# State of the Economy and Prospects

1

CHAPTER

*Managing growth and price stability are the major challenges of macroeconomic policymaking. In 2011-12, India found itself in the heart of these conflicing demands. The Indian economy is estimated to grow by 6.9 per cent in 2011-12, after having grown at the rate of 8.4 per cent in each of the two preceding years. This indicates a slowdown compared not just to the previous two years but 2003 to 2011 (except 2008-9). At the same time, sight must not be lost of the fact that, by any cross-country comparison, India remains among the front-runners. With agriculture and services continuing to perform well, India's slowdown can be attributed almost entirely to weakening industrial growth. The manufacturing sector grew by 2.7 per cent and 0.4 per cent in the second and third quarters of 2011-12. Inflation as measured by the wholesale price index (WPI) was high during most of the current fiscal year, though by the year's end there was a clear slowdown. Food inflation, in particular, has come down to around zero, with most of the remaining WPI inflation being driven by non-food manufacturing products. Monetary policy was tightened by the Reserve Bank of India (RBI) during the year to control inflation and curb inflationary expectations. The slowing inflation reflects the lagged impact of actions taken by the RBI and the government. Reflecting the weak manufacturing activity and rising costs, revenues of the centre have remained less than anticipated; and, with higher-than-budgeted expenditure outgo, a slippage is expected on the fiscal side. The global economic environment, which has been tenuous at best throughout the year, turned sharply adverse in September 2011 owing to the turmoil in the eurozone, and questions about the outlook on the US economy provoked by rating agencies. However, for the Indian economy, the outlook for growth and price stability at this juncture looks more promising. There are signs from some high frequency indicators that the weakness in economic activity has bottomed out and a gradual upswing is imminent.*

1.2 The macroeconomic situation in February 2011 — at the time of presentation of Economic Survey 2010-11 — looked positive, even though there was some concern about industrial slowdown. Economic Survey 2010-11 had anticipated that the Indian economy would register growth of around 9 per cent (+ or - 0.25 per cent) in 2011-12, almost reverting to the pre-crisis levels achieved during the three-year period 2005-6 to 2007-8. The optimism was driven in part by the fact that the economy had achieved a growth rate of 8.4 per cent during the years 2009-10 and 2010-11 and the savings and investment rates had begun rising once again. However, during the course of the year it became increasingly clear that economy would fall short of that growth rate by a significant margin for various reasons. This was indeed pointed out in the Mid-Year Analysis for the year 2011-12 that had stated that the Indian economy was expected to register a growth rate of 7.5 per cent during the year. As it happens, the

## 0.1 KEY INDICATORS

| | Data categories and components | Units | 2006-07 | 2007-08 | 2008-09 | 2009-10 | 2010-11 | 2011-12 |
|---|---|---|---|---|---|---|---|---|
| 1 | **GDP and Related Indicators** | | | | | | | |
| | GDP (current market prices) | ₹ crore | 4294706 | 4987090 | 5630063 | 6457352[PE] | 7674148[QE] | 8912178[AE] |
| | Growth Rate | % | 16.3 | 16.1 | 12.9 | 14.7 | 18.8 | 16.1 |
| | GDP (factor cost 2004-05 prices) | ₹ crore | 3564364 | 3896636 | 4158676 | 4507637[PE] | 4885954[QE] | 5222027[AE] |
| | Growth Rate | % | 9.6 | 9.3 | 6.7 | 8.4 | 8.4 | 6.9 |
| | Savings Rate | % of GDP | 34.6 | 36.8 | 32.0 | 33.8 | 32.3 | na |
| | Capital Formation (rate) | % of GDP | 35.7 | 38.1 | 34.3 | 36.6 | 35.1 | na |
| | Per Capita Net National Income (factor cost at current prices) | ₹ | 31206 | 35825 | 40775 | 46117 | 53331 | 60972 |
| 2 | **Production** | | | | | | | |
| | Foodgrains | Mn tonnes | 217.3 | 230.8 | 234.5 | 218.1 | 244.8 | 250.4[a] |
| | Index of Industrial Production [b] (growth) | Per cent | 12.9 | 15.5 | 2.5 | 5.3 | 8.2 | 3.6[c] |
| | Electricity Generation (growth) | Per cent | 7.3 | 6.3 | 2.7 | 6.1 | 5.5 | 9.4[c] |
| 3 | **Prices** | | | | | | | |
| | Inflation (WPI) (52-week average) | %change | 6.6 | 4.7 | 8.1 | 3.8 | 9.6 | 9.1[d] |
| | Inflation CPI (IW) (average) | %change | 6.7 | 6.2 | 9.1 | 12.4 | 10.4 | 8.4[d] |
| 4 | **External Sector** | | | | | | | |
| | Export Growth ( US$) | %change | 22.6 | 29.0 | 13.6 | -3.5 | 40.5 | 23.5[d] |
| | Import Growth (US$) | %change | 24.5 | 35.5 | 20.7 | -5.0 | 28.2 | 29.4[d] |
| | Current Account Balance (CAB)/GDP | Per cent | -1.0 | -1.3 | -2.3 | -2.8 | -2.7 | -3.6[e] |
| | Foreign Exchange Reserves | US$ Bn. | 199.2 | 309.7 | 252.0 | 279.1 | 304.8 | 292.8[f] |
| | Average Exchange Rate | ₹/US$ | 45.25 | 40.26 | 45.99 | 47.44 | 45.56 | 47.70[g] |
| 5 | **Money and Credit** | | | | | | | |
| | Broad Money (M3) (annual) | %change | 21.3 | 21.4 | 19.3 | 16.8 | 16.0 | 14.4[h] |
| | Scheduled Commercial Bank Credit (growth) | %change | 28.1 | 22.3 | 17.5 | 16.9 | 21.5 | 16.4[h] |
| 6 | **Fiscal Indicators (Centre)** | | | | | | | |
| | Gross Fiscal Deficit | % of GDP | 3.3 | 2.5 | 6.0 | 6.5 | 4.8[i] | 4.6[j] |
| | Revenue Deficit | % of GDP | 1.9 | 1.1 | 4.5 | 5.2 | 3.2[i] | 3.4[j] |
| | Primary Deficit | % of GDP | -0.2 | -0.9 | 2.6 | 3.2 | 1.8[i] | 1.6[j] |
| 7 | **Population** | Million | 1122 | 1138 | 1154 | 1170 | 1210[k] | na |

[AE] GDP figures for 2011-12 are advance estimates; [QE] Quick estimates; [PE] Provisional estimates.
na not available

- [a] Second advance estimates.
- [b] The Index of Industrial Production has been revised since 2005-06 on base (2004-05=100).
- [c] April-December 2011.
- [d] April 2011 to January 2012.
- [e] CAB to GDP ratio for 2011-12 is for the period April-September 2011.
- [f] At end January, 2012.
- [g] Average exchange rate for 2011-12 (April 2011-February 2012).
- [h] Provisional (upto January 27, 2012).
- [i] fiscal indicators for 2010-11 are based on the provisional actuals.
- [j] Budget estimates.
- [k] Census 2011.

economy is expected to register a growth rate of 6.9 per cent in 2011-12, as per the Advance Estimates (AE) released by the Central Statistics Office (CSO) on 7 February 2012. At sectoral level, growth is estimated to be 2.5 per cent for 2011-12 for agriculture and allied sectors, a little lower than expected. However, this has to be seen in light of the high growth of 7 per cent achieved in 2010-11. Growth in the services sector is likely to be 9.4 per cent in 2011-12 as against 9.3 per cent in 2010-11. Thus, it is primarily the dip in growth in industry to 3.9 per cent in 2011-12 that has led to the slowdown in real gross domestic product (GDP) growth (Table 1.1).

1.3 With the exception of the year 2008-9 when the growth rate was 6.7 per cent, the growth in real GDP in 2011-12 has been the lowest in nine years. This speaks well of the last nine years but must also be treated as a wake-up call. Like in 2008-9, a part of the reason for the slowdown lies in global factors, particularly the crisis in the eurozone area and near-recessionary conditions prevailing in Europe; sluggish growth in many other industrialized countries, like the USA; stagnation in Japan; and hardening international prices of crude oil, which always has a large effect on India. Domestic factors, namely the tightening of monetary policy, in particular raising the repo rate in order to control inflation and anchor inflationary expectations, resulted in some slowing down of investment and growth, particularly in the industrial sector. Since monetary policy operates largely through demand compression in the short run, the expectation is that this policy will in fact bolster long-run growth. The 2008-9 downturn came to India when the country's fiscal balances were robust. Hence, there was ample scope for fiscal and monetary stimulus. As in most parts of the world, this second slowdown is coming so quickly on the heels of the previous one that the latitude that we have in terms of fiscal and monetary policy is much more limited. Evidently, there is need to be innovative in terms of policy.

1.4 Earlier Economic Surveys had highlighted the growing divergence between the two measures of GDP, namely GDP at factor cost at constant prices (production or value-added method) and GDP at constant market prices (demand-side GDP), arising from the global financial crisis and the policy responses which included fiscal stimuli. As per the latest revisions to GDP announced by the CSO in the QE of national income released on 31 January 2012, demand-side GDP is estimated to have grown by only 3.9 per cent in 2008-9 and the recovery in 2009-10 and 2010-11 was sharper at 8.2 per cent and 9.6 per cent respectively (Table 1.2). The revisions indicate that the global crisis in 2008-9 was mainly reflected in negative growth in gross capital formation, with the slowdown in private final consumption expenditure being modest. More importantly, post-crisis growth in gross fixed capital formation has been lukewarm. As per the AE the growth of GDP at market prices is expected to be 7.5 per cent in 2011-12. The growth in real terms of consumption expenditure, gross fixed capital formation, exports and imports respectively works out to 6.0 per cent, 5.6 per cent, 14.3 per cent, and 17.5 per cent for the year 2011-12. The growth in these indicators in 2010-11 was 8.1 per cent, 7.5 per cent, 22.7 per cent, and 15.6 per cent respectively. The rate of growth of private final consumption expenditure in real terms has been fairly consistent and did not decline significantly even when the growth rate was relatively lower, partly due to

**Table 1.1 : Rate of Growth of GDP at Factor Cost at 2004-2005 Prices (per cent)**

| | 2005-06 | 2006-07 | 2007-08 | 2008-09 | 2009-10PE | 2010-11QE | 2011-12AE |
|---|---|---|---|---|---|---|---|
| Agriculture, forestry & fishing | 5.1 | 4.2 | 5.8 | 0.1 | 1.0 | 7.0 | 2.5 |
| Mining & quarrying | 1.3 | 7.5 | 3.7 | 2.1 | 6.3 | 5.0 | -2.2 |
| Manufacturing | 10.1 | 14.3 | 10.3 | 4.3 | 9.7 | 7.6 | 3.9 |
| Electricity, gas & water supply | 7.1 | 9.3 | 8.3 | 4.6 | 6.3 | 3.0 | 8.3 |
| Construction | 12.8 | 10.3 | 10.8 | 5.3 | 7.0 | 8.0 | 4.8 |
| Trade, hotels, transport & communication | 12.1 | 11.7 | 10.7 | 7.6 | 10.3 | 11.1 | 11.2 |
| Financing, insurance, real estate & business services | 12.6 | 14.0 | 12.0 | 12.0 | 9.4 | 10.4 | 9.1 |
| Community, social & personal services | 7.1 | 2.8 | 6.9 | 12.5 | 12.0 | 4.5 | 5.9 |
| **GDP at factor cost** | **9.5** | **9.6** | **9.3** | **6.7** | **8.4** | **8.4** | **6.9** |

***Source*** **: CSO.**
***Notes:*** **PE : Provisional Estimate, QE: Quick Estimate, AE: Advance Estimate.**

**Table 1.2 : Growth in GDP at Constant Market Prices (per cent)**

| | 2005-06 | 2006-07 | 2007-08 | 2008-09 | 2009-10PE | 2010-11QE | 2011-12AE |
|---|---|---|---|---|---|---|---|
| **1. Total final consumption expenditure** | 8.7 | 7.7 | 9.4 | 7.7 | 8.3 | 8.1 | 6.0 |
| 1.1 Private final consumption expenditure | 8.6 | 8.5 | 9.4 | 7.2 | 7.2 | 8.1 | 6.5 |
| 1.2 Government final consumption expenditure | 8.9 | 3.8 | 9.6 | 10.4 | 14.3 | 7.8 | 3.9 |
| **2. Gross capital formation** | 16.3 | 15.3 | 17.2 | -1.6 | 11.6 | 11.1 | 5.8 |
| 2.1 Gross fixed capital formation | 16.2 | 13.8 | 16.2 | 3.5 | 6.8 | 7.5 | 5.6 |
| 2.2 Changes in stocks | 26.7 | 31.6 | 31.3 | -51.4 | 63.2 | 37.4 | 2.9 |
| 2.3 Valuables | -1.6 | 13.7 | 2.9 | 26.9 | 57.6 | 32.4 | 12.5 |
| **3. Exports** | 26.1 | 20.4 | 5.9 | 14.6 | -4.8 | 22.7 | 14.3 |
| **4. Less imports** | 32.6 | 21.5 | 10.2 | 22.7 | -2.2 | 15.6 | 17.5 |
| **5. Discrepancies** | 48.2 | 47.5 | 111.8 | -75.3 | 230.5 | 38.9 | -111.6 |
| Growth in GDP at 2004-5 market prices | 9.3 | 9.3 | 9.8 | 3.9 | 8.2 | 9.6 | 7.5 |

***Source*** **: CSO.**

the inherent nature of private consumption that does not fluctuate as much as other demand-side components and partly on account of inflationary tendencies, which tend to reduce savings (on account of reduction in real interest rates) rather than affecting the consumption level in the economy.

1.5 The growth rate of investment in the economy is estimated to have registered a significant decline during the current year. The year has been witnessing a sharp increase in interest rates that resulted in higher costs of borrowings; and other rising costs affecting profitability and, thereby, internal accruals that could be used to finance investment. It may also be observed from Table 1.2 that the economy registered high growth in gross capital formation during 2005-6 to 2007-8. As a result, there was rapid increase in investment rate in the economy from 32.8 per cent in 2004-5 to 38.1 per cent in 2007-8 (Table 1.4). The level of investment declined in absolute terms in 2008-9 following the slowdown in the global economy. Though it did recover quickly in 2009-10 and 2010-11, the growth in gross capital formation, particularly fixed capital formation, has been substantially lower than had been achieved in 2005-6 to 2007-8. The investment rate continues to be lower than the peak level achieved in 2007-8.

1.6 Despite difficult conditions in the global economy, exports continued to be robust in the current year and registered a growth rate of 14.3 per cent in real terms over and above 22.7 per cent growth achieved in the previous year (2010-11), as per Advance Estimates. Imports are likely to end the year with a real growth rate of 17.5 per cent as against 15.6 per cent in 2010-11. It may further be noted that international trade (exports and imports) as per national accounts is now around 53 per cent of GDP, up from a level of 37 per cent in 2004-5.

1.7 As stated in paragraph 1.4, the growth rate of private final consumption expenditure has been fairly consistent even when the economy's growth rate has fluctuated somewhat. However, this consistency masks large variations between the various commodity groups as can be seen from Table 1.3. As against an overall growth of private final consumption expenditure that was in the range of 7.1-9.2 per cent during the period 2005-6 to 2010-11, the rates of growth of the consumption groups food, beverages, and tobacco and gross rent, fuel, and power have generally been lower. On the other hand, the growth rates of items like furniture and furnishing, transport and communications, and miscellaneous goods and services have generally been higher. As a result, the composition of private final consumption expenditure in terms of shares underwent changes, as shown in Table 1.3.

## Savings and Investment

1.8 As per the QE released by the CSO, gross domestic savings as a ratio of GDP at current market prices (savings rate) declined from 33.8 per cent in 2009-10 to 32.3 per cent in 2010-11 (Table 1.4). This decline is accounted for by a reduction in private savings, primarily household savings in financial assets, and somewhat by a reduction in corporate savings. Public savings on the other hand registered an increase, thanks to fiscal consolidation. The

**Table 1.3 : Private Final Consumption Expenditure : Annual Growth and Shares at 2004-05 prices**

| | 2004-05 | 2005-06 | 2006-07 | 2007-08 | 2008-09 | 2009-10[PE] | 2010-11[QE] |
|---|---|---|---|---|---|---|---|
| | | | | Annual Growth (per cent) | | | |
| Food, beverages, & tobacco | | 6.3 | 3.4 | 6.4 | 3.3 | 0.3 | 6.2 |
| Clothing & footwear | | 19.7 | 23.3 | 5.0 | 5.0 | 14.9 | 3.6 |
| Gross Rent, fuel, & power | | 3.7 | 3.8 | 4.7 | 3.6 | 5.4 | 4.9 |
| Furniture, furnishings, etc. | | 15.1 | 17.1 | 16.1 | 12.2 | 8.7 | 13.0 |
| Medical care & health services | | 8.8 | 8.7 | 4.5 | 6.9 | 8.9 | 7.6 |
| Transport & communication | | 5.8 | 9.1 | 7.9 | 7.7 | 12.0 | 12.5 |
| Recreation, education, & cultural services | | 11.0 | 8.4 | 9.8 | 6.8 | 4.0 | 5.6 |
| Miscellaneous goods & services | | 20.1 | 21.1 | 28.6 | 20.2 | 15.7 | 11.4 |
| Total private consumption | | 8.5 | 8.7 | 9.2 | 7.1 | 7.4 | 8.2 |
| | | | | Share in Total (per cent) | | | |
| Food, beverages, & tobacco | 40.0 | 39.1 | 37.3 | 36.3 | 35.0 | 32.7 | 32.1 |
| Clothing & footwear | 6.6 | 7.3 | 8.3 | 8.0 | 7.8 | 8.4 | 8.0 |
| Gross Rent, fuel, & power | 13.8 | 13.2 | 12.6 | 12.1 | 11.7 | 11.5 | 11.1 |
| Furniture, furnishings, etc. | 3.4 | 3.6 | 3.9 | 4.1 | 4.3 | 4.4 | 4.6 |
| Medical care & health services | 5.0 | 5.0 | 5.0 | 4.8 | 4.8 | 4.8 | 4.8 |
| Transport & communication | 19.3 | 18.8 | 18.9 | 18.7 | 18.8 | 19.6 | 20.4 |
| Recreation, education, & cultural services | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 2.9 | 2.9 |
| Miscellaneous goods & services | 8.9 | 9.9 | 11.0 | 13.0 | 14.6 | 15.7 | 16.2 |
| Total private consumption | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

***Source*** **: CSO.**

reduction in the financial savings rate of households could be partly attributable to inflationary tendencies in the economy during the period that resulted in higher growth of private final consumption expenditure than of personal disposable income and partly to a reduction in real interest rate.

**Table 1.4 : Ratio of Savings and Investment to GDP (at current market prices per cent)**

| | 2004-05 | 2005-06 | 2006-07 | 2007-08 | 2008-09 | 2009-10[PE] | 2010-11[QE] |
|---|---|---|---|---|---|---|---|
| **Gross domestic saving** | **32.4** | **33.4** | **34.6** | **36.8** | **32.0** | **33.8** | **32.3** |
| Public sector | 2.3 | 2.4 | 3.6 | 5.0 | 1.0 | 0.2 | 1.7 |
| Private sector | 30.1 | 31.0 | 31.0 | 31.8 | 31.1 | 33.6 | 30.6 |
| Household sector | 23.6 | 23.5 | 23.2 | 22.4 | 23.6 | 25.4 | 22.8 |
| Financial saving | 10.1 | 11.9 | 11.3 | 11.6 | 10.1 | 12.9 | 10.0 |
| Saving in physical assets | 13.4 | 11.7 | 11.9 | 10.8 | 13.5 | 12.4 | 12.8 |
| Private corporate sector | 6.6 | 7.5 | 7.9 | 9.4 | 7.4 | 8.2 | 7.9 |
| **Gross capital formation (investment)** | **32.8** | **34.7** | **35.7** | **38.1** | **34.3** | **36.6** | **35.1** |
| Public sector | 7.4 | 7.9 | 8.3 | 8.9 | 9.4 | 9.2 | 8.8 |
| Private sector | 23.8 | 25.2 | 26.4 | 28.1 | 24.8 | 25.2 | 24.9 |
| Corporate sector | 10.3 | 13.6 | 14.5 | 17.3 | 11.3 | 12.7 | 12.1 |
| Household sector | 13.4 | 11.7 | 11.9 | 10.8 | 13.5 | 12.4 | 12.8 |
| **Gross fixed capital formation** | **28.7** | **30.3** | **31.3** | **32.9** | **32.3** | **31.6** | **30.4** |
| Stocks | 2.5 | 2.8 | 3.4 | 4.0 | 1.9 | 2.7 | 3.3 |
| Valuables | 1.3 | 1.1 | 1.2 | 1.1 | 1.3 | 1.8 | 2.1 |
| **Saving-investment gap** | -0.4 | -1.3 | -1.1 | -1.3 | -2.3 | -2.8 | -2.8 |
| Public sector | -5.1 | -5.5 | -4.7 | -3.9 | -8.5 | -9.0 | -7.1 |
| Private sector | 6.3 | 5.8 | 4.6 | 3.7 | 6.3 | 8.5 | 5.8 |

***Source*** **: CSO.**
***Note*** **: Totals may not tally due to adjustment for errors and omissions.**

1.9 There was a reduction in investment rates, both in the public and private sectors, particularly the corporate sector, in 2010-11. Reduction in corporate investment could be attributed to global factors, with the global economy exhibiting signs of slowing down in the second half of 2010 as well as to domestic factors, namely increased cost of borrowing following the raising of interest rates in order to control inflation. Fixed investment as a ratio of GDP peaked in 2007-8 and has continued to register a decline since then, falling from 31.6 per cent in 2009-10 to 30.4 per cent in 2010-11.

1.10 At 2.8 per cent of GDP, the savings-investment gap during 2010-11 remained at the same level as in 2009-10. This reflected the need to finance the investment requirement from foreign savings (current account deficit). The gap, in excess of 2 per cent of GDP, has been at relatively elevated levels (since 2008-9), as compared to 0.4-1.3 per cent in 2004-5 to 2007-8. The savings-investment gap narrowed both in the public as well as private sectors in 2010-11 vis-à-vis 2009-10. For the public sector, it narrowed from - 9.0 per cent of GDP to -7.1 per cent. The gap was much lower in the years prior to 2008-9. However, the fiscal stimulus provided in order to overcome the slowdown of 2008-9 reduced public savings as a ratio of GDP by 4 percentage points in 2008-9 and another 0.8 percentage points in 2009-10. The increase in the revenue levels, thanks partly to substantial increase in non-tax revenue receipts in the year 2010-11, and the process of fiscal consolidation were among the factors responsible for narrowing of the public sector's savings-investment gap.

1.11 In the medium to long term, growth of an emerging economy depends, to a large extent, not only on overall level of investment but also on its sectoral composition reflecting the transformation taking place. However, annual growth rates of investment both at aggregate and sectoral levels may vary, depending on expectations of profitability, sales, etc. As can be seen from Table 1.5, there are large-scale variations in the growth rates of sectors over time. Most of the sectors in 2010-11 registered positive growth in real terms in investment levels except communications and railways. The marginal negative growth in communications in 2009-10 and 2010-11 is not surprising after the very high growth in this sector in the previous two years. The growth in real investment in railways turned negative after showing a positive trend for several years. This partly reflects the inability to raise tariffs in order to meet increasing expenditures.

1.12 Typically, the Economic Survey details developments in the current year; however, it is worth commenting on the growth of the Indian economy from the perspective of long-term trends, particularly in the context of the post 1991 period and reflect upon where we are at the current conjuncture. The rate of growth between 1950-1 and 1990-1 was 4.1 per cent. In contrast, between 1991-2 and 2011-12 the economy registered a growth of 6.9 per cent. While in the four decades from 1951-2 to 1991-2, the growth rate in terms of GDP at factor cost (at 2004-5 prices) was more than 6 per cent only in 10 years, between 1992-3 and 2011-12 (including the AE for 2011-12) (a time-span covering 20 years, inclusive of both observations) the growth rate has been over 6 per cent in as many as 14 years. The growth rate has accelerated significantly since 2003-4. Between 2003-4 and 2011-12, the economy registered a growth of 8.2 per cent per annum. In fact, during this period, the growth rate has never fallen below 6.7 per cent and has been over 8 per cent in six of these nine years. All the three major sectors of the economy, namely agriculture, industry, and services witnessed higher-than-trend growth rates at 3.9 per cent, 8.0 per cent, and 9.6 per cent respectively. Clearly the services sector has emerged as the key driver of growth in the Indian economy (see Chapter 10 for a fuller discussion). The growth of this sector has shown the least inter-temporal variations. With the declining share of the agriculture sector and reasonably consistent growth in the services sector, the variations in growth rate of GDP are lately being associated with the variations in the industry sector (Figure 1.1).

1.13 This accelerated growth could partly be attributed to an increase in savings and investment rates, which averaged 33.1 per cent and 34.3 per cent respectively during the period between 2003-4 and 2010-11. The average savings and investment rates in the 1990s were 23.0 per cent and 24.3 per cent respectively. Sustaining and accelerating this growth further could be crucial for attaining higher per capita income and other objectives that aim at enhancing human welfare as reflected by the inclusive development agenda. It may be mentioned that higher growth rate resulted in fairly rapid increase in per capita income. It took nearly 40 years for the real per capita income to double from the level achieved in 1950-1. However, it increased 2.5 times in the next 20 years in the post-reforms period.

**Table 1.5 : Sectoral Investment Growth Rates at 2004-2005 Prices**

| | Rate of growth of GCF (per cent) | | | | | |
|---|---|---|---|---|---|---|
| | 2005-206 | 2006-07 | 2007-08 | 2008-09 | 2009-10 | 2010-11 |
| Agriculture, forestry, & fishing | 13.8 | 6.3 | 14.9 | 20.2 | 3.2 | 8.5 |
| Agriculture | 13.9 | 5.9 | 15.9 | 21.4 | 2.8 | 8.4 |
| Forestry & logging | 30.9 | 13.4 | -20.3 | -3.2 | -11.9 | 3.8 |
| Fishing | 9.5 | 9.5 | 9.5 | 9.6 | 9.5 | 9.5 |
| Mining & quarrying | 40.0 | 15.7 | 13.1 | -16.6 | 15.7 | 6.7 |
| Manufacturing | 17.5 | 17.2 | 29.0 | -31.3 | 42.3 | 7.1 |
| Registered | 39.3 | 11.0 | 37.1 | -27.5 | 31.6 | 8.1 |
| Unregistered | -36.8 | 50.9 | -3.7 | -53.1 | 137.6 | 2.4 |
| Electricity, gas, & water supply | 21.3 | 18.1 | 12.6 | 15.1 | 3.3 | 1.0 |
| Construction | 5.7 | 66.5 | 20.2 | -23.1 | -2.5 | 14.1 |
| Trade, hotels, & restaurants | 26.7 | 30.0 | -14.7 | 28.7 | -12.1 | 48.9 |
| Trade | 22.6 | 34.0 | -20.1 | 35.8 | -16.2 | 56.4 |
| Hotels & restaurants | 49.3 | 11.7 | 14.8 | 1.7 | 8.9 | 19.2 |
| Transport, storage, & communication | 20.1 | -6.7 | 25.3 | 53.8 | -7.5 | 2.2 |
| Railways | 14.6 | 12.9 | 13.7 | 22.5 | 6.2 | -9.5 |
| Transport by other means | 12.9 | -14.2 | 28.7 | 30.8 | -17.5 | 13.3 |
| Storage | -285.9 | 18.0 | 5.7 | 71.9 | -8.0 | 13.3 |
| Communication | 33.2 | -6.7 | 29.3 | 110.6 | -2.9 | -2.4 |
| Financing, insurance, real estate, & business services | 6.2 | 2.4 | 8.9 | 41.4 | -11.9 | 3.6 |
| Banking & insurance | 70.4 | 61.8 | -6.8 | -28.0 | 0.0 | 54.5 |
| Real estate, ownership of dwellings, & business services | 4.3 | -0.4 | 10.1 | 45.9 | -12.2 | 1.7 |
| Community, social, & personal services | 19.6 | 12.5 | 18.2 | -0.7 | 8.3 | 12.5 |
| Public administration & defence | 17.3 | 14.0 | 13.4 | 7.3 | 10.1 | 11.5 |
| Other services | 22.7 | 10.7 | 24.5 | -10.4 | 5.7 | 14.0 |
| Total | 17.0 | 15.3 | 17.7 | -2.5 | 9.8 | 9.9 |

***Source*** **: CSO.**

**Figure 1.1 Rate of growth of GDP and major sectors**

1.14 The contributions of the agriculture and allied sector, industry sector, and services sector also underwent significant changes overtime. The long-term growth rate of the agriculture sector (over the last 60 years) has been 2.7 per cent. It was 2.3 per cent between 1950-1 and 1980-1 and 3.1 per cent during 1980-1 to 2011-12. Growth in the industry sector increased from 5.2 per cent in the earlier period to 6.4 per cent between 1980-1 and 2011-12. Similarly growth in the services sector was 4.4 per cent and 7.8 per cent respectively during these two sub-periods.

1.15 The structure of the economy has also undergone significant changes over time. Between 1950-1 and 1980-1, the industrial sector registered a higher growth rate than the services sector. The converse has been the case since then. This resulted in the share of the industry sector in GDP increasing by around 9 percentage points from 16.6 per cent to 25.9 per cent during the period from 1950-1 to 1980-1. The share of the services sector increased from 30.3 per cent in 1950-1 to 38 per cent in 1980-1. It started growing rapidly thereafter and this phenomenon became more pronounced in the 1990s. Consequently, since 1980-1, the share of the industry sector has remained in the range of 26 to 28 per cent of GDP, while the entire decline in share of agriculture has been balanced by an increase in share of the services sector. Thus, the resilience of the economy to shocks owe to the services sector which has the largest share and most consistent growth performance. The changes in relative shares of these sectors in GDP are shown in the Table 1.6.

**Table 1.6 Sectoral Composition of GDP**

| Year | Agriculture | Industry | Services |
|---|---|---|---|
| 1950-51 | 53.1 | 16.6 | 30.3 |
| 1960-61 | 48.7 | 20.5 | 30.8 |
| 1970-71 | 42.3 | 24.0 | 33.8 |
| 1980-81 | 36.1 | 25.9 | 38.0 |
| 1990-91 | 29.6 | 27.7 | 42.7 |
| 2000-01 | 22.3 | 27.3 | 50.4 |
| 2010-11[QE] | 14.5 | 27.8 | 57.7 |
| 2011-12[AE] | 13.9 | 27.0 | 59.0 |

***Source*: Calculated from CSO data.**

## Quarterly Estimates for GDP

1.16 The CSO released the estimates for the third quarter of the year 2011-12 on 29 February 2012. Table 1.7 gives the quarterly growth rates of GDP and major sectors for the first three quarters of 2010-11 and 2011-12.

1.17 The growth rate in the third quarter of the current year in terms of GDP at factor cost has been 6.1 per cent. The growth of agriculture, industry, and services sectors works out to be 2.7 per cent, 2.6 per cent, and 8.9 per cent respectively as against 11.0 per cent, 7.6 per cent, and 7.7 per cent respectively in the year 2010-11. It may be seen that growth in each of the successive quarters of the current year has been lower than in the preceding one. Growth in the first three quarters put together in the current year works out to 6.9 per cent as against 8.1 per cent in the corresponding period last year. The industry and agriculture sectors slowed

**Table 1.7 : Quarterly Growth Rate for first three quarters (per cent)**

| | Sector | 2010-11 Q1 | 2010-11 Q2 | 2010-11 Q3 | 2011-12 Q1 | 2011-12 Q2 | 2011-12 Q3 |
|---|---|---|---|---|---|---|---|
| 1 | Agriculture, forestry & fishing | 3.1 | 4.9 | 11.0 | 3.9 | 3.2 | 2.7 |
| | Industry | 8.3 | 5.7 | 7.6 | 5.1 | 3.2 | 2.6 |
| 2 | Mining & quarrying | 6.9 | 7.3 | 6.1 | 1.8 | -2.9 | -3.1 |
| 3 | Manufacturing | 9.1 | 6.1 | 7.8 | 7.2 | 2.7 | 0.4 |
| 4 | Electricity, gas & water supply | 2.9 | 0.3 | 3.8 | 7.9 | 9.8 | 9.0 |
| 5 | Construction | 8.4 | 6.0 | 8.7 | 1.2 | 4.3 | 7.2 |
| | Services | 10.0 | 9.1 | 7.7 | 10.0 | 9.3 | 8.9 |
| 6 | Trade, hotels, transport & communication | 12.7 | 10.8 | 9.8 | 12.8 | 9.9 | 9.2 |
| 7 | Financing, insurance, real estate & business services | 10.0 | 10.4 | 11.2 | 9.1 | 10.5 | 9.0 |
| 8 | Community, social & personal services | 4.4 | 4.5 | -0.1 | 5.6 | 6.6 | 7.9 |
| | **Total GDP at factor cost** | **8.5** | **7.6** | **8.3** | **7.7** | **6.9** | **6.1** |

***Source*: CSO**

down to 3.6 per cent and 3.2 per cent respectively, while the services sector has improved its growth to 9.4 per cent. The growth rate of GDP at constant market prices in the first three quarters of the current year has been 7.1 per cent.

## Agriculture and Food

1.18 Agriculture including allied activities accounted for 13.9 per cent of GDP at 2004-5 prices in 2011-12 as compared to 14.5 per cent in 2010-11. In terms of composition, out of a total share of 14.5 per cent in GDP in 2010-11, agriculture alone accounted for 12.3 per cent, followed by forestry and logging at 1.4 per cent, and fishing at 0.7 per cent. Notwithstanding the declining trend in agriculture's share in GDP, the importance of the sector to the economy is best understood with reference to its share in employment and in terms of its criticality for macroeconomic stability. While the former was well known, the latter became manifest with rising growth in incomes since the mid-2000s.

1.19 Hence, growth in agriculture and allied sectors remains an important objective and a 'necessary condition' for inclusive growth. The average annual growth in agriculture and allied sectors realized during the Eleventh Plan Period was 3.3 per cent against the targeted growth rate of 4 per cent. The sector recorded slightly lower average growth than targeted in the Eleventh Plan period due to severe drought experienced in most parts of the country during 2009-10 and drought/ deficient rainfall in some states, namely Bihar, Jharkhand, eastern UP, and West Bengal in 2010-11. However, timely and corrective measures taken by the government helped boost agricultural production and growth in the sector reached 7.0 per cent in 2010-11, the highest growth rate achieved during the last six years. In 2011-12 agriculture and allied sectors are estimated to achieve a growth rate of 2.5 per cent. However, it is a matter of concern that agricultural growth is still, to a certain extent, characterized by fluctuations due to the vagaries of nature, though there has not been actual decline in terms of output since 2002-3.

1.20 Rainfall continues to influence crop production and productivity in a substantial way. During the south-west monsoon season, which accounts for the bulk of rainfall in the country, rainfall was 1 per cent more than the long period average (LPA) in 2011. In terms of spatial distribution, rainfall during this season was most conducive for augmenting agricultural output this year.

1.21 In 2010-11 a significantly high level of 244.78 million tonnes of foodgrains production was achieved. As per the second AE, production of foodgrains during 2011-12 has been estimated at 250.42 million tonnes owing to increase in the production of rice in some of the major rice-producing states of the country, namely Assam, Bihar, West Bengal, Jharkhand, and Uttar Pradesh.

1.22 The stock position of foodgrains in the central pool as on 1 February 2012 was 55.2 million tonnes, comprising 31.8 million tonnes of rice and 23.4 million tonnes of wheat, which is adequate for meeting the requirements under the targeted public distribution system (TPDS) and welfare schemes during the current financial year. The higher levels of agricultural output and ample food stocks augur well for bringing down headline inflation.

## Industry and Infrastructure

1.23 Industrial growth, measured in terms of the index of industrial production (IIP), shows fluctuating trends. Growth had reached 15.5 per cent in 2007-8 and then started decelerating. Initial deceleration in industrial growth was largely on account of the global economic meltdown. There was, however, a recovery from 2.5 per cent in 2008-9 to 5.3 per cent in 2009-10 and 8.2 per cent in 2010-11. Fragile economic recovery in the US and Europe and moderately subdued expectations at home affected the growth of the industrial sector in the current year. Overall growth during April-December 2011 reached 3.6 per cent compared to 8.3 per cent in the corresponding period of the previous year.

1.24 There was a contraction in production in the mining sector, particularly the coal and natural gas segments. Contraction in output also resulted in its contribution to growth turning negative. The electricity sector witnessed an improvement in growth in the current year. This sector contributed 22.6 per cent to overall industrial growth, which was more than twice its weight in the IIP. Growth moderated in the manufacturing sector, from 9.0 per cent in April-December 2010 to 3.9 per cent in April-December 2011, which, given its large share in the IIP, led to a slowdown in the industry sector as a whole.

1.25 In terms of use-based classification of the IIP, in the current year (April-December), basic goods with a growth of 6.1 per cent and consumer non-durables with a growth of 6.1 per cent had relatively better growth compared to the corresponding period of the previous year. There was moderation in growth in other segments of the IIP and negative growth was observed in capital goods and intermediates. Contribution of basic goods segment to overall IIP growth at 65.7 per cent not only exceeded its weight in the IIP, but was also the highest. Contribution of consumer non-durables at 28.1 per cent also exceeded its weight in the IIP.

1.26 Within the manufacturing sector, the IIP separately provides growth rates for 22 sub-groups, disaggregated at two-digit level of the National Industrial Classification (NIC-2004). Growth varied across the sub-groups indicating that, while in terms of broad classification the slowdown might appear pervasive, there were segments that did well. In April-December 2011, there were 7 manufacturing sub-groups with a weight of 29.23 per cent in the IIP that recorded growth in excess of 10 per cent; 9 sub-groups with a weight of 26.6 per cent that had positive but below 10 per cent growth; and 6 sub groups with a weight of 19.7 per cent that had negative growth. Though in the current year sub-groups which recorded double-digit growth increased in terms of relative importance, a sharper moderation in other sectors resulted in a deceleration in aggregate growth.

1.27 Corporate-sector sales are another indicator of industrial performance. Abridged financial results of the listed manufacturing companies indicate robust sales growth (in nominal terms) during 2011-12. In the first three quarters of the current year, sales growth has varied between 20 and 25 per cent. Sales growth has moderated from a peak of 34.9 per cent in fourth quarter of 2009-10 to 22.6 per cent in the third quarter of the current financial year. However, it is better than the 19.0 per cent growth in the same period of the previous year. Expenditure growth, however, outpaced revenue growth, leading to lower growth in net profits, which declined in the latest two quarters. Higher expenditure growth was initially led by high raw material expenses, but interest expenses increased more sharply in the second and third quarters of 2011-12.

1.28 Production in eight core industries grew by 0.5 per cent in January 2012 as compared to 6.4 per cent in January 2012. Cumulative growth in April-January 2011-12 has been 4.1 per cent as compared to 5.7 per cent during the corresponding period of the previous year. While four sectors, namely coal, fertilizers, cement, and electricity, showed positive growth during January 2012 other four sectors, i.e. crude oil, natural gas, reifnary products and steel. registered negative growth. Though the cumulative growth of coal during the current year so far continues to be negative, there has been an increase in production in the last three months. Output in the cement sector has also shown a double digit growth in last three months (November-January 2011-12).

1.29 The Ministry of Statistics and Programme Implementation (MOSPI) has been monitoring the progress of all central-sector projects costing Rs 150 crore and above. The flash report for the month of October 2011 tracks the progress of 583 projects in different sectors. Of these, only 7 are ahead of schedule, 166 are on schedule, and 235 are delayed (175 projects were sanctioned without specifying any commissioning schedule). The delays also imply a cost overrun of 15.3 per cent. The maximum number of projects delayed belong to road transport and highways (90), followed by power (45), petroleum (29), railways (26), and coal (17). As is evident from national accounts as well as IIP data, the electricity sector is doing well this year.

1.30 Electricity generation by power utilities during 2011-12 was targeted to grow by 5.4 per cent to reach 855 billion units. Growth in power generation during April-January 2011-12 was 8.6 per cent as compared to 5.2 per cent during April-January 2010-11. In the first nine months of 2011, 76 per cent of the generation target had been achieved. The overall plant load factor (PLF), a measure of efficiency of thermal power stations, at 72.1 per cent during April-December 2011 was marginally lower than the PLF of 72.9 per cent achieved during April-December 2010. The PLF in the current year, however, exceeded the target of 68.2 per cent for the first three quarters. During the current financial year, production of crude oil is estimated at 38.19 million metric tonnes (MMT), which is about 1.33 per cent higher than the 37.70 MMT produced during 2010-11. Domestic crude oil production during April-December 2011-12 was 28.70 MMT, showing a growth of 1.9 per cent over the same period of the previous year. Non-coking coal accounts for more than 90 per cent of coal production in India. The lower growth in production during the current year and last year is primarily due to environmental restrictions, application of the comprehensive environmental pollution index (CEPI), non-availability of forestry clearance against some of the projects, poor law and order situation some of the states and excessive rainfall in the coal-mining areas. Lower domestic production increased dependency on imports and consequently 68.9 MT of coal was imported in 2010-11.

1.31 Freight loading on Indian Railways was 618.0 MT during April-November 2011 as compared to 593.4 MT in April-November 2010, registering an increase of 4.14 per cent. This was 26.6 MT short of the proportionate target of 644.6 MT . The low growth was primarily on account of relatively slow growth in core sectors of the economy. This was compounded by negative growth in iron ore after the imposition of a ban on export of iron ore in Karnataka and procedural problems in obtaining clearance from state governments. Air traffic in India continues to register significantly higher rates of growth, averaging 18.5 per cent in the last seven years. Domestic passenger traffic handled at Indian airports reached 108.1 million during January-November 2011 from a level of 90.5 million in the corresponding period of the previous year, registering a growth of 19.4 per cent. International passenger traffic and cargo handled at Indian airports grew by 7.7 per cent during January-November 2011 and was placed at 33.6 million passengers and 1.4 MMT of cargo. Domestic cargo throughput during the period January-November 2011 stood at 0.75 MMT, the same level as in the previous year.

1.32 The telecom sector continues to grow, with the total number of telephones increasing from 206.8 million on 31 March 2007 to 926.95 million on 31 December 2011. Tele-density is an important indicator of telecom penetration in the country. It has increased from 18.2 per cent in March 2007 to 76.8 per cent in December 2011. Tele-density varies across circles and there is significant urban-rural divide. While it reached 167.4 per cent in the urban areas at the end of December 2011, rural tele-density was only 37.5 per cent. In the ports sector, major and non-major ports in India handled a total cargo throughput of 446.1 MT during April-September 2011, reflecting an increase of 4.6 per cent over the same period last year. The rate of growth of cargo handled at 12 major ports improved from 1.2 per cent in April-September 2010 to 3.1 per cent in April-September 2011. There was, however, a deceleration in the growth of cargo handled at non-major ports, from 22.2 per cent in April-September 2010 to 7.2 per cent in April-September 2011.

## Services Sector

1.33 The share of services in India's GDP at factor cost (at current prices) increased from 33.5 per cent in 1950-1 to 55.1 per cent in 2010-11 and 56.3 per cent in 2011-12 as per Advance Estimates. Trade, hotels, and restaurants as a group, with 16.9 per cent share, is the largest contributor to GDP among the various services sub-sectors, followed by financing, insurance, real estate, and business services with 16.4 per cent share. The services-sector growth rate at constant prices has always been above the overall GDP growth rate since 1996-7 except for 2003-4. The compound annual growth rate (CAGR) of the services sector at 10.2 per cent for the period 2004-5 to 2010-11 has been higher than the 8.6 per cent GDP growth rate during the same period. In the years 2009-10 and 2010-11, the services sector registered a growth rate of 10.5 per cent and 9.3 per cent respectively. In 2011-12, as per the Advance Estimates, the growth rate of services has been placed at 9.4 per cent.

1.34 While agriculture continues to be the primary employment-providing sector, the services sector is the principal source of employment in urban areas. As per the National Sample Survey Organization's (NSSO) report on the 'Employment and Unemployment Situation in India, 2009-10', for every 1,000 people employed, 679 and 75 people are employed in agriculture sector in rural and urban areas respectively (measured in terms of usually working persons in the principal status and subsidiary status). On the other hand, the services sector accounted for 147 and 582 of every 1,000 persons employed in rural and urban areas respectively.

## Prices

1.35 Headline WPI inflation remained persistently high and relatively sticky at around 9 per cent during 2011. Though inflation remained high throughout the year, it has shown signs of moderation lately. One such indicator of the trend is the seasonally adjusted three-month moving average data in all the major groups of the WPI (Figure 1.2). The financial year 2011-12 started with a headline inflation of 9.7 per cent, which briefly touched double digits in September 2011 before declining to 6.6 per cent in January 2012. Consumer price index (CPI) inflation for the major indices declined to below 7 per cent in December 2011.

1.36 The major contributory factors to headline inflation during the current financial year include (a) higher primary articles prices driven by vegetables, eggs, meat, and fish due to changing dietary pattern of consumers; (b) increasing global commodity prices especially metal and chemical prices which ultimately led to higher domestic manufactured prices; and (c) persistently high international (Brent) crude petroleum prices in the last two years averaging around $ 111 per barrel (/bbl) in 2011 (January-December) as compared to $ 80/bbl in 2010 (January-December).

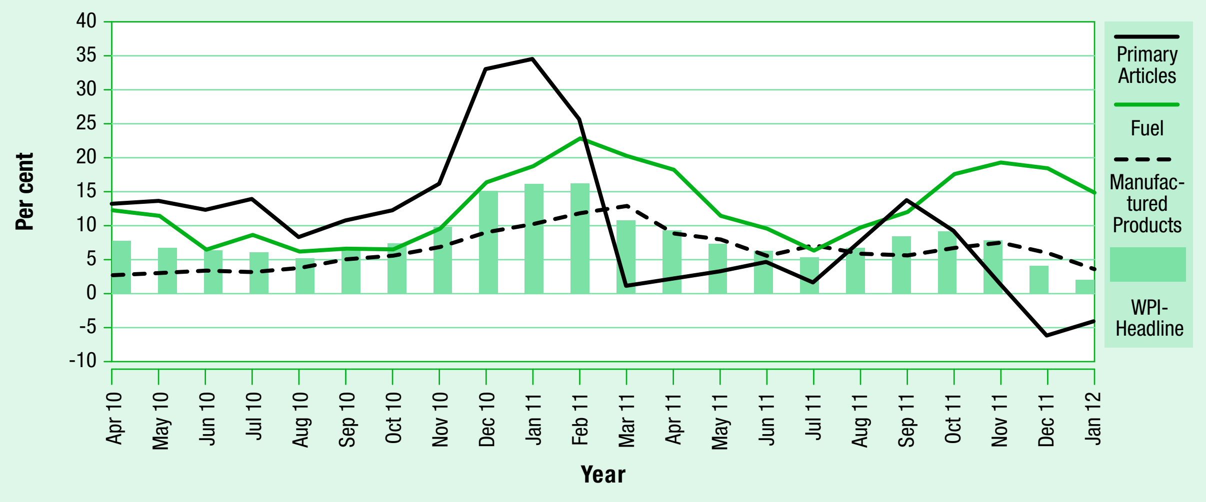
1.37 Compared to a relatively stable inflationary period in the earlier part of the last decade, average headline WPI inflation started to rise in 2008-9 and persisted. The pressure was mainly from primary and fuel products with average inflation in these commodities remaining continiously in double digits for a major period since 2008-9. In comparison, inflation in manufactured products remained relatively stable, dropping sharply in 2009-10 because of the global economic crisis and its impact in India, before it started to pick up and exceed its long-run average of around 5 per cent in early 2011-12. Among individual product groups, inflation in food products, beverages, textiles, chemicals, and basic metals remained elevated mainly on account of high global commodity prices.

1.38 WPI food inflation (weight 24.31 per cent) has significantly dropped from 20.2 per cent in February 2010 to 1.6 per cent in January 2012 mainly on the back of seasonal fall in fruit and vegetable prices and good harvest leading to lower inflation in cereals. The major drivers of food inflation during the current financial year were milk, eggs/ meat/ fish, gram, and edible oils. In comparison with last year when cereals, vegetables, and sugar were the main contributors to food inflation, the year 2011-12 witnessed higher contribution from manufactured food products, especially edible oils, due to higher global prices soyabean oil, palm oil, etc.

1.39 In the current financial year (2011-12), the gap between WPI and CPI inflation has significantly narrowed due to a fall in food inflation. Inflation based on CPI for industrial workers (IW), after remaining in single digit from August 2010 to August 2011, briefly touched double digits at 10.1 per cent in September 2011 before coming down to 5.3 per cent in January 2012. Food inflation for CPI-IW was 0.5 per cent in January 2012. WPI food articles (weight 14.34 per cent) inflation turned negative in January 2012.

1.40 The year-on-year inflation released recently by the CSO for CPI (urban), CPI (rural), and CPI (combined) was 8.25 per cent, 7.38 per cent, and 7.65 per cent respectively in January 2012. While a strict comparison is not possible, the inflation rate for CPI (rural) (7.38 per cent) released by the CSO for January 2012 is reported to be higher than CPI (rural labour) (5.27 per cent) released by the Labour Bureau, Chandigarh due to differences in coverage and weighting (consumption) patterns.

**Figure 1.2 Momentum (3-m-3 deseasonalized) in major subgroups of WPI**



## Monetary management

1.41 Reining in inflation and containing inflationary expectations were the dominating objectives of monetary policy during 2011-12. The RBI hiked the repo rate 13 times between March 2010 and January 2012, cumulatively by 375 basis points (bps). With supply-side factors feeding into food inflation and an uncertain economic scenario in advanced countries necessitating repeated liquidity injections by these countries to counter recessionary trends, the task of monetary policy calibration was particularly challenging. Sustained rate increases have, to an extent, impacted growth negatively. However, the period from December 2011 to January 2012 marked a reversal of the cycle with the RBI in its Third Quarter Review of Monetary Policy keeping the repo and reverse repo rates unchanged at 8.5 per cent and 7.5 per cent respectively. The cash reserve ratio (CRR), however, has been reduced from 6.0 to 5.5 per cent in order to ease the liquidity situation and aid revival of growth.

1.42 Significant changes in the operating procedure of monetary policy have been effected with the weighted average overnight call money rate made the operating target and the repo rate specified as the only independently varying policy rate. A new marginal standing facility (MSF) has been instituted under which scheduled commercial banks (SCBs) have been allowed to borrow overnight at their discretion, up to 1 per cent of their respective net demand and time liabilities (NDTL), at 100 bps above the repo rate. The revised corridor has been defined with a fixed width of 200 bps and the repo rate placed in the middle of the corridor and reverse repo rate at 100 bps below it. The RBI, as a one-time technical adjustment on 13 February 2012, has further aligned the bank rate with the MSF rate of 9.5 per cent.

1.43 During 2011-12, the growth rate in reserve money ($M_0$) has been 1.9 per cent (as on 10 February 2012) while broad money ($M_3$) growth has been 10.2 per cent (as on 27 January 2012). Year-on-year, non-food credit growth was 15.7 per cent at the end of December 2011. Liquidity conditions have generally remained in deficit during 2011-12, with the fiscal starting off with the liquidity adjustment facility (LAF) in absorption mode for a brief period, followed by reversion to deficit mode from April 2011. Some stress on liquidity emerged during June 2011 on account of quarterly advance tax outflows. The stress eased in July 2011 with, inter alia, redemption of a security amounting to around ₹ 37,000 crore. During the first half of 2011-12, the injection of liquidity under the MSF was limited to two occasions. Liquidity continued to be in deficit mode during November and December 2011, persisting up to January 2012. During 2011-12, the RBI addressed liquidity concerns via the use of standard tools, namely open market operation (OMO) purchases and measures including additional repo operations under the LAF in December 2011; and permitting banks to avail of funds on overnight basis under the MSF (against their excess statutory liquidity ratio [SLR] holdings) in addition to the existing facility that allows access to funds up to 1 per cent of their respective NDTL. To ease tightness in liquidity the RBI conducted OMOs aggregating over ₹ 70,000 crore over the period November 2011 to mid-January 2012.

## Financial Intermediation and Markets

1.44 The weak global economic prospects and continuing uncertainties in the international financial markets have had their impact on emerging market economies like India. Sovereign risk concerns, particularly in the euro area, affected financial markets for the greater part of the year, with the impact of Greece's sovereign debt problem spreading to India and other economies by way of higher-than-normal levels of volatility. The funding constraints in international financial markets could impact both the availability and cost of foreign funding for banks and companies, since the Indian financial system is bank dominated and banks' ability to withstand stress is critical to overall financial stability. Indian banks however remain robust, notwithstanding a decline in the capital to risk weighted assets ratio and spurt in non-performing asset levels in the recent past. Capital adequacy levels remain above the regulatory requirements.

1.45 Keeping in view progressive deregulation of interest rates, savings bank account interest rates were deregulated with effect from 25 October 2011, wherein banks will have to keep a uniform rate of interest for savings accounts with deposits up to ₹ 1 lakh, while differential interest rates could be set for savings deposits over ₹ 1 lakh. The deregulation is expected to improve the transmission of monetary policy. It is also expected to enhance the attractiveness of savings accounts and encourage thrift behaviour in the economy by bringing savings deposit rates in sync with changing market conditions.

1.46 Subdued foreign institutional investor (FII) inflows into the country led to a decline in Indian markets and contributed to the sharp depreciation of the rupee in the forex market, though much of the depreciation was due to 'flight to safety' by foreign investors, given the meltdown in Europe and inflation in emerging market economies. Moderation in the growth rate of the economy has also affected market sentiments. This moderation in growth is on account of several factors, including uncertainty in the global environment and the lag effect of monetary policy tightening. Qualified foreign investors (QFIs) were allowed to directly invest in Indian equity markets in January 2012. This was done to widen the class of investors, attract more foreign funds, reduce market volatility, and deepen the Indian capital market. Earlier, only FIIs/sub-accounts and non-resident Indians (NRIs) were allowed to directly invest in Indian equity markets.

1.47 In November 2011, the external commercial borrowings (ECB) policy was modified keeping in view developments in the global financial markets and macroeconomic conditions. The all-in-cost ceiling was enhanced and the proceeds of the ECBs raised abroad for rupee expenditure in India were required to be brought back immediately. The change in the all-in-cost ceiling came into force immediately and is applicable up to 31 March 2012, subject to review thereafter. Infrastructure development is key to long-term sustainable growth of the economy. However, infrastructure finance remains a constraining factor with heavy dependence on bank financing. Development of the corporate bond market is important for infrastructure development. While the introduction of credit default swaps is expected to help in the process, innovative steps are needed to make the corporate bond market a major component of infrastructure financing.

## International Trade

1.48 The resilience of India's trade can be seen from the fact that the growth of exports and imports, which was (-)3.5 per cent and (-)5 per cent respectively in 2009-10 as a result of the 2008 global economic crisis, rebounded to 40.5 per cent and 28.2 per cent in 2010-11. India not only reached pre-crisis levels in exports but also surpassed pre-crisis trends in export growth rate, unlike many other developing and even developed countries. India's share in global exports and imports also increased from 0.7 per cent and 0.8 per cent respectively in 2000 to 1.5 per cent and 2.2 per cent in 2010 (1.4 and 2.1 per cent as per the World Trade Organization [WTO]).

1.49 During the first half of 2011-12, India's exports witnessed a high growth of 40.6 per cent. However, since October 2011 there has been a deceleration as a result of the crisis originating in the periphery and spreading to the core economies in the euro area. In November 2011, export growth was at (-) 0.5 per cent and in December 2011 and January 2012, it was positive but low at 6.7 per cent and 10.1 per cent respectively. Cumulative exports were at US $242.8 billion, registering a growth of 23.5 per cent during 2011-12 (April-January). During April-December 2011, the export sectors that have done well are petroleum and oil products, gems and jewellery, engineering goods, cotton fabrics, made ups, electronics, readymade garments, and drugs.

1.50 Imports in 2011-12 (April-January) at US$391.5 billion registered a growth of 29.4 per cent. During this period, POL imports at US $ 118 billion grew by 38.8 per cent. Non-POL imports at US $ 273.5 billion grew by 25.7 per cent. Gold and silver imports of US $ 50 billion grew by 46.2 per cent. Non-POL and non-bullion imports, which basically reflect the imports of capital goods needed for industrial activity and imports needed for exports, valued at US $ 223 billion grew by 21.7 per cent. Trade deficit (on customs basis) increased by 8.2 per cent to US$ 118.6 billion in 2010-11 from US$ 109.6 billion in 2009-10. However, trade deficit for 2011-12 (April-January) at US $ 148.7 billion was 40.4 per cent higher than the US $ 105.9 billion in 2010-11 (April-January).

1.51 India has made progress in diversifiying its export and import markets. The share of Asia and the Association of South East Asian Nations (ASEAN) in total trade increased from 33.3 per cent in 2000-1 to 57.3 per cent in the first half of 2011-12, while that of Europe and America fell from 26.8 per cent to 19 per cent. This has helped India weather the global crisis emanating from Europe and America. The USA has been displaced by the UAE as India's largest trading partner, followed by China, since 2008-9.

## Balance of Payments (BoP)

1.52 The highlight of BoP developments during 2011-12 was merchandise exports of US$ 150.9 billion in the first half of the year, which represented an increase of over 40 per cent over the corresponding period in 2010-11. Imports of US$ 236.7 billion during April-September 2011 recorded an increase of 34.3 per cent over April-September 2010. The trade deficit was higher at US$ 85.8 billion (9.4 per cent of GDP) during the first half of 2011-12 vis-à-vis US$ 68.9 billion (8.9 per cent of GDP) in the first half of 2010-11. This was mainly on account of increase in international prices of imported commodities, namely oil and gold and silver during the first half of 2011-12.

1.53 The net invisibles surplus of US$ 52.9 billion (5.8 per cent of GDP) during the first half of 2011-12 was higher vis-à-vis US$ 39.3 billion (5.1 per cent of GDP) during April-September 2010. All broad categories of invisibles, that is services, transfers, and income, showed increase during the first half of 2011-12. The current account deficit increased to US$ 32.8 billion in the first half of 2011-12, as compared to US$ 29.6 billion during the corresponding period of 2010-11, which was mainly attributed to higher trade deficit.

1.54 Net capital flows at US$ 41.1 billion in the first half of 2011-12 remained higher as compared to US$ 38.9 billion in the first half of 2010-11. Under net capital flows, foreign direct investment (FDI) has shown considerable increase at US$ 12.3 billion during the first half of 2011-12 vis-à-vis US$ 7.0 billion in the corresponding period of 2010-11. Similarly, ECBs increased to US$ 10.6 billion during the first half of 2011-12 as against US$ 5.7 billion in the first half of 2010-11. Portfolio investment, mainly comprising FII investments and American depository receipts (ADRs)/global depository receipts (GDRs), however, witnessed large decrease in inflows to US$ 1.3 billion in the first half of 2011-12 vis-à-vis US$ 23.8 billion in the first half of 2010-11. However, net capital inflows as a proportion of GDP have shown moderation from 5.0 per cent in the first half of 2010-11 to 4.5 per cent in the first half of 2011-12. Net accretion to reserves (on BoP basis) during the first half of 2011-12 was lower at US$ 5.7 billion as compared to US$ 7.0 billion in the first half of the previous year mainly due to widening of the current account deficit.

## Foreign Exchange Reserves

1.55 In fiscal 2010-11, foreign exchange reserves increased by US$ 25.7 billion from US$ 279.1 billion at end March 2010 to US$ 304.8 billion at end March 2011. Of the total increase in reserves, US$ 12.6 billion was on account of valuation gains arising out of depreciation of the US dollar against major currencies and the balance US$ 13.1 billion was on BoP basis. In 2011-12, the reserves increased by US$ 6.7 billion from US$ 304.8 billion at end March 2011 to US$ 311.5 billion at end September 2011. Out of this total increase, US$ 5.7 billion was on BoP basis and the balance US$ 1.0 billion on account of valuation effect.

1.56 In the current fiscal, foreign exchange reserves rose and then declined. The reserves reached an all-time high of US$ 322.0 billion at end August 2011. However, they declined to US$ 311.5 billion at end September 2011. At end December 2011, reserves stood at US$ 296.7 billion and at end January 2012 at US$ 292.8 billion, indicating a decline of US$ 12.0 billion from US$ 304.8 billion at end March 2011. The decline in reserves is partly due to intervention by the RBI to stem the slide of the rupee against the US dollar.

## Exchange Rate

1.57 In the current fiscal, on month-to-month basis the rupee depreciated by 12.4 per cent from ₹ 44.97 per US dollar in March 2011 to ₹ 51.34 per US dollar in January 2012. On point-to-point basis, it depreciated by 16.2 per cent from ₹ 44.65 per US dollar on 31 March 2011 to ₹ 53.26 per US dollar on 30 December 2011. The rupee reached a peak of ₹ 43.94 on 27 July 2011 and a low of ₹ 54.23 per US dollar on 15 December 2011, indicating a depreciation of 19.0 per cent. Similarly, the monthly average exchange rate of the rupee depreciated by 11.5 per cent against the pound sterling, 9.1 per cent against the euro, and 18.7 per cent against the Japanese yen between March 2011 and December 2011.

## External Debt

1.58 India's external debt stock stood at US$ 326.6 billion at end-September 2011, recording an increase of US$ 20.2 billion (6.6 per cent) over end March 2011 estimates of US$ 306.4 billion. This increase was primarily on account of higher commercial borrowings and short-term debt, which together contributed over 80 per cent of the total increase in the country's external debt.

1.59 The maturity profile of India's external debt indicates the dominance of long-term borrowings. The long-term external debt at US$ 255.1 billion at end September 2011 accounted for 78.1 per cent of the total external debt, while the remaining 21.9 per cent was short-term debt. Government (sovereign) external debt stood at US$ 79.3 billion, while non-government debt amounted to US$ 247.3 billion at end September 2011. India's external debt has remained within manageable limits as indicated by the external debt to GDP ratio of 17.8 per cent and debt service ratio of 4.2 per cent in 2010-11. This has been possible due to an external debt management policy of the government that emphasizes monitoring of long- and short-term debt, raising sovereign loans on concessional terms with long maturities, regulating ECBs through end-use and all-in-cost restrictions, and rationalizing interest rates on NRI deposits.

## Fiscal Developments

1.60 Following two years of purposeful fiscal expansion, the Budget for 2010-11 resumed fiscal consolidation with a partial rollback of the stimulus. The outcome was substantial, with fiscal deficit declining to 4.8 per cent of GDP in 2010-11 from 6.5 per cent in 2009-10. The Budget for 2011-12 sought to carry forward the process of fiscal consolidation through a reduction in the fiscal deficit to 4.6 per cent of GDP. The Medium Term Fiscal Policy Statement indicated that this would be further continued, underscoring the commitment to fiscal consolidation for sustaining macroeconomic outcomes.

1.61 Economic Surveys 2009-10 and 2010-11 had analysed in some detail the macroeconomic dimensions of the fiscal stimuli to counteract the adverse impact of the global financial and economic crisis, using national accounts data. The recent revisions to GDP data indicate that demand slowdown in 2008-9 was sharper and GDP at constant market prices was placed at 3.9 per cent in 2008-9. This consisted of a contraction of 1.6 per cent in gross capital formation and deceleration in private final consumption expenditure. The fiscal expansion was manifest in growth of over 10 per cent and 14 per cent in government final consumption expenditure and 12.3 per cent and 4.5 per cent in capital formation by government in 2008-9 and 2009-10 in terms of constant 2004-5 prices. Besides, growth in indirect taxes minus subsidies, after declining to 14.7 per cent in 2008-9 and 10.4 per cent in 2009-10, rose to 28.7 per cent in 2010-11. The macroeconomic outcome of this expansion was the sharp rebound in growth of demand-side GDP (at constant market prices) to 8.2 per cent in 2009-10 and 9.6 per cent in 2010-11 from 3.9 per cent in 2008-9. This level of rebound was among the swiftest and highest in the global economy.

1.62 Globally, it might be recalled that most advanced economies had very little monetary space for responding to the crisis and sought recourse to fiscal policies to ease the recessionary tendencies. The Update of Fiscal Monitor of the International Monetary Fund (IMF) for January 2012 documents the extent of fiscal expansion around the world. The overall fiscal deficit went up from 2.0 per cent of GDP in 2008 to 6.7 per cent in 2009 following the large fiscal stimulus the worldover to alleviate the adverse impact of the global financial and economic crisis. After declining to 5.5 per cent of GDP in 2010, the fiscal deficit is projected to fall to 4.5 per cent in 2011 and 4.1 per cent in 2012.

1.63 Advanced economies as a group had larger deficits in both the pre-crisis and post-crisis periods according to the Update of Fiscal Monitor. While the fiscal deficit of advanced economies was 7.6 per cent of GDP in 2010 and projected to be 6.6 per cent in 2011; that of emerging market economies is placed at 3.6 per cent and 2.6 per cent respectively for these years. Among the major emerging economies, India's fiscal deficit at 8.9 per cent in 2010 and estimated level of 8.5 per cent in 2011 was among the highest. The projections firmly indicate that fiscal consolidation is taking place across nations since 2010. In India's case, the Monitor indicates that a larger correction is needed in terms of key fiscal indicators. It also projects the average interest rate-growth differential to be -5.1 per cent for the period 2011-16, which would enable favourable dynamics in terms of the debt-GDP ratio. The fiscal outcome in 2010-11 in India partly reflected that unique advantage in terms of a better-than-estimated reduction in debt-GDP ratio on account of this differential as well as the substantial fiscal correction arising from the higher level of nominal GDP. As a proportion of GDP, fiscal deficit of the central government fell from 6.5 per cent in 2009-10 to

4.8 per cent in 2010-11. With fiscal deficit of the states declining from 2.9 per cent of GDP in 2009-10 to 2.7 per cent in 2010-11, general government deficit declined to 7.9 per cent of GDP in 2010-11 from 9.4 per cent in 2009-10.

1.64 With the AE released in February 2011 indicating growth in real GDP at market prices to be 9.6 per cent in 2010-11, though there was some concern about industrial slowdown, the macroeconomic outlook at the time of the presentation of the Budget for 2011-12 was positive and supportive of the process of fiscal consolidation. However, as the year progressed the industrial downturn got prolonged and the persistence of inflationary pressures and monetary tightening led to a sharper demand slowdown. This had its impact on public finances with rising costs impairing profit margins and thereby affecting level of growth in corporate income tax and central excise. The higher outgo in terms of tax refunds, the lower levels of non-tax revenues and the state of the equities market that was inappropriate for achieving the planned disinvestment in the first nine months of the current fiscal have made the task of achieving the budgeted revenues in the current fiscal quite challenging. Global crude petroleum prices remained high and, given limited flexibility in domestic price setting, there has been some additional expenditure with implications for the levels of deficit – both revenue and fiscal. This is reflected in the Union Accounts data made available by the Controller General of Accounts for April-December 2011.

1.65 Union public finances are under some stress with revenue deficit at 93.1 per cent of the Budget Estimates (BE) and fiscal deficit at 92.3 per cent of BE in April-December 2011. In the first nine months, gross tax revenue has grown at a rate which is 5 percentage points lower than the year-on-year growth envisaged in BE 2011-12 over provisional actuals of 2010-11. This has been mainly due to lower growth in corporation taxes at 6 per cent as against the 20.2 per cent envisaged by BE 2011-12, partly attributable to the higher levels of refunds this year and a much-lower-than-targeted growth in excise duties. Given that there was a sizeable hike in expenditure in 2010-11, which was largely made possible by the higher-than-estimated receipts under non-tax revenues, the Budget for 2011-12 estimated a growth target of 4.9 per cent for total expenditure for the full year. Growth in total expenditure in the first nine months of 2011-12 was 13.9 per cent, which comprised a growth of 15.4 per cent in non-Plan expenditure and 10.8 per cent growth in Plan expenditure. Consequently, a slippage is likely in the revenue and fiscal deficits budgeted this year notwithstanding the efforts taken to minimize it.

1.66 The fiscal outcome of states (combined) in 2008-9 and 2009-10 was much better with fiscal deficit lower than 3.0 per cent of GDP and moderate levels of revenue surplus and revenue deficit. This was made possible by a year-on-year growth of 10.3 per cent and 9.3 per cent in tax revenue in 2008-9 and 2009-10 respectively. This was composed of 12.3 per cent and 12.8 per cent growth in states' own taxes and 5.5 per cent and 2.9 per cent growth in taxes devolved from the centre in 2008-9 and 2009-10 respectively. With higher levels of grants accruing to them as per the Thirteenth Finance Commission's recommendations, the revenue receipts of states (combined) were placed at 12.3 per cent of GDP in 2008-9. After remaining subdued even in the crisis-affected years of 2008-9 and 2009-10, growth in total expenditure has shot up to 22.1 per cent in 2010-11. As a proportion of GDP, total expenditure of the states was at 16.1 per cent. Even after this level of total expenditure, revenue and fiscal deficits were respectively placed at 0.3 per cent and 2.7 per cent of GDP in 2010-11. In BE 2011-12, fiscal deficit of states is estimated to come down to 2.2 per cent of GDP with revenue surplus at 0.2 per cent of GDP.

1.67 In Mid-Year Analysis 2011, it was indicated that the macroeconomic dimensions of fiscal policies are best understood with reference to fiscal aggregates at the level of consolidated general government. The actual outcome in terms of the deficits of consolidated general government has been much better than what is typically assessed during the course of the year. Fiscal deficit was less than 6 per cent of GDP in 2006-7 and 2007-8. It had increased in the crisis-affected years of 2008-9 and 2009-10 but declined to 7.9 per cent of GDP in 2010-11 and was budgeted at 6.9 per cent of GDP in 2011-12. While the likely slippage in the centre's fiscal outcome this year may push up the consolidated general government deficit, it may be moderated if states continue to perform well. This is essentially an exceptional year when a whole host of factors have turned out differently than was envisaged at the time of presentation of the Budget. A large fiscal correction, followed by a likely slippage (in the previous and current fiscal respectively) is somewhat in the nature of a cyclical fiscal adjustment; but going forward fiscal consolidation is likely to be anchored in a medium-term framework that mitigates such risks.

## Human Development

1.68 India is passing through a phase of unprecedented demographic changes. This 'demographic dividend' provides India greater opportunities but also poses a challenge. India still has a great distance to go in terms of human development indicators, especially those pertaining to helath and education. However, without taking away the importance of doing better, it may be noted that an analysis of the trends during 1980-2011 shows that although lower in HDI ranking, India has performed better than most countries in terms of average annual HDI growth rate.

### Trends in India's social-sector expenditures

1.69 Central government expenditure on social services and rural development (Plan and non-Plan) has consistently gone up over the years. It increased from 13.38 per cent of total central government expenditure in 2006-7 to 18.47 per cent in 2011-12. Central support for social programmes has continued to expand in various forms although most social-sector subjects fall within the purview of the states. Expenditure on social services as a proportion of total expenditure increased from 21.6 per cent in 2006-7 to 24.1 per cent in 2009-10 and further to 25 per cent in 2011-12 (BE). As a proportion of the GDP, this share increased from 5.57 per cent in 2006-7 to 7.34 per cent in 2010-11, helping India face the global crisis without much adverse impact on the social sector. In 2011-12 it is expected to be 6.74 per cent as per the BE. While expenditure on education as a proportion of GDP increased from 2.72 per cent in 2006-7 to 3.11 per cent in 2011-12 (BE), the expenditure on health increased from 1.25 per cent in 2006-7 to 1.30 per cent in 2011-12 (BE). These programmes also help in the betterment of health and education of the population, besides contributing to more inclusive development.

### Employment

1.70 The Eleventh Five Year Plan (2007-12) aimed at generation of 58 million work opportunities. The NSSO quinquennial survey has reported an increase in work opportunities to the tune of 18 million under the current daily status (CDS) between 2004-5 and 2009-10. However, the overall labour force expanded by only 11.7 million. This was considerably lower than in comparable periods earlier and can be attributed to the much larger retention of youth in education and also because of lower labour force participation among working-age women. In all likelihood this is an indication of improving economic conndtions. As a result, unemployment in absolute terms declined by 6.3 million. The lower growth in the labour force is not expected to continue, as educated youth are expected to join it in increasing numbers during the Twelfth Plan and in the years beyond. This means that the pace of job/livelihood creation has to be greatly accelerated. The Twelfth Plan Approach Paper therefore lays greater stress on skill building which can be viewed as an instrument for improving the effectiveness and contribution of labour to overall production.

1.71 A comparison between different estimates of unemployment in 2009-10 indicates that the CDS estimate of unemployment is the highest (Table 1.8). The higher unemployment rates according to the CDS approach compared to the weekly status and usual status approaches indicate a high degree of intermittent unemployment. Interestingly, urban unemployment was higher under both the usual principal and subsidiary status (UPSS) and current weekly status (CWS) but rural unemployment was higher under the CDS approach. However, overall unemployment rates were lower under each of the measures of unemployment vis-à-vis 2004-5.

1.72 The Employment Situation in 2010-11 as per Quarterly Survey Reports (July to September 2011) indicates that the upward trend in employment generation since July 2009 has been maintained. The results for selected sectors, i.e. textiles including apparel, leather, metals, automobiles, gems and jewellery, transport, information technology (IT) / business process outsourcing (BPO) and handloom/

**Table 1.8 : All-India NSS 66th Round Rural and Urban Unemployment Rates**

| Sl. No. | Estimate | Rural 2009-10 | Urban 2009-10 | Total 2009-10 | Total 2004-05 |
|---|---|---|---|---|---|
| 1 | UPSS | 1.6 | 3.4 | 2.0 | 2.3 |
| 2 | CWS | 3.3 | 4.2 | 3.6 | 4.4 |
| 3 | CDS | 6.8 | 5.8 | 6.6 | 8.2 |

***Source*** **: NSSO**

powerloom show that overall employment in September 2011 over September, 2010 increased by 9.11 lakh, with the highest increase recorded in the IT/BPO sector (7.96 lakh) followed by metals (1.07 lakh), automobiles (0.71 lakh), gems and jewellery (0.08 lakh), and leather industries (0.07 lakh).

### Unique Identification Authority of India (UIDAI)

1.73 Implementation of the Unique Identification (UID) project has progressed and about 13 crore Aadhaar numbers (UID numbers) have already been generated. The Aadhaar number has been recognized as valid proof of identification /proof of address for obtaining new LPG connections. This will considerably simplify the process of disbursement of welfare funds by government departments.

## Sustainable Development and Climate Change

1.74 Sustainable development is a difficult balancing act in countries especially with low incomes. Society has to simultaneously accomplish three things with trade-offs: improve economic well-being with social justice for the present generation, yet manage with more restrained use of land, air, forest, energy and water resources, and protect the interests of future generations. The choices are more difficult in developing countries—because they affect people's livelihoods. For such a 'stewardship' to succeed, therefore, it has to respond to people's needs, share information on choices and costs, and ensure participation and ownership. This, it is hoped, will be kept at centre stage of the Second Earth Summit in Rio in June 2012 that is likely to take stock of sustainable development priorities globally.

1.75 India has done well on all these counts of stewardship over the past decades. It has followed a conscious path in response to the key environmental issues. Sustainable development in terms of environmental concerns has been a recurring theme in Indian policy and planning. Economic reforms since the 1980s have accelerated growth and incomes. Social well-being has improved broadly, as measured by gains in life-expectancy and other indicators. India has stepped up protection of its natural environment such as its forests. India's particular development path has relied on fast-growing services, which has helped reduce the emissions intensity of its growth path and accelerate literacy and education. While India could have done even better, much has been accomplished. The reasons behind such progress are undoubtedly strong institutional underpinnings: democratic participation, Constitutional protection of social justice, steady accretion of environmental laws and regulations, multiple actors, markets, and expanding government programmes and policies.

1.76 The challenges ahead are, nevertheless, large. The 2009 State of the Environment Report by the Ministry of Environment and Forests (MOEF) clubs the issues under five key challenges faced by India, which are climate change, food security, water security, energy security, and managing urbanization. Broad-based economic and social development is ultimately the answer for greater environmental sustainability. Economic pricing of energy and other resources will be key to switching to a more sustainable development path. Deployment of appropriate technologies is certainly going to be crucial. At the same time, stepped-up public spending on energy access and other basic necessities for the poor will be required.

1.77 The challenge of climate change has been receiving intense political attention both at domestic and international levels. Climate change is primarily caused by the building up of greenhouse gases (GHGs) in the atmosphere. With climate change, the type, frequency, and intensity of extreme events, floods, and droughts are expected to increase. Thus climate change represents additional stress on ecological and socio-economic systems that are already facing tremendous pressure due to haphazard economic development. Hence, addressing climate change is a major challenge in terms of policies and resources needed to address it at domestic and international levels.

1.78 Internationally the United Nations Framework Convention on Climate Change (UNFCC, the Convention) was set up in 1992 and entered into force in 1994. Although global in scope, it differentiated the commitments/responsibilities of parties on the basis of respective capabilities, economic structures, and resource base and on the basis of the principle of 'equity' which is at the core of the climate change debate. The Convention lays down binding commitments for the developed countries, taking into account their historical responsibilities. It recognizes that economic and social development and poverty eradication are the 'first and overriding priorities' of developing countries.

1.79 Climate change is a complex policy issue with major implications in terms of finance. All actions to address climate change ultimately involve costs. Funding is vital for countries like India to design and implement adaptation and mitigation plans and projects. Lack of funding is a large impediment to implementing adaptation plans. The scale and magnitude of the financial support required by developing countries to enhance their domestic mitigation and adaptation actions are a matter of intense debate in the multilateral negotiations under the UNFCCC. The Convention squarely puts the responsibility for provision of financial support on the developed countries, taking into account their contribution to the stock of GHGs in the atmosphere. Given the magnitude of the task and the funds required, domestic finances are likely to fall short of the current and projected needs of the developing countries. Global funding through the multilateral mechanism of the Convention will enhance domestic capacity to finance the mitigation efforts.

1.80 The recently held Durban Climate Change Conference from 28 November to 10 December 2011marks an important step forward in the climate change negotiations (see Box 12.6 of Chapter 12 for details). The Durban outcomes made significant contribution as they established the second commitment period of the Kyoto Protocol and operationalized some of the key Cancun agreements related to a Green Climate Fund (GCF), Technology Mechanism (TM), and Adaptation Framework. The Durban outcomes also opened a window for discussions on the post 2020 arrangements for the global climate change regime for which the Durban Platform has been launched. Though India and other developing countries came under tremendous pressure at Durban, India took the lead in ensuring that the new arrangements are firmly anchored in the Convention and are based on the principles of 'common but differentiated responsibilities and equity'.

## PROSPECTS, SHORT TERM AND MEDIUM TERM

1.81 The financial crisis in Europe, along with certain exogenous shocks like the Japanese nuclear disaster, has resulted in a sharp global economic slowdown during 2011-12. When this happens so quickly after a recession—the last one being in 2008-9—it is not easy to deal with. Most of the standard and well-known policies are already used to near capacity and a second dose can backfire. The entire world, especially Europe, is treading with caution and working on devising novel cures for the problems on hand. Thanks to India's rapid growth over the last two decades and growing integration with the world, it can no longer be impervious to global developments. Not surprisingly, the Indian economy has also been adversely affected and its GDP growth is likely to decline to 6.9 per cent during the current year, somewhat mirroring what happened in 2008-9, when growth was 6.7 per cent; and the pressure is on for the nation to improvise policies to revive growth.

1.82 There is no doubt that a part of India's slowdown is rooted in domestic causes. The persistent inflation that remained over 9 per cent for much of the year and needed to be tamed played a role. There were also the pressures of democratic politics, which slowed reforms. Keeping these factors in view, it seems reasonable to endorse the CSO's AE of 6.9 per cent growth for this year. Calculations based on tracking several statistical indicators and projections of incremental capital-output ratios lead to a forecast of the growth rate of real GDP for 2012-13 to be 7.6 (+/-0.25) per cent.

1.83 The main reason for the recovery to be initially slow is the slight decline in investment rate. In the third quarter of 2011-12, gross fixed capital formation as a ratio of GDP was 30 per cent, down from 32.3 per cent one year ago. But as fiscal consolidation gets back on track, savings and capital formation should begin to rise. Moreover, with the easing of inflationary pressures in the months to come, there could be a reduction in policy rates by the RBI, which would encourage investment activity that could have a positive impact on growth. These factors, along with the fact that India's investment rate at 35.1 per cent, is still an impressive figure, should result in growth consolidating in 2012-13 and picking up rapidly thereafter. Preliminary calculations suggest that the growth rate of GDP in 2013-14 will be 8.6 per cent. Long-term forecasts of course always come with a larger margin of error. These projections are based on assumptions regarding factors like normal monsoons, reasonably stable international prices, particularly oil prices, and global growth somewhere between where it now stands and 0.5 per cent higher. A deviation from these situations would have an impact on the growth trajectory of India. However, thanks to 15 years of robust growth and nearly a decade of over 30 per cent investment rate, the economy now has enough resilience for an optimistic view that India can be the leading engine of global growth.

1.84 Agricultural growth in the Eleventh Five Year Plan has been less than the target of 4 per cent despite a clear improvement compared to the previous plan periods. Though agriculture has now shrunk as a proportion of GDP to 13.9 per cent, as is only to be expected of a growing economy, it is vital sector and provider of livelihood for more than 50 per cent of the population. How this sector performs also has large implications for overall prices and, hence, it is a sector deserving of special attention. The area under foodgrains production has declined over the last three decades. That in itself is not worrying but what is of concern is the low productivity of Indian agriculture. In yield parameters, India is lagging behind global levels in most crops. Concerted and focused efforts are required for addressing the challenge of stagnating productivity levels in agriculture. A holistic approach, simultaneously working on agricultural research and development, dissemination of technology, and provision of agricultural inputs such as quality seed, fertilizers, pesticides, and irrigation, would be important. Above all, the need is to raise investment in agriculture. Specifically there is a need to promote horticulture, fisheries, livestock farming, poltury and related activities by raising both public and private investment in these sectors. Furthermore, higher investment will be required in watersheds development, contour-bunding and water harvesting structures. Some of these activities could be taken up under MNREGA.

1.85 It is also important to understand that productivity itself will get a fillip if the supply chain from farm to consumer can be improved. This will lead to farmers getting a higher price for their products and will incentivize them to invest and produce more. The crux of an improved supply chain is not for government to try to provide this directly by the public service delivery authorities but to take policy steps that facilitate private players to provide this vital service. A lot of these facilitating policies simply consist of altering rules to allow individuals and firms to enter into this business and cleaning up the regulations so that people do not unnecessarily have to seek permission at every juncture of business and trade. This theme recurs later in the Survey.

1.86 The industrial sector performed poorly this year and the share of industry in the GDP, which had peaked at 28.7 per cent, has now retreated to 27 per cent. This is an adverse move for an emerging economy. It is expected that this decline will gradually get reversed on its own, starting in 2012-13. However, industry is such an important driver of an emerging economy's growth and provider of jobs that special effort needs to be made to get this sector growing much more rapidly than it has done this year. One simple clue lies in the fact that Indian services, such as information technology (IT) and financial services, have done very well over the last two decades and the services sector, having been largely outside of the tax net, did not have to interact much with the state machinery and was also less affected by infrastructural handicaps since a lot of services do not need freights and ports. This suggests that the manufacturing and industry can be helped by improving the infrastructure and lessen the need for interfacing with administration. This is a sector strong enough to take off on its own; what is simply needed is to provide an enabling business environment. In this regard, the National Manufacturing Policy, as a first dedicated policy measure for manufacturing is expected to provide a major impetus to the manufacturing sector of the Indian economy. The National Manufacturing Policy, while adequately addressing the concerns relating to labour welfare and environmental conservation, attempts to simplify business regulations and certification to reduce transactions costs for industry and improve its competitive position.

1.87 In 2010-11 and 2011-12, there is a slight moderation in services growth. This is mainly due to the steep fall in growth of public administration and defence services, creating some fiscal space for the government. Growth in trade, hotels, and restaurants is more robust at 11.2 per cent. If interest rates remain elevated, there would be some concern about growth in real estate, ownership of dwellings, and business services which has started decelerating. The outlook for some of the services in the economy is also linked to the global prospects. While software services exports have continued to be steady, the unfolding events in the euro area could lead to some sluggishness in this sector. The growth in fair-weather business services which has already shown signs of deceleration may not get better. Among the other two major services, transportation has already been affected with the Baltic dry index at an all-time low, though this may be of a passing nature. While travel and tourism could also be affected, it could also lead to a shift in tourist inflow pattern with increased inflow of holiday backpackers searching for cheaper destinations like India. The rise in tourists from South Asia, East Asia, and South East Asia could further help this sector.

1.88 Monetary policy remained focused on controlling inflation and anchoring inflationary expectations, with 13 adjustments in policy rates since March 2010. This had a short-term slowing effect on growth, as was anticipated. But it also contributed to moderating inflation to around 6.5 per cent by March. Vigilance will nevertheless be required and steps need to be taken to quickly deal with any unexpected developments and global shocks such as increases in the price of crude oil.

1.89 The recent regulatory prescriptions for European banks have brought in fears of deleveraging. Indian banks are not expected to have any direct impact on account of their negligible exposure to the troubled zone. However, there could be indirect impact on account of funding pressures. The scope for countercyclical financial policy could be explored in financial regulations in order to minimize the negative impact of accumulated financial risks. This will go a long way in providing needed stability to the financial system.

1.90 As indicated earlier, slippage is likely in the fiscal outcome this year in respect of the centre; however, the states combined are likely to be on track. The less-than-budgeted fiscal outcome owes to fiscal risks mainly emanating from assumptions regarding international crude prices and below target revenue generation. Going forward, fiscal consolidation would need to be anchored in a framework that addresses some of the risks like rise in crude prices and the chapter that follows details the options in this regard, which are essentially micro-foundational reforms for achieving desired macroeconomic outcomes.

# Micro-foundations of Macroeconomic Policy

2

CHAPTER

*For the Indian economy this was a year of disappointing growth performance. During each of the previous two years, 2009-10 and 2010-11, India's gross domestic product GDP (at factor cost) grew by 8.4 per cent per annum. Further, in 2010-11, the GDP at market price grew by a remarkable 9.6 per cent. This performance, coming in the wake of one of the biggest global recessions in history, was outstanding. It fed expectations that India's short economic downturn in 2008-9, when the GDP grew by 6.7 per cent, was behind us and the economy was on its way to full-fledged recovery. That did not happen. The index of industrial production (IIP) dropped sharply in April 2011 and it has, thereafter, been seven months of indifferent performance. The services sector continued to do well and agriculture recovered but the mood in the economy was increasingly being set by the industrial sector and, in particular, manufacturing, which constitutes 75.5 per cent of industrial value added. Overall GDP growth declined to 7.7 per cent in the first quarter (Q1) and then to 6.9 per cent in Q2 of 2011-12. The advance estimates of the Central Statistics Office (CSO) has placed growth in real GDP at 6.9 per cent in 2011-12. This is a somewhat curious situation because how we evaluate these numbers depends critically on the analyst's perch. Given the global despondency, and steadily deteriorating global growth scenario, these numbers look good rather than bad, especially if one's perch were to be in Europe. However, compared to how India has fared since 2003 and, especially, since 2005, they are disappointing.*

2.2 Lest we fall into the trap of complacency, it is better for Indian policymakers to use the latter perspective as the benchmark and ask what caused the slowdown and what we as planners and architects of policy can do to pull India back to where it was—among the three or four fastest growing economies in the world—so that these last seven or eight months go down as a small downswing and we quickly pull back to rapid, inclusive development. Such a task is entirely within the realm of the feasible. The only risk is that, when it comes to the economy, there is always a fire to fight. It is important to realize that if, however, all our time is spent fighting fires, it is likely that, in the long run, there will be more fires to fight because not enough time and effort would have been spent on research and development of non-flammable materials. Hence, to craft good policy, something that stands us in good stead not just the next day but puts the nation on a stable path to a better future, there is need to occasionally step back, take stock of what we are doing and how, dip into contemporary research, evaluate old and new policy initiatives, and try to innovate. The **Economic Survey** is meant to do some of this and, especially, Chapter 2 over the last few years has been devoted to the task of taking a deeper look at the state of the economy and suggesting policies to put India on a surer footing for sustained, inclusive growth and all-round development.

2.3 Accordingly, the chapter is devoted to some of the most pressing problems that arose during the year—such as inflation, slowdown in industrial growth, exchange rate fluctuations triggered by Standard and Poor's (S&P's) downgrading of the US sovereign rating, the balancing act between monetary and fiscal policies—and some of the challenges we face this year as a consequence of it being the start of a new Five-Year Plan— including laying the foundations for major infrastructural investment, building human capital, and eradicating poverty and malnutrition. All these topics are addressed in one form or the other throughout this Survey. In the present chapter, they are investigated at a more micro-foundational level and with an eye to presenting new ideas for research and actual policy. In India, when policies have failed, they have done so more often because of faulty implementation and fault lines in the detail rather than in the broad conception. The error has usually been in misreading the incentives and behavioural traits of the individuals who are to benefit from the policies and those who are supposed to carry out their day-to-day functioning. Fortunately, this is beginning to change both in the discipline of economics as well as in the design of policies in India. There is increasing recognition that flawed micro-foundations can devastate the best of macro intentions.

## Inflation And Growth: Monetary and Fiscal Policies

2.4 Fiscal year 2011-12 began with inflation precariously close to double digits. Wholesale price index (WPI) inflation in April 2011 was 9.74 per cent, and food inflation 8.95 per cent, showing little sign of easing. Since high inflation had begun in December 2009, this was a matter of major concern, leading observers to ask if this was the new normal we would have to get used to. Government continued to fight this malaise with numerous calibrated steps, which constituted a combination of policies to improve supply, especially of food and basic agricultural products, and curb fiscal and revenue deficits. Independently, the Reserve Bank of India (RBI) tightened monetary policy. It would be imprudent to claim that we got all the policies right. There can be important questions raised as to whether the government did enough on fiscal consolidation even allowing for the fact that this was a difficult year and whether the RBI was right in its use of interest rate policy in the current global scenario where industrialized nations are maintaining interest rates close to zero. Unlike some branches of economics, such as the theory of auctions, where economics provides hard and usable techniques akin to engineering principles, monetary and fiscal policies are part science and part intuition and common sense.

2.5 What is clear is overall, the package worked. Inflation began coming down from December 2011. Food inflation was down to around zero and general WPI inflation in January 2012 was 6.55 per cent. While the battle against inflation had some slowing down effect on growth, as we knew in advance would happen, there were no signs of major long-term damage or a rise in unemployment. What makes the inflation story heartening is that, after several months, government is in a position to turn its attention more exclusively to inclusive growth. As for inflation, we need to keep a watch, because we are not yet fully out of danger, and work to gently bring it down all the way below 5 per cent. But government's primary concern now has to be to advance the economy's productivity and improve income distribution. This means that during the coming year all hands have to be on growth.

2.6 The handling of India's inflation challenge consisted of a careful combination of effort on the part of the RBI and government, including the Ministry of Finance and several other ministries, along with advisory support by the Inter-Ministerial Group (IMG) on Inflation. There was action on several fronts—monetary, fiscal, and supply chain management to improve the movement of goods from farms to households. There were multiple policy ideas on the table. While that may have concerned some observers, in truth, what would have been more worrying is if there was total unanimity. There are some fields of economics where knowledge is well-settled and general agreement in these areas is of no surprise. But there are domains of economics where even researchers working at the frontline do not have consensus solutions. In such areas, to pronounce with certainty is to display ignorance. As Wislawa Szymborska, in her Nobel lecture, pointed out, 'If Isaac Newton had never said to himself, "I don't know," the apples in his little orchard might have dropped to the ground like hailstones and at best he would have stopped to pick them up and gobble them with gusto.'

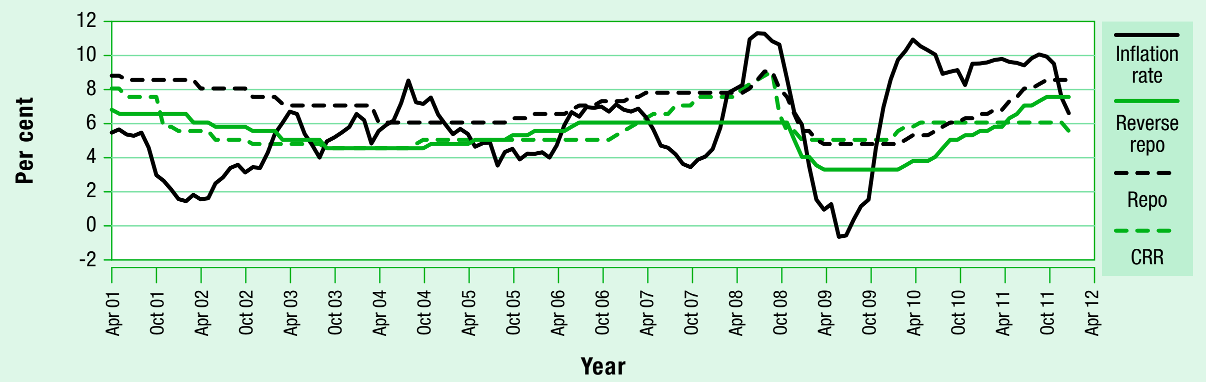
2.7 Before turning to macroeconomic policy, it is useful to recount the importance of supply management in controlling the volatility of prices, especially of perishables, such as most food items. The fiscal year 2011-12 saw several initiatives to improve agricultural productivity and management of supply chains. In the last Budget, ₹ 400 crore was allocated to promote green revolution in eastern India and ₹ 300 crore to boost production of pulses. These have yielded results and have contributed to the containment of food price inflation. There has also been special effort to improve foodgrain storage facilities, so that India can be more self-sufficient in food. The idea is to (1) procure basic foodgrains in order to make these available to poor and vulnerable households through various programmes, such as the targeted public distribution system (TPDS) and mid-day meal schemes, and also to (2) make sure that we build up our stocks in years of bounty and offload these in years of shortage. This is vital to stabilize prices from one year to another and for this, in turn, we need additional storage facilities.

2.8 The IMG on Inflation recommended several steps for improving supply chains from the farmer to the consumer. In a Position Paper, the IMG pointed out that it was often the case that for tomatoes farmers got a price of ₹ 3 per kg, while consumers paid ₹ 15 per kg. It recommended that we amend our Agricultural Produce Marketing Committee (APMC) Acts in order to cut down on the large middleman price margin. It recommended that one way to improve the supply chain and benefit farmers is to allow foreign direct investment (FDI) in multi-brand retail. The IMG argued that if this was permitted within a carefully crafted regulatory framework, there could be large gains for farmers and also for ordinary consumers. Further, it could create such large expansion of the retail sector in India that, eventually, even the small, middle traders would benefit. The argument is that, while the price margin between farm gate and retail would decline, the overall size of the retail business would increase sufficiently, so as to benefit middle traders by virtue of the larger volume of business. These ideas are now in the public domain for discussion and eventual policy action. In addition, there is need to ensure that there is free movement of agricultural products from one state to another.

2.9 Macroeconomic policymaking entails a mix of science and intuition. To ignore either of these would be a mistake. We need to marshal the best scientific knowledge available and study the microeconomic foundations of these macroeconomic concerns and then blend them with intuition and commonsense to craft policy. In India, monetary policy instruments typically consist of the repo rate, the cash reserve ratio (CRR), and some other occasional interventions, like open market operations and changes in savings bank interest rate policy, which may or may not be construed as monetary policy. It may be pointed out that savings bank interest rates have been deregulated since October 2011. Further, since the RBI announced earlier this year that the spread between the repo and the reverse repo rates will, now on, be held fixed at 100 basis points, those two instruments are now basically one instrument.

2.10 The question of interest is: How sharp are the connections between these instruments of control and the object of control, namely the WPI inflation rate? In answering this, Figure 2.1 is suggestive. In this figure, the two most important monetary policy instruments, the repo rate and the CRR, along with the target variable, WPI inflation, are displayed. As will be obvious by eyeballing the graph, the correlation between the policy instruments and inflation is slender. If we take the data underlying the graphs and subject these to careful statistical analysis by putting in lags, we will see that the policy instruments do have an impact on inflation with a lag. This is corroborated by careful studies done in industrialized nations. Nevertheless, there is plenty of white noise and the correlations are far from perfect. So much

**Figure 2.1 Policy rate changes and inflation**



so that there is room for a multiplicity of opinions about what constitutes optimal control (see Box 2.1). This highlights why we need sustained research in this field. It is testimony to India's commitment to openness that many different kinds of advice and schools of thought on this subject were put on the table.

2.11 The RBI increasingly voiced concern that the fiscal deficit that the government was tolerating was too high and made its task of controlling inflation harder. There were some in government who felt that the monetary tightening, successively 13 times, was not having adequate impact on inflation and the hardening interest rates were instead impacting more on growth; and that this needed rethinking because we were living in a world in which industrialized nations were maintaining near-zero interest rates, thereby creating a propensity for inefficient interest-rate arbitrage. The well-demarcated bifurcation of responsibility means that, in the end, the RBI has to independently decide what to do regarding monetary policy and the Ministry of Finance has to decide on fiscal policy. In keeping with this architecture of decision-making, each entity took account of the ideas on the table and took independent decisions in their respective zones. And it worked well. As remarked earlier, inflation has gradually eased off and without any major rise in unemployment.

2.12 This is not the end of the story; over the last few months growth has slowed and the government's fiscal balance is under strain. It can be legitimately argued that at a time when the risk of a second-dip recession in the world and an economic slowdown in India seems genuine, we have to be restrained in pruning the fiscal deficit in order not to exacerbate immediate growth deceleration. So this could not

## Box 2.1: Macroeconomics, Empirically Founded

Our understanding of the empirical foundations of monetary policy has undergone a virtual paradigm shift with the arrival of a new statistical tool, vector autoregression (VAR), developed by Christopher Sims. VAR allows us to study the interrelationships between a multiplicity of variables and their movements over time and makes it possible for us to get as close to causal connections as reality permits. By using this technique, researchers have been able to tease out the causal links between macroeconomic policy variables and inflation, something that to the naked eye looks quite hopeless since macroeconomic data come with so much white noise.

Studies using VAR and US data show that monetary shocks administered by the central bank in the form of altering the interest rate—the Federal fund rate in the case of the US—do impact monetary variables like the inflation rate, even though the time lags are very large and, also, the impact eventually tapers off. Similarly, positive spending shocks by government and sudden reductions in the tax rate can have a positive, albeit temporary, impact on real growth.

Seminal work by Thomas Sargent and his co-authors has shed light on the relation between inflation and unemployment. There seems reason to believe that, in the short run, the standard Phillips curve wisdom, namely that bringing down inflation tends to raise unemployment, is valid. However, in the long run there is little impact of this on unemployment. In other words, the impact of a change in inflation on unemployment is temporary. Unemployment eventually returns to where it was.

Research using these modern techniques has also enabled us to analyse the interconnections between different kinds of macroeconomic policies. Work by Sargent and Wallace, for instance, shows how monetary and fiscal policies are actually interlinked. Large fiscal deficits create the need for seigniorage; and since monetary policy can generate seigniorage, they create pressure on the central bank to use monetary interventions.

Unfortunately, most of these studies are based on US or European experience. While they show that the broad contours of these relationships are common to these nations, there are also some variations. This suggests the need for greater research using Indian data, especially since the differences may be more marked between a fully industrialized nation and an emerging economy. Also, with globalization occurring in leaps and bounds, the economic structure of the world is changing and it is conceivable that policies that worked earlier may not have the same efficacy or may need modification. At the level of national policy even minor improvements can have mega impacts on the well-being of the people. This simply underlines the need for more fundamental research in India. For the purely deductive theorems of economics it does not matter where they occur. But policy-related research can be very context-sensitive and it is imperative that India strengthens its independent capacity in this.

***References***: [1] Royal Swedish Academy of Sciences (2011), 'Empirical Macroeconomics,' *Scientific Background on the Sveriges Riksbank Prize in Economic Sciences in Memory of Alfred Nobel 2011*. [2] Sargent, T. J. (1971), 'A Note on the "Accelerationist" Controversy', *Journal of Money, Credit and Banking*, vol. 3. [3] Sargent, T. J. and N. Wallace (1981), 'Some Unpleasant Monetarist Arithmetic', *Federal Reserve Bank of Minneapolis Quarterly Review*, vol. 5. [4] Sims, C. (1992), 'Interpreting the Macroeconomic Time Series Facts: The Effects of Monetary Policy,' *European Economic Review*, vol. 36. [5] Gali, J. and M. Gertler (1999), 'Inflation Dynamics: A Structural Econometric Analysis', *Journal of Monetary Economics*, vol. 44. [6] Blanchard, O. and R. Perotti (2002), 'An Empirical Characterization of the Dynamic Effects of Changes in Government Spending and Taxes on Output', *Quarterly Journal of Economics*, vol. 117.

be the year of sharp fiscal tightening, even though the government considers it an imperative on the path of fiscal consolidation. Likewise, the RBI argued that in a year of high inflation, to let go on interest-rate tightening would give signals to market players that would not help. Luckily, the collective discussion and well-bifurcated policymaking domains have worked well, even though there are lessons to take away.

2.13 In the interest of medium- to long-term growth, it is important for us to bring the fiscal deficit down. While an expanded deficit can boost consumption and economic growth, this is medicine akin to antibiotics. It is very effective if properly used and in limited doses, but can cause harm if used over a prolonged period. Hence, government's aim must be to effect rapid fiscal consolidation. A large deficit over a long period tends to squeeze out the private sector from the credit space. This dampens private investment and productivity and, more significantly, worsens the options of the inflation-growth mix available to government. Research, dating as far back as 1958, has shown that when a nation works to bring down inflation, unemployment tends to rise and the growth rate tends to drop. While subsequent research has added plenty of caveats and provisos to this, the broad idea remains intact. When tackling inflation, government has to choose between different inflation-growth (or inflation-unemployment) pairs. And the feasible contour of these pairs is such that (in the short run) lower inflation means slower growth and possibly more unemployment. What sustained, large fiscal deficits do is to shift this entire contour such that the available options deteriorate. A particular level of inflation is now accompanied by a lower level of growth (or higher unemployment) than was the case earlier. Hence, if we want to keep inflation down and post robust growth, we have to aim for rapid fiscal consolidation.

2.14 The principal way in which this has to be achieved is by raising our tax-GDP ratio and cutting down wasteful expenditures. The centre's gross tax-GDP ratio (Budget Estimates [BE]) in 2011-12 stood at 10.5 per cent. This is below what we had achieved in the past and all effort has to be made to raise this. Our aim must be to cross 13 per cent by the last year of the next Five Year Plan period, which is 2016-17. The government has taken the position that in a nation with widespread poverty and malnutrition, the state has to take direct responsibility for eradicating the worst forms of such deprivation. It is worth reminding ourselves that, while growth is extremely important, its value is as an instrument for human development, for eradicating poverty. We take the view, in the spirit of what Mahatma Gandhi had urged us, that, in the end, a society ought to be judged by how its poorest segment fares.

2.15 This critical task of inclusion cannot be left to the free market. The untrammelled laws of the market play an important role in growth and efficiency, but they do not have a natural propensity to reach out to the poor and vulnerable. That has to be the responsibility of government. In keeping with this principle, government has mandated the commitment to provide basic needs, like food, education, and health services, to the poor (see Box 2.2). Several progressive legislations, enacted or about to be enacted, address these concerns. At the same time, it is important to remember that in devising the mechanisms for delivering these benefits, we have to utilize the forces of the market, not ignore them. We have to use the incentives of private agents to deliver on these services. For government the role has to be that of enabler. To try to deliver all these benefits by using the machinery of the state and the bureaucracy will be to create untenably large transactions costs and corruption. Good economic policy is all about choices. To be stubborn against the inevitable is to court failure, as Oscar Wilde did in the famous though arguably apocryphal story, in which, moments before his death in a cheap Paris hotel, he insisted that the wall-paper was so awful that either it would have to go or he would.

2.16 The simple rule that emanates from this is that for most of these benefits it is best not to tamper with market prices. Almost invariably the laws of the market end up getting the better of the policymaker. As far as possible, benefits should be delivered by directly empowering the poor and letting them choose for themselves. In the case of food subsidy, for instance, the view that the government takes is that it wants a law that ensures that basic needs of food are met for the entire population, with direct government intervention and subsidization in the case of the poor and the vulnerable. However, instead of having the government acquire all the food and then giving the subsidized food to designated stores to be handed over to the people, the aim is to gradually move to a system where the subsidy is handed over directly to the poor, so that they can use this to buy the food from the market. The income subsidy will then be periodically adjusted to make sure that these basic needs are available to them at, effectively, a reduced price. With this in mind, the

## Box 2.2 : Food and Inclusion

A central focus of India's economic policy is to achieve inclusive growth. However, while India's success in growth over the last two decades has been universally praised, much remains to be done on the inclusion front. Accordingly, the government is committed to making this a central tenet of policy. In doing so, it is worthwhile to be self-critical and analyse why India has not done better on this dimension despite so much energy and rhetoric directed to it. Some recent papers that analysed this, by focusing on the distribution of food, shed useful light.

It is a maintainable ethical principle that in any nation that is in principle able to provide food to all, basic food should not be treated as an option or a luxury, but as a right. The Indian government's new food security bill is rooted in this fundamental ethical precept and is, as such, highly desirable. An implication of this bill is that all the poor and vulnerable must be empowered by the state to be able to get their basic food requirements.

Before commenting on this it is worth clarifying that when economists measure poverty there can be two very different motivating factors. One is to see how the level of poverty is changing over time and the other is to identify the poor in order to direct benefits. When tracking the level of poverty over time we have to hold the poverty line constant (subject to corrections for the changing value of the rupee). This is for the same reason that we use the same standard over time to see if there is global warming occurring. To change the standard would make inter-temporal comparison quite meaningless.

However, to decide on whom to direct subsidies, we have reason to use different standards for measuring poverty. We could think of measures which change as society becomes better off and is able to service the poor better. One criterion in this spirit is the quintile income measure, which assesses society in terms of how its poorest 20 per cent population or the bottom quintile fares. We of course know that they do not fare well (see discussion in [2]). But what is more dismaying is that they do not even adequately get the benefits they are supposed to get. A study by Dutta and Ramaswami [4] showed using 1993-4 NSS data that the bottom quintile of rural population in Maharashtra and Andhra Pradesh got 10 per cent and 20 per cent, respectively, of the foodgrain that they were supposed to get. In general, several studies (e.g. [1] and [3]) confirm that our track record of delivering to the vulnerable remains highly flawed. One of the most comprehensive recent studies of this, by Swedberg [1], suggests that a key secret lies in giving the benefit to the poor directly. Swedberg estimates that to transfer ₹ 1 to a poor household by the current method of giving cheap food first to PDS stores and then having them transfer it to the poor, the Government of India incurs a budgetary expenditure of ₹ 9. At this rate a large food programme would be fiscally unviable.

Fortunately, with Aadhaar coming up, it is possible to make a cash transfer to the poor directly, which, especially if given to the female head of the household, can empower the poor and the women and sharply cut down leakages and the costs of the programme. This in turn means that we can greatly increase the coverage of the population that gets the subsidy. Success stories with cash transfer programmes from Mexico's Oportunidades and Brazil's Bolsa Familia bolster this argument. Of course, we have to be aware that in many regions of India private markets hardly exist and so we will in these regions have to, for now, rely on actual food being delivered through the PDS system. On the other hand, it is important to recognize that one reason private markets do not exist in these areas is because the people do not have enough buying power. Once we make cash transfers to them, private markets will develop even in these areas. This is what is meant by the enabling role of government. It should create a setting where it is in the interest of private agents to deliver on what needs to be delivered. (At the risk of creating an infinite loop, the reader may be referred to Box 2.3)

***References*** **:** [1] Svedberg, P. (2011), 'Reforming or Replacing the Public Distribution System with Cash Transfers?,' *Economic and Political Weekly*, vol. 47, 18 February. [2] S. Subramanian (2011), '"Inclusive Development" and the Quintile Income Statistic,' *Economic and Political Weekly*, vol. 46, 22 January. [3] Himanshu and A. Sen (2011), 'Why not a Unified Food Security Legislation?' *Economic and Political Weekly*, vol. 46, April. [4] Dutta, B. and B. Ramaswami (2001), 'Targeting and Efficiency in the Public Distribution System,' *Economic and Political Weekly*, vol. 36, May.

Finance Minister in his Budget speech in 2011 mandated the development of a platform that would enable direct delivery of basic goods like kerosene, LPG cylinders, and fertilizers; later food was added to this list. The idea is to use the new Aadhaar-based system (see Box 2.3) as the information technology based platform for this. Game-changer is an excessively used term but Aadhaar has the potential for being a game-changer for the Indian economy.

2.17 Turning to the deceleration of growth from April 2011, it is useful to try to pin down the principal causes. With Europe on the brink of a second successive recession, the foremost cause that stands out is the global slowdown. This slowdown is evident even from a cursory examination of the growth patterns over the various quarters of 2011 of the G-20 countries (the fourth quarter data are not yet available for some nations; see Table 2.1). There is only one country where all available quarters show monotonic improvement—Australia (the three quarters' annual growth being, chronologically, 1.1, 1.9, and 2.5). On the other hand, close to a majority of the G-20 countries show a monotonic decline in growth. India falls into the latter category even though its level of growth remains high even after the slowdown. The global near-recessionary condition

## Box 2.3 : Aadhaar's Progress: Plumbing for Better Public Service Delivery

The Unique Identification Authority of India (UIDAI), attached to the Planning Commission, is engaged in providing residents of India a Unique Identification number (called Aadhaar) linked to the resident's demographic and biometric information. The project aims to create a platform that serves as an 'identification infrastructure' for delivery of public and private services to the residents of India. The Aadhaar project is set to become the largest biometric capture and identification project in the world.

Aadhaar has huge potential for improving operations and delivery of services. Its potential applications in various significant public service delivery and social sector programs are as follows:

**PDS:** India's PDS with a network of 4.78 lakh fair price shops (FPS) is perhaps the largest retail system of its type in the world. The PDS is operated under the joint responsibility of the central and the state Governments. By using Aadhaar it is possible to have the subsidy go directly to the target households who can then purchase their food from any PDS store or maybe even non-PDS shops. The PDS system stands to benefit from Aadhaar in several ways:

- **Better Identification and Beneficiary Mobility** – Integration with the UID programme will lead to better identification of individuals and families making possible better targeting and increased transparency. Further, an individual who migrates to some other part of the country can easily continue to avail of his designated benefits.
- **Offtake Authentication** – The UID database will maintain details of the beneficiary that can be updated from multiple sources. The PDS system can use this database for authentication of beneficiaries.
- **Duplicate and Ghost Detection** – The UIDAI will provide a detection infrastructure to the PDS programme to weed out duplicate and ghost cards.
- **Support for PDS reform** – The UID will become an important identifier in banking services. This can support PDS reform by, for example, providing the banking account number for a family to effect direct cash transfer.

**Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS):** Incorporation of the UID into the MGNREGS programme (discussed in Chapter 13) will assist in addressing some of the major challenges that impede progress:

- **Payment of Wages** - The UID can replace the need to provide supporting documentation for the standard Know Your Customer (KYC) fields, making opening a bank account significantly simpler.
- **Ghost Beneficiaries** – Once each citizen in a job card needs to provide his UID before claiming employment, the potential for ghost or fictitious beneficiaries is eliminated.
- **Beneficiary Management** – The UID system will provide a platform for managing citizens who relocate or migrate from one place to another and want to seamlessly enjoy benefits of the programme.
- **Social Audit** - The village-level social audit committee can be selected after authentication with the UID database. The social audit reports filed by the village-level committees can be authenticated by the biometrics of the committee members and social audit coordinator.

**Public health:** Health, and health-related development schemes, could benefit from the UID. Public health in India is seeing a revolution in terms of (1) greater commitment towards government financing of public and primary health care, (2) pressure to meet the millennium development goals (MDGs), and (3) consequent creation of large supply platforms at national level such as the National Rural Health Mission (NRHM) and Rashtriya Swasthya Bima Yojana (RSBY).

What would be the public health associated pay-off from the application of the UID? Routine health information systems that capture and track the morbidity and mortality due to various disease conditions are critical to improving public health outcomes including life expectancy. Currently infrequent national or state surveys are the major mode of capturing data on infectious disease conditions. However, chronic or lifestyle diseases are not captured in any meaningful way even through surveys. An integrated routine health system that can capture and track population-level disease conditions by linking citizen IDs with hospital or other medical facility records generated through facility visits can (1) inform the public health system of the prevalence of various routine disease conditions and (2) help prepare the health system to respond to unforeseen epidemics. A partial example of (1) can be seen under the Rajeev Arogyasri insurance scheme in Andhra Pradesh.

**Education:** Currently the primary education system in our country faces a serious problem of inflated enrolment at school level. This results in significant leakages and serious implementation problems. Leakages occur in various areas, including mid-day meals, books, scholarships, provision of uniforms and bicycles. If UIDs are given to children, it will do away with the problems of multiple enrolments and ghosts. Provision of UIDs will ensure that there are no problems due to migration of students anywhere within the country as one would have no difficulty in establishing one's identity at the new location. It will effectively address the issue of education of children of migrant labourers as their children can be admitted at new places, without cumbersome verification. (Running the risk of an infinite loop, the reader is referred to Box 2.2.)

***References*** : [1] 'UID and PDS', 'UID and Education', 'UID and Public Health', 'UID and MGNREGA', and 'Analytics : Empowering operations - The UIDAI Experience' available at http://uidai.gov.in/uidai-documents.html#publication.

[2] Khound, D. 'Improving Public Service Delivery : Building a New Aadhaar for a Billion Plus', in R. Malhotra (ed.) *A Critical Decade : Policies for India's Development*, Oxford University Press New Delhi, 2012.

impacts India directly through a slowdown in exports and drop in investment flows from foreign institutional investors (FIIs), and, in addition, through the somewhat mysterious ways of financial infection, which includes the drying up of trade finance. Even though there is effort afoot to ring-fence India from some of these, all these channels were at work at some level to bring down India's growth. Some of these are discussed in Chapter 7.

2.18 Second, there was the effect of measures to tighten liquidity to control inflation. This contributed to a slowdown, as was anticipated, though it is arguable that this had a larger impact because of the confounding effect of the current global situation, with industrial nations facing an economic downturn and creating liquidity to counter it. It should, however, be pointed out that the slowdown that inflation control causes is a temporary phenomenon. It usually begins to correct itself as inflation cools off.

2.19 A third factor, even though it is hard to quantify and for that reason is contestable, has to do with some slackening in the pace of reforms. One consequence of increased awareness of high-profile corruption scandals in different parts of India and welcome civil-society activism has been a sense of caution among civil servants in taking the final decision. Since one way to avoid the charge of an ill-considered or, worse, ill-intentioned decision is to take no decision, it is arguable that some civil servants in this season of charges and counter-charges have resorted to precisely this strategy. This would cause a slowdown in decision making. In addition, coalition politics and federal considerations played their role in holding up economic reforms on several fronts, ranging from diesel and LPG pricing and taxation reform like the goods and services tax (GST) and direct taxes code (DTC), to FDI in retail and reform of the APMC Act.

**Table 2.1 : Real GDP, Growth Rates**

(The growth rates are based on comparison of each quarter with the same quarter of the previous year)

| S. No. | Country | 2011 Q1 | 2011 Q2 | 2011 Q3 | 2011 Q4 |
|---|---|---|---|---|---|
| 1 | Australia | 1.1 | 1.9 | 2.5 | |
| 2 | Canada | 2.8 | 2.1 | 2.4 | |
| 3 | France | 2.2 | 1.6 | 1.5 | 1.4 |
| 4 | Germany | 4.6 | 2.9 | 2.7 | 2.0 |
| 5 | Italy | 1.0 | 0.8 | 0.3 | -0.5 |
| 6 | Japan | -0.1 | -1.7 | -0.6 | -1.0 |
| 7 | Korea | 3.9 | 3.4 | 3.6 | 3.4 |
| 8 | United Kingdom | 1.6 | 0.5 | 0.4 | 0.7 |
| 9 | United States | 2.2 | 1.6 | 1.5 | 1.6 |
| 10a | EU (27) | 2.4 | 1.7 | 1.4 | 0.9 |
| 10b | Euro Area | 2.4 | 1.6 | 1.3 | 0.7 |
| 11 | Brazil | 4.2 | 3.3 | 2.2 | |
| 12 | Russian Fed | 3.8 | 3.5 | 4.9 | |
| 13 | ***India**** | ***7.8*** | ***7.7*** | ***6.9*** | ***6.1*** |
| 14 | China* | 9.7 | 9.5 | 9.1 | 8.9 |
| 15 | South Africa | 3.7 | 3.3 | 2.9 | |
| 16 | Argentina | 10.0 | 9.5 | 10.0 | |
| 17 | Indonesia | 6.7 | 6.6 | 6.6 | 6.6 |
| 18 | Mexico | 3.9 | 3.9 | 4.4 | 3.7 |
| 19 | Saudi Arabia | NA | NA | NA | |
| 20 | Turkey | 11.0 | 8.1 | 8.5 | |

***Source*** **: OECD.**

*** Country Website.**

2.20 However, we expect growth to pick up in small measure soon, arguably even from the second quarter of 2012-13. This is not a statement concerning seasonality. Indeed, it is a common mistake to assert that there are some quarters when growth is higher because of seasonality. Seasonality can affect the level of production but it is almost a logical impossibility for seasonality to cause growth to be higher. If that were so then India would begin to look like an industrialized nation in certain quarters and slide back to a poor economy in the other quarters. The forecast that is being made is that actual growth will see a pickup. With inflation easing over the last month or two and government showing signs of taking steps to restart the reform process, there is reason to believe that the growth engines of India will be fired up sooner rather than later. The latest indicators, such as the Hong Kong and Shanghai Bank's (HSBC) purchasing managers index (PMI) and the most recent IIP numbers indicate a changing mood in the nation. This leads us to expect that growth in 2012-13 will be greater than that in 2011-12. As already indicated, we expect growth in 2012-13 to be 7.6 (+/-0.25) per cent. In 2013-14 it is expected that there will be further recovery for India and the nation will virtually be on the growth path it was on before the global recession of 2008. Our point forecast of growth for 2013-14 is 8.6 per cent. The major drivers of growth—the savings and investment rates as percentage of GDP—have moved down a little and stand at, respectively, 32.7 and 35.1 for 2010-11. These are less than in the previous year but still handsome figures. We expect these figures to go down in 2011-12, and then to rebound quickly as India consolidates fiscally, and to continue rising slowly thereafter, as the ratio of India's working age population to overall population rises because of the demographic dividend. All this will contribute to very robust overall growth in the medium to long run. The nation also has large potential in manufacturing-sector exports as discussed in Chapter 7. If policies can be adopted to realize this, it is possible for India to take on the mantle of global growth leader within the period of the next Five Year Plan.

## Managing The Exchange Rate

2.21 A remarkable feature of India over the last two decades has been its opening up to the global economy. During 1990-9, India's exports plus imports of goods as a ratio of GDP was 18.8 per cent; this rose to 37.5 per cent in 2010-11. During 1990-9, India's service exports plus imports was 4.1 per cent of GDP; this rose to 12.9 per cent in 2010-11. During 1990-9, India's gross capital inflows and outflows as a ratio of GDP was 15.1 per cent; this rose to 53.9 per cent in 2010-11. These changes mark the arrival of India on the global economic stage and are a matter for celebration. But they also mean that our policies are intertwined with those of the rest of the world. The opening up was vital and has given the economy the enormous growth that it has achieved since the mid-1990s and a voice in global policy matters through G-20 and other international bodies. But it has also made us more sensitive to what happens in other nations, especially the systemically important ones. One of the most important conduits through which the world affects our domestic well-being is the rupee exchange rate. The exchange rate is like a vital pipeline that links all of India to the rest of the world. It is through this that goods, services, and investments flow in and out of the nation. The nation's growth and, especially, inflation are sensitive to the exchange rate.

2.22 During the last six months of 2011, and especially since early August, the Indian rupee depreciated sharply. It had reached a peak of ₹ 43.94 to the US dollar on 27 July 2011 and hit a trough on 15 December when the exchange rate was ₹ 54.23. This amounted to a depreciation of 19 per cent. However, the rupee regained value after that and came down to just over ₹ 49 by the third week of February 2012. Prior to these recent gyrations, the exchange rate had fallen out of public attention by virtue of having been uninterestingly stable for a long stretch of time. It suddenly came into sharp focus with the rapid depreciation, especially after it broke through the ₹ 54 mark in December 2011. The debate that broke out in public shows how contentious this topic can be. For years, Indian exporters had lamented that they found it difficult to compete with nations like China that maintained a depreciated exchange rate. Now, with the rupee depreciating, there was sharp criticism from the other side that imports were becoming prohibitively costly. And this resulted in a genuine concern about whether the depreciation may trigger inflationary pressures, emanating from the traded goods sector. This, in turn, led to questions concerning the policymaker's role. Should the RBI intervene in such situations and, if so, how? The RBI has traditionally taken the view, rightly, that interventions should not be made to alter the natural trend in the exchange rate but only to smoothen out volatility. It may be pointed out that even some fluctuations are best left untouched since they act like shock absorbers for the economy. However, there are speculation-driven fluctuations in the exchange rate that the central bank ought to dampen. What is being discussed here, however, is the pure technology of exchange rate management: How should it be done if and when a central bank wants to do it?

2.23 Central banks wanting to devalue their currency often intervene in the foreign exchange market by using domestic currency to buy up foreign currency or, conversely, if they want to revalue their currency, they intervene by selling off foreign exchange reserves. On 6 September 2011, the Swiss National Bank caused a stir by announcing a ceiling for the Swiss franc vis-a-vis the euro and stating that it 'was prepared to buy foreign currencies in unlimited quantities' in order to maintain this ceiling. Similar interventions by central banks to depreciate (and occasionally appreciate) currencies have been undertaken around the world. On 15 September 2010, the world felt the tremors when, following a sharp appreciation of the yen, the Bank of Japan sold yens and bought dollars. The immediate impact of this action was to weaken the yen vis-a-vis the US dollar. The RBI has also on occasion used with considerable dexterity similar actions to smoothen exchange rate fluctuations.

2.24 It may be pointed out that for a nation with capital controls, as is the case in India, there are interventions possible which do not entail the RBI buying or selling foreign currency. When the rupee depreciated sharply in the second half of 2011, measures were taken to relax some of the capital controls in the hope that this would allow more dollars to flow into the country, thereby lowering the value of the dollar and, in turn, allowing the rupee to appreciate. Thus the existing external commercial borrowings (ECB) limit under the automatic approval route was increased from US$ 500 million to US$ 750 million for eligible corporates. For service-sector borrowers, the limit was raised from US$ 100 million to US$ 200 million. The FII limit for investment in government securities and corporate bonds was raised from US$ 10 billion and US$ 15 billion to US$ 15 billion and US$ 20 billion, respectively. A more detailed discussion of these policy changes occurs in Chapter 6.

2.25 Turning to the more ubiquitous method of the central bank buying and selling international currency, using the indigenous currency, in order to alter the exchange rate, it is evident that this method has its share of practical problems. There is, for instance, the risk that the bank that executes the central bank's order to, for instance, buy up dollars to help stall the appreciation of the rupee will front-run and buy some dollars for itself first, before executing the central bank's order. Once the central bank's large dollar purchase is executed, the dollar value will rise and the agent bank can then sell off the dollars and make a quick profit. Front-running is always a risk in these kinds of actions but even if this can be ruled out, there is the bigger problem that such interventions lead to a build-up or running down of foreign exchange reserves, with attendant costs and risks.

2.26 Closely intertwined with this is the question of attitude towards reserves. Should an emerging economy like India build them up to combat currency appreciation and run them down to battle currency depreciation? Interestingly, there is a critical difference between managing a depreciation and managing an appreciation, as was evident during this last round of sharp rupee depreciation. Countering an appreciation entails using rupees to buy up dollars. Since we own the printing presses that make rupee notes, in principle this can be done quite freely, even though it would in all likelihood have long-run adverse consequences. But battling a depreciation means using hard currency reserves to buy up rupees from the market. This has a natural constraint in the form of the quantity of foreign exchange reserves held by the country. And, in fact, well before one hits that constraint, the running down of reserves too sharply risks creating speculative bubbles. Hence there is need for some research on the question of 'how' to release and buy foreign currency in economies like India and, for that matter, all nations that are committed to a floating exchange rate system. It

## Box 2.4 : Central Bank Interventions

It is well known that different central banks (of nations committed to floating exchange rates) have often used different ways to buy and sell foreign currency from the market. On 29 November 2011, Mexico's Currency Exchange Commission, which comprises representatives of the central bank and Finance Ministry, announced that it was going to use US$ 400 million per day from its US$ 140 billion reserves if the peso declined more than 2 per cent in one day. This policy turned out to be effective and even in the past a similar policy has been successfully used by the Mexican authorities.

Some countries have done a lot of their transactions by making explicit announcements, others have made them with no announcements and have revealed their interventions retrospectively. Turkey decided that on the days on which the central bank planned to sell foreign exchange, the selling amount announced at 11.00 a.m. would be the maximum daily amount that could be sold; and, on every working day, the total maximum amount that could be sold for the next two working days via foreign exchange selling auctions began to be announced. Even in the US, to effect an intervention in the foreign exchange market, the Fed has on occasions contacted a dealing bank, such as Citibank, and bought currency at its quoted rate. Moreover, a lot of the Fed's interventions, by some counts nearly half, are done secretly.

Typically, a central bank is acutely aware of the fact that big private players try to game the central bank. What has not been explored adequately is the possibility of the central bank, in turn, using strategic moves in the market to its own advantage. The key is to make 'conditional' or 'schedule' interventions, which entail making the volume of purchase or sale dependent on the exchange rate, through which the central bank can influence the exchange rate without affecting its forex reserves. In other words, the central bank enters the market directly or through its agent bank not with a lump sum buy or sell order but with a full schedule of how to behave, conditional on what the exchange rate is. There is game-theoretic literature on analysing such conditional interventions. It turns out that by suitably designing these schedule interventions, a country can manage its exchange rate without taking undue burden of building up or running down its foreign exchange reserves. It is merely the assurance of how it will behave outside of equilibrium that makes this possible.

The literature is still quite new and there will have to be empirical tests and estimations and trial runs before these ideas can safely be put to use. But just as by properly studying the micro-foundations of auctions we have today transformed the art of conducting auctions, it is likely that there will be great improvements in the art of exchange rate management over the next years.

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is known that there can be variants in the manner of intervention and indeed different central banks in different nations have used variants of the Indian intervention.

2.27 One could, for instance, ask if the central bank should involve multiple agents to buy small quantities of dollars or just one to buy them all? Should the purchase be a simple instruction to buy at the existing market price or a conditional purchase instruction: if the exchange rate is *a* buy *b*, if it is *c*, buy *d*, and so on? It turns out that a lot depends on the micro-structure of how the purchase or sale is managed. In particular, it is possible to design interventions so that the RBI can influence the exchange rate without running down or building up reserves. The decision to influence the exchange rate and the decision to build up or run down reserves can be treated as two separate objectives (see Box 2.4).

## Finance and The Relativity of Sovereigns

2.28 For the ordinary observer it is easy not to understand the importance of finance. Finance and financial indicators to most people are abstract numbers moving up and down, whereas what matters are the real goods and services they consume. In truth, whereas we should indeed evaluate an economy in terms of the real goods and services consumed and the standard of living achieved by the people, finance is the vital conduit through which these goals are achieved. As we learned during the American sub-prime problem of 2007-8, a financial crisis is like an early blockage in the piping system. To start with, we may be oblivious of it, but soon this leads to the taps going dry.

2.29 Following the recent global financial crisis, several nations have been revisiting their regulatory architecture. India has also been prompt to act on this front. In 2010-11 two new agencies were set up—the Financial Stability Development Council (FSDC) and the Financial Sector Legislative Reforms Commission (FSLRC). The FSDC is a non-statutory apex council for coordination among various regulatory bodies, since in our increasingly complex economy, issues arise that straddle multiple financial jurisdictions and so risk falling through the cracks or getting caught in the crossfire. The FSLRC will outline the architecture of financial regulation and legislation in the future and so can have far-reaching consequences.

2.30 Looking back at the development of India's financial history, it is evident that equity financing in India is in good shape. The equity market was the focus of policymakers from 1992 and the focus has paid off. One form of financial activity, namely stock lending, is absent in India; but barring this, all sophisticated features of the world's top equity markets are now found in India. The two Indian exchanges, National Stock Exchange (NSE) and Bombay Stock Exchange (BSE), rank third and fifth in global ranking by number of transactions. These are indicators to be satisfied with, but they also place a large responsibility on our regulators and the government to make sure that these vital pipelines of exchange and trade remain healthy and contribute to the real economy's well-being. Where India remains stagnant is in the development of the bond market. The excessive reliance on bank credit and equity and relative insignificance of the bond market can at one level be dismissed as special to our economy. After all, nations have idiosyncrasies—some grow relying on services, some on industry. Every such special feature should not be an excuse for policy intervention. It has, however, been argued widely and persuasively that development of the bond market will help India further modernize finance and achieve greater entrepreneurial efficiency besides obtaining debt resources for infrastructural projects. Hence, there is a case for giving India's dormant bond market a policy nudge (see Box 2.5).

2.31 One interesting change, which has partially compensated the inadequacy of the bond market in India, is foreign borrowing. This has risen sharply. An interesting implication of this is that, as India has globalized and more and more foreign capital and investment flow in and out of the country, the ratings given by credit rating agencies begin to matter. The evaluations of sovereign rating agencies have been met with a mix of scepticism, enthusiasm, and concern in emerging economies that are new entrants in the global space. Even some industrialized nations have viewed the operations of credit rating agencies with concern, especially when their own credit ratings have been downgraded.

2.32 Sovereign bonds issued by industrialized nations used to be, for long, the safe asset. If one were interested in safety, without being fussy about returns, the sovereign bond market was the benchmark. As a consequence, this market grew at unimaginable pace over the last years. A study by Bank of America Merrill Lynch estimated that in 2001 there were US$11 trillion worth of sovereign bonds in

**Box 2.5 : Bond and Beyond**

There is now ample empirical research to corroborate Schumpeter's conjecture that financial development facilitates real economic growth. The depth of the financial markets and availability of diverse products should therefore not be treated as mere adornment but as critical ingredients of inclusive growth.

In India, banks accounted for 14.4 per cent of the financing of large firms in 2000-1, and this rose further to 17.8 per cent in 2010-11. The bond market, on the other hand, has been miniscule in comparison. The thinness of the bond market has been somewhat compensated by foreign borrowing done by Indians, which rose sharply over the last decade.

Further, India is characterized by a disproportionate amount of secured borrowing. The small size of unsecured borrowing may, at first sight, not seem to be a matter of concern, but it could be a reflection of the weakness of contract enforcement and lack of adequate information. If contracts were quickly enforced and lenders had information on borrowers, they would be more willing to give unsecured loans. This would give a nimbleness to the financial markets which they presently lack.

There are many reasons why bond markets are important for an emerging economy. Prominent among these is the fact that they lead to more efficient entrepreneurship and greater value creation. When an entrepreneur takes a loan or issues bonds, all additional profit over and above the pre-fixed repayment amount accrues to the entrepreneur. So he or she is better incentivized to take sharper decisions. By having a weak bond market, we may be foregoing this efficiency. And further, this efficiency gap may well mean that there is less lending and hence less investment and entrepreneurship in the economy than is feasible. Further, as India tries to garner 500 billion dollars from the private sector in the Twelfth Plan for investment in the infrastructure sector, having an active bond market would be a valuable avenue for raising money.

There can be many reasons why, despite these advantages, the bond market has not developed adequately. One reason has to do with what economists call multiple equilibria. Consider a situation where the bond market is small. If you buy bonds and later wish to sell these off, you anticipate difficulty. Since the bond market is not active, you may not easily be able to sell the bonds you hold simply because you cannot find a buyer. Hence, this may lead to your not buying the bonds in the first place. If everybody reasons like this, the bond market remains thin. Hence, the need is for a push that nudges the market to another equilibrium, where people readily buy bonds because they know that they can easily sell these off and this becomes a self-fulfilling prophesy and sustains the large bond market.

There is effort currently on to try to boost India's debt and bond markets and success in this can give another fillip to growth.

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the world. By 2011, this rose to US$33 trillion. The sovereign bonds of mature industrialized nations were viewed as an opportunity for risk-free returns, even if the returns were minimal. With the eurozone turmoil, this picture changed quite dramatically, with observers commenting cynically on bonds that give you 'returns-free risk'. Some private bond investors who have invested in Greek sovereign bonds stand to lose close to 70 per cent of their investment. The reason for this gestalt shift in the status of sovereign bonds is clear enough in retrospect. The ability of eurozone nations to run up fiscal deficits but not have access to their own central banks that can be commandeered to monetize those deficits has no doubt contributed to this in a big way. But the fact of the matter remains that today sovereign bonds have moved to the centre stage of global economics and politics in a way that was never the case earlier. And with this, the routine exercise by credit rating agencies to rate sovereign bonds has also moved centre stage.

2.33 In August 2011, when S&P downgraded the status of the long-term sovereign credit of the United States, there was an element of shock and awe the world over. There were political leaders in the United States who protested about the unfairness of the rating. This rating event had large consequences for the US and also inflicted ample collateral damage on others. Whether the consequence was a form of self-fulfilling prophecy or an accurate description of the riskiness of investment, the fact remains that it affected economic life the world over. Curiously the sharp depreciation that the Indian rupee faced from August 2011 began with this seemingly unrelated news of the US downgrade. This downgrade was widely viewed by markets as an indication of further global turmoil. As a consequence, many foreign institutional investors pulled their capital out from around the world and placed it, ironically, in US treasuries. The reasoning was that even if the treasuries earned them very little money they were confident of not having to face a default. This in turn meant that the dollar gained in value vis-a-vis numerous currencies and India was no exception.

2.34 Thereafter, a spiral of speculation and genuine nervousness took over and the rupee depreciated precipitously breaking through the 54 rupees (to the dollar) mark on 15 December 2012, before again returning to more 'normal' levels. It must be understood that some depreciation of the rupee was quite natural. As discussed in an earlier section, India has been facing high inflation for two years now, whereas inflation in the United States has been negligible. If the nominal exchange rate remained stable, this would mean that in terms of the real exchange rate the rupee was appreciating. Indeed, this is what was happening for several months. S & P's downgrading of the United States was like a gentle nudge to a golf ball which then sheds its inertia and moves to the more natural resting place. It is true that the exchange rate had depreciated abnormally but subsequent partial correction means that it is now at a more realistic level.

2.35 The rising importance of sovereign ratings raises the natural question: How has India fared? At one level the answer is easy to read off by consulting the websites of the major rating agencies. But this question gives rise to a related, more interesting question for which an answer is not readily available. Major credit rating agencies give out the sovereign credit rating of each nation as an absolute grade. How other nations fare does not matter in a particular nation's rating score. This is very different from a *comparative* rating, which is a statement of how a nation has done *in relation to others*. In evaluating a sovereign, comparative rating is clearly important. After all, if other nations find their ratings going down, then in an important sense this nation, even if its own absolute rating is unaltered, has done well. A comparative rating captures this idea. When an investor searches across nations for a place to invest her money, comparative rating is important. If nation *j*'s absolute rating is unchanged, but all other nations find their ratings rise, then nation *j*'s comparative rating would go down; and an investor may well have reason to consider pulling some of her investment out of that nation.

2.36 Since, for investors, relative or comparative rating is such an important concept, it was felt that there is need to develop a new index which captures precisely this idea. Accordingly, researchers in the Ministry of Finance have developed a new index called the 'comparative rating index for sovereigns' or, in brief, CRIS. Over the last few years, the global economy has gone through lots of highs and lows; and nations have moved up and down the ratings ladder. This makes it entirely possible that a particular nation that has had only a small rating change may now be better off or worse off in terms of the CRIS and the CRIS movement may well be in a direction different from the standard rating change. A nation that has travelled down the rating ladder in absolute terms may, in comparative terms, be better off because others have done even worse. How have nations fared over the last six years in terms of the CRIS? Box 2.6 elaborates on this idea and provides tabular information on how a selection of nations has done by this measure.

2.37 It is worth noting that India's CRIS has seen a rise from 23.81 in 2007 to 24.52 in 2012. Since the CRIS is a comparative rating score, it means that vis-à-vis the rest of the world, India's rating has risen by 2.98 per cent. The way the CRIS is constructed, the world's average CRIS score is always a constant. Hence, this is not an insubstantial rise. Unsurprisingly, the last six years have seen sharp declines in the CRIS for Greece, Portugal, Iceland, and many other nations. On the other hand, the CRIS has been rising for many emerging economies.

2.38 The changing profile of CRIS scores across the world tells us a major story about the changing map of the world economy in which emerging economies are moving into centre stage and becoming drivers of the global economy. Clearly, all emerging economies will not get to occupy that space. A lot will depend on how well a nation is equipped to seize this opportunity. Good policy—fiscal, monetary, and that pertaining to nuts and bolts efficiency—will matter; the ability to develop good governance and nurturing institutions will matter. India, despite the slowdown of the past year, has done remarkably well over the last two decades and especially since 2005. And the medium- to long-term prospects for India look excellent. However, the chronicles of nations are seldom foretold. There is a lot that remains to be done in India by way of reforms, fiscal and monetary policies, improving governance structures, controlling corruption, and developing infrastructure. Several of these topics are discussed in the sections that follow and also in the chapters that follow.

## Infrastructure, Finance, and Fiscal Prudence

2.39 For an emerging economy, the lynchpin of growth is investment. Fortunately India, having historically been a nation that saved and invested

## Box 2.6 : CRIS

The standard sovereign credit rating is a statement of how safe and rewarding a nation's credit is, without any account of where other nation's stand on this dimension. However, for investors it is often critical to know how a nation does in *comparative* terms. Accordingly, a new index has been developed that is called the 'comparative rating index for sovereigns' (CRIS). The detailed derivation of the CRIS is available in a forthcoming paper (see [1]). Over the last few months there were trial runs with different functional forms but the research team has now settled on a measure that has several attractive properties.

The precise mathematical formula for the CRIS, and hence the paper [1], is confidential. But its broad idea is easy to explain. It should first be clarified that its computation is based on nothing apart from standard ratings data and data on the GDPs of different nations in order to determine the importance or weights of different nations. For a variety of reasons, the researchers settled on Moody's foreign currency credit ratings and the International Monetary Fund's (IMF) GDP statistics, with no purchasing power parity (PPP) correction. Each nation's CRIS is constructed using these two sets of numbers.

Among the important mathematical properties of the CRIS are the following. (1) If nation *i*'s sovereign credit rating is constant, and all other nations' Moody's ratings rise, then nation *i*'s CRIS will decline. (2) The weighted average of the CRIS for all nations is constant. Hence, one nation's improvement in CRIS is invariably accompanied by worsening of the CRIS for some other nation or nations. (3) The CRIS has been constructed so as to register diminishing marginal returns to improvements in the absolute ratings.

The plan is to use the formula and give out CRIS scores of nations at regular intervals in order to help investors make better decisions and, in turn, for nations to evaluate themselves more effectively. In the paper [1] the CRIS is formally defined and then the profiles of 101 nations are tracked over time. The CRIS scores of certain selected nations from this paper are reproduced in Table 1.

**Table 1 : CRIS Scores of Select Nations with Percentage Change from 2007 to 2012**

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | % change from 2007 to 2012 |
|---|---|---|---|---|---|---|---|
| Paraguay | 14.36 | 16.13 | 16.16 | 19.19 | 19.48 | 19.56 | 36.23 |
| Indonesia | 20.31 | 20.40 | 21.68 | 21.76 | 23.29 | 24.52 | 20.75 |
| Philippines | 18.99 | 19.54 | 20.44 | 20.52 | 22.09 | 22.18 | 16.77 |
| Brazil | 22.70 | 22.81 | 24.33 | 24.42 | 25.86 | 25.96 | 14.37 |
| Turkey | 20.31 | 20.40 | 20.86 | 22.16 | 22.50 | 22.59 | 11.23 |
| Chile | 27.80 | 27.94 | 29.21 | 29.91 | 30.36 | 30.48 | 9.63 |
| China | 28.72 | 28.86 | 29.21 | 30.20 | 30.66 | 30.78 | 7.19 |
| Russia | 24.87 | 26.01 | 26.06 | 26.16 | 26.55 | 26.66 | 7.19 |
| Korea | 27.80 | 27.94 | 27.99 | 29.02 | 29.46 | 29.57 | 6.36 |
| Oman | 27.80 | 27.94 | 27.99 | 29.02 | 29.46 | 29.57 | 6.36 |
| Israel | 28.11 | 28.86 | 28.91 | 29.02 | 29.46 | 29.57 | 5.19 |
| Saudi Arabia | 29.01 | 29.15 | 29.21 | 29.91 | 30.36 | 30.48 | 5.06 |
| South Africa | 26.21 | 26.34 | 27.04 | 27.14 | 27.23 | 27.33 | 4.26 |
| India | 23.81 | 23.93 | 24.33 | 24.42 | 24.43 | 24.52 | 2.98 |
| Mexico | 25.88 | 26.01 | 26.06 | 26.16 | 26.55 | 26.66 | 2.98 |
| Australia | 32.11 | 32.26 | 32.32 | 32.44 | 32.93 | 33.06 | 2.98 |
| Canada | 32.11 | 32.26 | 32.32 | 32.44 | 32.93 | 33.06 | 2.98 |
| Germany | 32.11 | 32.26 | 32.32 | 32.44 | 32.93 | 33.06 | 2.98 |
| Malaysia | 26.86 | 26.99 | 27.04 | 27.14 | 27.56 | 27.66 | 2.98 |
| France | 32.11 | 32.26 | 32.32 | 32.44 | 32.93 | 32.79 | 2.12 |
| United Kingdom | 32.11 | 32.26 | 32.32 | 32.44 | 32.93 | 32.79 | 2.12 |
| United States of America | 32.11 | 32.26 | 32.32 | 32.44 | 32.66 | 32.79 | 2.12 |
| Botswana | 28.11 | 28.25 | 27.99 | 27.78 | 28.52 | 28.63 | 1.85 |
| Argentina | 16.58 | 16.13 | 16.16 | 16.22 | 16.47 | 16.53 | -0.29 |
| Tunisia | 24.87 | 24.99 | 25.04 | 25.13 | 24.05 | 24.15 | -2.91 |
| Lithuania | 27.80 | 27.63 | 25.72 | 26.16 | 26.55 | 26.66 | -4.13 |
| Belgium | 31.57 | 31.72 | 31.50 | 31.62 | 32.10 | 30.18 | -4.39 |
| Japan | 32.11 | 32.26 | 30.66 | 30.78 | 30.36 | 30.48 | -5.06 |
| Slovenia | 30.74 | 30.89 | 30.66 | 30.78 | 30.36 | 28.31 | -7.89 |
| Vietnam | 20.72 | 19.97 | 20.01 | 18.73 | 19.02 | 19.09 | -7.89 |
| Ukraine | 19.44 | 19.54 | 17.20 | 17.77 | 18.04 | 17.60 | -9.48 |
| Latvia | 27.80 | 26.67 | 23.60 | 24.06 | 24.79 | 24.89 | -10.49 |
| Pakistan | 18.54 | 15.58 | 16.16 | 16.22 | 16.47 | 16.53 | -10.82 |
| Spain | 32.11 | 32.26 | 32.32 | 31.62 | 29.15 | 27.33 | -14.87 |
| Hungary | 27.80 | 26.67 | 25.72 | 26.16 | 24.05 | 22.99 | -17.33 |
| Egypt | 22.32 | 22.43 | 22.85 | 22.94 | 19.02 | 18.11 | -18.87 |
| Iceland | 32.11 | 25.67 | 23.97 | 23.69 | 24.05 | 24.15 | -24.79 |
| Ireland | 32.11 | 32.26 | 31.23 | 25.82 | 22.90 | 22.99 | -28.41 |
| Portugal | 30.46 | 30.61 | 30.38 | 29.02 | 21.68 | 20.47 | -32.79 |
| Greece | 29.01 | 29.15 | 27.68 | 22.94 | 7.36 | 7.39 | -74.52 |

***Note*: Moody's long-term foreign currency sovereign ratings data updated up to 13 February 2012.**

If we use the full chart of 101 nations, among the countries with the highest increases in CRIS from 2007 to 2012 are Uruguay (25.12 per cent), Bolivia (24.72 per cent), Indonesia (20.75 per cent), Philippines (16.77 per cent), Peru (15.56 per cent), and Brazil (14.37 per cent). In interpreting these results, it needs to be borne in mind that for countries which began with low CRIS values, the scope for improvement is greater. Also, there are studies that show that nations with lower per capita income tend to have lower sovereign ratings. So it is not surprising that there are relatively few rich nations in the list of the highest achievers. Keeping in mind that India's per capita income is low, India's sovereign rating performance, both the level and the fact that its CRIS has risen over the last six years, is impressive.

It is interesting to note that while during this six-year period, the US dropped from first rank to 13th, its CRIS has increased. This simply means that nations ranked below it have done worse in terms of rating than the US, thereby boosting the US's comparative standing. India's CRIS has risen steadily throughout this six-year stretch. For many European nations, there was a rise in CRIS from 2007 to 2008; thereafter, there was a decline.

Twenty-seven economies, among the 101 that we track, had negative growth in CRIS across this period. Among these were Greece (-74.52 per cent), Portugal (-32.79 per cent), Ireland (-28.41 per cent), Iceland (-24.79 per cent), Egypt (-18.87 per cent), Hungary (-17.33 per cent), and Spain (-14.87 per cent).

**References**. [1] Basu, K., A. Bisen, S. De, R. Ghosh, and Shweta, 'The Relativity of Sovereigns: A New Index of Sovereign Credit Ratings and an Analysis of How Nations Fared over the Last Six Years,' Economic Division, Department of Economic Affairs, Ministry of Finance, Government of India, access embargoed. [2] Ferri, G., L.G. Liu, and J.E. Stiglitz (1999), 'The Pro-cyclical Role of Rating Agencies: Evidence from the East Asian Crisis,' *Economic Notes by Banca Monte dei Paschi Siena*, vol. 28. [3] Dadush, U. and D. Dasgupta (2011), 'The Benefits and Risks of Capital Account Opening in Developing Countries', in *Capital Flows without Crisis*, Routledge, London.

little, has now transformed itself into a major saver and investor. The aggregate savings rate (that is savings as a percentage of GDP) crossed the 30 per cent mark in 2004 and has not looked back since. India's savings and investment rates currently look very much like the statistics one encountered in East Asia in the 1970s and 1980s, during the heydays of their rapid growth. In 2010-11, India saved 32.3 per cent and invested 35.1 per cent of its GDP. This large capital formation becomes even more effective if a substantial part of it is directed to infrastructure. Between 2006 and 2011, net bank credit to infrastructure witnessed a handsome annual growth of 48.4 per cent, even though there has been some deceleration from April 2011 onwards. But even with this, the need to step up investment in this sector remains. Hence, a critical question that India faces at this juncture is *how* to step up infrastructural investment. Recognizing that this is more a matter of financing than bricks and mortar, the Indian Planning Commission has talked about a target of one trillion dollars of infrastructural investment during the Twelfth Five-Year Plan, 2012-17, with about half of this being raised from the private sector (see Chapter 11 for further discussion). This will not be an easy task. During the Eleventh Five-Year Plan, it is estimated that 36 per cent of the infrastructural expenditure came from the private sector.

2.40 The build-up of capital and infrastructure will depend to a great extent on what the government does and also on what it does not do. Some initiatives have been taken *vis-a-vis* take out financing and in the form of Infrastructure Debt Fund. There are areas where virtually all that government needs to do is to create an enabling atmosphere for private players. It does not have to spend money but facilitate private agents to do so. Human capital and research is an example. India, with its history of higher education, has a natural advantage in this. It has the potential to be a major hub of global education. Buying education is so expensive in several industrialized nations that it is possible for India to provide quality education, charge to cover all costs, keep a margin, and still have students come. The surplus generated can be used to increase our own gross enrolment ratio. Providing higher education to the world will also enhance the nation's global stature. Since this is a financially viable operation, all government needs to do is to give educational institutes autonomy, including in terms of fees and salaries, and then allow private investment into the arena. It will also have to work on some nuts and bolts measures such as having provision for foreign students to get four-year visas at one go. There will of course have to be a regulatory framework within which this works, so that students are not misinformed or cheated and do not face mid-course increases in fees. Basically, this is like a resource that is lying unused under the ground. With the right enabling rules, we can create huge returns and boost our own higher education and research sector.

2.41 Returning to the subject of infrastructure, one problem is that these are usually such large projects and also have such long gestation before they become financially viable that most entrepreneurs would have to find agents willing to invest money, such as angel investors and venture capitalists, before they can start up. Should government get involved in boosting and channelizing private-sector money for this or should it follow a hands-off policy? Should the government give guarantees or comfort letters to investors trying to decide whether to put their money in infrastructure? It is known that such guarantees greatly facilitate investment by reassuring the investor but they also place a responsibility on the government, because if there is a default, the government has an obligation to step in. This is a subject that has been heavily debated internationally. With India about to embark on big infrastructural projects, the debate has come to our doorstep. To look away from it will mean decision by default.

2.42 When trying to undertake large investment projects, reckless governments often used to give guarantees to investors which would, in effect, assert that, in the event of the project going bankrupt, the government would pay off the investor. Experience shows that when a government (with the ability to print money) gives a guarantee, there will be investors galore to put their money in projects. We have, however, come to learn that this may not be such a good strategy for governments. Giving such a guarantee may do nothing to the government's fiscal arithmetic immediately, but it amounts to undertaking future fiscal expenditure. Since there is always the probability that such a guaranteed project will fail in the future, each such guarantee amounts to a certain additional expected expenditure by the government in the future. Hence, such guarantees, given recklessly, can lead to unsustainable fiscal deficits in the future with all their attendant problems, such as inflation, collapse in investment, and, ultimately, economic recession. For this reason, under the Fiscal Responsibility and Budget Management Act 2003, India rightly places restrictions on such guarantees.

2.43 In addition, governments are repeatedly warned by international bearers of fiscal standards not to give guarantees to investors, especially for private-sector initiatives. While this warning is a valid one and governments ought to keep it in mind, there are circumstances where some strategic and well-

### Box 2.7 : Doing Better by Coordination

Among infrastructural projects there is typically a lot of positive externality. The new road that will be operated by a toll system is more likely to be successful if the residential township at the end of the road comes up; and the residential township being contemplated by the developer is more likely to be successful if the road gets built (see [1] and [2]). Government, by giving some carefully orchestrated guarantees to investors, can ensure that all these projects are started up, thereby raising the probability of success for each of these projects. Of course, if they all fail, that will be a more momentous failure. But that precisely is the dilemma. To pretend that there is no dilemma and to be wedded to one of these options by virtue of habit is clearly no solution.

To illustrate this with a simple arithmetic example, suppose there are three projects, pertaining to a road, a township, and a power project. Each entails an initial cost of 100. If the project succeeds, it yields 150; if it fails, the entire initial cost goes unrecovered. If all three projects are undertaken, each project is more likely to succeed, because of the kind of positive externality mentioned; let us suppose that the probability of success of each project, when the other two are implemented, is 0.95. If, on the other hand, the other two are not implemented, then assume the project that is implemented has a probability of success equal to 0.5. If government gives a guarantee to the investor for a project, then for an investor it is worthwhile investing in the project, since she incurs no risk of default. In the event of a default, government pays off the investor the 100 that she had invested.

Suppose now government gives a guarantee to only one project. Assuming that the other projects are not undertaken under the circumstances, there is an expected loss of 50 units of money to the government, since the probability of failure is half and in the event of a failure government has to pay the investor 100. Hence, the expected fiscal deficit rises by 50.

Now suppose Government gives guarantees to all three projects, then all three projects get implemented; and the Government's expected fiscal cost of this is only 15 (= $3 \times 0.05 \times 100$), since there are three projects, each project has 0.05 probability of failure and, in the event of a project's failure, government has to pay 100 units of money. If these projects create socially valuable wealth, which is worth more than 15 units of money, it is arguable that guarantees to all three are desirable; even though it may not be worthwhile giving a guarantee to any single project.

This simple arithmetic is not a reason to rush and give out guarantees or even comfort letters (comfort letters often, in effect, turn out to be like guarantees in the eyes of the law) but it alerts us to the fact that for a nation on the verge of take-off, and with complementarities between projects, the calculus of guarantees and fiscal deficits is not as simple as may seem at first sight. We should evaluate the benefits and fiscal costs of government trying to give a coordinated big push to a cluster of infrastructural projects; and recognize that the costs and benefits would not be the same if we worked this out for each project separately and then simply added them up.

***References*** **:** [1] Murphy, K. M., A. Shleifer, and R. Vishny (1989), 'Industrialization and the Big Push,' *Journal of Political Economy*, vol. 97. [2] Ray, D. (1998), *Development Economics*, Princeton University Press, Chapter 5. [3] Reddy, Y. V. (2002), *Lectures on Economic and Financial Sector Reforms in India,* Oxford University Press.

designed guarantees or comfort letters from the government can be desirable in the overall interest of the nation. This can happen in a buoyant nation on the verge of take-off and considering an expansion in a number of infrastructural projects. Hence, it is an argument that has direct relevance to India. The gist of the argument is surprisingly simple and is outlined in Box 2.7.

## Contracts and Efficiency

2.44 How a nation functions at the level of macroeconomic aggregates depends a lot on the nuts and bolts of the economy. In our concern with managing the large and attention-catching variables, it is easy to let attention slip on the small, which may be vital. The details of how a nation's laws are written up, be it concerning Food Security or Land Acquisition, can make a huge difference to the economy. How cumbersome the procedures are for an importer or exporter completing the customs paperwork and for a company filing tax returns can have a large impact on the nation's ability to compete with other nations. It is important to realize that the aim of government must be to enable and facilitate, not to block and discourage. It was by taking steps towards this that the reforms of the early 1990s unleashed energy and growth in the economy. As Amartya Sen observed in an article published in the first issue of *Prospect* in 1995, where he talks about the importance of equity and human development: 'There is certainly a more secure basis for economic growth in post-reform India. The integration of the Indian economy in the world market and the dismantling of the "license raj" offer economic opportunities that did not exist earlier.' There is a lot going on in India towards this, such as, the effort to nurture domestic innovation and an environment for early stage Venture Capital Funds and Angel investing, as evidenced by the Planning Commission constituting a committee of experts to promote these.

2.45 Looking ahead, while it is not possible to outline all the separate areas in which action is needed, the basic principle is simple. The central driver of a modern economy is the contract. We need a system where individuals and firms are able to get into agreements and contracts quickly and, once they have done so, to be able to rely on these contracts. In the event of someone reneging on a contract, the signatory to the contract who did nothing wrong but is hurt by this should be able to get quick redress. Together these features describe the ethos for 'doing business' in a nation. By the measure of 'Ease of Doing Business', India does poorly. In 2012, the World Bank's cross-country study ranks India 132 among 183 nations. In terms of procedures to start a business and get all the 'permissions' needed, India ranks 166. For getting construction permits, India ranks 181. The one indicator on which India does well is 'protecting investors'. On this, the country gets a rank of 46, which, for a newly emerging economy, is creditable performance. On the other hand, in the hassles of paying taxes India ranks 147 and in enforcing contracts 182.

2.46 Clearly, we still have some distance to go in breaking away from the culture of 'permissionism' that used to permeate so much of our economic lives, thwarting creativity and enterprise. Fortunately, India has begun to work on improving these nuts and bolts components of the economy. As was mentioned in the Finance Minister's Union Budget Speech of 2011, we have now several initiatives in the spirit of facilitating business and the ordinary tax-payer's life:

- The online preparation and e-filing of income tax returns, e-payment of taxes through 32 agency banks, ECS facility for electronic clearing of refunds directly in taxpayers' bank accounts, and electronic filing of tax deducted at source (TDS) returns are now available throughout the country. These measures have empowered taxpayers to meet their tax obligations without visiting an income tax office.
- The Centralized Processing Centre (CPC) at Bengaluru has increased its daily processing capacity from 20,000 to 1.5 lakh returns in 2010-11. This project has won a gold award for e-Governance in 2011. Two more CPCs will become operational in Manesar and Pune by May 2011 and a fourth will come up in Kolkata in 2011-12.
- With the completion of its IT Consolidation Project, the Central Board of Excise and Customs (CBEC) can now centrally host its key applications in customs, central excise, and service tax. The Customs Electronic Data Interchange (EDI) system now covers 92 locations across the country. The CBEC's e-Commerce portal ICEGATE, has also been conferred a gold award for e-Governance.

2.47 There are, in addition, moves to bring in a consolidated GST system, which should, in one go, improve our rank on the various tax efficiency measures. This can have a large impact on the business ethos of the nation. But it is important to recognize that even with these implemented, there will be much remaining to be done. The guiding principle has to be to respect the space of individuals, not only in terms of freedom of speech and writing, in which India's record is commendable, but also in terms of economic exchange and enterprise.

2.48 A central feature of the market is price. Prices in a market economy typically emerge not by directive but from the decisions of millions of individuals trying to buy and sell goods and services. The prices that emerge from this process are not always fair and, for that reason, we have laws against collusion, anti-competitive behaviour, and price gouging. To go beyond that and try to hold prices down or up by diktat is not, in general, a good idea. It tends to introduce more distortion and bias than the problems it cures. In economic policymaking there are very few inviolable principles; and there is no denial that there are some areas where prices may have to be centrally controlled. But these have to be kept to a minimal list.

2.49 The distortions that arise from such price controls are easy to see. First of all, to lower the price of a good by government diktat means subsidizing both the rich and the poor. Thus once we lower fertilizer price or the price of diesel, large farmers and large car owners also get the subsidy. If we try to prevent this by creating a dual price, a low one for the poor and for small farmers and a high price for the rich and the well-to-do, we promote bureaucratization and incentives for cheating and corruption (see Box 2.8) are rife, since the one who gets it at a lower price can buy and then sell it to the high-price consumer. It is not surprising that the poor complain that when they go for their food rations to the PDS stores, they are often turned away or given

### Box 2.8 : The Risks of Over-regulation

Corruption and poor governance have been major problems in many countries. Often, attempts to curb corruption are accompanied by increases in regulation. However, this may prove to be counter-productive in terms of increasing the overall inefficiency of public bodies. This was highlighted in a recent paper by Bandiera, Prat, and Valleti [1]. The paper distinguishes between 'active waste' and 'passive waste' in public services. 'Active waste' is the situation where the public decision maker benefits directly or indirectly. Corruption in procurement where the price of the procured good is inflated in lieu of a bribe is an example. In contrast, 'passive waste' does not benefit public officials. It can, for instance, arise from onerous regulations which increase the price the public body pays.

The researchers exploited a fortuitous natural experiment arising out of the procurement system in Italian public bodies. The public bodies can purchase goods either directly or through a central procurement agency called Consip. Consip purchases do not offer opportunities for active waste but may be linked to passive waste. Consip has agreements with suppliers for certain goods at given prices at specific periods of time. Since these agreements are not always in operation, the public bodies faced instances when they could purchase a certain good either directly or through Consip and other times when they could only purchase directly. These differential circumstances allow the researchers to pry out propensities for passive waste.

The analysis reveals that there are substantial differences in the average prices paid by different public bodies. These differences are correlated with the type of institution. Semi-autonomous bodies pay the lowest prices. Town governments pay around 13 per cent more than them, regional governments 21 per cent more, and the average ministry pays the most at about 40 per cent higher. The paper provides evidence that those public bodies which have lower passive waste do not tend to have higher active waste. Estimated at around 82 per cent of public purchase waste, passive waste arising from rigidity and regulatory burdens may have effects worse than active waste arising from misuse of discretion. . This does not imply that corruption or active waste is not an important issue. But curbing discretion and increasing regulations may not be the most effective solution. Instead, organizational form matters more, with relatively autonomous bodies performing better. This seemingly counter-intuitive insight indicates that autonomy and discretion with appropriate oversight controls may be better than rigorous and rigid regulation.

While we need to ruthlessly crack down on corruption, it must, at the same time, be recognized that the fear of a large and cumbersome anti-corruption bureaucracy can be detrimental to risk taking and may hamper legitimate activities in public institutions. This is highlighted in the case of the Indian banking sector in a paper by Banerjee, Cole, and Duflo [2]. Building on previous research which indicates that loan officers of public banks are reluctant to lend to growing firms for profitable opportunities, and accounts from the loan officers that cite fear of prosecution for corruption as one reason, the authors study the impact of vigilance activities on lending. They find that vigilance activities result in reduced lending in the affected branch as well as neighbouring branches and the effect persists for around two years. Risk taking also declines in the aftermath of a vigilance event.

In essence, smart policy design needs to be distinguished from mere procedural tightening and bureaucratic expansion, since the latter, if not properly thought out, can increase inefficiencies and wastage in public expenditure and service delivery.

***References*** : [1] Bandiera, O., A. Prat, and T. Valleti (2006), 'Active and Passive Waste in Government Spending: Evidence from a Policy Experiment', *American Economic Review,* vol. 99. [2] Banerjee, A., S. Cole, and E. Duflo (2006), 'Are the Monitors Over-Monitored? Evidence from Corruption and Lending in Indian Banks', mimeo.

adulterated foodgrains. The reason is that their share is often sold more profitably to the rich, who pay the market price. This is just a mild manifestation of a problem that was ubiquitous in some countries in the 1970s, 1980s, and 1990s, where price controls were widely used. Prices would be low but goods would vanish from the shelves—'low prices for no goods'. Customers would be turned away or made to wait in long queues to buy limited quantities of basic goods like bread, butter, and soap.

2.50 There is another problem that arises from prices that are kept low for consumers by government diktat. Firms that produce these goods would end up making a loss; so the government has to subsidize these firms or pay for their 'under-recoveries', as this is euphemistically called, to make sure that these goods are manufactured. This in turn means, first of all, a larger fiscal deficit with all its attendant costs; and, additionally and in some ways more importantly, the incentive to be efficient and cut costs virtually vanishes, since the firms know that in the end they will be given a subsidy by the government to cover their costs, whatever they may be.

2.51 There is a third problem with price controls. Prices are signals to consumers and sellers and all those who deal in these products of shortages (or, equivalently, the rising cost of production) and abundance. Prices rise when there is a shortage and decline when there is a glut. Once prices are controlled, we effectively cut off these signals. Take petroleum products, for instance diesel. When the international crude price rises, for India, which has to import the bulk of this product, there is, effectively, a shortage. If prices were left to the market, diesel price would rise in response to this, ordinary people would economize on their use of diesel, and demand would decline, as indeed needs to happen during a shortage. In India, this rarely happens, because the signal of shortages and rising cost of inputs in the area of many fuels and energy resources is not permitted to be transmitted to the consumers.

2.52 All these costs add up massively, creating inefficiencies, large deficits, and extra-inflationary pressures (for goods and services that are not controlled). Hence, we have to take steps in India to move away from price controls. This does not mean that we leave the poor open to the vulnerabilities of the market. It means that we should subsidize the poor, wherever possible, *directly*, that is by shoring up their income by making transfers to their bank accounts or giving them cash. With India's growing sophistication in information technology and ability to identify individuals by bio-markers, this is now entirely within the realm of the possible. Of course, change always means some transactions costs. But to resist those costs at all times is to court perpetual poverty and live with outmoded institutions. India has lived with controlled prices of a variety of petroleum products for a long time and it is not easy to move away from this. Petrol was decontrolled on 25 June 2010; on the same day it was announced that diesel would also be decontrolled but that has not yet happened. The basic problem arises from the fact that petrol and diesel marketing has been a controlled sector for so long (with a system of paying public-sector companies subsidies to cover their costs) that virtually all private players have exited this market.

2.53 In a market where all dominant players are public-sector companies, 'market price' is not a very meaningful concept. It is easy for government to control state-owned companies through nods and winks. So what really needs to be done as a first step is to put petrol pricing on a transparent formula—if the price of crude is x and the exchange rate y, then every month or fortnight, government announces a maximum price of petrol, which anybody can work out from the x and the y. The rule has to be worked out to make sure that the oil-marketing companies can, in general, cover their costs. This will mean that if one company can innovate and cut costs, it will make greater profits. Hence, firms will be more prone to innovate and be efficient under this system. Once the rule is announced, there should be no interference by government. If this is done for a while, private companies will re-enter this market. And once a sufficient number of them are in the fray, we can remove the rule-based pricing and leave it truly to the market (subject to, of course, the usual regulations of antitrust and other competition laws).

2.54 For diesel, where even the rudimentary first step for freeing prices has not yet occurred, a possible intermediate step is to fix a per litre subsidy from the government. In other words, for every litre of diesel sold by an oil-marketing company, the government will give a fixed subsidy of a certain number of rupees. This is not ideal but as an interim measure has several advantages. Note that, since this subsidy is fixed per litre, the government's fiscal burden will not have to take on the full share of the burden created by a rise in the price of crude. The only change in burden will be caused by changes in the aggregate consumption of crude, which is a fairly predictable number. Second, the signalling role of price will now be largely intact. If the price of crude rises, with the subsidy per litre fixed, the consumer's price will rise and so the signal to save on the use of diesel will be transmitted. It is possible to make this more sophisticated by requiring that the per-litre subsidy will be raised if the price rises too high, in order to cushion the consumer. What is important is that the subsidy should be pre-specified so that, thereafter, government stays fully out of the picture. Whether or not we give a per litre subsidy, till such time when more private firms enter this business, we may have to use a formula-based upper bound on the consumer price. Being formula based, this will move up and down with the international price of crude and the exchange rates and the upper bound will be set so as to ensure that the firms can cover their costs. It is possible to have an upper bound even after private players enter the market, but the purpose of the upper limit will, in that case, be like an antitrust measure to rule out collusive price hikes.

2.55 Another area where we need to do some sophisticated thinking, using ideas from the basic principles, concerns land acquisition. This is vital for India's manufacturing and industrial sector. These sectors have not done well of late. The share of industry in terms of value added in India's GDP had reached a peak of 28.7 per cent but is now down to 27 per cent. While we do not want to make any move to deter the services sector, which continues to be the nation's driver of growth, from doing well, it is critical to boost manufacturing and industry, especially since the demographic dividend will give India an abundance of working-age population.

2.56 In developing industry, it will be important not to make the mistake that was made earlier when India tried to use a system of licensing to direct investment into this sector. Instead, keeping in mind the incentive structure of markets, the government's aim must be to create a level playing field, provide the essential infrastructural facilities and a non-interfering bureaucracy, and then enable the sector to flourish on its own. The development of the small town can play an important role in this. For small towns to do well, the state has to provide for connectivity through roads and railways, basic infrastructure like power and water supply, and law and order. Using the growing connectivity of the major metropolitan cities we can try to provide these facilities along the major highways connecting major cities and encourage the appearance of small towns along this.

2.57 Even with all this, one important precondition for industry to do well is to have a system of buying land from the agricultural sector, since a lot of industry is both land and labour intensive. There are some obvious obstacles to land acquisition in a nation like ours. The crux is what is often called the hold-up problem. Usually, setting up a new industry or a manufacturing unit requires a lot of contiguous land and, since agricultural landownership is highly fragmented, an industrial entrepreneur has to simultaneously negotiate with multiple farmers. And therein lies the problem. In case all farmers agree to sell but one or two, owning land in the middle of this space, refuse, then the entire project could become unviable for the industrial entrepreneur. What this means is that the interests of farmers get pitted against one another. If we force the one farmer holding out to sell, we violate his interest; and if we abandon the project, we are violating the interests of the farmers who want to sell. From this it should be clear what is not often realized that not to have a viable land acquisition policy is to compromise the rights of farmers, namely the rights of those who want to sell their land.

2.58 It is this that necessitates government to step in as mediator. To leave it completely to the market would mean giving in entirely to the hold-up problem. Not only would this slow down industrialization, it also means riding roughshod over the preferences of farmers who want to earn substantial money by selling their land. This is the reason why this is one area where government intervention is considered necessary. The need is to have a well-articulated law on where and under what circumstance and for what kind of payment can government acquire land from farmers for industrial purposes. India's new land acquisition bill is based on a recognition of this problem and it is hoped that we will, before long, have a well-structured eminent domain law, and Indian industry can begin to grow at the rate at which it is capable.

2.59 Research and innovation in ideas is essential for good policy making (see Box 2.9) and one field of inquiry and research crying out for more attention in India is law and economics. A legal system that pays little attention to individual incentives and the laws of economics as it evolves over time, has the danger of becoming so cluttered and conflicted that it becomes difficult for anybody to both do business and not violate the law. If that happens, we face the choice of bringing business and enterprise to a halt or becoming a nation of violators. There is need over time to revisit our laws pertaining to the economy with this in mind. Also the aim has to be to give individuals and firms as clear rights as possible, as much freedom as we can without impinging on the welfare of others, and easy exit routes. Wherever

### Box 2.9 : Delhi Economics Conclave, 2011

The Ministry of Finance, Government of India in collaboration with the National Institute of Public Finance and Policy (NIPFP), Confederation of Indian Industry (CII), Delhi School of Economics (DSE) and Indian Statistical Institute (ISI) organised a series of lectures, seminars and workshops during the week of 12-17 December 2011. To mark this occasion, the week was declared as the Delhi Economics Conclave (DEC) 2011.The central day of the conclave was on December 14, 2011 when the main plenary sessions were held on the theme: "Economic Policies for Emerging Economies."

The Conclave brought together eminent economic thought-leaders and economic practitioners as well as policymakers and stakeholders in the Indian capital. More than 400 participants from diverse countries including the US, UK, Germany, Australia, Singapore and Bangladesh attended. An intensive interactive forum, it elicited perspectives on the theoretical and practical aspects of an evolving global economic environment, with particular emphasis on the role of India as a large emerging economy, and a vibrant democracy.

With the backdrop of the recent economic and financial crisis, this conference was organized to discuss the ways through which emerging market economies, such as India, could overcome the adverse impacts of these external vulnerabilities. In this respect, the conference deliberated on a number of issues such as spillover impacts of the recession, and economic and social policies to cope with the imminent slowdown. The deliberations converged on the view that emerging economies need to have strong back-up plans and focus more on South-South trade. On distilling various views, there appeared to be six priorities for India: investment and capital formation; increased agriculture output and productivity through government investment; fiscal consolidation; education and skill development to harness the demographic dividend; ensure the flow of foreign investment for asset creation; and focus on inclusive growth through improved health facilities, education and financial inclusion. Policymaking has to move on from a purely mechanistic exercise of implementing well-worn rules to nurturing bold, strategic ideas and putting them to work. Nations that have done so have reaped large benefits. There is need to bring in new people and innovations into the world of policy. A colloquium, like the Delhi Economics Conclave, is a step towards this. But, as India advances and becomes industrialized, we will have to think of more sweeping ways of injecting the imaginative spirit.

possible, when giving a person a right it is best also to give the person the right to sell that right. In the absence of that, valuable assets often get attached to persons and enterprises and are effectively frozen. In India there are entities that have been given land with severe strictures on how that land can be used and with plenty of restriction on selling off the land. The outcome is land under-utilization.

2.60 Similarly with labour laws, there is need to give much greater freedom to both employers and employees to voluntarily sign contracts of different kinds and then have the state recognize the contract and help enforce it. In a modern economy needs across sectors vary. Some may need permanent labour whereas some may serve demands that are volatile and so need flexibility in running their labour force up or down. Likewise, some workers may want permanence of tenure, whereas others may be willing to forego this in order to earn more money. Not to allow these flexibilities means smaller organized labour markets with stagnant wages. All provisions of freedom and flexibility come with certain limits. But when these limits become too binding, we end up curbing the demand for labour and in the end this hurts labourers more than anybody else since the limited demand causes wages to remain low. Similarly, we need to have more transparent exit routes for firms. This will mean a lot of land that remains locked in sick industries will get freed up quickly and increase the overall efficiency of our manufacturing sector. The costs of production of India's manufacturing sector, within the factory walls, are highly competitive. If the transaction and administrative costs can be lowered, industry will get a large boost in terms of competitiveness in international markets These are not matters that can be attended to overnight but if we want to have an efficient economy and society, and want India to take a seat among the world's industrialized nations, these are areas where we will have to act sooner or later.

2.61 Finally, in talking about a nation's economic progress, all attention, including both praise and criticism, is usually focused on the government. It is, however, important to recognize that much also depends on civil society, the firms, the farmers, and ordinary citizens. The social norms and collective beliefs that shape the behaviour of these agents play an important role in how a nation does (Box 2.10). Honesty, punctuality, the propensity to keep promises, the attitude towards corruption are matters shaped in great part by norms and social beliefs and the behaviour patterns can become habitual. Moreover, in a democracy like India, what can be done by government depends in great measure on how ordinary people think and what people believe in. That is what electoral politics is all about. An important reason why this got so little attention in the past is because so much of traditional economics was written as if these non-economic facets of life did not matter. But we now know that a market economy cannot function if people are totally self-

## Box 2.10 : Values and Economics

There is research in psychology and evolutionary biology which shows that morality, altruism, and other-regarding values are an innate part of the human mind, even though the social setting in which a person lives can nurture or stunt these traits. However, the recognition that these human and moral qualities can have a large impact on economic development came relatively late to economics. Hence, the literature on this is relatively recent and brief. There was the celebrated work of Fukuyama, which illustrated how societies that managed to develop higher levels of trustworthiness among the people were societies that had achieved greater economic prosperity. We now know that this is true for many social norms and habits. In fact, recent research shows that having a few 'good' human beings in society can give rise to dynamics through which we end up with an overall better society.

There is also evidence that social norms and habits that at first sight seem ingrained in a society can change over short periods of time. By this argument it is possible for India to nurture and develop the kinds of social norms that enable a more vibrant economy. The following is an interesting example of how social habits change, where the identity of the nation is deliberately withheld from the quotation: 'In his published memoir, Kattendyke (an European visiting this nation) cited a series of events to illustrate the frustrating slowness of the nation. For example, the supplies necessary to make repairs, which he had specifically ordered to be delivered at high tide, did not arrive on time; one worker showed up just once and never returned ... . Kattendyke's frustrations were in fact shared by most of the foreign engineers in the country ... . They often found themselves vexed by the work habits of the locals, and the main reason for their vexation was the apparent lack of any sense of time. To these foreigners, the locals worked with an apparent indifference to the clock.'

The nation in question is Japan, arguably the contemporary world's most punctual society, at the turn of the nineteenth century. The quotation is from [4].

***References*** : [1] Fukuyama, F.(1996), *Trust: The Social Virtues and the Creation of Prosperity*, Free Press, New York. [2] Guha, A. S. and B. Guha (2012, forthcoming), 'The Persistence of Goodness,' *Journal of Institutional and Theoretical Economics*. [3] Hauser, M. D. (2006), *Moral Minds*, Harper Collins, New York. [4]. Hashimoto, T. (2008), 'Japanese Clocks and the History of Punctuality in Modern Japan,' *East Asian Science, Technology, and Society*, vol. 2.

serving. While self-interest is a major driver of economic growth, it is important to recognize that honesty, integrity, and trustworthiness constitute the cement that binds society. At times economists treated these social norms, preferences and customs as unalterable. If that were so, there would not be much point in analysing their effect. But we do know that these qualities in a people can be changed. Honesty and integrity can be nurtured and aversion to corruption can be shored up.

2.62 If these traits are absent or inadequate in a nation, it is likely that that nation will stagnate and remain in a chaotic poverty trap. Take, for instance, contracts. As remarked upon earlier, they enable markets to develop and form the basis of economic life. If the contractual system in a nation is so weak that when a bank gives a 20-year mortgage to a person for buying a house, there is high risk of default, the implication of this is not that banks in this country will make large losses. The implication is that banks will not give loans; and the housing market will remain severely underdeveloped and the total number of houses few and far between. Enforcing complicated or large contracts, especially ones protracted over a long period of time, is the responsibility of the state. The state provides the laws and enforcement to enable people to sign contracts. In India, the state does a fairly good job in the housing mortgage market and banks and individuals rely on that.

2.63 However, economic life is full of everyday 'contracts'—you let me ride in your taxi, and I pay you at the end of it; I pay you money now and you paint my house over the next two days; or you paint my house over the next two days and I pay you after that. In these everyday situations it is too cumbersome to bring in the state and the law courts. Here the main guarantor has to be people's personal integrity and trustworthiness. Societies that have successfully nurtured these qualities have done well; societies that have done poorly on these, tend to do poorly in terms of economic progress. It is not known precisely how these values can be inculcated in society. But, hopefully, writing about their importance will catalyse change, as ordinary people realize that for *economic* advancement these *social* qualities are as important as policies that concern directly with the economy—like running the stock market or setting the rules of market competition. Further, basic literacy and better education are helpful since people can then, on their own, reason and reach these conclusions. Literacy has the added value that it implies ordinary people will demand policies which are truly better, rather than those that merely look good on the surface. And, in a democratic setting like India, this will incentivize politicians to adopt better policies. Finally, if the political leaders and policymakers act as role models in terms of these qualities of honesty, integrity, and trustworthiness, that can set the ball rolling.

# Fiscal Developments and Public Finance

3

CHAPTER

*Rapid fiscal consolidation was effected in 2010-11 with fiscal deficit dropping to 4.8 per cent of gross domestic product (GDP) from 6.5 per cent of GDP in 2009-10. The Budget for 2011-12 estimated a further reduction to 4.6 per cent of GDP to be achieved through a 16 per cent growth in tax revenue, disinvestment receipts of ₹40,000 crore and moderation in growth in expenditure to 4.9 per cent. Economic developments in the current fiscal have panned out very differently than was envisaged at the time of budget formulation. With a sharp deceleration in real GDP growth, particularly in the industry sector and continued high levels of prices in key commodities, a slippage is likely in the deficit targets envisaged at the time of Budget Estimates. However, with states performing better in overall terms, the combined deficit of the centre and states appears to be on firmer footing, which augurs well for strengthening medium-term macroeconomic prospects. The medium-term outlook is firmly on the consolidation path; albeit with a likely longer tail in terms of time horizon.*

3.2 The macroeconomic environment has been under stress since 2008-09 when the global economic and financial crisis unfolded, necessitating rapid calibration of policies. Fiscal expansion followed in 2008-09 and 2009-10 did yield macroeconomic dividends in the form of a sharp recovery in 2009-10, which stabilized in 2010-11 at the same 8.4 per cent level of growth. Economic Survey 2010-11 had succinctly indicated the preponderantly structural nature of the fiscal deficit in India and underscored the need for sustained fiscal consolidation to support medium-term growth prospects. Given this nature, the resumption of fiscal consolidation in 2010-11 as envisaged in the Budget for 2010-11 was apposite and fairly ambitious. The outcome for 2010-11 exceeded this primarily on account of the larger-than-estimated growth in nominal GDP and substantial gains in terms of non-tax revenues and higher than anticipated tax revenues. Higher tax refunds in the current financial year implies that growth of last year was overstated. The higher than budgeted non-tax revenue in 2010-11 was appropriated by the higher expenditure outgo through supplementary demand for grants. Thus, substantial part of the better fiscal outcome (as proportion of the GDP) owed to higher nominal GDP in 2010-11.

3.3 The macroeconomic situation at the time of formulation of Budget 2011-12 looked positive, even though there was some concern about industrial slowdown. However, the persistence of inflationary pressures and consequent demand slowdown had their impact on public finances with rising costs impairing profit margins and thereby affecting levels of growth in corporate income tax and central excise. With global commodity prices remaining high and given limited flexibility in domestic price setting, there have been some expenditure additionalities with implications for the levels of deficit – both revenue and fiscal. The higher outgo in terms of tax refunds, the lower levels of non-tax revenues and the state of the equities market that was inappropriate for achieving the planned disinvestment in the first nine months of the current fiscal make it a challenge to reach the budgeted revenues in the current fiscal. At the same time global crude oil prices (Indian basket) averaged US $ 110.1/bbl in the first nine months, which was much higher than what was assumed at the time of budget formulation. Together with the fact that headline inflation has been high even with limited pass through of fuel prices, these have implications for higher levels of subsidies. While efforts are afoot to rein in expenditure overruns, it is likely that deficit calculations may have to factor in additional expenditure.

3.4 The Budget for 2011-12 had estimated a modest decline of ₹ 4385 crore in revenue receipts, which was placed at ₹ 7,89,892 crore over 2010-11. Given that non-tax revenues were bound to dip after a huge jump in 2010-11, revenue receipts were to be mainly driven by gross tax revenues which were estimated to reach ₹ 9,32,440 crore. It was also envisaged that growth in expenditure would be limited to 4.9 per cent and accordingly total expenditure was placed at ₹ 12,57,729 crore. As a proportion of GDP, revenue deficit was to be brought down to 3.4 per cent and fiscal deficit to 4.6 per cent in 2011-12 (Table 3.1 and Figure 3.1). As against a long-period average annual growth of 13.7 per cent in nominal GDP (between 1991-92 and 2007-08), the growth since 2008-09 has been more volatile, impacting fiscal aggregates when expressed as proportions of nominal GDP. For instance, a substantial part of the correction in fiscal deficit in 2010-11 owes to changes in nominal GDP (Table 3.1 A). While in absolute terms the provisional fiscal deficit was close to the BE, as a proportion of GDP there was sharp reduction.

**Table 3.1 : Trends in Deficits of Central Government**

| Year | Revenue Deficit | Fiscal Deficit | Primary Deficit | Revenue Deficit as per cent of Fiscal Deficit |
|---|---|---|---|---|
| | (As per cent of GDP) | | | |
| 2003-04 | 3.6 | 4.5 | 0.0 | 79.7 |
| 2004-05 | 2.4 | 3.9 | 0.0 | 62.3 |
| 2005-06 | 2.5 | 4.0 | 0.4 | 63.0 |
| 2006-07 | 1.9 | 3.3 | -0.2 | 56.3 |
| 2007-08 | 1.1 | 2.5 | -0.9 | 41.4 |
| 2008-09 | 4.5 | 6.0 | 2.6 | 75.2 |
| 2009-10 | 5.2 | 6.5 | 3.2 | 81.0 |
| 2010-11(P) | 3.2 | 4.8 | 1.8 | 66.3 |
| 2011-12(BE) | 3.4 | 4.6 | 1.6 | 74.4 |

***Sources*** **: Union Budget documents and Controller General of Accounts.**
**BE : Budget Estimates.**
**P: Provisional Actuals (Unaudited).**
***Notes*****: The ratios to GDP at current market prices (CMP) are based on the Central Statistics Office's (CSO) National Accounts 2004-05 series.**

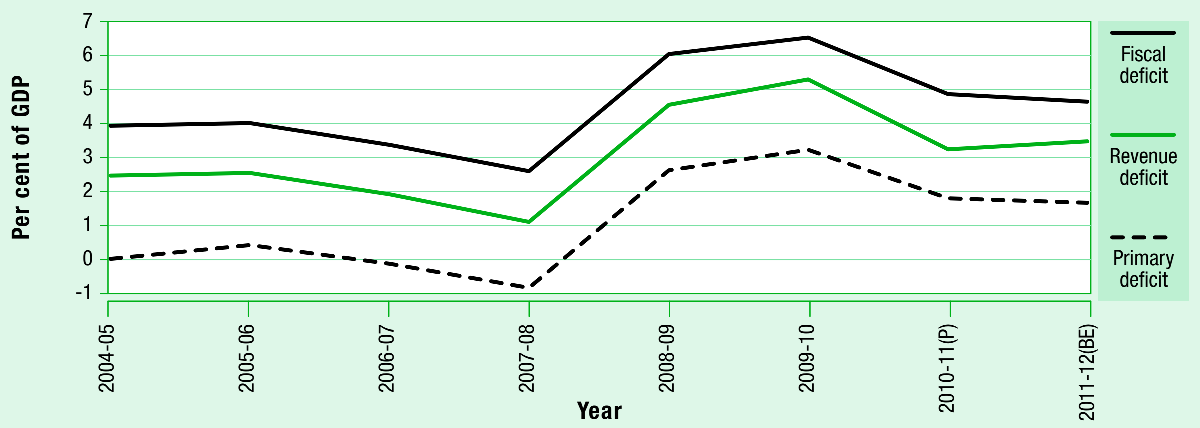
## Budgetary developments in 2011-12

3.5 The macroeconomic backdrop leading to the presentation of the Budget for 2011-12 was fairly promising and the Economic Survey had indicated a return to the high growth path with a projection of 9 +/- 0.25 per cent. In terms of quarterly GDP data, growth was still strong even though there was some deceleration in the second quarter for 2010-11. Inflation was above 9 per cent in January 2011 and monetary policy was in a tightening mode; core inflation was moderate and while growth in the industrial sector as per the index of industrial production (IIP) was buoyant in the first two quarters of 2010-11, there was strong deceleration in the IIP in November 2010, which was seen more as a road bump than any long-run problem; and the savings and investment data showed promise of reverting to their pre-crisis trajectories. Against this backdrop, the Budget for 2011-12 indicated sustaining the process of fiscal consolidation and announced a

**Table 3.1(A) : Trends in Deficits due to Change in GDP**

| | 2010-11(BE) At the time of Budget 2010-11 (Estimates) | 2010-11(AE) Advance Estimates | 2010-11(RE) Revised Estimates | 2010-11(QE) Quick Estimates |
|---|---|---|---|---|
| **GDP(CMP) (₹ crore)** | 6934700 | 7877947 | 7875627 | 7674148 |
| Nominal GDP growth (per cent) | 12.5 | 20.3 | 20.2 | 17.2 |
| | **2010-11(BE)** | **2010-11(RE)** | **2010-11(P)** | **2010-11(P)** |
| **Fiscal deficit (₹ crore)** | 381408 | 400998 | 369043 | 369043 |
| **Fiscal deficit as per cent of GDP** | **5.5** | **5.1** | **4.7** | **4.8** |

Figure 3.1 Trends in deficits of the Central Government

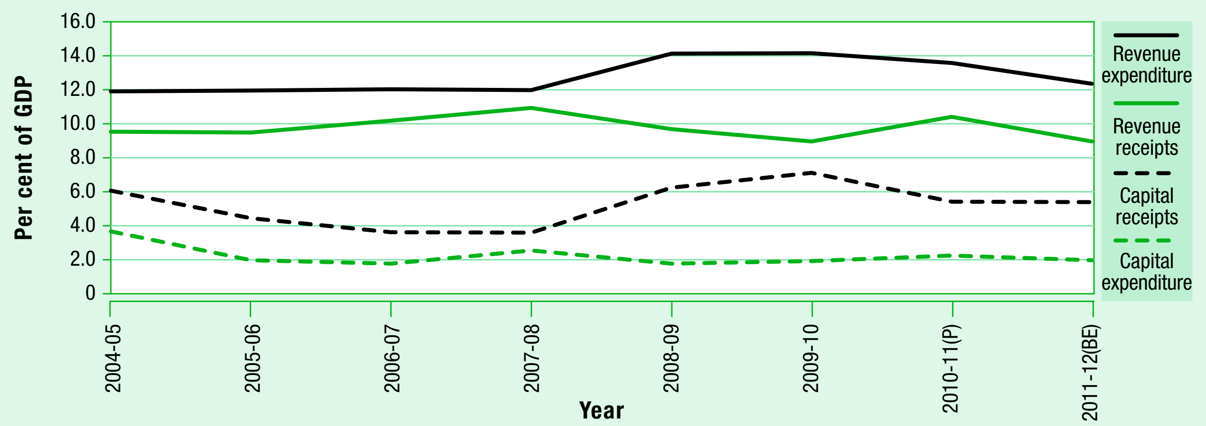



plan to introduce an amendment to the Fiscal Responsibility and Budget Management (FRBM) Act in 2011-12, laying down the fiscal roadmap for the next phase.

3.6 Pointing to the criticality of effective management of public expenditure in sustaining the fiscal consolidation process, the Budget for 2011-12 indicated the initiatives in this regard including the constitution of the High Level Expert Committee on Efficient Management of Public Expenditure, the intent of the government to extend the nutrient-based subsidy regime to urea and the move towards direct transfer of subsidy. While reiterating the commitment to retaining at least 51 per cent ownership and management control of the central public-sector undertakings, the Budget for 2011-12 set a ₹ 40,000 crore disinvestment target . Given this situation and against the then estimated (Revised Estimates) level of fiscal deficit of 5.1 per cent, the Budget for 2011-12 placed fiscal deficit at 4.6 per cent (Table 3.2 and Figures 3.2 and 3.3).

3.7 The key objective of the FRBM Act 2003 was to ensure intergenerational equity in fiscal management and towards this end, revenue surpluses were to be generated by a specified time frame. The intention was that borrowings and revenue surpluses could be channeled into capital expenditure leading to creation of assets conforming to the 'golden rule' principle of treating borrowings only for capital expenditure. Given that there were large intergovernmental transfers which typically in an accounting sense could get classified as revenue expenditure, in the Union Budget 2011-12, a new fiscal indicator, namely "Effective Revenue Deficit" was introduced to ascertain the actual deficit in the revenue account after adjusting for expenditure of capital nature. Hence the "adjusted or "effective" revenue deficit is what is of importance for equity across generations. The effective revenue deficit for 2011-12 is projected at 1.8 per cent of GDP as against the revenue deficit estimate of 3.4 per cent of GDP.

Figure 3.2 Receipts and expenditure of the Central Government



## Table 3.2 : Receipts and Expenditure of the Central Government

| | 2006-07 | 2007-08 | 2008-09 | 2009-10* | 2010-11 (BE) | 2010-11 (P) | 2011-12 (BE) |
|---|---|---|---|---|---|---|---|
| | | | | (₹ crore) | | | |
| **1. Revenue receipts (a+b)** | **434387** | **541864** | **540259** | **572811** | **682212** | **794277** | **789892** |
| **(a) Tax revenue (net of States' share)** | **351182** | **439547** | **443319** | **456536** | **534094** | **572790** | **664457** |
| **(b) Non-tax revenue** | **83205** | **102317** | **96940** | **116275** | **148118** | **221487** | **125435** |
| **2. Revenue expenditure** | **514609** | **594433** | **793798** | **911809** | **958724** | **1039130** | **1097162** |
| *of which:* | | | | | | | |
| (a) Interest payments | 150272 | 171030 | 192204 | 213093 | 248664 | 234738 | 267986 |
| (b) Major subsidies | 53495 | 67498 | 123581 | 135508 | 109092 | 131212 | 134411 |
| (c)Defence expenditure | 51682 | 54219 | 73305 | 90669 | 87344 | 92386 | 95216 |
| **3. Revenue deficit (2-1)** | **80222** | **52569** | **253539** | **338998** | **276512** | **244853** | **307270** |
| **4. Capital receipts** | **149000** | **170807** | **343697** | **451676** | **426537** | **404642** | **467837** |
| *of which:* | | | | | | | |
| (a) Recovery of loans | 5893 | 5100 | 6139 | 8613 | 5129 | 12752 | 15020 |
| (b) Other receipt (mainly PSU disinvestment) | 534 | 38795 | 566 | 24581 | 40000 | 22847 | 40000 |
| (c) Borrowings and other liabilities $ | 142573 | 126912 | 336992 | 418482 | 381408 | 369043 | 412817 |
| **5. Capital expenditure** | **68778** | **118238** | **90158** | **112678** | **150025** | **159789** | **160567** |
| **6. Total expenditure [2+5=6(a)+6(b)]** | **583387** | **712671** | **883956** | **1024487** | **1108749** | **1198919** | **1257729** |
| *of which:* | | | | | | | |
| (a) Plan expenditure | 169860 | 205082 | 275235 | **303391** | **373092** | **377350** | **441547** |
| (b) Non-plan expenditure | 413527 | 507589 | 608721 | 721096 | 735657 | 821569 | 816182 |
| **7. Fiscal deficit [6-1-4(a)-4(b)]** | **142573** | **126912** | **336992** | **418482** | **381408** | **369043** | **412817** |
| **8. Primary deficit [7-2(a)]** | **-7699** | **-44118** | **144788** | **205389** | **132744** | **134305** | **144831** |
| | | | | (As per cent of GDP) | | | |
| **1. Revenue receipts (a+b)** | **10.1** | **10.9** | **9.6** | **8.9** | **9.8** | **10.4** | **8.9** |
| **(a) Tax revenue (net of States' share)** | **8.2** | **8.8** | **7.9** | **7.1** | **7.7** | **7.5** | **7.5** |
| **(b) Non-tax revenue** | **1.9** | **2.1** | **1.7** | **1.8** | **2.1** | **2.9** | **1.4** |
| **2. Revenue expenditure** | **12.0** | **11.9** | **14.1** | **14.1** | **13.8** | **13.5** | **12.3** |
| *of which:* | | | | | | | |
| (a) Interest payments | 3.5 | 3.4 | 3.4 | 3.3 | 3.6 | 3.1 | 3.0 |
| (b) Major subsidies | 1.2 | 1.4 | 2.2 | 2.1 | 1.6 | 1.7 | 1.5 |
| (c) Defence expenditure | 1.2 | 1.1 | 1.3 | 1.4 | 1.3 | 1.2 | 1.1 |
| **3. Revenue deficit (2-1)** | **1.9** | **1.1** | **4.5** | **5.2** | **4.0** | **3.2** | **3.4** |
| **4. Capital receipts** | **3.5** | **3.4** | **6.1** | **7.0** | **6.2** | **5.3** | **5.2** |
| *of which:* | | | | | | | |
| (a) Recovery of loans | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.2 | 0.2 |
| (b) Other receipt (mainly PSU disinvestment) | 0.0 | 0.8 | 0.0 | 0.4 | 0.6 | 0.3 | 0.4 |
| (c) Borrowings and other liabilities $ | 3.3 | 2.5 | 6.0 | 6.5 | 5.5 | 4.8 | 4.6 |
| **5. Capital expenditure** | **1.6** | **2.4** | **1.6** | **1.7** | **2.2** | **2.1** | **1.8** |
| **6. Total expenditure [2+5=6(a)+6(b)]** | **13.6** | **14.3** | **15.7** | **15.9** | **16.0** | **15.6** | **14.1** |
| *of which:* | | | | | | | |
| (a) Plan expenditure | 4.0 | 4.1 | 4.9 | 4.7 | 5.4 | 4.9 | 5.0 |
| (b) Non-plan expenditure | 9.6 | 10.2 | 10.8 | 11.2 | 10.6 | 10.7 | 9.2 |
| **7. Fiscal deficit [6-1-4(a)-4(b)]** | **3.3** | **2.5** | **6.0** | **6.5** | **5.5** | **4.8** | **4.6** |
| **8. Primary deficit [7-2(a)]** | **-0.2** | **-0.9** | **2.6** | **3.2** | **1.9** | **1.8** | **1.6** |
| **Memorandum items** | | | | (₹ crore) | | | |
| (a) Interest receipts | 22524 | 21060 | 20717 | 21756 | 19253 | 22064 | 19578 |
| (b) Non-plan revenue expenditure | 372191 | 420861 | 559024 | 657925 | 643599 | 726767 | 733558 |

***Sources*** **: Union Budget documents and Controller General of Accounts.**

**BE-Budget estimates P: Provisional actuals (unaudited)**

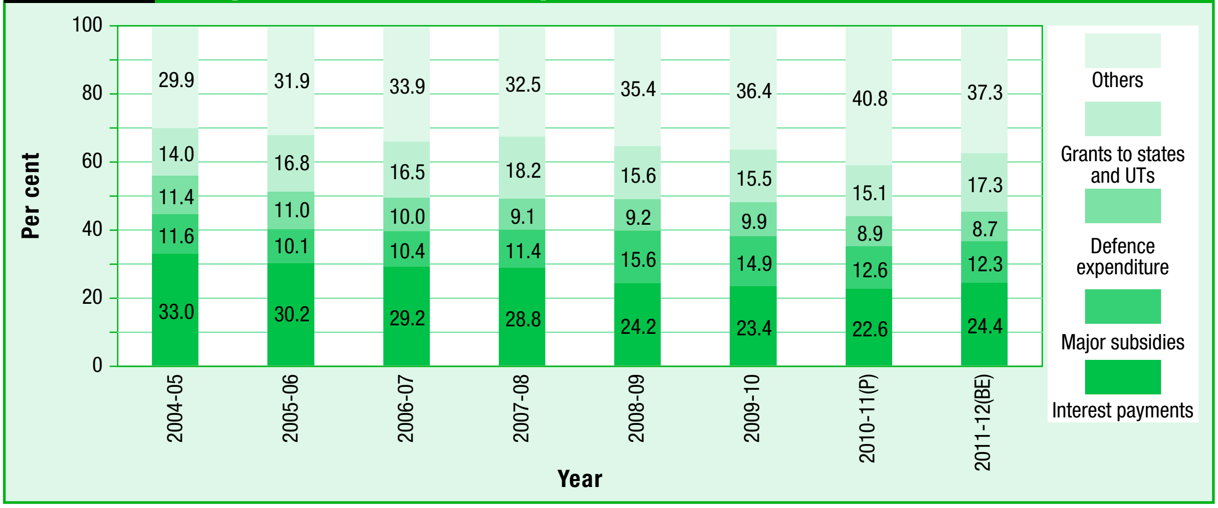
*** Based on provisional actuals for 2009-10.**

**$ Does not include receipts in respect of the Market Stabilization Scheme, which will remain in the cash balance of the Central Government and will not be used for expenditure.**

***Notes*** **: 1. The ratios to GDP at current market prices are based on the CSO's National Accounts 2004-05 series.**

**2. The figures may not add up to the total due to rounding/approximations.**

Figure 3.3 **Composition of revenue expenditure**




## Revenue and capital receipts

3.8 With bright real GDP growth outlook, the Budget for 2011-12 projected revenue receipts at ₹ 7,89,892 crore, which was marginally lower than the ₹ 7,94,277 crore achieved during 2010-11 (Provisional Actuals). As pointed out earlier, in 2010-11 while the BE had placed non-tax revenue at ₹ 1,48,118 crore, the actual outcome was ₹ 2,21,487 crore, which was on account of a higher-than-estimated realization of ₹ 1,06,000 crore as proceeds from the auction of third generation/ broadband wireless access (3G/BWA) telecom spectrum. Adjusted for the excess receipts under this head, the growth in revenue receipts would be 20.2 per cent. In BE 2011-12 non-tax revenues were estimated at ₹ 1,25,435 crore. Adjusted for one-off receipts under spectrum auctions of ₹ 1,06,000 crore, BE 2011-12 envisages a growth of 14.8 per cent year-on-year in non-tax revenues.

3.9 Growth in gross tax revenue in 2011-12 (BE) was estimated at 18.5 per cent over RE 2010-11 and based on a return to the high growth path of the economy. As a proportion of GDP (as per the then available data), revenue receipts were estimated to decline to 8.8 per cent from a 10.4 per cent level in 2010-11. Gross tax revenue was estimated to improve to 10.4 per cent of GDP in 2011-12 (BE) from a level of 10.1 per cent of GDP in 2011-12. On the basis of GDP data released by the CSO on 31 January 2012 and 7 February 2012, revenue receipts were placed at 10.4 per cent of GDP in 2010-11 (8.9 per cent in 2011-12) and gross tax revenue was placed at 10.4 per cent of GDP (10.5 per cent in 2011-12) (Table 3.3).

3.10 Capital receipts of the non-debt variety have not been a major source of financing given the disintermediation of loans by the centre to states and the low levels of disinvestment receipts as well as changes in the policy of treating the proceeds therefrom. As against a target of ₹ 40,000 crore under other receipts (mainly PSU disinvestment), ₹ 22,847 crore was realized in 2010-11. The Budget for 2011-12 indicated that higher-than-anticipated realization in non-tax revenues early in 2010-11 led to the rescheduling of some of the planned disinvestment for that year and consequently ₹ 40,000 crore was budgeted for 2011-12 as well.

## Direct Taxes

3.11 As a proportion of gross tax revenue, direct taxes have been accounting for over a half of the total since 2007-08. Given the composition earlier in the decade, which had a large share of indirect taxes, this indicated robust levels of growth in direct taxes, particularly corporation tax. However, growth in corporation tax was moderate in 2008-09 and 2009-10 owing to demand slowdown on account of the impact of global crisis. At 22.4 per cent, growth in corporation tax rebounded in 2010-11. Growth in personal income tax fell appreciably in 2008-09 to 3.3 per cent and rebounded in 2009-10 to reach 15.4 per cent. With growth in 2010-11 marginally lower at 13.7 per cent, overall growth in direct taxes in 2010-11 was at 19.5 per cent. It was budgeted at about the same level in BE 2011-12 with a growth of 20.2 per cent envisaged in corporation tax and 18.2 per cent in personal income tax. The Budget for 2011-12 underscored the governance initiatives taken

**Table 3.3 : Sources of Tax Revenue**

| | 2006-07 | 2007-08 | 2008-09 | 2009-10 | 2010-11 (BE) | 2010-11 (P) | 2011-12 (BE) |
|---|---|---|---|---|---|---|---|
| | | | | (₹ crore) | | | |
| **Direct (a)** | **219724** | **295938** | **319859** | **367543** | **422500** | **439258** | **525151** |
| Personal income tax | 75093 | 102644 | 106046 | 122370 | 120566 | 139148 | 164526 |
| Corporation tax | 144318 | 192911 | 213395 | 244725 | 301331 | 299423 | 359990 |
| **Indirect(b)** | **241538** | **279031** | **269433** | **244737** | **315000** | **345739** | **397250** |
| Customs | 86327 | 104119 | 99879 | 83324 | 115000 | 136058 | 151700 |
| Excise | 117613 | 123611 | 108613 | 102991 | 132000 | 138372 | 163550 |
| Service tax | 37598 | 51301 | 60941 | 58422 | 68000 | 71309 | 82000 |
| **Gross tax revenue #** | **473512** | **593147** | **605299** | **624528** | **746651** | **795064** | **932440** |
| | | | *Tax revenue as a percentage of gross tax revenue* | | | | |
| **Direct (a)** | 46.4 | 49.9 | 52.8 | 58.9 | 56.6 | 55.2 | 56.3 |
| Personal income tax | 15.9 | 17.3 | 17.5 | 19.6 | 16.1 | 17.5 | 17.6 |
| Corporation tax | 30.5 | 32.5 | 35.3 | 39.2 | 40.4 | 37.7 | 38.6 |
| **Indirect(b)** | 51.0 | 47.0 | 44.5 | 39.2 | 42.2 | 43.5 | 42.6 |
| Customs | 18.2 | 17.6 | 16.5 | 13.3 | 15.4 | 17.1 | 16.3 |
| Excise | 24.8 | 20.8 | 17.9 | 16.5 | 17.7 | 17.4 | 17.5 |
| Service tax | 7.9 | 8.6 | 10.1 | 9.4 | 9.1 | 9.0 | 8.8 |
| | | | *Tax revenue as a percentage of gross domestic product* | | | | |
| **Direct(a)** | 5.1 | 5.9 | 5.7 | 5.7 | 6.1 | 5.7 | 5.9 |
| Personal income tax | 1.7 | 2.1 | 1.9 | 1.9 | 1.7 | 1.8 | 1.8 |
| Corporation tax | 3.4 | 3.9 | 3.8 | 3.8 | 4.3 | 3.9 | 4.0 |
| **Indirect(b)** | 5.6 | 5.6 | 4.8 | 3.8 | 4.5 | 4.5 | 4.5 |
| Customs | 2.0 | 2.1 | 1.8 | 1.3 | 1.7 | 1.8 | 1.7 |
| Excise | 2.7 | 2.5 | 1.9 | 1.6 | 1.9 | 1.8 | 1.8 |
| Service tax | 0.9 | 1.0 | 1.1 | 0.9 | 1.0 | 0.9 | 0.9 |
| **Gross tax revenue #** | 11.0 | 11.9 | 10.8 | 9.7 | 10.8 | 10.4 | 10.5 |

*Sources* : Union Budget documents and Controller General of Accounts.

BE-Budget estimates P: Provisional actuals (unaudited)

# includes Taxes referred to in (a) & (b) and Taxes of Union Territories and 'other' Taxes.

*Notes* :1. Direct Taxes also include Taxes pertaining to expenditure, interest, wealth, gift, and estate duty.

2. The ratios to GDP at current market prices are based on the CSO's National Accounts 2004-05 series.

through information technology including online preparation and e-filing of income tax returns, Electronic Clearing Services (ECS) facility for crediting of refunds directly in taxpayers' bank accounts; and electronic filing of tax deduction at source (TDS) documents. Also a category of taxpayers was notified who need not file a return of income as their income tax liability has been discharged at source.

3.12 In so far as proposals for 2011-12 were concerned, continuing the process of broadening the tax slab, the Budget enhanced the personal income tax exemption limit for the general category of individual taxpayers from ₹ 1,60,000 to ₹ 1,80,000; reduced qualifying age for senior citizens from 65 to 60 years with enhancement in their exemption by a further ₹ 10,000 (from ₹ 2,40,000 to ₹ 2,50,000); and created a new category of very senior citizens (80 years and above) who were given a higher exemption limit of ₹ 5,00,000. Budget 2011-12 reduced the surcharge on corporation tax to 5 per cent from the earlier 7.5 per cent while the rate of minimum alternate tax (MAT) was raised from 18 per cent to 18.5 per cent of book profits and the levy of MAT was extended to special economic zones (SEZs). Alternative Minimum Tax (AMT) at the rate of 18.5 per cent was introduced in the case of Limited Liabilities Partnerships (LLPs) to ensure a minimum level of tax payment by organised business.

## Indirect Taxes

3.13 Reduction in excise duties was a key component of the fiscal stimulus package announced in the wake of the global financial and economic crisis and its impact on the economy. With the economy rebounding in 2009-10 and 2010-11 and healthy growth in indirect taxes in 2010-11, the budget for 2011-12 had the option of rollback of the excise duty cuts. But this was eschewed for two reasons: to see improved business margins, incentivize higher investment rates and to facilitate introduction of the goods and services tax (GST). While holding the peak non-agricultural custom duty rates at 10 per cent, the Budget for 2011-12 sought to rationalize three rates of 2 per cent, 2.5 per cent, and 3 per cent at the middle level of 2.5 per cent.

### Customs

3.14 Some sector-specific changes in the rates of duty were made:

*Food/Agro-processing/Agriculture:*

- Basic customs duty reduced from 5 per cent to 2.5 per cent on specified agricultural machinery like paddy transplanters, laser land levellers, cotton pickers, reaper-cum-binders, straw or fodder balers, sugarcane harvesters, and tracks used for manufacture of track-type combine harvesters. Basic customs duty was reduced from 7.5 per cent to 2.5 per cent on parts and components required for the manufacture of such equipment.
- Basic customs duty reduced from 7.5 per cent to 5 per cent on micro-irrigation equipment.
- Basic customs duty on raw pistachios and cranberry products reduced from 30 per cent to 10 per cent; on sun-dried dark seedless raisins reduced from 100 per cent to 30 per cent.
- Full exemption from basic customs duty extended to de-oiled rice bran oil cake.
- Export duty of 10 per cent imposed on exports of de-oiled rice bran oil cake.

*Automobiles:*

- Full exemption from basic customs duty and special additional duty (SAD) along with concessional countervailing duty (CVD) of 5 per cent (by way of a central excise duty exemption) extended to specified parts of hybrid vehicles namely, battery packs, battery chargers, AC/DC electric motors, and motor controllers (subject to actual user condition and available till 31 March 2013).
- The customs duty dispensation and concessional CVD of 5 per cent also made available on imports of spare battery packs for electric vehicles by such importers as are registered with the agencies notified for the Central Financial Assistance scheme of the Ministry of Non-conventional and Renewable Energy.
- A definition for 'completely knocked down (CKD) unit' of a vehicle including two wheelers, eligible for concessional import duty, inserted to exclude such units containing a pre-assembled engine or gearbox or transmission mechanism or a chassis where any of such parts or sub-assemblies is installed.

*Textiles:*

- Basic customs duty reduced on raw silk (not thrown) of all grades from 30 per cent to 5 per cent; on poly tetra methylene ether glycol and diphenylmethane 4, 4-diisocyanate from 7.5 per cent to 5 per cent subject to actual user condition; on acrylonitrile reduced from 5 per cent to 2.5 per cent; on sodium polyacrylate from 7.5 per cent to 5 per cent; on caprolactum reduced from 10 per cent to 7.5 per cent; on nylon chips, fibre, and yarn from 10 per cent to 7.5 per cent; on rayon grade wood pulp from 5 per cent to 2.5 per cent.
- Cotton waste fully exempted from basic customs duty.

*Capital Goods/Infrastructure:*

- The scope of full customs duty exemption to water supply projects for agricultural and industrial use expanded by bringing the water pumping station and water reservoir also within the ambit of exemption.
- The benefit of full exemption from basic customs duty and CVD available to 'tunnel boring machines' and parts thereof for hydroelectric power projects extended to such machines for highway development projects also.
- Basic customs duty reduced from 7.5 per cent to 5 per cent for specified gems and jewellery machinery.

- Full exemption from basic customs duty provided to cash dispensers and parts required for the manufacturer of cash dispensers.
- Concessional 5 per cent basic customs duty, 5 per cent CVD, and Nil SAD currently applicable to high-speed printing machinery extended to mailroom equipment compatible with such printing machinery imported by registered newspaper establishments.
- A concessional rate of 5 per cent basic customs duty, 5 per cent CVD, and Nil SAD extended to parts and components for manufacture of 23 specified high voltage transmission equipments.
- Full exemption from basic customs duty extended on bio-based asphalt sealers and preservation agents, millings removers and crack fillers, asphalt removers, and corrosion protectant and sprayer systems for bio-based asphalt applications.

*Concessions to Environment-friendly Items:*

- Concessional CVD of 5 per cent and full exemption from SAD provided to light- emitting diodes (LEDs) used for manufacture of LED lights and light fixtures.
- Basic customs duty on solar lanterns or lamps reduced from 10 per cent to 5 per cent.
- Full exemption from customs duty extended to toughened glass and silver paste imported for manufacture of solar cells/modules on actual user condition.

*Health Sector:*

- Endovascular stents fully exempted from basic customs duty of 5 per cent.
- A concessional import duty regime of 5 per cent basic customs duty, 5 per cent CVD, and nil SAD for specified raw materials for the manufacture of syringes, needles, catheters, and cannulae, on actual user condition.
- Exemption from SAD provided to patent and proprietary (P & P) medicines imported for retail sale.
- Customs duty on four specified life-saving drugs and their bulk drugs reduced from 10 per cent to 5 per cent with Nil CVD (by way of excise duty exemption).
- Basic customs duty on lactose for use in the manufacture of homoeopathic medicines reduced from 25 per cent to 10 per cent.

*Electronics Hardware:*

- A concessional import duty structure of 5 per cent CVD and Nil SAD prescribed on parts of inkjet and laser-jet printers imported for manufacture of such printers.
- Full exemption from basic customs duty extended to parts/components required for the manufacture of PC connectivity cables and sub-parts of parts and components of battery chargers, hands-free head phones, and PC connectivity cables of mobile handsets including cellular phones.
- Full exemption from SAD available up to 31 March 2011 on parts, components, and accessories for manufacture of mobile handsets including cellular phones extended up to 31 March 2012.
- Full exemption from customs duty extended to additional specified capital goods and raw materials for the manufacture of electronic hardware.
- A concessional import duty structure of 5 per cent CVD and Nil SAD prescribed on parts for manufacture of DVD writers, combo drives, and CD drives subject to actual user condition.

*Aircraft:*

- A basic customs duty of 2.5 per cent imposed on imports of aircraft for non-scheduled operations. The exemption from additional duty of customs (CVD) and special additional duty of customs (SAD) to continue.
- Exemption from education cess and secondary and higher education cess presently available to aircraft withdrawn.

*Export Promotion:*

- The list of specified goods, allowed to be imported duty free for use in the manufacture of leather goods for export, expanded.
- The list of specified goods, allowed to be imported duty free for use in the manufacture of textile and leather garments, expanded by including anti-theft devices like labels, tags, and sensors therein.
- Description of some items changed in the list of items that are allowed to be imported duty free for manufacture of textile/leather garments and other leather goods for export.

- Benefit of duty-free import extended to trimmings, embellishments, components, etc. for manufacture of leather goods, footwear, and textile garments by merchant exporters/their supporting manufacturers.
- Specified tools used in the handicrafts sector included in the list of specified goods allowed to be imported duty free to handicrafts exporters.
- Full exemption from basic customs duty extended to fin fish feed.
- Basic customs duty on vannamei broodstock reduced from 30 per cent to 10 per cent; on bamboo used for manufacture of agarbattis reduced from 30 per cent to 10 per cent.

*Paper:*

- Basic customs duty on waste paper reduced from 5 per cent to 2.5 per cent.

*Metals:*

- Full exemption from basic customs duty extended to stainless steel scrap.
- Basic customs duty on ferro-nickel reduced from 5 per cent to 2.5 per cent.
- Statutory rate of export duty on iron ores increased from 20 per cent to 30 per cent while unifying the effective rate of export duty on iron ore fines and lumps at 20 per cent.
- Iron ore pellets were fully exempted from export duty.
- Copper dross, copper residues, copper oxide mill scale, brass dross, and zinc ash exempted from special additional duty of customs of 4 per cent.
- Basic customs duty on vanadium pentaoxide and vanadium sludge reduced from 7.5 per cent to 2.5 per cent.
- Exemption from basic customs duty provided on the value of gold and silver contained in copper concentrate.

*Precious Metals:*

- An import duty of 'Nil basic customs duty + CVD of ₹ 140 per 10 gram + Nil special additional duty of customs' prescribed for gold dore bars of up to 80 per cent gold purity imported for refining and manufacturing serially numbered gold bars in India.

*Miscellaneous:*

- Basic customs duty reduced from 5 per cent to 2.5 per cent on carbon black feed stock, petroleum coke, and mineral gypsum.
- Crude palm stearin fully exempted from basic customs duty for use in the manufacture of laundry soap on actual user basis.
- At present specified categories of works of art and antiquities are exempted from customs duty for specified scope.
- Special provision made in the Finance Bill imposing definitive safeguard duty retrospectively on imports of caustic soda lye imported into India and retrospectively for the period 4 December 2009 to 3 March 2010.
- Special provision made in the Finance Bill to retrospectively provide a concessional basic customs duty of 30 per cent to fresh garlic imported by the National Consumer Cooperative Federation and the Madhya Pradesh State Cooperative Marketing Federation under import licences issued by the central government and cleared after 15 March 2003.
- Certain notifications amended retrospectively to allow exports made under the Export Promotion Capital Goods (EPCG) Scheme to simultaneously avail of export reward schemes such as the Served from India Scheme and Focus Market Scheme.

*Special Economic Zones (SEZs):*

- All clearances from SEZs into the domestic tariff area (DTA) exempted from SAD of 4 per cent provided they are not exempt from the levy of value added tax (VAT)/sales tax.
- The CVD exemption available to plastic materials reprocessed in India out of the scrap or the waste of goods extended to DTA clearances of such plastic materials manufactured in SEZ units also.

*Ship Repairs:*

- The benefit of exemption available to ship repair units on imports of spares and consumables required for repair of ocean-going vessels extended to such spares and consumables for repairs of ocean-going vessels by owners of such vessels registered in India.

## Central Excise

3.15 Some of the major measures taken in the Budget for 2011-12 are as follows:

- An excise duty of 1 per cent without Cenvat credit facility imposed on about 130 specified items, which were hitherto either fully exempt from excise duty or chargeable to nil rate of excise duty.
- Merit rate of excise duty of 4 per cent increased to 5 per cent.
- A mandatory excise duty of 10 per cent imposed on ready-made garments and textile made ups bearing a brand name or sold under a brand name.
- An excise duty of 5 per cent was imposed on automatic looms and projectile looms.
- Exemption from excise duty available to clearances up to 3500 metric tonne of paper manufactured from non-conventional material withdrawn.
- Sugar and textile items have been omitted from the schedule of the Additional Duties of Excise (Goods of Special Importance) Act 1957.

### *Food/Agro-processing:*

- Full exemption from excise duty extended to air-conditioning equipment, panels and refrigeration panels for installation of cold chain infrastructure for the preservation, storage, transport, or processing of agricultural, horticultural, dairy, poultry, apiaries, aquatic, and marine produce; conveyor belt systems for use in cold storage for the preservation, storage, transport or processing of agricultural, horticultural, dairy, poultry, apiary, aquatic and marine produce and in mandis and warehouses for storage of foodgrains and sugar.

### *Capital Goods:*

- Excise duty exemption extended to goods required for expansion of an existing mega/ultra mega power project under specified conditions on a par with exemption from CVD on the import of goods for expansion of such projects.
- Excise duty reduced from 10 per cent to 5 per cent on parts of specified textile machinery.
- Full exemption from excise duty extended to specified parts of sewing machines (other than those with in-built motors).

### *Environment Friendly and Energy Saving Goods:*

- A concessional rate of excise duty of 10 per cent prescribed for hydrogen vehicles based on fuel cell technology.
- Excise duty reduced from 10 per cent to 5 per cent on hybrid kits for conversion of fossil fuel vehicles to hybrid vehicles. Parts of such kits to attract 5 per cent duty.

### *Health:*

- Excise duty on sanitary napkins, baby and clinical diapers, and adult diapers (as also similar articles of textile wadding) reduced from 10 per cent to 1 per cent with no Cenvat credit.

### *Water Supply:*

- Full exemption from excise duty currently available to pipes required for delivery of drinking water from its source to the plant and from there to the first storage point extended to pipe fittings such as joints, elbows, and couplings.
- Concessional rate of excise duty of 1 per cent extended to water filters using pressurized tap water but without use of electricity and their replaceable kits.

### *Automobile Sector:*

- Concessional rate of excise duty of 10 per cent extended to factory-built ambulances. Other vehicles retrofitted as ambulances subsequent to their removal from the factory to continue to be eligible for refund-based concession.
- The scope of the Taxi Refund Scheme extended to include vehicles carrying 13 persons including the driver.
- Concessional excise duty structure for taxis rationalized to provide refund of 20 per cent of the excise duty paid on such vehicles if they are registered as taxis subsequent to removal.
- Full exemption from excise duty extended to parts of power tillers when cleared to another factory of the same manufacturer for manufacturing power tillers.

### *Paper and Paper Board:*

- Cotton stalk particle boards fully exempted from excise duty.

- Concessional rate of 5 per cent excise duty extended to corrugated boxes whether or not pasted with duplex sheets on their outer surfaces.
- Excise duty on greaseproof paper and glassine paper reduced from 10 per cent to 5 per cent.

### *Precious Metals:*

- Excise duty on serially numbered gold bars, other than tola bars, made in the same factory starting from the ore/concentrate stage reduced from '₹ 280 per 10 grams' to '₹ 200 per 10 grams'.
- Concessional excise duty rate of ₹ 200 per 10 grams extended to serially numbered gold bars manufactured by refining of gold dore bar also.
- Excise duty of '₹ 300 per 10 gram' imposed on serially numbered gold bars, other than tola bars, manufactured during the process of copper smelting.
- Excise duty of '₹ 1500 per kg' imposed on silver manufactured during gold refining starting from the ore/concentrate stage or from gold dore bar or during the process of copper smelting.
- Excise duty of 1 per cent imposed on branded jewellery and articles of precious metals.

### *Textiles:*

- A tariff rate of excise duty of 10 per cent prescribed for jute yarn while it is being simultaneously exempted from excise duty.

### *Miscellaneous:*

- Enzymatic preparations used in the leather industry fully exempted from excise duty.
- Full exemption from excise duty (and hence from CVD on imports) provided to colour, unexposed cinematographic film in jumbo rolls of 400 feet and 1000 feet.

## Service Tax

3.16 The introduction of service tax in 1994-95 ushered in a major structural change in indirect taxes in the form of a wider tax base and facilitated the process of rationalization of excise duties resulting in lower tax burden on productive sectors. Over the years, there has been an increase in the number of services and the rate of service tax leviable (Table 3.4).The Budget for 2011-12 retained the service tax rate at 10 per cent and focused on achieving a closer fit between the present service tax regime and the proposed GST. This was sought to be done by adding a few new services on the ability to pay principle, expanding or rationalizing the scope of existing services, rationalizing certain provisions relating to important services and valuation, modifying provisions of the Cenvat credit scheme seeking to effect the right balance between input credits and output tax, and harmonizing the provisions of the scheme across goods and services, incentivizing honesty and penalizing dishonesty in compliance, and adoption of point of taxation rules to facilitate accrual basis of the collection.

3.17 The major initiatives/highlights of Budget 2011-12 are detailed as follows :

Service tax was imposed on the following services: services provided by air-conditioned restaurants having a licence to serve alcoholic beverages in relation to serving of food and/or beverages; short-term accommodation provided by a hotel, inn, guesthouse, club or campsite, or any other similar establishment for a continuous period of less than three months.

The scope of certain existing services was expanded or altered:

- The scope of 'life insurance service' widened to cover all services provided to a policy holder or

**Table 3.4 : Service Tax- A Growing Revenue Source**

| Year | No. of Services# | Tax Rate in per cent | Revenue (₹ crore) | Growth in per cent over Previous Year@ |
|---|---|---|---|---|
| 2004-05 | 75 | 10 | 14200 | 80.0 |
| 2005-06 | 78 | 10 | 23055 | 62.4 |
| 2006-07 | 93 | 12 | 37598 | 63.1 |
| 2007-08 | 100 | 12 | 51301 | 36.4 |
| 2008-09 | 106 | 12* | 60941 | 18.8 |
| 2009-10 | 109 | 10 | 58422 | -4.1 |
| 2010-11(P) | 117 | 10 | 70896 | 21.4 |
| 2011-12 (April-December) | 119 | 10 | 60860 | 37.3 |

***Sources*** **: Receipts Budget, Controller General of Accounts and Department of Revenue.**

***Notes*** **: * Reduced to 10 per cent w.e.f. 24 February 2009.**

**@ Growth for 2011-12 (April-December) is over the corresponding period previous year.**

**# Based on new entries added each year.**

**P Provisional actual.**

any person, by an insurer, including re-insurer carrying on life insurance business. Tax to be charged on the portion of the premium other than what is allocated for investment, when the break-up of premium is shown separately in any document given to the policy holder. The rate of composition increased from 1 per cent to 1.5 per cent.

- The scope of 'club or association service' expanded to include service provided to non-members within its ambit.
- The scope of the service of 'authorized service station' expanded to :
  - (a) include services provided by any person;
  - (b) cover all motor vehicles other than those meant for goods carriage and three-wheeler scooter auto-rickshaws; and
  - (c) cover decoration and other similar services in respect of vehicles along with the services already covered.
- The definition of 'business support services' amended so as to include services provided by way of operational or administrative assistance in any manner.
- The scope of legal consultancy services expanded by bringing within their ambit
  - (a) service provided by a business entity to individuals in relation to advice, consultancy, or assistance in any branch of law, in any manner;
  - (b) representational service provided by any person to any business entity (representational services provided to individuals to continue to be exempt); and
  - (c) 'arbitration' service provided by an arbitral tribunal to any business entity.
- In commercial training or coaching services, the definition of 'commercial training or coaching centre' amended so as to bring all unrecognized courses within the tax net, irrespective of the fact that such courses are conducted by an institute which also conducts courses that may lead to grant of a degree or diploma.

*Certain exemptions were extended:*

- Exemption provided to services rendered in relation to business exhibitions held abroad.
- An abatement of 25 per cent from the taxable value provided for the purpose of levy of service tax under 'transport of goods through coastal and inland shipping'.
- Exemption provided to 'works contract' service rendered for construction or finishing of new residential complexes under the Jawaharlal Nehru National Urban Renewal Mission and Rajiv Awaas Yojana.
- Exemption provided to services rendered within a port or other port or an airport under 'works contract' service for specified areas.
- Exemption provided to the Rashtriya Swasthya Bima Yojana under general insurance service.
- Value of air freight included in the assessable value of goods for charging customs duties excluded from taxable value for the purpose of levy of service tax under 'transport of goods by air' service.
- Services related to transportation of goods by road, rail, or air when origin and destination are located outside India exempted from service tax.
- A modified scheme introduced to refund service tax to SEZ units and developers and notification No.9/2009-ST superseded. In the modified scheme, 'wholly consumed' services defined in the notification in order to extend 'outright exemption' and to permit refund of all other services on a proportionate basis.
- Some existing exemptions on domestic and international travel and club or association services were withdrawn.

## Collection Rates

3.18 As part of the announced long-term commitment to align custom tariffs to those prevailing in Association of South East Asian Nations (ASEAN) countries, peak rates of customs have been progressively reduced since the beginning of the reform process in 1991 to about 10 per cent in the Budget for 2007-08. Collection rates on overall basis progressively declined to reach 5.9 per cent in 2009-10. A rise in the rate is observed in 2010-11, reflected in part restoration of excise duty cuts (rise in CVDs) and rise in global commodity prices in some components like metals, man-made fibre, petroleum, oil and lubricants (POL) and chemicals (Table 3.5).

**Table 3.5 : Collection Rates for Selected Import Groups***

(per cent)

| Sl. No. | Commodity Groups | 1990-91 | 2005-06 | 2006-07 | 2007-08 | 2008-09 | 2009-10 | 2010-11 (Provisional) |
|---|---|---|---|---|---|---|---|---|
| 1 | Food products | 47 | 32 | 23 | 19 | 4 | 3 | 3 |
| 2 | POL | 34 | 6 | 5 | 6 | 3 | 2 | 6 |
| 3 | Chemicals | 92 | 20 | 22 | 22 | 16 | 14 | 17 |
| 4 | Man-made fibres | 83 | 34 | 28 | 30 | 17 | 22 | 30 |
| 5 | Paper & newsprint | 24 | 9 | 10 | 10 | 8 | 8 | 8 |
| 6 | Natural fibres | 20 | 13 | 12 | 13 | 6 | 4 | 5 |
| 7 | Metals | 95 | 25 | 24 | 24 | 17 | 17 | 22 |
| 8 | Capital goods | 60 | 13 | 14 | 16 | 13 | 11 | 13 |
| 9 | Others | 20 | 5 | 6 | 6 | 4 | 4 | 4 |
| 10 | Non-POL | 51 | 12 | 12 | 13 | 9 | 8 | 9 |
| **11** | **Total** | **47** | **10** | **10** | **10** | **7** | **6** | **8** |

*Source* : Department of Revenue, Ministry of Finance

*Notes* : * Collection rate is defined as the ratio of revenue collection (basic customs duty + CVD) to value of imports unadjusted for exemptions, expressed in percentage.
S.No. 1 includes cereals, pulses, tea, milk and cream, fruits, vegetables, animal fats, and sugar.
S.No. 3 includes chemical elements, compounds, pharmaceuticals, dyeing and colouring materials, plastic, and rubber.
S.No. 5 includes pulp and waste paper, newsprint, paperboards and manufactures, and printed books.
S.No. 6 includes raw wool and silk.
S.No. 7 includes iron and steel and non-ferrous metals.
S.No. 8 includes non-electronic machinery and project imports, electrical machinery.

## Goods and Services Tax

3.19 To operationalize the GST, the Constitution (115th Amendment) Bill has been introduced in the Lok Sabha in March 2011 to enable Parliament and state legislatures to make laws for levying GST on every transaction of supply of goods or services or both. Some goods, namely crude petroleum, diesel, petrol, aviation turbine fuel, natural gas and alcohol are not to come under the purview of the GST. The constitutional amendment bill also seeks to empower the President to set up within 60 days of the passage of the legislation, a GST Council with the union Finance Minister as chairperson and union Minister of State for Revenue and Finance Ministers of all the states as members. The GST Council is to work on the basis of consensus and make recommendations on issues like GST rates, exemption lists, and threshold limits. Further, the bill provides for setting up of a GST dispute settlement authority, comprising a chairperson and two members to resolve disputes arising out of deviations from the recommendations of the GST Council either by the central or state governments. The draft Bill has since been referred to the Parliamentary Committee on Finance for examination.

3.20 Among the other steps that are being taken for the introduction of the GST is the establishment of a strong information technology (IT) infrastructure. For this purpose the government has set up an Empowered Group headed by Nandan Nilekani, Chairman, Unique Identification Authority of India (UIDAI). Significant progress has been made in the conceptualization and design of the GST Network (GSTN) - a common portal for the centre and states that will enable electronic processing of the key business processes of registration, returns, and payments. For this purpose, the structure of these processes is in advanced stages of finalization. The National Securities Depository Limited (NSDL) has been selected as technology partner for incubating the National Information Utility that will establish and operate the IT backbone for the GST. In this regard the NSDL has set up a pilot project in collaboration with eleven states prior to its roll-out across the country. Three Joint Working Groups of officials have also been constituted comprising officials from the central government, state governments, and an Empowered Committee of State Finance Ministers to work on legislation, business procedures and IT infrastructure respectively.

## Tax Expenditure

3.21 Under the Fiscal Responsibility and Budget Management Act (FRBMA) 2003 a Statement of Revenue Foregone is included in the Receipts Budget for 2011-12. Tax foregone on account of exemptions under corporate income tax for 2009-10 and 2010-11 was estimated at ₹ 72,881 crore and ₹ 88,263 crore respectively. In the case of corporates, deduction on account of accelerated depreciation, deduction for export profits of export-oriented units and units located in software technology parks, and for profits of businesses in the power and telecom sectors were some of the major incentives. Tax foregone on account of exemptions under personal income tax was estimated at ₹ 40,297 crore and ₹ 45,222 crore respectively in 2009-10 and 2010-11 with deduction on account of certain eligible savings, investments, and expenditures under Section 80C of the Income-tax Act being the major incentives. Though the absolute amount of deductions has gone up owing to higher absolute tax payments, the phasing out of profit-linked deductions and levy of MAT has led to a higher effective rate of tax in the case of corporates, rising to 23.5 per cent for financial year 2009-10 from 19.2 per cent for 2005-06.

3.22 In indirect taxes, the difference between the tariff rates (i.e. the rates mentioned in the schedules of the acts governing customs and central excise) and the effective rates that are operationalized by notifications issued from time to time constitutes the tax expenditure. Some of these exemptions are 'area'-based or based on the category of business groups or individual items (tariff heads) under central excise or customs tariffs. In so far as excise duties are concerned, revenue foregone was ₹ 1,69,121 crore in 2009-10, of which area-based exemptions amounted to ₹ 8,553 crore. In 2010-11, excise revenue foregone was estimated at ₹ 1,98,291 crore of which ₹ 11,250 crore was on account of area-based exemptions. In the case of customs, with greater levels of computerization, revenue foregone is available in greater detail. Tax expenditure on account of customs exemptions was estimated at ₹ 2,33,950 crore in 2009-10 and ₹ 2,28,500 crore in 2010-11. The major heads under these exemptions were diamond and gold, crude oil and mineral oils, edible vegetable, fruits, cereals and vegetable oils, machinery, and chemicals and plastics. Revenue foregone under various export promotion schemes was estimated at ₹ 38,662 crore and ₹ 54,082 crore, which is a part of the afore-mentioned estimates.

3.23 The high levels of tax expenditure broadly indicate the plethora of exemptions and a complex tax regime. There is merit in rationalizing and minimizing them. However, these tax expenditure quantifications indicate the extent of revenue foregone under certain assumptions and simplifications; it would be inappropriate to conclude that these revenues could have actually accrued but for the exemptions and hence constitute revenue loss. One of them being that revenue is directly proportional to the rate of duty. It has by now been fairly well established post-economic reforms, fewer and lower levels of taxes have resulted in higher tax revenues. As such, revenue foregone is to a large extent notional. Besides, lower effective rates offer the required protection for productive sectors and also facilitate the economy's competitiveness which in turn increases the tax base. Even in the case of excise on manufacture, the exemptions help achieve specific purposes and removal of exemptions would not ipso facto result in the same quantum of additional revenues as prices and altered demand conditions affect actual accrual.

## Non-tax revenue

3.24 As a proportion of GDP, non-tax revenue reached a peak of 3.0 per cent in 2001-02. After declining steadily to 1.7 per cent in 2008-09, it shot up to 2.9 per cent in 2010-11 on account of the 3G/BWA auction receipts. The Budget for 2011-12 placed non-tax revenue at 1.4 per cent of GDP. Broadly non-tax revenue is projected to continue to remain subdued in the next Plan also as per the preliminary projections of the Approach Paper to the Twelfth Plan. Heterogeneous sources such as dividends, interest, fees, fines, and miscellaneous receipts collected in the exercise of sovereign functions, regulatory charges and licence fees, and user charges for services (economic and social) rendered comprise non-tax revenues. Dividends and profits and user charges on economic services are the major components of non-tax revenues. The sluggishness in the growth of non-tax revenue is due to the low levels of trend growth in dividends and profits. A part of this owes to the high input costs, particularly of global prices of crude oil and less than commensurate pass through to domestic administered prices. However, a growth in user charges in both economic and social services at much higher levels in the recent past is a noteworthy development.

## Expenditure Trends

3.25 A key component of fiscal reforms and the fiscal responsibility and budget management legislations is public expenditure management. In an emerging economy with a lot of unmet minimum needs of the masses that require focus on equity issues and macroeconomic needs that require prudential limits on deficits and debts, calibrating fiscal policies should entail an optimization of outcome from public expenditure. Recent budgets have focused on outcomes and reprioritization of expenditure rather than overtly on higher outlays. Expenditure reforms have to be of a long-term nature to overcome the structural rigidities. For instance, interest payments appropriated 29.6 per cent of revenue receipts in 2010-11 reflecting the burden of past fiscal imprudence and this can come down only with sustained fiscal consolidation for a number of years. The core principle in fiscal management of FRBMA 2003 is inter-generational equity. Therefore, given the limits to growth in expenditure as mandated by the FRBM and the large inclusive agenda needs of development policy, prioritization of expenditure is an imperative. Recognizing this, a high-level committee was constituted to go into the expenditure classification and management in a comprehensive way (Box 3.1).

3.26 It might be recalled that the fiscal stimulus package put in place to revive demand in 2008-09 entailed a large expenditure hike including front loading of plan expenditure. Thus both plan and non-plan expenditure went up substantially in 2008-09 and 2009-10. While fiscal consolidation resumed in 2010-11, the higher tax and non-tax revenues provided some space for funding additional expenditure; fiscal deficit could be lowered thanks to high growth in nominal GDP. However, in the current year there is no such space available with growth in nominal GDP expected to be only marginally higher than envisaged at the time of Budget Estimates. Besides, higher oil prices entail higher-than-budgeted subsidy outgo with attendant implications for the levels of deficit.

### Box 3.1 : The Recommendations of the High Level Expert Committee on Efficient Management of Public Expenditure

The Planning Commission constituted the High Level Expert Committee (HLEC) on Efficient Management of Public expenditure under the Chairmanship of Dr C.Rangarajan. The terms of reference were: to clearly define the scope of public-sector Plan aligning it to changes in design and delivery systems; to suggest an action plan for abolition of the Plan and non-Plan distinction; to suggest a comprehensive framework for resource transfer to states; to examine the accountability concerns arising out of direct transfer of funds; and to examine revenue and capital expenditure classification on end-use basis.

The HLEC submitted its report in September 2011 and the main recommendations of the Committee are as follows:

- A fundamental shift in the approach of public expenditure management by removing the Plan-Non Plan distinction and with budgeting linked to outputs and outcomes.
- Introduction of a new multi-dimensional budget and accounting classification with uniform codes for central programmes, sub programmes and schemes being implemented in the States. The Central Plan Scheme Monitoring System (CPSMS) to be extended and a portal to be set up for the citizens to provide information on flow of resources and their utilization.
- The switchover to complete treasury mode from 12th Five Year Plan for all new schemes. A suitable accounting methodology to distinguish between final expenditure and transfer to be worked out by the CGA (Controller General of Accounts) and CAG (Comptroller and Auditor General).
- The annual budgetary component of the Plan of the Centre and States to have one-to-one relation with the Government Budget of the Centre or of a State respectively. All States/UTs to include information about investment outlays of SPSEs (State Public Sector Enterprises) in their budgets as a separate annexure. The resources of the rural and urban local bodies to be included as part of the State/UT Plans.
- Regular updates on Project-wise, Ministry-wise and Sector-wise information on Public Private Partnerships (PPPs) to be provided in Central and State Budgets as both annuity payments and VGF (Viability Gap Funding) pertaining to PPP projects are provided from the budgetary support.
- Continuation of the Revenue-Capital classification and introduction of an "adjusted revenue deficit" by adjusting the revenue deficit to the extent of grants for creating assets for better understanding and for compliance in terms of FRBMA. Capital expenditure should relate to the creation of assets and be determined by the ownership criterion.

## Interest Payments

3.27 As a proportion of GDP, interest payments have come down even in the years 2008-09 and 2009-10 when there was a rise in deficits and debt owing to the fiscal stimulus packages. In terms of year-on-year growth, interest payments have risen sharply in this period and it is the higher growth in nominal GDP that accounts for their lower share in GDP. The annual average cost of borrowing remained sticky at 7.5 – 7.6 per cent in the last four years ending 2010-11 (RE). It has been budgeted to decline to 7.4 per cent in 2011-12 (Table 3.6 and Figure 3.4). In the Budget for 2011-12 interest payments account for 33.9 per cent of revenue receipts; bringing this proportion down would require lower levels of borrowing.

**Table 3.6 : Interest on Outstanding Internal Liabilities of Central Government**

| | Outstanding Internal Liabilities (₹ crore) | Interest on Internal Liabilities (₹ crore) | Average Cost of Borrowings (per cent per annum) |
|---|---|---|---|
| **2004-05** | 1603785 | 105176 | 7.2 |
| **2005-06** | 1752403 | 111476 | 7.0 |
| **2006-07** | 1967870 | 128299 | 7.3 |
| **2007-08** | 2247104 | 149801 | 7.6 |
| **2008-09*** | 2565991 | 170388 | 7.6 |
| **2009-10** | 2902148 | 192567 | 7.5 |
| **2010-11(RE)** | 3293369 | 219356 | 7.6 |
| **2011-12(BE)** | 3700359 | 244224 | 7.4 |

*Source* : Union Budget documents.

* Excludes ₹ 563 crore towards premium on account of domestic debt buyback scheme and prepayment of external debt.

*Notes*: 1. Average cost of borrowing is the percentage of interest payment in year 't' to outstanding liabilities in year 't-1'.

2. Outstanding internal liabilities exclude NSSF loans to States, with no interest liability on the part of the Centre.

3. The figures of interest payment reported in the earlier issues may differ as these figures are net of interest payments on the National Small Savings Fund (NSSF) paid by the Government since 1999-2000, i.e. constitution of the NSSF.

## Subsidies

3.28 Of the major items in non-Plan revenue expenditure, it is the subsidies that are more or less policy driven and amenable to reforms. Given the rising trend in some of the subsidies, recent budgets have focused on comprehensive reforms without compromising on entitlements to the poor. In so far as food subsidies are concerned, the National Food Security Bill seeks to correct the under-consumption by the poor and other vulnerable sections and might entail some rise in levels of subsidy when operationalized. In so far as fertilizer subsidies are concerned, with the exception of urea, a nutrient-based fertilizer subsidy regime is in place. Petroleum products' subsidies have also gone up in the recent years on account of high global prices of crude petroleum. Given the high headline inflation levels, the pass through of global prices to the domestic market was limited. Major subsidies grew appreciably in 2010-11 and were at ₹ 1,31,212 crore. While BE 2011-12 placed them at ₹ 1,34,411 crore, given the build-up so far in crude prices, they are likely to be much higher this year. As a proportion of GDP major subsidies exceeded the 2 per cent

**Figure 3.4 Interest on internal liabilities and average interest cost of borrowing**

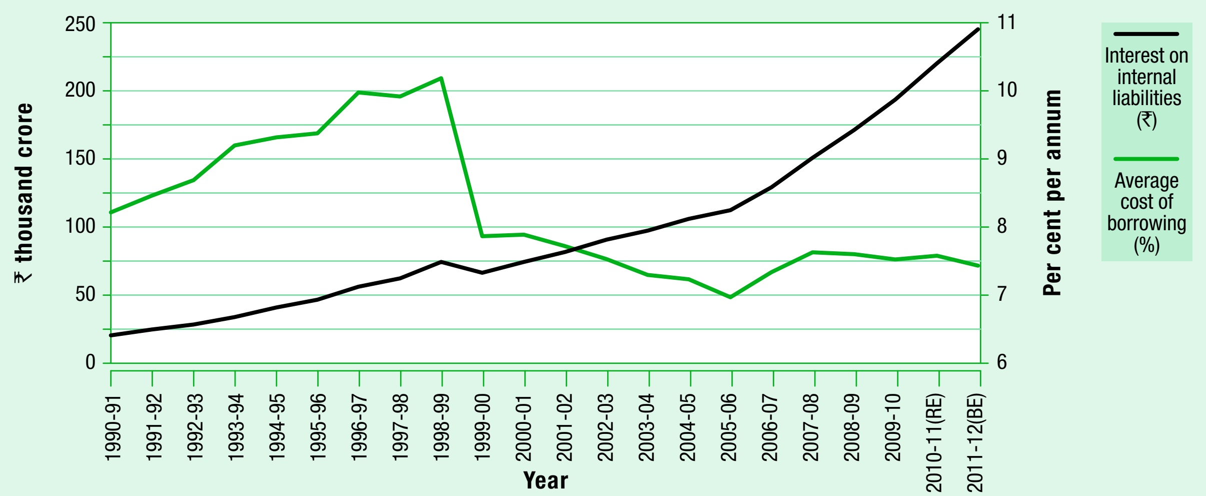
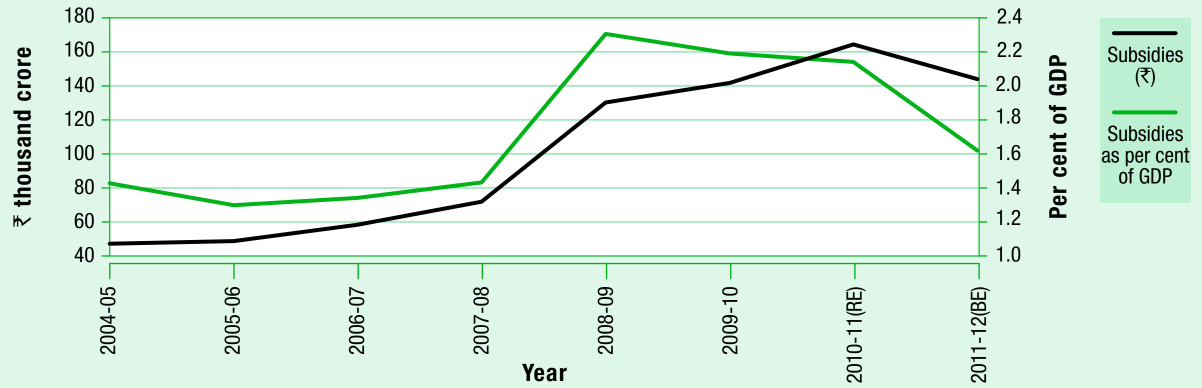


Figure 3.5 **Subsidies as per cent of GDP**




mark in 2008-09 and 2009-10. In BE 2011-12, they were placed at 1.5 per cent of GDP (Figure 3.5).The resource projections for the Twelfth Plan detailed later in this chapter require far-reaching reforms in non-Plan expenditure and towards this end the recommendations of the Report of the Task Force on an IT Strategy for the PDS (public distribution system) and an implementable solution for direct transfer of subsidies on food and kerosene are important (Box 3.2).

## Box 3.2 : Report of the Task Force on an IT Strategy for PDS and an implementable solution for the direct transfer of subsidy for Food and Kerosene

The Task Force on 'An IT strategy for PDS and an implementable solution for the direct transfer of subsidy for food and kerosene' was constituted by the Planning Commission under the Chairmanship of Nandan Nilekani, Chairman, UIDAI. The Task Force was mandated to recommend an IT strategy for PDS reform and suggest a solution for direct transfer of subsidies on kerosene, LPG, and fertilizer to the intended beneficiaries. The Terms of Reference of the Task Force were to identify and suggest required changes in the existing systems, processes and procedures; suggest IT frameworks and supply chain management; recommend institutional mechanisms to implement IT strategy for the PDS; and examine and suggest an implementable solution for direct transfer of subsidies on food and kerosene to intended beneficiaries with the use of Aadhaar (Unique Identification Numbers), Aadhaar enabled transactions, and Aadhaar authentication infrastructure. The Task Force submitted its report in October 2011 and the main recommendations are as follows:

- Set up a strong, robust IT infrastructure backbone to reform the functioning of PDS which would be an incentive based system for all stakeholders.
- End-to end computerization of PDS across the country and provision of a token-agnostic technology solution that can accept physical coupons, smartcards, electronic coupons, and facilitate direct cash transfers.
- PDS Network (PDSN), as the National Information Utility (NIU) to be the common software platform for all States, to implement and operate the IT infrastructure for PDS. PDSN as the technology back office would manage all IT operations related to PDS with focus on supply chain management to address leakages, real time fraud analytics, entitlement portability and transparent grievance redressal channel.
- Aadhaar (UIN) to be used in PDS to simplify ration card registration, cleaning up the beneficiary database; State Governments can use Aadhaar Payments Bridge and Aadhaar Enabled Payments Systems to channel subsidy funds for approved commodities to Aadhaar-enabled Bank Accounts.
- Provision of maximum choice to the beneficiaries in terms of location, mix of commodities, convenient quantities and in any number of installments; and choice to purchase commodities or receive a direct transfer of subsidy.
- The Organizational structure to operationalise the PDS to consist of a Governing Board appointed by the shareholders of PDSN which includes Government of India and other stakeholders with the Chairman of the Board appointed by Government of India. The CEO of PDSN would be selected through an open selection process by the Board.
- Set up a Core Subsidy Management System (CSMS) for direct transfer of subsidies on kerosene, LPG, and fertilizer through Aadhar Enabled Bank Account (AEBA) to facilitate robust identification of the beneficiary. The CSMS would support all forms of direct transfers of subsidies such as non-cash transfers, conditional cash transfers, direct cash transfers etc. CSMS would be responsive to the needs of beneficiaries, provide increased transparency, grievance redressal and real time transfer of funds.
- Fertilizers movement and sale at market price, with reimbursement of subsidy directly to the beneficiary, to reduce the incentive for pilferage due to two prices of the same commodity.

## Supplementary demands for grants

3.29 Supplementary demands for grants are placed before Parliament to include all the additional expenditure proposals (higher demands or fresh proposals or re-appropriations) that were not envisaged at the time of formulation of the Budget and have to be incurred in the current year. Two supplementary demands for grants have so far been presented in the current fiscal. The first batch, consisting of 53 grants, was approved by Parliament in August 2011, which authorised gross additional expenditure of ₹ 34,724.5 crore. However, the aggregate net cash outgo amounted to ₹ 9,016.1 crore and gross additional expenditure, matched by savings of the Ministries/Departments or by enhanced receipts/recoveries amounted to ₹ 25,708 crore. The net cash outgo to meet the main items of additional expenditure is ₹ 2,300 crore for the additional requirement for the BPL Survey in the Department of Rural Development, ₹ 2,370 crore for additional expenditure under the Member of Parliament Local Area Development (MPLAD) scheme, and ₹ 1,066 for transfer of funds to the National Clean Energy Fund in the Department of Economic Affairs.

3.30 The second batch of Supplementary Demands for Grants for 2011-2012 includes 67 Grants and 1 Appropriation. The Parliament approved gross additional expenditure of ₹ 63,180.2 crore in December 2011. The aggregate net cash outgo is ₹ 56,848.5 crore and gross additional expenditure, matched by savings of the Ministries/Departments or by enhanced receipts/recoveries aggregates to ₹ 6,330.9 crore. Besides, token provision of ₹ 90 lakh is sought, ₹ one lakh for each item of expenditure, for enabling re-appropriation of savings in cases involving new service or new instrument of service. The main items of additional expenditure are ₹ 13,779 crore for subsidy on fertilizers, ₹ 2,297 crore for food subsidy, and ₹ 30,000 crore on providing compensation towards estimated under-recoveries to oil marketing companies on account of sale of petroleum products.

## Central Plan Outlay

3.31 The central Plan outlay was placed at ₹ 5,02,250 crore for 2010-11 (RE). Gross budgetary support (GBS) for the Plan constituted 59.5 per cent of the total outlay. With a growth of 18 per cent over 2010-11 (RE), the central Plan outlay now stands at ₹ 5,92,457 crore in the Budget for 2011-12. The outlay comprises GBS of ₹ 3,35,521 crore and internal extra-budgetary resources (IEBR) of central public sector enterprises (CPSEs) of ₹ 2,56,936 crore. The broad sector-wise allocations for important sectors included energy (26.2 per cent); social services (24.4 per cent); transport (19.7 per cent); communication (3.4 per cent); rural development (9.3 per cent); industry and minerals (7.6 per cent); agriculture and allied activities (2.5 per cent); and irrigation and flood control (0.1 per cent). Central assistance to state and UT Plans in 2011-12 (BE) is placed at ₹ 1,06,026 crore, a growth of 10 per cent over 2010-11(RE). The Approach Paper to the Twelfth Plan has made provisional estimates of the GBS for the Twelfth Plan period at 5.2 per cent of GDP; rising from 4.9 per cent of GDP in 2012-13 to reach 5.8 per cent in 2016-17 (Box 3.3).

## Government debt

3.32 Maintaining sustainable levels of government debt is critical to sustained high macroeconomic outcome. In fact, typically the fiscal rules under the fiscal responsibility and budget management framework entail assessment of what is usually a sustainable level of public debt for the country. The FRBMA 2003 had an incremental debt assumption rule in addition to the cap on fiscal deficits envisaged by the terminal year 2008-09. On account of the fiscal expansion in 2008-09 and 2009-10, the targets had to be relaxed and a new FRBM framework was necessitated. Even in the years of fiscal expansion there has been marginal decline in outstanding liabilities as a proportion of GDP. These declined from 56.9 per cent in 2007-08 to 51.2 per cent in 2010-11 (RE) and are budgeted at 48.8 per cent in 2011-12 (Table 3.7). As against the targets set by the Thirteenth Finance Commission and the Government Debt Report 2010, there has been over-performance in terms of reduction in government debt, driven by the favourable dynamics of the positive and sizeable differential between GDP growth rates and interest rates.

## Economic and functional classification of the Budget

3.33 Central government budgets are essentially presented in terms of accounting classification to facilitate examination of the demands for grants

## Box 3.3 : Financing the Public Sector Plan in the Twelfth Five Year Plan (2012-17)

The Approach Paper to the Twelfth Five Year Plan has indicated the provisional assessment of resource availability for the centre for the Twelfth Plan as detailed by the Working Group on Centre's Financial Resources. These estimates might undergo revisions when the resource position is finalized for inclusion in the Twelfth Plan Document.

**Gross Budgetary Support**: The Gross Budgetary Support (GBS) for the Twelfth Plan is projected to increase by about 0.83 percentage points of GDP over a five year period, from 4.92 per cent of GDP in 2011-12 to 5.75 per cent of GDP by 2016-17 (based on then available nominal GDP data). Compositionally, the increase in GBS in the Twelfth Plan is due to the following:

- Net tax revenue for the Centre is expected to increase only by 1.51 percentage points, from 7.40 per cent of GDP in 2011-12 (BE) to 8.91 per cent of GDP in 2016-17, non-tax revenues are expected to fall from 1.40 per cent of GDP in 2011-12 to 0.88 per cent of GDP in 2016-17.
- Contribution of non-debt capital receipts (mainly dis-investment proceeds) as a ratio of GDP is also expected to fall.
- There is no room for fiscal expansion and the fiscal deficit is expected to be lowered from 4.7 per cent of GDP in 2010-11 to 3.0 per cent of GDP in the latter part of the Twelfth Plan in line with the Government's medium term fiscal consolidation policies.

The limited scope to increase GBS would be a binding constraint in increasing allocations to important sectors like health, education and infrastructure. Thereby strict prioritization will have to be enforced in the Twelfth Plan to achieve the sectoral growth targets.

**Aggregate resources for the Centre**: Aggregate resources for the Centre are to fall from 14 per cent of GDP in 2011-12 (BE) to 13.11 per cent of GDP in 2016-17. The size of GBS is projected to increase mainly due to the projected decline in non-Plan expenditure from 9.09 per cent of GDP in 2011-12 to 7.36 per cent of GDP in 2016-17. The projected decline in Non-Plan Expenditure is crucial for financing the public sector plan.

**Non-Plan expenditure**: It is projected to grow at an average annual growth of around 10.0 per cent in nominal terms. Among the non-plan expenditure items, subsidies have remained rather high as a proportion of GDP in the past and the effective targeting of subsidies would be critical for achieving the resource targets in the Plan.

- Interest payments' forecast on the basis of projected growth of debt with interest rate of 8.7 per cent on annual incremental borrowings in consonance with FRBM targets.
- Defence expenditure to fall from 1.83 per cent of GDP in the base year to 1.56 per cent of GDP in the final year and the pay and allowances to grow at an annual rate of 7.0 per cent in nominal terms and unlikely to exceed (no likelihood of increase owing to growth in public employment or pay commission revisions).
- Pension expenditure to grow at an annual rate of 9.0 per cent- the level assumed by the 13$^{th}$ Finance Commission.
- Subsidies projected to decline from an estimated 1.6 per cent of GDP in 2011-12 (BE) to 1.24 per cent of GDP in the final year.
- It would be crucial to raise additional tax resources to raise the level of resources for the Twelfth Plan period, which could become possible if the critical tax-reforms take off and make the economy more competitive.

**Provisional Estimates* of Centre's Resources for the Twelfth Five Year Plan**

(as per cent of GDP)

| Description | 2011-12 (BE) | 2012-13 | 2013-14 | 2014-15 | 2015-16 | 2016-17 | XII Plan Average |
|---|---|---|---|---|---|---|---|
| **Tax Revenue Net to Centre** | 7.40 | 8.14 | 8.53 | 8.72 | 8.83 | 8.91 | **8.68** |
| **Non-Tax Revenue** | 1.40 | 1.10 | 1.09 | 1.09 | 0.98 | 0.88 | **1.01** |
| **Non-Debt Capital Receipts** | 0.60 | 0.54 | 0.46 | 0.41 | 0.36 | 0.32 | **0.41** |
| **Fiscal deficit** | 4.60 | 4.10 | 3.50 | 3.00 | 3.00 | 3.00 | **3.25** |
| **Aggregate Resources (1+2+3+4)** | 14.00 | 13.88 | 13.59 | 13.21 | 13.18 | 13.11 | **13.34** |
| **Non-Plan Expenditure** | 9.09 | 8.96 | 8.63 | 8.23 | 7.83 | 7.36 | **8.09** |
| **GBS for Plan** | 4.92 | 4.92 | 4.95 | 4.98 | 5.35 | 5.75 | **5.25** |
| **Central Assistance to States/UTs** | 1.18 | 1.18 | 1.19 | 1.20 | 1.25 | 1.30 | **1.23** |
| **Central Plan** | 3.74 | 3.74 | 3.76 | 3.78 | 4.10 | 4.45 | **4.02** |
| **IEBR** | 2.86 | 2.86 | 2.85 | 2.84 | 2.84 | 2.83 | **2.84** |
| **Plan Resources for the Centre** | 6.60 | 6.59 | 6.61 | 6.63 | 6.94 | 7.28 | **6.86** |

* Assume 9.0 percent real GDP growth and 5.0 per cent inflation in terms of GDP deflator

## Table 3.7 : Outstanding Liabilities of the Central Government

| | 2006-07 | 2007-08 | 2008-09 | 2009-10 | 2010-11 (RE) | 2011-12 (BE) |
|---|---|---|---|---|---|---|
| | | | (₹ crore) | | | |
| **1. Internal liabilities #** | **2435880** | **2725394** | **3036132** | **3383761** | **3774758** | **4181842** |
| a) Internal debt | 1544975 | 1808359 | 2028549 | 2349148 | 2703844 | 3110618 |
| i) Market borrowings | 972801 | 1092468 | 1326094 | 1746623 | 2082036 | 2425036 |
| ii) Others | 572174 | 715891 | 702455 | 602525 | 621808 | 685582 |
| b) Other Internal liabilities | 890905 | 917035 | 1007583 | 1034613 | 1070914 | 1071224 |
| **2. External debt(outstanding)*** | **102716** | **112031** | **123046** | **134083** | **156347** | **170847** |
| **3. Total outstanding liabilities (1+2)** | **2538596** | **2837425** | **3159178** | **3517844** | **3931105** | **4352689** |
| 4. Amount due from Pakistan on account of share of pre-partition debt | 300 | 300 | 300 | 300 | 300 | 300 |
| **5. Net liabilities (3-4)** | **2538296** | **2837125** | **3158878** | **3517544** | **3930805** | **4352389** |
| | | | (As per cent of GDP) | | | |
| **1. Internal liabilities** | **56.7** | **54.6** | **53.9** | **52.4** | **49.2** | **46.9** |
| a) Internal debt | 36.0 | 36.3 | 36.0 | 36.4 | 35.2 | 34.9 |
| i) Market borrowings | 22.7 | 21.9 | 23.6 | 27.0 | 27.1 | 27.2 |
| ii) Others | 13.3 | 14.4 | 12.5 | 9.3 | 8.1 | 7.7 |
| b) Other Internal liabilities | 20.7 | 18.4 | 17.9 | 16.0 | 14.0 | 12.0 |
| **2. External debt(outstanding)*** | **2.4** | **2.2** | **2.2** | **2.1** | **2.0** | **1.9** |
| **3. Total outstanding liabilities** | **59.1** | **56.9** | **56.1** | **54.5** | **51.2** | **48.8** |
| **Memorandum items** | | | | | | |
| (a) External debt (₹ crore)@ | 201204 | 210083 | 264076 | 249311 | 278885 | 304146 |
| (as per cent of GDP) | 4.7 | 4.2 | 4.7 | 3.9 | 3.6 | 3.4 |
| (b) Total outstanding liabilities (adjusted) (₹ crore) | 2637084 | 2935477 | 3300208 | 3633072 | 4053643 | 4485988 |
| (as per cent of GDP) | 61.4 | 58.9 | 58.6 | 56.3 | 52.8 | 50.3 |
| (c) Internal liabilities( Non-RBI) ## | 2217671 | 2471396 | 2687037 | 3054435 | 3435432 | 3827516 |
| (as per cent of GDP) | 51.6 | 49.6 | 47.7 | 47.3 | 44.8 | 42.9 |
| (d) Outstanding liabilities (Non-RBI)## (₹ crore) | 2418875 | 2681479 | 2951113 | 3303746 | 3714317 | 4131662 |
| Outstanding liabilities (Non-RBI) (as per cent of GDP) | 56.3 | 53.8 | 52.4 | 51.2 | 48.4 | 46.4 |
| (e) Contingent liabilities of central government (₹ crore) | 109826 | 104872 | 113335 | 137205 | n.a. | n.a. |
| Contingent liabilities of central government (as per cent of GDP) | 2.6 | 2.1 | 2.0 | 2.1 | n.a. | n.a. |
| (f) Total assets (₹ crore) | 1339119 | 1571668 | 1569043 | 1607544 | 1796209 | 1980404 |
| Total assets (as per cent of GDP) | 31.2 | 31.5 | 27.9 | 24.9 | 23.4 | 22.2 |

*Sources* : Union Budget documents, Controller of Aid Accounts and Audit and Reserve Bank of India.

n.a. : not available

* External debt figures represent borrowings by central government from external sources and are based upon historical rates of exchange.

@ Converted at year end exchange rates. For 2006-07, the rates prevailing at the end of March 2007, for 2007-08, the rates prevailing at the end of March 2008, and so on.

# Internal debt includes net borrowing of ₹ 29,062 crore for 2005-06,₹ 62,974 crore for 2006-07, ₹ 1,70,554 crore for 2007-08, ₹ 88,773 crore for 2008-09, ₹ 2,737 crore for 2009-10, and ₹ 20,000 crore for 2011-12(BE) under the Market Stabilisation Scheme.

## This includes marketable dated securities held by the RBI.

*Note* : The ratios to GDP at current market prices are based on the CSO's National Accounts 2004-05 series.

## Table 3.8 : Total Expenditure and Capital Formation by the Central Government and its Financing

(As per Economic and Functional Classification of the Central Government Budget)

| | 2006-07 | 2007-08 | 2008-09 | 2009-10 | 2010-11 (RE) | 2011-12 (BE) |
|---|---|---|---|---|---|---|
| | | | (₹ crore) | | | |
| **I. Total expenditure** | **570185** | **688908** | **864530** | **992440** | **1179016** | **1233437** |
| **II. Gross capital formation out of budgetary resources of central government** | **87885** | **143892** | **136935** | **184501** | **274823** | **287316** |
| (i) Gross capital formation by the central government | 36487 | 43652 | 51464 | 58999 | 68447 | 82931 |
| (ii) Financial assistance for capital formation in the rest of the economy | 51398 | 100240 | 85471 | 125502 | 206376 | 204385 |
| **III. Gross saving of the central government** | **-33918** | **13674** | **-176082** | **-232452** | **-106154** | **-133287** |
| **IV. Gap(II-III)** | **121803** | **130218** | **313017** | **416953** | **380977** | **420603** |
| Financed by | | | | | | |
| a. Draft on other sectors of domestic economy | 110801 | 118180 | 299208 | 402774 | 355957 | 403930 |
| (i) Domestic capital receipts | 106284 | 145351 | 246612 | 404160 | 370957 | 383930 |
| (ii) Budgetary deficit/draw down of Cash Balance | 4517 | -27171 | 52596 | -1386 | -15000 | 20000 |
| b. Draft on foreign savings | 11002 | 12038 | 13809 | 14179 | 25020 | 16673 |
| | | | (As per cent of GDP) | | | |
| **I. Total expenditure** | **13.3** | **13.8** | **15.4** | **15.4** | **15.4** | **13.8** |
| **II. Gross capital formation out of budgetary resources of the central government** | **2.0** | **2.9** | **2.4** | **2.9** | **3.6** | **3.2** |
| (i) Gross capital formation by the central government | 0.8 | 0.9 | 0.9 | 0.9 | 0.9 | 0.9 |
| (ii) Financial assistance for capital formation in therest of the economy | 1.2 | 2.0 | 1.5 | 1.9 | 2.7 | 2.3 |
| **III. Gross saving of the central government** | **-0.8** | **0.3** | **-3.1** | **-3.6** | **-1.4** | **-1.5** |
| **IV. Gap(II-III)** | **2.8** | **2.6** | **5.6** | **6.5** | **5.0** | **4.7** |
| *Financed by* | | | | | | |
| a. Draft on other sectors of domestic economy | 2.6 | 2.4 | 5.3 | 6.2 | 4.6 | 4.5 |
| (i) Domestic capital receipts | 2.5 | 2.9 | 4.4 | 6.3 | 4.8 | 4.3 |
| (ii) Budgetary deficit/draw down of cash balance | 0.1 | -0.5 | 0.9 | 0.0 | -0.2 | 0.2 |
| b. Draft on foreign savings | 0.3 | 0.2 | 0.2 | 0.2 | 0.3 | 0.2 |
| | | | (increase over previous year) | | | |
| **II. Gross capital formation out of budgetary resources of central government** | **3.7** | **63.7** | **-4.8** | **34.7** | **49.0** | **4.5** |
| ***Memorandum items*** | | | | | | |
| | | | (₹ crore) | | | |
| 1 Consumption expenditure | 121609 | 131396 | 174345 | 210625 | 234395 | 248546 |
| 2 Current transfers | 356560 | 408676 | 543347 | 580898 | 652873 | 673712 |
| | | | (As per cent of GDP) | | | |
| 1 Consumption expenditure | **2.8** | **2.6** | **3.1** | **3.3** | **3.1** | **2.8** |
| 2 Current transfers | **8.3** | **8.2** | **9.7** | **9.0** | **8.5** | **7.6** |

***Sources*** : Ministry of Finance, An Economic and Functional Classification of the Central Government Budget-various issues.

***Notes*** :
(i) Gross capital formation in this table includes loans given for capital formation on a gross basis. Consequently domestic capital receipts include loan repayments to the central government.
(ii) Consumption expenditure is the expenditure on wages and salaries and commodities and services for current use.
(iii) Interest payments, subsidies, pension, etc. are treated as current transfers.
(iv) Gross capital formation and total expenditure are exclusive of loans to States/UTs against States'/UTs' share in the small savings collection.
(v) The figures of total expenditure of the central government as per economic and functional classification do not tally with figures given in the current account. In the capital account, expenditure financed out of Railways, Posts, and Telecommunications' own funds, etc. is included
(vi) The ratios to GDP at current market prices are based on the CSO's National Accounts 2004-05 series.

and voting in Parliament. The Economic and Functional Classification of the Central Government Budget reclassifies such accounting budgetary outlays into economic and functional outlays. It provides a summary of union finances in terms of broad macroeconomic aggregates of government's consumption expenditure, capital formation, savings and transfer payments to rest of the economy. As per the Economic and Functional Classification 2011-12, the total budgeted expenditure of the central government for 2011-12 is ₹12, 33,437 crore (Table 3.8). The total expenditure is estimated to increase by 4.6 per cent over the Revised Estimates for 2010-11. Consumption expenditure is estimated to grow by 6.0 per cent and investment by 21.2 per cent. The transfer payments to the rest of the economy constitute 69.8 per cent of the total expenditure of the union finances, out of which the transfers intended for social and economic services account for 48 per cent, interest payments 30.4 per cent, and other statutory and non-development grants 3.4 per cent. In terms of functional classification, the budgeted expenditure on Social Services for 2011-12 is estimated to grow by 6.4 per cent. There has been an estimated decline of 6.5 per cent in expenditure on economic services and the budgeted expenditure on general services is to go up by 8.6 per cent for 2011-12. The net dissavings of the central government and its departmental undertakings were ₹ 2,38,165 crore in 2009-10, ₹ 1,11,854 crore in 2010-11 (RE), and are budgeted at ₹ 1,40,629 crore in 2011-12.

## Fiscal outcome in 2011-12

3.34 In the Mid-Year Analysis 2011-12, it was indicated in some detail that higher refunds in the current fiscal had a major impact on the half-yearly fiscal outcome. It was mentioned that refunds of about ₹ 62,200 crore were made in the first half of the current fiscal as against ₹ 27,657 crore in the first half of 2010-11. Refunds under corporation tax accounted for the bulk of the higher refunds this

**Table 3.9 : Central Government Finances**

| | Budget Estimates 2011-12 | April-December 2010-11 | April-December 2011-12 | Col.4 as % of 2 2011-12 (BE) | Per cent change over 2010-11 |
|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 |
| | (₹ crore) | | | | |
| **1. Revenue receipts** | **789892** | **584268** | **498491** | **63.1** | **-14.7** |
| **Gross tax revenue** | **932440** | **527782** | **592347** | **63.5** | **12.2** |
| **Tax (net to Centre)** | 664457 | 391148 | 420414 | 63.3 | 7.5 |
| Non Tax | 125435 | 193120 | 78077 | 62.2 | -59.6 |
| **2. Capital receipts** | **467837** | **202584** | **397870** | **85.0** | **96.4** |
| of which | | | | | |
| Recovery of loans | 15020 | 8591 | 14115 | 94.0 | 64.3 |
| Other receipts | 40000 | 22744 | 2743 | 6.9 | -87.9 |
| Borrowings and other Liabilities | 412817 | 171249 | 381012 | 92.3 | 122.5 |
| **3. Total receipts (1+2)** | **1257729** | **786852** | **896361** | **71.3** | **13.9** |
| **4. Non-Plan expenditure (a)+(b)** | **816182** | **536898** | **619457** | **75.9** | **15.4** |
| (a) Revenue account | 733558 | 487692 | 550692 | 75.1 | 12.9 |
| of which: | | | | | |
| Interest payments | 267986 | 146304 | 179429 | 67.0 | 22.6 |
| Major subsidies | 134211 | 94318 | 104181 | 77.6 | 10.5 |
| Pensions | 54521 | 40210 | 40454 | 74.2 | 0.6 |
| (b) Capital account | 82624 | 49206 | 68765 | 83.2 | 39.7 |
| **5. Plan expenditure (i)+(ii)** | **441547** | **249954** | **276904** | **62.7** | **10.8** |
| (i) Revenue account | 363604 | 212885 | 233903 | 64.3 | 9.9 |
| (ii) Capital account | 77943 | 37069 | 43001 | 55.2 | 16.0 |
| **6. Total expenditure (4)+(5)=(a)+(b)** | **1257729** | **786852** | **896361** | **71.3** | **13.9** |
| (a) Revenue expenditure | 1097162 | 700577 | 784595 | 71.5 | 12.0 |
| (b) Of which grants for creation of capital assets | 146853 | 35361 | 84149 | 57.3 | 138.0 |
| (c) Capital expenditure | 160567 | 86275 | 111766 | 69.6 | 29.5 |
| **7. Revenue deficit** | **307270** | **116309** | **286104** | **93.1** | **146.0** |
| **8. Effective revenue deficit** | **160417** | **80948** | **201955** | **125.9** | **149.5** |
| **9. Fiscal deficit** | **412817** | **171249** | **381012** | **92.3** | **122.5** |
| **10. Primary deficit** | **144831** | **24945** | **201583** | **139.2** | **708.1** |

*Source* : Controller General of Accounts, Ministry of Finance.

year. As per the data made available by the Controller General of Accounts for April-December 2011, union finances are apparently under some stress with revenue deficit at 93.1 per cent of the BE and fiscal deficit at 92.3 per cent (Table 3.9). In the first nine months, gross tax revenue has grown by 12.2 per cent as against the BE target of 17.3 per cent. Among the major taxes, growth in corporation taxes at 6 per cent as against the 20.2 per cent envisaged by BE 2011-12 and union excise duties at 8 per cent as against the 18.2 per cent envisaged by BE 2011-12 are the key concerns. Growth in service tax at 30 per cent, customs at 15 per cent, and personal income tax at 16 per cent are either on a par with or above BE 2011-12.

3.35 As against the BE growth target of 4.9 per cent for the whole year, growth in total expenditure in the first nine months of 2011-12 was 13.9 per cent, which comprised of 15.4 per cent growth in non-Plan expenditure and 10.8 per cent growth in Plan expenditure. Typically, based on the trend in the last five years, 33.4 per cent of total tax revenues accrue in the fourth quarter and 32.9 per cent of total expenditure is incurred in the fourth quarter. As such, a simple extrapolation would indicate a slippage of over 3 per cent each in revenue receipts and expenditure. Consequently, a slippage is likely from the revenue and fiscal deficits budgeted. The rapid build-up in expenditure over the nine months and less than commensurate growth in revenue have led to high proportions of deficits in the first nine months (Table 3.10).

## Performance of Departmental Enterprises of the Central Government

### Railways

3.36 Indian Railways has been taking measures to judiciously augment its resources through public-private partnerships (PPP), cost sharing with state governments and other stake holders, and market borrowings. In order to step up investment in rail infrastructure, the Railways Budget for 2011-12 announced mobilization of an additional ₹ 10,000 crore through issue of tax-free bonds during the year. Freight loading by Indian Railways during the fiscal 2010-11 was at 921.7 million tonnes against 887.8 million tonnes in 2009-10, registering an increase of 3.8 per cent. Despite an incremental loading of 33.9 million tonnes over 2009-10 levels, railways freight loading during the fiscal fell short of the revised target by 2.3 million tonnes. The freight traffic target for the year 2011-12 was fixed at 993 million tonnes, an increase of 7.8 per cent over the freight loading of previous year. During April-November 2011,

**Table 3.10 : Trends in Cumulative Central Government Finances (April-December) for 2011-12**

(₹ crore)

| | Budget Estimates | April | April-May | April-June | April-July | April-August | April-Sept. | April-Oct. | April-Nov. | April-Dec. |
|---|---|---|---|---|---|---|---|---|---|---|
| 1. Revenue receipts | 789892 | 6880 | 28716 | 90920 | 137155 | 188550 | 305528 | 359712 | 392813 | 498491 |
| Per cent to BE | | 0.9 | 3.6 | 11.5 | 17.4 | 23.9 | 38.7 | 45.5 | 49.7 | 63.1 |
| 2. Capital receipts | 467837 | 80250 | 137546 | 170297 | 238010 | 283667 | 293565 | 320662 | 367881 | 397870 |
| Per cent to BE | | 17.2 | 29.4 | 36.4 | 50.9 | 60.6 | 62.7 | 68.5 | 78.6 | 85.0 |
| 3. Total receipts | 1257729 | 87130 | 166262 | 261217 | 375165 | 472217 | 599093 | 680374 | 760694 | 896361 |
| Per cent to BE | | 6.9 | 13.2 | 20.8 | 29.8 | 37.5 | 47.6 | 54.1 | 60.5 | 71.3 |
| 4. Non-Plan expenditure | 816182 | 70123 | 121390 | 177093 | 263497 | 340215 | 421270 | 479181 | 539416 | 619457 |
| Per cent to BE | | 8.6 | 14.9 | 21.7 | 32.3 | 41.7 | 51.6 | 58.7 | 66.1 | 75.9 |
| 5. Plan expenditure | 441547 | 17007 | 44872 | 84124 | 111668 | 132002 | 177823 | 201193 | 221278 | 276904 |
| Per cent to BE | | 3.9 | 10.2 | 19.1 | 25.3 | 29.9 | 40.3 | 45.6 | 50.1 | 62.7 |
| 6. Total expenditure | 1257729 | 87130 | 166262 | 261217 | 375165 | 472217 | 599093 | 680374 | 760694 | 896361 |
| Per cent to BE | | 6.9 | 13.2 | 20.8 | 29.8 | 37.5 | 47.6 | 54.1 | 60.5 | 71.3 |
| 7. Revenue expenditure | 1097162 | 67495 | 138785 | 225541 | 332075 | 418550 | 527308 | 602724 | 673270 | 784595 |
| Per cent to BE | | 6.2 | 12.6 | 20.6 | 30.3 | 38.1 | 48.1 | 54.9 | 61.4 | 71.5 |
| 8. Revenue deficit | 307270 | 60615 | 110069 | 134621 | 194920 | 230000 | 221780 | 243012 | 280457 | 286104 |
| Per cent to BE | | 19.7 | 35.8 | 43.8 | 63.4 | 74.9 | 72.2 | 79.1 | 91.3 | 93.1 |
| 9. Fiscal deficit | 412817 | 74661 | 130726 | 162653 | 228753 | 273523 | 280810 | 307009 | 353369 | 381012 |
| Per cent to BE | | 18.1 | 31.7 | 39.4 | 55.4 | 66.3 | 68.0 | 74.4 | 85.6 | 92.3 |

***Source*** **: Controller General of Accounts, Ministry of Finance.**

Indian Railways carried 618 million tonnes of revenue-earning freight traffic. The freight carried shows an increase of 24.56 million tonnes over the freight traffic of 593.4 million tonnes actually carried during the corresponding period last year, which implies a growth of 4.1 per cent. Freight earnings at ₹ 62,844.7 crore during 2010-11 exceeded the revised target by ₹ 355.4 crore, registering a growth of 7.4 per cent over 2009-10. Passenger earnings (excluding other coaching earnings) during 2010-11 stood at ₹ 25,792.6 crore as against ₹ 23,488 crore in 2009-10, an increase of 9.8 per cent. The overall traffic revenue for 2010-11 at ₹ 94,525.5 crore registered a growth of 8.5 per cent over 2009-10. Taking into account further accumulation of ₹ 10.2 crore to the traffic outstandings, the gross traffic receipts of the Railways for 2010-11 stood at ₹ 94,535.6 crore. Gross traffic receipts for 2011-12 were budgeted at ₹ 1,06,239 crore.

3.37 The total approximate earnings of Indian Railways on originating basis during 1 April to 20 December 2011 were ₹ 71,613.1 crore, translating to an increase of 10.2 per cent over the ₹ 64982.4 crore earned during the same period last year. During this period, the total goods earnings went up from ₹ 43,257.9 crore to ₹ 47,653.3 crore, also showing an increase of 10.2 per cent. The total passenger revenue earnings at ₹ 20,249.8 crore increased by 9.5 per cent as compared to ₹ 18,501.6 crore during the same period last year. Ordinary working expenses at ₹ 68,139.22 crore during 2010-11 indicate an increase of 3.5 per cent over 2009-10. The total working expenses including appropriations to the Depreciation Reserve Fund and Pension Fund at ₹ 89,474.22 crore recorded an increase of 7.9 per cent over 2009-10. Ordinary working expenses are budgeted at ₹ 73,650 crore for 2011-12 and total working expenses at ₹ 96,450 crore (BE).

3.38 Taking into account the net variation of the miscellaneous receipts and miscellaneous expenditure, Railways' net revenue in 2010-11 was ₹ 6,346.14 crore. After fully discharging the dividend liability of ₹ 4,941.25 crore for the fiscal, during 2010-11, Railways generated an excess of around ₹ 1,404.89 crore. Dividend liability during 2011-12 was budgeted at ₹ 6,735 crore.

3.39 A moderate growth of traffic revenues on account of improved economic condition is reflected in an improvement in operating ratio[1] of the Railways, which stood at 94.6 per cent in 2010-11 as against 95.3 per cent in 2009-10. Net Revenue as a proportion of capital-at-charge and investment from Capital Fund for the works out to 3.8 per cent in 2010-11 as compared to 4.5 per cent in 2009-10. The operating ratio for 2011-12 was targeted at 91.1 per cent at BE stage.

3.40 The Plan outlay for 2010-11 stood at ₹ 40,793 crore including internally generated resources of ₹ 11,527 crore (i.e. 28.3 per cent of the Plan outlay) and market borrowings of ₹ 9,780 crore (i.e. 23.9 per cent of the Plan outlay) by the Indian Railway Finance Corporation (IRFC), which also includes borrowings of ₹ 100 crore for Rail Vikas Nigam Limited. The annual Plan outlay for 2011-12 was budgeted at ₹ 57,630 crore. Construction work has commenced in the East and West Dedicated Freight Corridors and is targeted for completion in the terminal year of the Twelfth Plan. The project is being implemented through a mix of bilateral/multilateral debt, budgetary support, and PPP with a debt-equity ratio of 2:1. In a major move to give further impetus to Railways' modernization plans, an Expert Group was constituted in September 2011, under the Chairmanship of Sam Pitroda to recommend ways and means of modernizing Indian Railways, while at the same time ensuring adequate focus on addressing social and strategic requirements of the country.

## Department of Posts

3.41 The gross receipts of the Department of Posts in 2010-11 were placed at ₹ 6,962.3 crore. The gross and net working expenses during the year 2010-11 were ₹ 13,793.7 crore and ₹ 13,307.9 crore respectively, resulting in a deficit of ₹ 6,345.6 crore. In the current year 2011-12 (BE), the gross receipts are budgeted at ₹ 7,517.7 crore and with gross and net working expenses estimated at ₹ 13,522.4 crore and ₹ 12,827.3 crore respectively, with the deficit estimated at ₹ 5,309.6 crore. Government has approved the IT Modernization Project of the Department of Posts for a total Plan outlay of ₹ 1,877.2 crore. The project is intended for computerization of all the non-computerized post offices, mail offices, administrative and other offices, establishment of required IT infrastructure and development of required software applications. This IT Modernization Project is envisaged for

[1] **The operating ratio represents the percentage of working expenses to gross traffic earnings.**

implementation of all the above activities and is expected to be rolled out by the year 2013.

### Broadcasting

3.42 The provisional expenditure of Prasar Bharati, which is the public service broadcaster, in 2010-11 was ₹ 2,686 crore excluding charges on account of space segment and spectrum charges and interest and depreciation costs. The total revenue earned was ₹ 1,310.3 crore (net) in 2010-11. Prasar Bharati has taken a number of steps to increase revenue generation by adopting an aggressive marketing strategy and providing services catering to the advertising needs of various entities through a single window facility. The FM radio sector is on the positive growth path. Radio is increasingly gaining acceptance among advertisers and higher ad spends on radio are likely to materialize. The Budget for 2011-12 provided ₹ 1,944.1 crore to cover the resource gap of Prasar Bharati.

## State-level finances

3.43 As a proportion of GDP, total receipts of the state governments were more or less stable or higher even in the fiscal expansion years of 2008-09 and 2009-10. In 2010-11, there has been an increase in receipts driven by higher tax devolution as well as growth in own state revenues. The disbursements of the states also exhibit a similar trait and the BE for 2011-12 indicate a revenue surplus and moderation in fiscal deficit to 2.2 per cent of GDP (Table 3.11). As per the Thirteenth Finance Commission's fiscal consolidation road map for states, the states need to eliminate revenue deficit and achieve a fiscal deficit of 3 per cent of their respective gross state domestic products (GSDP), latest by 2014-15. The fiscal deficit of states has remained below 3 per cent of GDP since 2006-07. The revenue receipts are budgeted to grow by 12.4 per cent in 2011-12. With the introduction of GST and other critical tax reforms, the states would be able to generate revenue to meet the fiscal targets.

### State-level Reforms

3.44 The Thirteenth Finance Commission has worked out a fiscal consolidation road map for states individually requiring them to eliminate revenue deficit and achieve a fiscal deficit of 3 per cent of their respective GSDPs, latest by 2014-15. It has also recommended a combined states' debt target of 24.3 per cent of GDP to be reached during this period. The states are required to amend or enact their FRBMAs to incorporate the fiscal consolidation roadmap recommended for each state. So far information about twenty-seven states having enacted/amended their FRBM Acts (including 2 states through Ordinances) as prescribed by the Thirteenth Finance Commission, has been received. In respect of one remaining State (Goa), its FRBM Act enacted in 2006 already contains the fiscal consolidation roadmap which is in line with the recommendations of FC-XIII for the first three years of the award period (i.e. 2010-11 to 2012-13).

3.45 At the consolidated level, states could generate a surplus of 0.2 per cent of GDP in their revenue accounts in 2011-12 (BE) as against a deficit of 0.3 per cent (of GDP) in 2010-11 (RE). In 2011-12 (BE), the consolidated fiscal deficit of the states fell to 2.2 per cent of GDP from 2.7 per cent in 2010-11 (RE). Debt and other obligations of states too decreased to 22.6 per cent of GDP in 2011-12 (BE) from 23.6 per cent in 2010-11 (RE). The borrowing limits for each state are fixed by the Government of India keeping in view the recommendations of the Finance Commission. The borrowing limits for the year 2011-12 have been fixed keeping in view the fiscal deficit targets prescribed by the Thirteenth Finance Commission for States.

### Treasury Computerization of State Governments

3.46 A scheme for implementation of the mission mode project 'Computerisation of State Treasuries' was put in place by the Government of India in June 2010 under the National e-Governance Plan (NeGP). The states and UTs are required to complete their projects in about three years beginning 2010-11. The funds are released against deliverables. The scheme will support states and UTs to fill the existing gaps in their treasury computerization, upgradation, expansion and interface requirements, apart from supporting basic computerization. The scheme covers installation of suitable hardware and application software systems in a networked environment on a wide area basis and building of interfaces for data sharing among various stakeholders.

3.47 The scheme for treasury computerization is expected to make the budgeting process more efficient, improve cash flow management, promote real-time reconciliation of accounts, strengthen

**Table 3.11 : Receipts and Disbursements of State Governments***

| | 2006-07 | 2007-08 | 2008-09 | 2009-10 | 2010-11 (RE) | 2011-12 (BE) |
|---|---|---|---|---|---|---|
| | | | (₹ crore) | | | |
| **I. Total receipts(A+B)** | **673605** | **765735** | **891292** | **1007636** | **1214374** | **1394956** |
| **A. Revenue receipts (1+2)** | **530556** | **623748** | **694658** | **768136** | **970167** | **1109458** |
| 1. Tax receipts | 372841 | 437948 | 482983 | 528075 | 673659 | 784292 |
| of which | | | | | | |
| State's own tax revenue | 252548 | 286546 | 321930 | 363062 | 458886 | 534719 |
| 2. Non-tax receipts | 157714 | 185799 | 211675 | 240062 | 296509 | 325167 |
| of which: | | | | | | |
| Interest receipts | 11825 | 12637 | 16356 | 15309 | 17165 | 16987 |
| **B. Capital receipts** | **143049** | **141987** | **196634** | **239500** | **244207** | **285498** |
| of which: | | | | | | |
| Recovery of loans & advances | 7579 | 7770 | 11072 | 8088 | 5598 | 4483 |
| **II. Total disbursements(a+b+c)** | **657280** | **752324** | **882332** | **1015009** | **1239241** | **1378820** |
| a) Revenue | 505699 | 580805 | 681985 | 799154 | 993083 | 1092879 |
| b) Capital | 137793 | 157258 | 184376 | 198366 | 228516 | 264573 |
| c) Loans and advances | 13789 | 14261 | 15971 | 17489 | 17642 | 21368 |
| **III. Revenue deficit** | **-24857** | **-42943** | **-12673** | **31018** | **22916** | **-16579** |
| **IV. Gross fiscal deficit** | **77508** | **75455** | **134589** | **188820** | **207857** | **199427** |
| | | | (As per cent of GDP) | | | |
| **I. Total receipts(A+B)** | **15.7** | **15.4** | **15.8** | **15.6** | **15.8** | **15.7** |
| **A. Revenue receipts (1+2)** | **12.4** | **12.5** | **12.3** | **11.9** | **12.6** | **12.4** |
| 1. Tax receipts | 8.7 | 8.8 | 8.6 | 8.2 | 8.8 | 8.8 |
| State's own tax revenue | 5.9 | 5.7 | 5.7 | 5.6 | 6.0 | 6.0 |
| 2. Non-tax receipts | 3.7 | 3.7 | 3.8 | 3.7 | 3.9 | 3.6 |
| of which: | | | | | | |
| Interest receipts | 0.3 | 0.3 | 0.3 | 0.2 | 0.2 | 0.2 |
| **B. Capital receipts** | **3.3** | **2.8** | **3.5** | **3.7** | **3.2** | **3.2** |
| of which: | | | | | | |
| Recovery of loans & advances | 0.2 | 0.2 | 0.2 | 0.1 | 0.1 | 0.1 |
| **II. Total disbursements(a+b+c)** | **15.3** | **15.1** | **15.7** | **15.7** | **16.1** | **15.5** |
| a) Revenue | 11.8 | 11.6 | 12.1 | 12.4 | 12.9 | 12.3 |
| b) Capital | 3.2 | 3.2 | 3.3 | 3.1 | 3.6 | 3.0 |
| c) Loans and advances | 0.3 | 0.3 | 0.3 | 0.3 | 0.2 | 0.3 |
| **III. Revenue deficit** | **-0.6** | **-0.9** | **-0.2** | **0.5** | **0.3** | **-0.2** |
| **IV. Gross fiscal deficit** | **1.8** | **1.5** | **2.4** | **2.9** | **2.7** | **2.2** |

***Source*** **: Reserve Bank of India.**

*** Data from 2009-10 onwards are provisional and are based on budget documents of 28 state governments for the year 2011-12, of which 5 are Vote on Accounts.**

**BE : Budget Estimates  RE : Revised Estimates**

***Note*** **: (1) Negative (-) sign indicates surplus in deficit indicators.**

**(2) The ratios to GDP at current market prices are based on the CSO's National Accounts 2004-05 series.**

**(3) Capital receipts include public accounts on a net basis.**

**(4) Capital disbursements are exclusive of public accounts.**

management information systems (MIS), improve accuracy and timeliness in accounts preparation, bring about transparency and efficiency in public delivery systems, help bring about better financial management along with improved quality of governance in states and UTs. The overall estimated cost of the scheme is ₹ 626 crore at ₹ 1 crore per district in existence on 1 April 2011. Financial support is up to 75 per cent (90 per cent in case of north-eastern states) of the individual project cost of admissible components limited to ₹ 75 lakh per district (₹ 90 lakh per district for north-eastern states). Funds will be released as central assistance in three instalments of 40 per cent, 30 per cent, and 30 per cent each, subject to satisfactory receipt of utilization certificates.

## Consolidated General Government

3.48 Consolidated general government is the aggregation of union and combined state finances after due process of netting of inter-governmental transactions. This aggregation gives clarity in the fiscal operations of the general government and its macroeconomic impact. The gross fiscal deficit of the general government is budgeted to decline to 6.9 per cent of GDP in 2011-12 (Table 3.12).The revenue deficit had increased to 4.3 per cent and 5.7 per cent of GDP in the years 2008-09 and 2009-10 on account of the fiscal expansion; declined to 3.8 per cent in 2010-11(RE) and is budgeted to decline further to 3.3 per cent in 2011-12. The revenue receipts reflect marginal increase over the period 2009-10 to 2010-11. Tax receipts have remained at around 16 to 17 per cent of GDP since 2006-07. With rationalization of tax structure through moderate levels and few rates, implementation of the Direct Taxes Code (DTC) integrating all direct tax laws, widening of the tax base, and reduction in compliance costs through improved tax

**Table 3.12 : Receipts and Disbursements of Consolidated General Government**

| | 2006-07 | 2007-08 | 2008-09 | 2009-10 | 2010-11 (RE) | 2011-12 (BE) |
|---|---|---|---|---|---|---|
| | | | (₹ crore) | | | |
| **I. Total receipts(A+B)** | **1124252** | **1329654** | **1608494** | **1844923** | **2215502** | 2408486 |
| A Revenue receipts (1+2) | 877075 | 1061892 | 1116955 | 1210735 | 1604894 | 1728593 |
| 1 Tax receipts | 724023 | 877496 | 926303 | 984611 | 1237344 | 1448749 |
| 2. Non-tax receipts | 153052 | 184396 | 190652 | 226124 | 367550 | 279844 |
| of which | | | | | | |
| Interest receipts | 21744 | 22584 | 25224 | 25911 | 26129 | 26340 |
| B Capital receipts | 247177 | 267762 | 491539 | 634188 | 610608 | 679893 |
| of which: | | | | | | |
| a) Disinvestment proceeds | 2440 | 45750 | 832 | 25393 | 23447 | 42042 |
| b) Recovery of loans & advances | -1773 | 4682 | 8939 | 11499 | 7077 | 11198 |
| **II. Total disbursements(a+b+c)** | **1108174** | **1316246** | **1599533** | **1852296** | **2240369** | **2392348** |
| a) Revenue | 932441 | 1071518 | 1357819 | 1580750 | 1897653 | 2019284 |
| b) Capital | 157316 | 225803 | 218679 | 246245 | 295475 | 334579 |
| c) Loans and advances | 18417 | 18925 | 23035 | 25301 | 47241 | 38485 |
| **III. Revenue deficit** | **55366** | **9626** | **240864** | **370015** | **292759** | **290691** |
| **IV. Gross fiscal deficit** | **230432** | **203922** | **472807** | **604669** | **604951** | **610515** |
| | | | (As per cent of GDP) | | | |
| **I. Total receipts(A+B)** | **26.2** | **26.7** | **28.6** | **28.6** | **28.9** | **27.0** |
| A Revenue receipts (1+2) | 20.4 | 21.3 | 19.8 | 18.7 | 20.9 | 19.4 |
| 1. Tax receipts | 16.9 | 17.6 | 16.5 | 15.2 | 16.1 | 16.3 |
| 2. Non-tax receipts | 3.6 | 3.7 | 3.4 | 3.5 | 4.8 | 3.1 |
| of which | | | | | | |
| Interest receipts | 0.5 | 0.5 | 0.4 | 0.4 | 0.3 | 0.3 |
| B Capital receipts | 5.8 | 5.4 | 8.7 | 9.8 | 8.0 | 7.6 |
| of which: | | | | | | |
| a) Disinvestment proceeds | 0.1 | 0.9 | 0.0 | 0.4 | 0.3 | 0.5 |
| b) Recovery of loans & advances | 0.0 | 0.1 | 0.2 | 0.2 | 0.1 | 0.1 |
| **II. Total disbursements(a+b+c)** | **25.8** | **26.4** | **28.4** | **28.7** | **29.2** | **26.8** |
| a) Revenue | 21.7 | 21.5 | 24.1 | 24.5 | 24.7 | 22.7 |
| b) Capital | 3.7 | 4.5 | 3.9 | 3.8 | 3.9 | 3.8 |
| c) Loans and advances | 0.4 | 0.4 | 0.4 | 0.4 | 0.6 | 0.4 |
| **III. Revenue deficit** | **1.3** | **0.2** | **4.3** | **5.7** | **3.8** | **3.3** |
| **IV. Gross fiscal deficit** | **5.4** | **4.1** | **8.4** | **9.4** | **7.9** | **6.9** |

***Source*** **: Reserve Bank of India.**

**BE : Budget Estimates RE : Revised Estimates**

***Note*** **: The ratios to GDP at current market prices are based on the CSO's National Accounts 2004-05 series.**

administration, adoption of IT would create an enabling environment for voluntary compliance and would increase buoyancy in tax revenues and help in fiscal consolidation.

## Outlook

3.49 The fiscal outcome in 2011-12 is likely to be affected by the macroeconomic setting which indicates a sharp slowdown in industry and rising costs affecting profits. As a consequence, revenues grew at a less-than-estimated pace in key areas on the one hand and additional expenditure needs arose from the stickiness in high global commodity prices, particularly crude petroleum and fertilizers on the other. Besides, the financial market conditions were not appropriate for going ahead with the scheduled disinvestment plan. As such, a slippage on the targets of the deficit indicators is likely though efforts are afoot to minimize them. This is essentially an exceptional year when a whole host of factors have turned out differently than envisaged at the time of presentation of the Budget. A large fiscal correction followed by a likely slippage (in the previous and current fiscal respectively) is somewhat in the nature of a cyclical fiscal adjustment; but going forward there is a need to anchor fiscal consolidation on structural reforms in expenditure.

3.50 While, there may be some slippage in the current year, the medium-term stance of fiscal consolidation could be salvaged, though the timelines may have to be redrawn. The new FRBM framework on the anvil is likely to factor in the developments in the current fiscal and indicate the correct fiscal consolidation path for the medium term. What is critical here is that policies need to be in place to cater to the uncertainties that might arise during the course of the year, particularly in dealing with risks like global oil prices that have acquired a systemic nature. The Mid-Year Analysis had indicated clearly that the finances of the consolidated government are what matters for macroeconomic outcome. It is here that the fact that states (combined) have done exceedingly well in terms of both the deficit indicators even in the years of fiscal expansion augurs well for rapid fiscal consolidation.

# Prices and Monetary Management

# 4
CHAPTER

*Wholesale price index (WPI) inflation, after remaining in an elevated zone at over 9 per cent through the year, has been falling sharply since December 2011, aided by lower food prices, a global economic slowdown, and the impact of nearly two years of domestic monetary policy tightening and other measures put in place by the government. Monetary policy remained focused on controlling inflation and anchoring inflationary expectations, with 13 adjustments in policy rates since March 2010, which has slowed growth. These effects, coupled with a favourable base effect in prices and continued global slowdown, are expected to moderate inflation to around 6.5 to 7.0 per cent by March 2012; inflation is expected to come down further during 2012-13. The global economy witnessed fresh spells of crisis during 2011-12, with domestic business and consumer confidence dampening on the back of the deepening sovereign debt crisis in Europe. Global commodity prices, particularly those of food and metals, softened from high levels, even as crude oil prices remain elevated and are a major source of uncertainty and risk. All emerging and developing economies (EDEs) witnessed higher inflationary pressures with consumer price inflation for EDEs rising to 7.2 per cent for 2011, while that for advanced economies (AEs) was 2.7 per cent. Looking ahead, vigilance is called for in getting back to a low-inflation/sustained high-growth path in India, by renewed focus on supply-side measures and improved fiscal consolidation, including stepped-up regular adjustments in domestic energy prices. High levels of food stocks and producer responses to higher protein and other food prices should help maintain overall price stability ahead.*

## Prices

4.2 Headline year-on-year WPI inflation after remaining persistently high over the past two years has started to show signs of moderation lately. Financial year 2011-12 started with a headline inflation of 9.7 per cent, which briefly touched double digits in September 2011 before coming down to 6.6 per cent in January 2012. Consumer price inflation (CPI) for the major indices declined to below 7 per cent in December 2011, and fell further in January 2012 (Table 4.1).

4.3 Headline WPI inflation remained relatively sticky at around 9 per cent during the calender year 2011.The factors contributing to this situation and their relative importance have, however, been changing over time. Some of the contributory factors during this period include (a) higher primary articles prices driven by vegetables, eggs, meat, and fish due to changing dietary pattern of consumers; (b) increasing global commodity prices especially metal and chemical prices which ultimately led to higher domestic manufactured prices; and (c) persistently high international crude petroleum prices in the last two years averaging around US $ 111 per barrel in 2011 (Jan.-Dec.) as compared to US $ 80 per barrel (Jan.-Dec.) in 2010.

4.4 Inflation in primary articles has declined drastically, falling to 2.25 per cent by January 2012, after remaining in double digits for almost two years

**Table 4.1 Annual Inflation as per Different Price Indices**

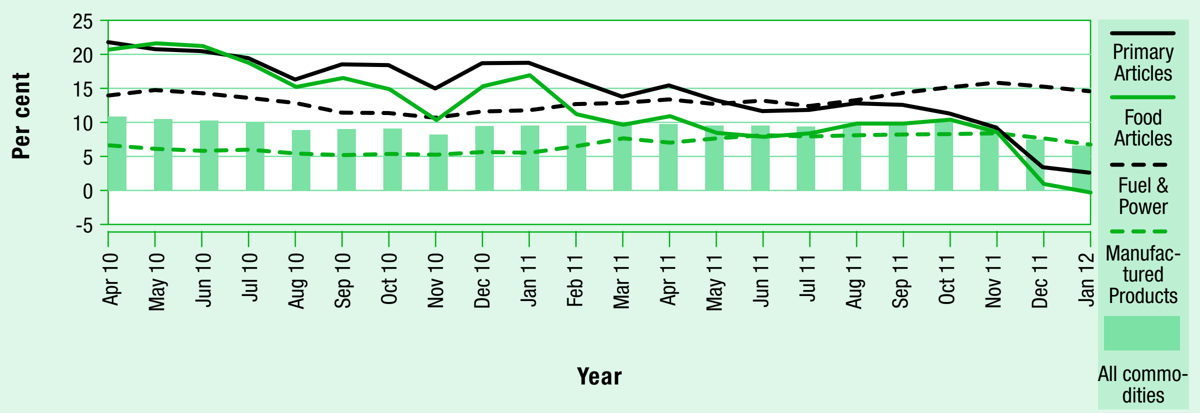
(per cent)

| Month | WPI | | CPI-IW | | CPI-AL | | CPI-RL | |
|---|---|---|---|---|---|---|---|---|
| | 2010-11 | 2011-12 | 2010-11 | 2011-12 | 2010-11 | 2011-12 | 2010-11 | 2011-12 |
| April | 10.88 | 9.74 | 13.33 | 9.41 | 14.96 | 9.11 | 14.96 | 9.11 |
| May | 10.48 | 9.56 | 13.91 | 8.72 | 13.68 | 9.63 | 13.68 | 9.63 |
| June | 10.25 | 9.51 | 13.73 | 8.62 | 13.02 | 9.32 | 13.02 | 9.14 |
| July | 9.98 | 9.36 | 11.25 | 8.43 | 11.02 | 9.03 | 11.24 | 9.03 |
| Aug. | 8.87 | 9.78 | 9.88 | 8.99 | 9.65 | 9.52 | 9.66 | 9.71 |
| Sept. | 8.98 | 10.00 | 9.82 | 10.06 | 9.13 | 9.43 | 9.34 | 9.25 |
| Oct. | 9.08 | 9.87 | 9.70 | 9.39 | 8.43 | 9.36 | 8.45 | 9.73 |
| Nov. | 8.20 | 9.46 | 8.33 | 9.34 | 7.14 | 8.95 | 6.95 | 9.14 |
| Dec. | 9.45 | 7.47 P | 9.47 | 6.49 | 7.99 | 6.37 | 8.01 | 6.72 |
| Jan. | 9.47 | 6.55 P | 9.30 | 5.32 | 8.67 | 4.92 | 8.69 | 5.27 |
| Feb. | 9.54 | | 8.82 | | 8.55 | | 8.55 | |
| Mar. | 9.68 | | 8.82 | | 9.14 | | 8.96 | |
| **Average** | **9.56** | | **10.45** | | **10.00** | | **10.01** | |

***Source*** **: The Office of the Economic Adviser (OEA), Department of Industrial Policy and Promotion (DIPP).**

***Note*** **: P : Provisional; CPI : Consumer Price Index; IW : Industrial Workers; AL : Agriculture Labour; RL : Rural Labour**

**Figure 4.1** **Year-on-year inflation for major groups in WPI**




(Figure 4.1). However, inflation in fuel has continued to remain high during the last two years. Inflation in manufactured products had started to accelerate since January 2011, remaining range-bound between 7 and 8 per cent in 2011, due to a surge in metal and chemical prices, but it has also recently started to moderate.

4.5 Compared to a relatively benign and stable inflationary period in the earlier part of the last decade, average headline WPI inflation started to rise in 2008-9 and persisted. The pressure was mainly from primary and fuel products with the average inflation in these commodities remaining persistently in double digits for a major period since 2008-9. In comparison, inflation in manufactured products remained relatively stable, dropping sharply in 2009-10 because of the global economic crisis and impacts in India, before it started to pick up and exceed its long-run average of around 5 per cent in early 2011-12. Among individual product groups, inflation in food products, beverages, textiles, chemicals, and basic metals remained elevated mainly on account of high global commodity prices and cost push pressures (Table 4.2).

**Table 4.2: Annual Average Inflation by Major Heads in WPI**

(per cent)

| Commodities | Weight | 2005-06 | 2006-07 | 2007-08 | 2008-09 | 2009-10 | 2010-11 (Apr.- Jan.) | 2011-12 (Apr.- Jan.)P |
|---|---|---|---|---|---|---|---|---|
| **All commodities** | **100.00** | **4.47** | **6.59** | **4.74** | **8.05** | **3.80** | **9.55** | **9.11** |
| **Primary articles** | **20.12** | **4.30** | **9.62** | **8.33** | **11.05** | **12.66** | **18.41** | **9.91** |
| Food articles | 14.34 | 5.38 | 9.62 | 6.97 | 9.09 | 15.27 | 16.75 | 7.15 |
| Non-food articles | 4.26 | -3.32 | 5.80 | 11.86 | 12.87 | 5.47 | 20.49 | 12.27 |
| Minerals | 1.52 | 15.15 | 18.64 | 11.84 | 22.08 | 8.79 | 26.74 | 24.15 |
| **Fuel & power** | **14.91** | **13.58** | **6.46** | **0.03** | **11.57** | **-2.11** | **12.24** | **13.67** |
| Coal | 2.09 | 17.60 | 0.09 | 3.38 | 24.30 | 3.43 | 5.07 | 13.26 |
| Mineral oils | 9.36 | 16.73 | 9.14 | -0.90 | 12.35 | -4.29 | 16.03 | 17.12 |
| Electricity | 3.45 | 2.57 | 2.66 | 0.84 | 0.19 | 0.96 | 5.74 | 1.17 |
| **Manufactured products** | **64.97** | **2.42** | **5.66** | **4.78** | **6.16** | **2.22** | **5.46** | **7.58** |
| Food products | 9.97 | 1.19 | 5.29 | 3.54 | 8.69 | 13.49 | 4.26 | 7.35 |
| Beverages, tobacco & products | 1.76 | 4.66 | 5.10 | 6.52 | 9.52 | 6.11 | 7.08 | 11.81 |
| Textiles | 7.33 | -1.06 | 1.88 | 0.73 | 1.62 | 3.43 | 11.05 | 9.51 |
| Wood & wood products | 0.59 | 5.74 | 5.84 | 6.69 | 9.49 | 9.60 | 4.03 | 8.00 |
| Paper & paper products | 2.03 | 3.63 | 4.60 | 2.96 | 4.20 | 2.20 | 4.84 | 5.94 |
| Leather & leather products | 0.84 | 4.25 | 7.95 | 3.06 | 5.47 | 4.93 | -0.92 | 1.76 |
| Rubber & plastic products | 2.99 | 1.91 | 5.61 | 4.28 | 4.53 | 0.74 | 5.98 | 6.82 |
| Chemicals & their products | 12.02 | 3.79 | 4.96 | 3.57 | 4.64 | -0.26 | 5.00 | 8.74 |
| Non-metallic mineral products | 2.56 | 3.41 | 11.58 | 11.19 | 2.63 | 6.97 | 2.59 | 5.52 |
| Basic metals, alloys & products | 10.75 | 2.23 | 9.28 | 10.29 | 11.96 | -6.12 | 8.10 | 11.12 |
| Machinery & machine tools | 8.93 | 3.58 | 6.31 | 3.65 | 2.89 | 0.46 | 2.73 | 3.11 |
| Transport, equipment/parts | 5.21 | 2.69 | 2.22 | 2.47 | 5.36 | 3.08 | 2.96 | 3.54 |

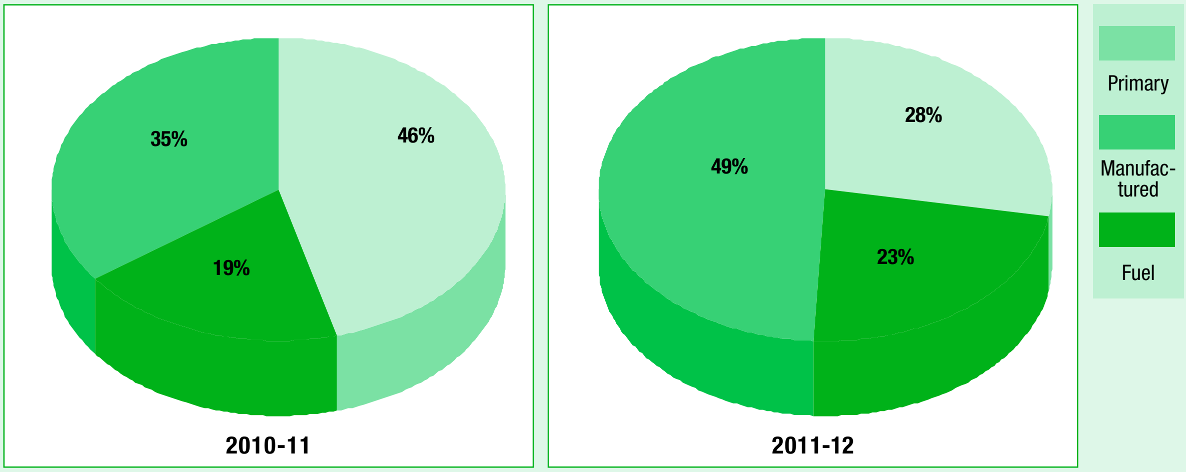
***Source*** **: OEA, DIPP. P: Provisional**

## Change in Reporting of Inflation

4.6 At present the WPI for all commodities including manufactured products is released only on a monthly basis. However, until recently WPI for primary articles and the fuel group was also being released on a weekly basis. This practice was intended to help in analysing the trends for policy-making as these commodities are essential in nature. But it was observed over a period of time that there was a tendency for upward revisions in the indices reported once the final numbers were later released. The higher frequency weekly reporting was thus prone to more statistical 'noise' and sometimes provided a misleading picture, so the trade-off was between the more frequent and less reliable data and less frequent but more reliable data. International practice for reporting CPI inflation is also on a monthly basis.

4.7 In view of this, the Cabinet Committee on Economic Affairs (CCEA) in its meeting held on 24 January 2012, agreed to discontinue the weekly release of WPI for the commodities/items under the groups 'primary articles' and 'fuel and power' with immediate effect. The last weekly WPI for the week ending 14 January 2012 was released on 27 January 2012. WPI shall, henceforth, be released on a monthly basis only.

Figure 4.2 Contribution to WPI inflation by major groups (per cent)




## Main drivers of Headline WPI Inflation

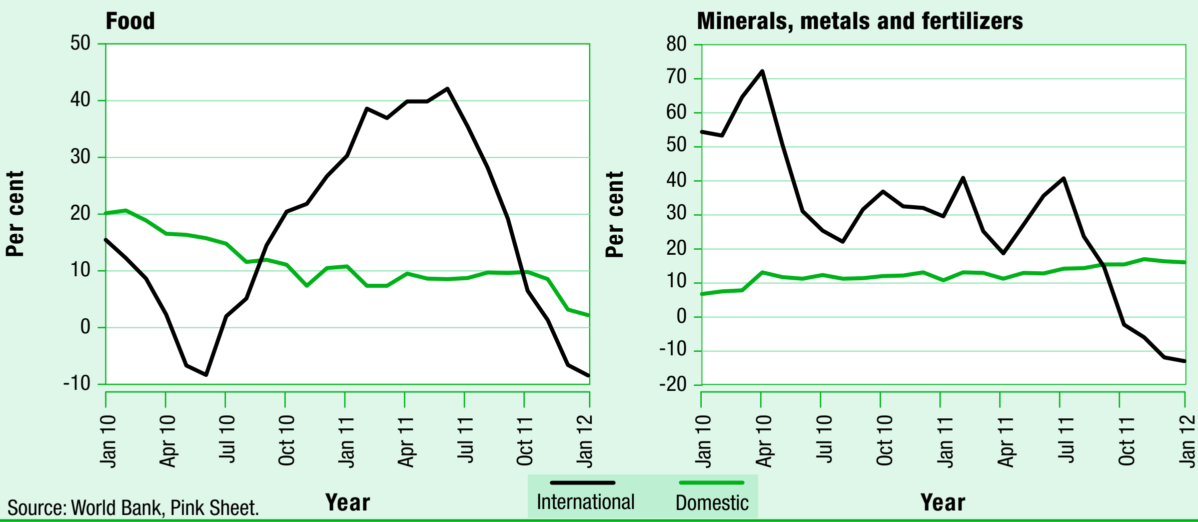
4.8 Looking at the weighted contribution of major product groups to WPI inflation, it can be seen that the contribution of primary articles has significantly declined from about 46 per cent in 2010-11 (April-January) to 28 per cent in 2011-12 (April-January) (Figure 4.2). On the other hand, that of manufactured products has gone up from 35 per cent in 2010-11 to about 49 per cent in 2011-12. The contribution of fuel has remained relatively stable at around 19 per cent in 2010-11 and 23 per cent in 2011-12.

### The Impact of Global Commodity Prices

4.9 The major source of inflation in the recent past has been price rise in non-food raw materials dependent manufactured products, much of which has been due to imported global commodity inflation. The high inflation in several commodities globally has led to increase in price level of these commodities domestically. For example, international prices of silver in the last one year (January-December 2011) is up 75 per cent, coconut and copra by 54 per cent, cotton by 45 per cent, fertilizers by 43 per cent, groundnut oil by 41 per cent, coffee by 38 per cent, gold by 28 per cent, and iron by 15 per cent. As a result, domestic manufacturing inflation has also started to pick up from about 5.5 per cent in 2010-11 (April to January) to 7.6 per cent in 2011-12 (April to January) (Table 4.2 and Box 4.1). Minerals and metal inflation remained at elevated levels.

4.10 International food inflation was also well above domestic food inflation and started accelerating from

Figure 4.3 Year-on-year Inflation: domestic vs international




Source: World Bank, Pink Sheet.

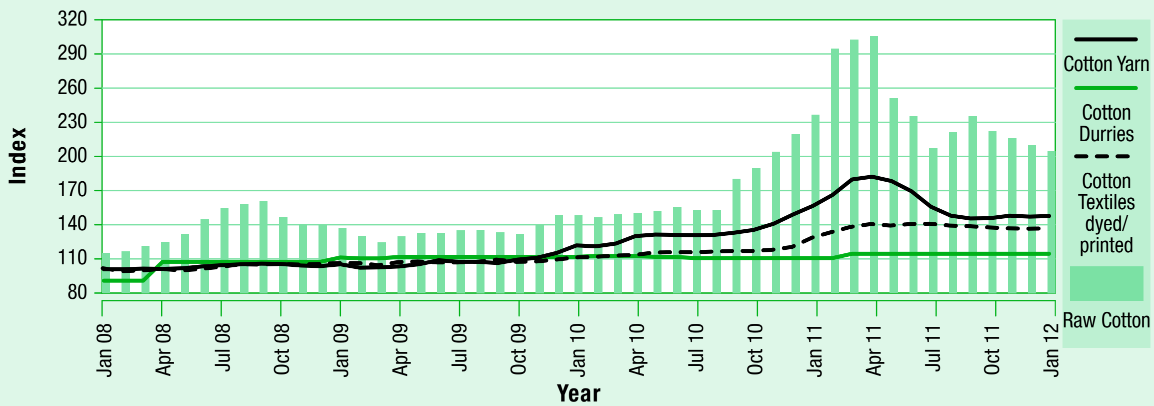
## Box 4.1 : Disentangling Drivers of Manufacturing Inflation: Cotton Textiles

Manufacturing occupies an unusually large weight (65 per cent), relative to its share in national output (and omitting services), in the WPI, and hence has exaggerated bearing on inflation measurement in India. A particular policy focus is on 'core inflation' in non-food manufacturing (Reserve Bank of India: RBI). The reason that 'core manufacturing inflation' occupies importance is because it is thought to be less prone to supply shocks and a more accurate gauge of demand-side pressures. A standard demand-side inflation explanation: if output growth is above some sustainable potential output (supply capacity), then inflation results. This 'Phillips-curve' explanation of a short-term inverse relationship between output (employment) and prices (wages) is widely used by policymakers to gauge inflation, and take demand-side policy measures, such as tighter monetary and fiscal policy to manage inflation. This is also sometimes invoked more broadly to explain why core inflation in emerging countries such as India, China, and Brazil is recently much higher (6-9 per cent) because of their faster growth (signs of possible 'overheating'), versus low inflation (2-3 per cent) in developed countries.

While this demand-side focus may be appropriate, a complicating factor in emerging markets such as India is also the influence of unprecedented international commodity price rises in recent years as a 'cost-push' cause of manufacturing inflation. The recent rise in global commodity prices, in turn, is judged to be, at least partly, the result of very loose monetary policies in developed countries. Consider textiles, a major manufacturing sector in India. Cost-push pressures start with raw cotton prices, which spill over to yarn costs, then to woven cloth, and finally the finished products: textiles, garments, and others. A closer look at this sector would hence be useful.

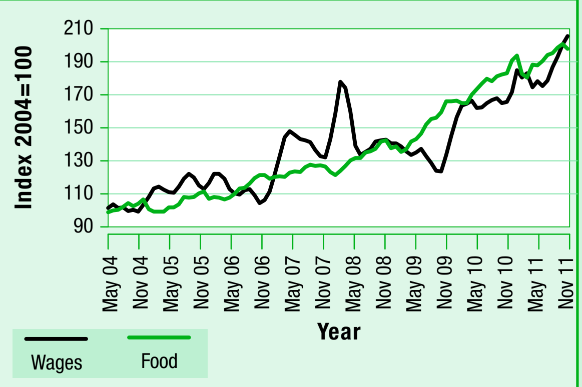
The following chart shows the broad picture of what has been happening to different components of cotton textile prices (January 2008-January 2012). As is evident, raw cotton prices, which ballooned in global markets in August 2010 and reached a peak in March-April 2011 and have since been moderating, although still well above historical levels, have been a major influence on subsequent manufacturing stages' prices. What happens to prices of the output of spinning mills, cotton yarn, is heavily influenced by cotton prices. In turn, these heavily influence all subsequent stages such as cotton textiles and garments. Formal econometric tests confirm that. The point: even traditional 'core' manufacturing inflation is not without large 'supply-side' shocks from world markets in key manufacturing sectors in India (and other emerging countries); accordingly, we need to be appropriately cautious about unhesitatingly using traditional developed country theories and measures of demand-side pressures as causes of core inflation.

**Prices of cotton textiles: Global input shocks vs domestic demand pressures and wages**

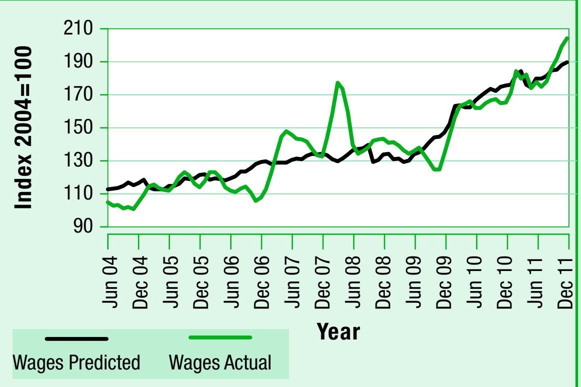



A further analytical question: can we disentangle raw material cost-push price pressures from, say, labour costs? Later stages of cotton textile manufacturing are especially interesting, because after raw material costs, labour costs dominate. Indeed, visually one can see that the influence of raw cotton costs drops the further down the chain one goes—say cotton textiles dyed or printed or artisanal cotton durries. The following chart shows the results of an exercise: imputed labour (and other) cost movements in textiles, using the (econometric) residuals after taking out raw material costs (raw cotton, yarn, or cloth, as the case may be, at each stage). The results are also compared to food price movements. They suggest two conclusions: (1) nominal labor-cost pressures were rising prior to the global crisis in 2008, but fell sharply after the crisis (till late 2009) and have since started to rise again; and (2) real wage movements are, however, much more moderate, as labour costs appear to track food prices (with a lag). The analysis was cross-checked with other labour-intensive industries (leather, wool). One further key analytical insight: traditional artisanal industries (carpet making, weaving), which employ massive numbers, are faring worst in imputed earnings with sharply rising raw material input costs and rising market costs outside.

**Imputed textile wage/labour-cost pressures and food prices**




**Predicting imputed textile labour costs (from food prices and crisis impact)**




Three broad conclusions: (a) recent very high inflation episode in India was influenced heavily by global commodity price shocks, even in 'core' manufacturing, as in textiles; (b) imputed nominal wage inflation, from labour-intensive industries, has been recovering and rising, but is influenced by rising food price inflation; and (c) whether Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) and other pressures have independently contributed to this or were simply following food prices cannot be easily disentangled; the latter explanation is preferable. A domestic demand-side explanation of recent 'core' inflation in India may merit caution and warrants further analytical work.

near zero per cent in June 2010 to about 42 per cent in June 2011; thereafter it stabilized and turned negative in December 2011 (Figure 4.3). However, domestic food inflation remained relatively flat in the last one year, before dropping recently. The food price index (base 2002-04 = 100) of the Food and Agriculture Organization (FAO), which touched an all-time high of 238 in February 2011, has since declined to 214 in January 2012. This has been facilitated by a slowdown in demand besides improvement in global supply of agricultural commodities. Nevertheless, price levels and volatility continue to remain a cause for concern and are expected to continue to be impacted globally by increased incomes, diversification of dietary patterns, attraction of bio-fuels as alternative sources of energy, and weather disturbances.

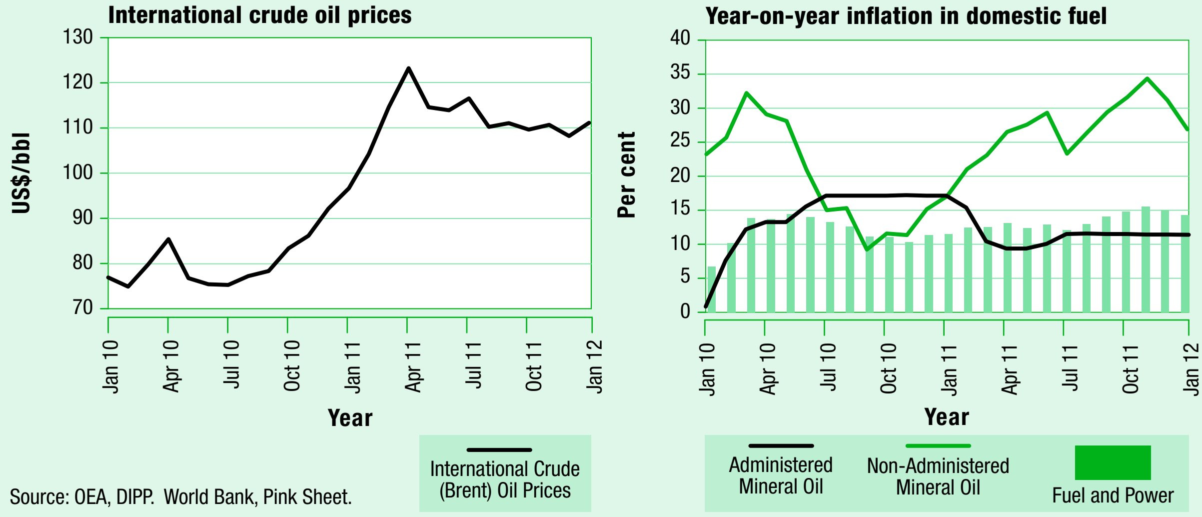
4.11 As a consequence of these developments, during the year 2011-12, inflationary pressures were witnessed particularly in the EDEs even though the outlook for global growth remained weak. However, the renewed sluggishness in the global economy has led to some moderation in commodity prices - particularly those of metals. Overall, going forward, global commodity prices are expected to decline in 2012, as per World Bank projections, due to slowdown in demand and improved supply prospects.

## Fuel

4.12 Fuel was another contributory factor behind high headline inflation in the last two years. The sharp rise and volatility of prices of oil and petroleum products in international markets has become a matter of global concern. Crude oil prices remained volatile during financial year 2011-12 due to political upheaval in the major oil-exporting countries coupled with increasing uncertainly in the global economic environment. Crude oil prices have steadily been increasing since December 2008. International crude oil (Brent) prices have moved up very sharply from US $ 75 per barrel to over US $ 114 per barrel in June 2011, a 52 per cent year-on-year increase.

4.13 Simultaneously, the average price of the Indian basket of crude oil which was US $ 69.76 per barrel in 2009-10 has gone up to US $ 85.09 per barrel in 2010-11 and further to US $ 109.97 per barrel in 2011-12 (up to December 2011). The pass through of higher international crude oil prices on the domestic front was clearly evident as inflation in non-administered mineral oil, which consists of aviation turbine fuel, bitumen, furnace oil, and naphtha, recorded an increase of 41 per cent between September 2010 and January 2011 (Figure 4.4). In comparison, inflation in administered mineral oil prices (liquefied petroleum gas [LPG], kerosene, and diesel) recorded an increase of only 11 per cent in the same period.

Figure 4.4 International vs Domestic price movement in energy




Source: OEA, DIPP. World Bank, Pink Sheet.

4.14 Global prices of crude oil and petroleum products play a decisive role in the domestic pricing of petroleum products since more than 75 per cent of the country's crude oil requirement is met through imports. Therefore the price of crude oil and petroleum products in the international oil markets has considerable impact on domestic prices of petroleum products. With the dismantling of administered petrol prices (with effect from 26 June 2010), prices of petrol have risen by 12.46 per cent during 2011-12 (April- December) from ₹ 58.37 per litre (April 2011) to ₹ 65.64 per litre (December 2011).

4.15 Despite the increase in international oil prices, Indian consumers have been partially insulated from the adverse impact of price rise, as the prices of three important petroleum products, namely public distribution system (PDS) kerosene, LPG, and diesel continued to be administered by the government and the price rise has been passed on only partially. During April-December 2011-12 with the increasing subsidy burden and mounting under-recoveries of oil marketing companies (OMCs), the prices of PDS kerosene were moderately revised upwards from ₹ 12.73 per litre to ₹ 14.83 per litre, i.e. an increase of 16.50 per cent, and diesel from ₹ 37.71 per litre (April 2011) to ₹ 40.91 per litre, i.e. 8.49 per cent increase. The prices of domestic LPG cylinders have also been increased by 15.53 per cent from ₹ 345.35 per cylinder to ₹ 399 per cylinder. As a result, domestic fuel inflation was 14.21 per cent in January 2012.

4.16 But even after these increases, the products remain heavily subsidized, with prices lower than in most countries, including among regional neighbours such as Sri Lanka and Bangladesh. The OMCs are incurring huge under-recoveries owing to non-revision of selling prices of diesel, domestic LPG, and PDS kerosene in line with their prevailing international prices. During the current financial year (April-September), the OMCs have incurred under-recoveries of ₹ 64,900 crore against total under-recoveries of ₹ 78,190 crore during 2010-11 and ₹ 46,051 crore in 2009-10.

4.17 To reduce the adverse impact of rising crude oil prices on the consumer, the government also removed the 5 per cent custom duty on crude oil, brought down import duty on petrol and diesel from 7.5 per cent to 2.5 per cent, and reduced excise duty on diesel by ₹ 2.60 per liter (with effect from 25 June 2011). Further, in view of the importance of the household fuels, namely PDS kerosene and domestic LPG, the Government decided that the subsidies on these products will be continued. The PDS Kerosene and Domestic LPG Subsidy Scheme 2002 as well as the Freight Subsidy (for far-flung areas) Scheme 2002 have also been extended till 31 March 2014.

## Food Inflation

4.18 The food price index consists of two sub-components, namely primary food articles and manufactured food products. The overall weight of the composite food index in the WPI is 24.31 per cent, (primary food articles: 14.34 per cent and manufactured food products: 9.97 per cent). The primary food article inflation has been a cause of serious concern for the government during 2009-11.

**Table 4.3 : WPI-based Year-on-Year Inflation in Major Subgroups**

(per cent)

| | Food-grains | Fruits & vegetables | Milk | Eggs, meat, & fish | Sugar | Edible oils |
|---|---|---|---|---|---|---|
| **Weight** | **4.09** | **3.84** | **3.24** | **2.41** | **1.74** | **3.04** |
| **Apr. 2010** | **11.05** | **14.32** | **27.91** | **38.61** | **24.55** | **0.09** |
| Apr. 2011 | 2.15 | 26.48 | 2.87 | 11.14 | 3.45 | 13.47 |
| May 2011 | 2.61 | 15.23 | 6.11 | 6.59 | 5.53 | 15.47 |
| Jun. 2011 | 2.08 | 7.49 | 11.52 | 9.88 | 7.53 | 15.80 |
| Jul. 2011 | 2.53 | 11.62 | 10.77 | 9.56 | 3.96 | 14.76 |
| Aug. 2011 | 3.33 | 18.29 | 9.41 | 10.42 | 6.28 | 14.72 |
| Sept. 2011 | 3.91 | 15.06 | 10.28 | 11.88 | 7.38 | 13.87 |
| Oct. 2011 | 5.48 | 13.48 | 11.12 | 12.43 | 7.31 | 12.93 |
| Nov. 2011 | 4.59 | 8.96 | 10.91 | 11.40 | 6.18 | 11.82 |
| Dec.-2011P | 4.11 | -14.89 | 11.02 | 11.88 | 4.34 | 11.52 |
| Jan. 2012P | 4.08 | -21.83 | 12.16 | 18.63 | 2.25 | 9.59 |

***Source*** **: OEA, DIPP. P : Provisional.**

It remained at an average level of 16.75 per cent in 2010-11 and 15.27 per cent in 2009-10 (April-January) mainly due to surge in (a) fruits and vegetables prices and (b) prices of protein-rich items such as milk, eggs, fish, and meat. However, in the current financial year (April-January 2011-12), average inflation in food articles has significantly declined to 7.15 per cent (Table 4.2). This was mainly on account of sizeable drop in fruits and vegetables prices, as a result of which inflation in these commodities has now turned negative in December 2011 and January 2012 (Table 4.3).

4.19 Inflation for 31 essential commodities (which include pulses, cereals, milk, fish, meat, edible oils, kerosene oil etc) for both WPI and CPI tracked each other closely. Year-on-year inflation in this particular category has declined from about 24 per cent in January 2010 to about 5 to 6 per cent in November and December 2011 (Figure 4.5).

## Main drivers of food inflation

4.20 The major drivers of food inflation during the current financial year were milk, eggs/ meat/ fish, and edible oils. In comparison with last year when cereals, vegetables, and sugar were the main contributors to food inflation, 2011-12 witnessed higher contribution from manufactured food products especially edible oils due to higher global prices of soyabean oil, palm oil, etc. India's edible oil requirement is estimated at 16-17 million tonnes, about 50 per cent of which is met through imports of crude palm oil, sunflower oil, soyabean oil, and Refined, Bleached and Deodorised (RBD) palmolein. As a result, a spurt in global prices has led to higher domestic prices of these commodities.

4.21 Within food articles, the major areas of concern have shifted from foodgrains to other commodities. It can be seen from Figure 4.6 that inflationary pressure from foodgrains have eased

**Figure 4.5 Movement of 31 essential commodities in WPI and CPI-IW**

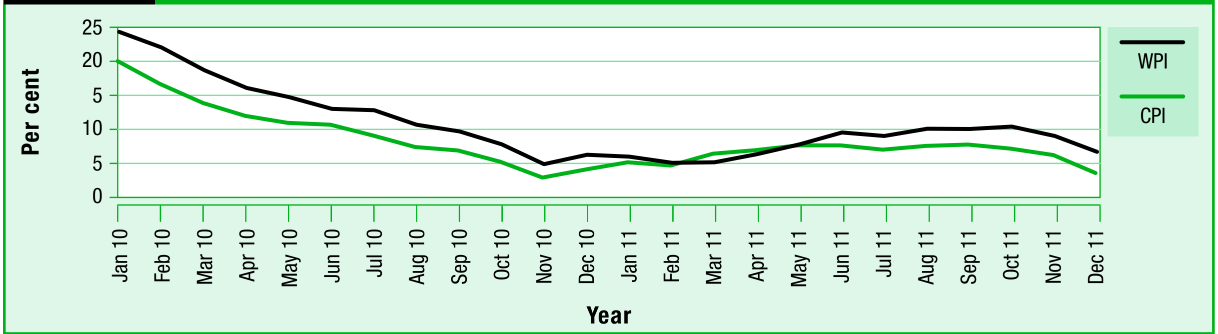
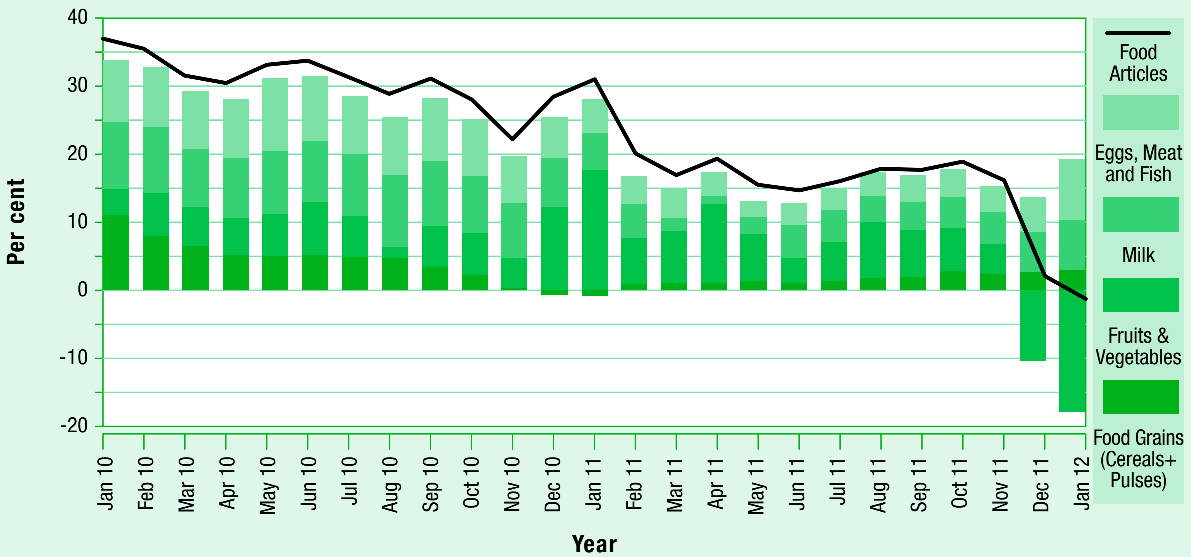


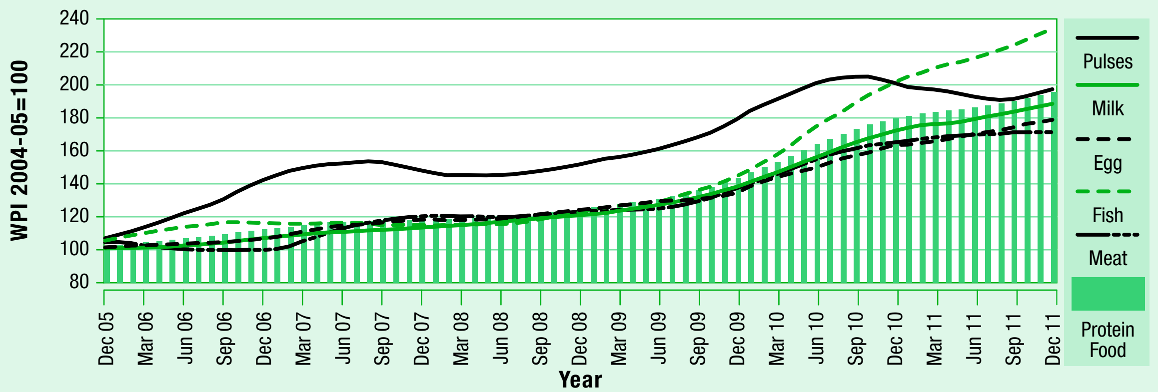
**Figure 4.6** **Weighted contribution of food articles & its components to headline inflation**




## Box 4.2 : What is Driving Protein Food Prices Higher in India?

Some recent articles suggest that a change in dietary habits towards protein-rich foods has been a key driver of high food price inflation in India (Subbarao 2011, Gokarn, 2011); they also suggest that this is a result of (a) rising nominal rural wages helped by the expansion of the Mahatma Gandhi National Rural Employment Guarantee (MGNREGA) scheme; (b) inadequate producer supply responses relative to demand; and (c) shocks from global food inflation, as India integrates with the world. A more nuanced view is possible on each factor.

**Twelve months moving average in protein food item in WPI**

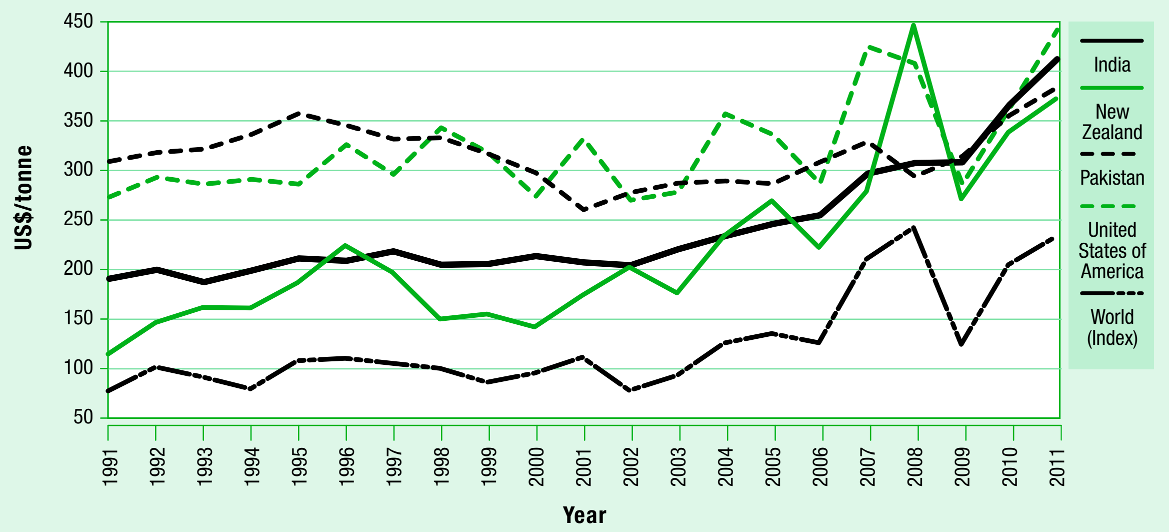



Protein inflation—rising prices of pulses, fish, meats, eggs, and milk—is evident (figure above). But the causes are more complicated than rising spending among low-income rural households. First, the shift to more expensive proteins is very unlikely to be from rising incomes in rural areas from income groups benefited by the MGNREGA. Incomes of average rural households in the bottom two deciles (MGNREGA target beneficiaries), for example, would have to jump to those of the rich farmer category, the sixth decile in rural areas, for a modest ₹ 100 monthly increase in per capita spending on protein-rich items by those households. The average (5$^{th}$ decile) urban household, by contrast, spends as much as seven times more than the bottom rural decile on protein-rich foods, and could achieve the same increase with a much more modest increase in incomes. Fast-growing urban consumers benefiting, for example, from the government's sixth pay commission pay hikes in 2008-9 and even larger private-sector salary hikes after a spectacular urban growth spurt during 2004-8, are a far more likely source of rising demand. Consider milk consumption. Monthly per capita liquid milk consumption in urban areas (from National Sample Survey [NSS] data) is far higher (5.4 litres) than in rural (4 litres); milk products (powder, solids, paneer, cheese, others) consumption is overwhelmingly urban and fastest growing (over 12 per cent per annum)-- a pattern seen worldwide--whereas much of rural consumption is in own use, non-market forms that only affect market prices from a distance.

Second, we turn our attention to supply-demand imbalances. Milk happens to have the biggest weight (52 per cent) in consumption expenditures on protein-rich items in India and a closer look is useful. It turns out that inability to produce milk is not necessarily the problem. India is the world's largest milk producer, milk production has been growing by over 4 per cent per annum, twice as fast as general agriculture and world production, and as rapidly as rising demand, raising per capita consumption successfully from 217 g to 263 g per day during 2000-10. Exports of milk products are also growing. Thanks to the 'white' revolution, the sector is relatively better organized, a success story worldwide, by helping smallholders into cooperatives and arranging an efficient collection, storage, and distribution system. Less well-developed but similar systems also operate in egg, poultry, and fisheries, whose production has also grown apace. Despite weaker and more volatile production, pulses, the poor-man's protein, have seen a lower price rise.

Third, the following chart shows how Indian milk prices have fared, relative to global trends. Two things stand out: (1) global milk prices have surged, helping Indian milk prices rise higher; the decline of the EU's milk mountains has been a key factor, as important as rising appetites among richer urban classes in emerging markets; (2) Indian milk prices have, however, grown even faster, doubling from US$200 a tonne in 2002 to well over US$400, catching up with the USA, the world's richest big producer, and matching New Zealand. Notice also the smoother price rise in India, which is characteristic of more 'organized' market processes. Such higher prices are expected to lead to rapid production response, although rising feed costs (fodder) for smallholders are a major factor in a land-scarce country.

**Producer price of milk: India catching-up with world (1991-2011)**




*Sources* : **(1) FAO Food Stats and Country Data; (2) Duvvuri Subbarao, 2011. The Challenge of Food Inflation, Presidential Address, Annual Conference of the Indian Society of Agricultural Marketing, Hyderabad, 22 November. (3) Subir Gokarn, 2011. Kale Memorial Lecture, Gokhale Institute of Politics and Economics, Pune, 9 December. (4) Dipak Dasgupta et al., 2011. Domestic Wheat Price Formation and Food Price Inflation in India, Ministry of Finance Working Paper. (5) Nancy Morgan, 2009. Dairy Prices, Policies and Potential Opportunities for Smallholders in Asia, Asia-Pacific Dairy Strategy project. (6) Wayne Arnold, 2007. A Thirst for Milk Bred by New Wealth Sends Prices Soaring, New York Times, September 4. (7) Jesper Stage, Jorn Stage, and Gordon McGranahan, 2009. Is Urbanization Contributing to Higher Food Prices? UNFPA. (8) Milk Prices up 35%, CCI targets 'cartel'. The Financial Express, 2011. (9) Shalini Gupta, 2012. Food Expenditure and Intake in the NSS 66th Round, Economic and Political Weekly, 14 January, Vol. XLVII, No. 2.**

sharply during 2011-12 due to robust production of cereals, as the weighted contribution of foodgrains to headline WPI inflation has declined from 11.06 per cent in January 2010 to 3.04 per cent in January 2012. This has helped bring down the weighted contribution of food articles from 36.7 per cent in January 2010 to just 1.8 per cent in December 2011 and further to a negative 1.48 per cent in January 2012. However, commodities such as eggs/ meat/ fish and milk have continued to witness higher double-digit inflation (Table 4.3) due to complicated structural factors (Box 4.2), including sharply higher producer prices.

4.22 As indicated by National Sample Survey Organization (NSSO) surveys, and consistent with worldwide experience, there has been a structural (Engel's law) shift in the consumption pattern of consumers as they become richer, with an increase in consumption of protein-rich commodities like fish, meat, eggs, and milk, an ongoing long-term process. This will require long-term solution, which is already in process, enhancing farm production and productivity of these commodities. Another major related issue is the strengthening of the supply chain so as to avoid wastage of perishable products. One suggestive measure in this regard could be the expeditious completion of the Agriculture Produce Marketing Committee (APMC) Acts reforms in different states so that enough flexibility is imparted to farmers to sell their produce. Further, it is important to develop a robust agricultural marketing system through adequate investment - domestic and/or foreign - so as to strengthen the back end infrastructure and reduce wastages. Overall, any strategy for strengthening agricultural marketing needs to have a three-pronged objective: first, of providing remunerative prices to farmers; second, strengthening efficiencies of supply chain; and third, ensuring that end consumers are charged fair and reasonable prices (Box 4.3).

4.23 To arrest the adverse impact of food inflation on the common man, the policy of the government has continued to lay emphasis on the PDS, import-export policy, distribution of essential commodities at below market prices through state public-sector units (PSUs), anti-hoarding operations, and strengthening of supply chain efficiency. Even more important, the response of farmers to better prices and two consecutive years of good monsoons has resulted in increased production. This, with continued efforts of the government and Reserve Bank of India (RBI), supported by high agricultural production, led to year-on-year combined food inflation (primary food articles + manufactured food products) gradually moderating from a peak of 20.22 per cent in February 2010 to 8.95 per cent in April 2011 and thereafter falling sharply to 1.58 per cent in January 2012.

### Food Production and Prices

4.24 Food production trends are reviewed in Chapter 8; the purpose here is to highlight the relationship between prices and changes in production (and hence stocks). Cereal production for 2011-12 is estimated to reach an all-time high of 233.14 million tonnes (as per second advance estimates), largely on the back of record wheat and rice output for the second year running. The WPI annual inflation in cereals has consequently dropped to a comfortable level. Lower production of edible oilseeds and raw cotton could, however, be a cause for concern next year, although international prices have a major impact on these commodities and sugarcane. The long-term movement of production and inflation for some important agricultural commodities is given in Figure 4.7.

## Inflation based on the CPI Vs WPI

4.25 Inflation in all major indices largely followed each other. The gap between the WPI and CPIs had widened in 2009-10 due to higher food inflation, as food items have a much larger weight in the CPI vis-à-vis the WPI. Food items contribute a weight of 46.20 per cent in the CPI-IW and 69.15 per cent in the CPI-AL as against 24.31 per cent

### Box 4.3 : Inter-Ministerial Group (IMG) on Inflation

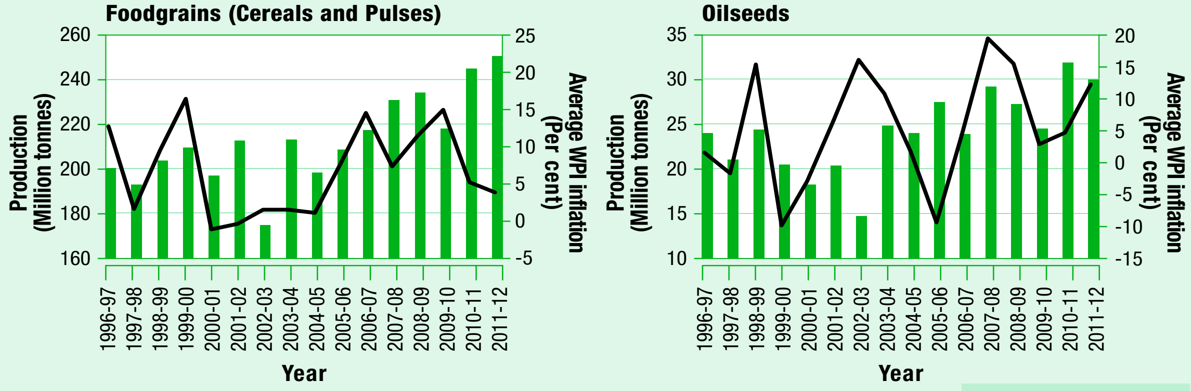
On the recommendation of the Prime Minister, an IMG, chaired by the Chief Economic Adviser, Ministry of Finance, was constituted on 2 February 2011, to review the overall inflation situation with particular reference to primary food articles and suggest corrective measures. Till date there have been five meetings of the IMG covering information system on all aspects of price monitoring, food inflation and flaws in marketing, macroeconomic demand management, the APMC Act, and multi-product retail reform.

Based upon deliberations in its meetings, the IMG has recommended two important policy changes that can have multiplier effect and large benefits to manage inflation: reforms in the APMC Acts and foreign direct investment (FDI) in multi-brand retail. Agriculture markets are regulated in India through the APMC Acts. According to the provisions of the APMC Acts of the states, every APMC is authorized to collect market fees from the buyers/traders in the prescribed manner on the sale of the notified agricultural produce. The relatively high incidence of commission charges on agricultural / horticultural produce renders their marketing cost high, an undesirable outcome.

This suggests that a single-point market fee system is necessary to facilitate the free movement of produce, bring price stabilization, and reduce price differences between the producer and consumer market segments. As the APMCs were created to protect the interest of farmers it would be in the fitness of things to secure farmers the choice to go to the APMC or not. In the light of this, the IMG recommended that the APMC Act be revisited. Secondly, the IMG recommended that leveraging FDI in multi-brand retail could be one of the means available for addressing issues relating to high rates of food inflation, low prices realized by Indian farmers, developing a 'farm-to-fork' retail supply system, and addressing the investment gaps related to post harvest infrastructure for agricultural produce.

While the reform in the APMC Act is under consideration of the Department of Agriculture and Cooperation, on FDI in multi-brand retail, the DIPP is in the process of creating consensus among various stakeholders.

**Figure 4.7 Annual average inflation and production**




Source: OEA and Ministry of Agriculture.
Note: 2011-12 (Second advance estimate), WPI inflation for 2011-12 is average of April to December

in the WPI. However, in the current financial year (2011-12), the gap has significantly narrowed due to drastic fall in food inflation, and the CPI-IW and WPI are tracking each other closely (Figure 4.8). CPI-IW inflation, after remaining in single digit from August 2010 to August 2011, briefly touched double digits at 10.06 per cent in September 2011 (Table 4.2). Food inflation for all CPIs and the WPI was about 2 per cent in December 2011 (Table 4.4); and dropped further in January 2012. WPI food articles (weight: 14.34 per cent) inflation turned negative in January 2012.

## Introduction of New Series of CPI (R+U)

4.26 The Central Statistics Office (CSO), Ministry of Statistics and Programme Implementation has introduced a new CPI series on base 2010=100 for all-India and states/union territories (UTs) separately for rural, urban, and combined with effect from January 2011. CPI (urban) covers 310 towns while CPI (rural) covers 1,181 villages across the country. The weighting diagrams for the new CPI series have been derived on the basis of average monthly consumer expenditure of an urban/rural household obtained from the NSS 61st round Consumer

**Figure 4.8 Movement of WPI and CPI-IW inflation since April 2009**

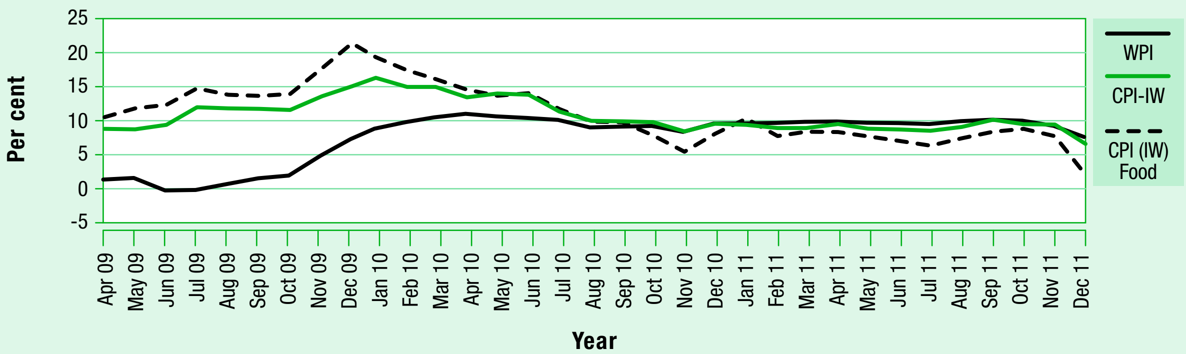



**Table 4.4: Food Inflation based on the WPI and CPI-IW/AL/RL**

(per cent)

| | Weight (%) 2011 | Jan. 2011 | Feb. 2011 | Mar. 2011 | Apr. 2011 | May 2011 | Jun. 2011 | Jul. 2011 | Aug. 2011 | Sep. 2011 | Oct. 2011 | Nov. 2011 | Dec. 2011 | Jan. 2012 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **WPI** | **24.31** | 10.3 | 6.8 | 6.8 | 9.0 | 8.1 | 8.0 | 8.2 | 9.2 | 9.1 | 9.3 | 7.9 | 2.6P | 1.6P |
| **CPI-IW** | **46.20** | 10.2 | 7.7 | 8.3 | 8.2 | 7.6 | 6.9 | 6.3 | 7.3 | 8.3 | 8.7 | 7.6 | 2.0 | 0.5 |
| **CPI-AL** | **69.15** | 7.5 | 7.1 | 7.2 | 7.3 | 7.5 | 6.8 | 6.4 | 7.1 | 6.5 | 6.8 | 5.9 | 2.4 | 0.3 |
| **CPI-RL** | **66.77** | 7.5 | 6.9 | 7.3 | 7.1 | 7.5 | 6.8 | 6.4 | 6.9 | 6.7 | 6.8 | 5.9 | 2.4 | 0.5 |

***Source*: OEA, DIPP, Labour Bureau.** **P : Provisional**

Expenditure Survey data (2004-5). The year-on-year inflation for CPI-CSO (urban), CPI-CSO (rural) and CPI-CSO (combined) was 8.25 per cent, 7.38 per cent and 7.65 per cent respectively in January 2012. While a strict comparison is not possible, and the new series is yet to be tested over time, the inflation rate for January 2012 with CPI-CSO (rural) (7.38 per cent) is reported to be higher than with CPI-Labour Bureau (rural labour) (5.27 per cent)—due to differences in coverage and weighting (consumption) patterns. The weighting pattern for CPI-Labour Bureau (rural labour) is based on 1983 NSS consumer expenditure survey as compared to the use of 2004-5 consumer expenditure survey for CPI-CSO (rural).

4.27 The inflation momentum, as examined by month-over-month annualized headline inflation for all the major categories viz, rural, urban, and combined (rural+urban) has shown significant moderation since July, helped by seasonality (Figure 4.9). Similar decline has been experienced across the board for other indices as well, mainly on account of fall in food inflation.

## Private Final Consumption Expenditure Deflator (PFCED)

4.28 Movement of the consumption pattern of a country can be analyzed through its deflator generated by private final consumption expenditure (PFCE) at current prices over constant prices base 2004-5. Annual price indices data for the CPI-RL, CPI-IW (represents urban area), and PFCED from 2004-5 onwards indicate an upward swing in the cost of living (Figure 4.10).

4.29 Price changes may cause consumers to switch from one good to another. Whereas the fixed basket CPI does not account for altered spending habits caused by price changes, the PFCED's ability to account for such substitutions makes it an alternative preferred measure of inflation. The CPI-RL represents rural areas, where price indices are reigning higher than the CPI-IW in response to improvements in purchasing power and consumption pattern.

**Figure 4.9 Month-over-month annualized inflation for new CPI series**


**Figure 4.10 Annual trend in price indices and PFCED**


| | 2004-05 | 2005-06 | 2006-07 | 2007-08 | 2008-09 | 2009-10 | 2010-11 | 2011-12 |
|---|---|---|---|---|---|---|---|---|
| PFCED | 100 | 103.4 | 109.9 | 115.4 | 122.8 | 130.5 | 141.2 | 153.7 |
| CPI-IW | 100 | 104.4 | 111.4 | 118.3 | 129.1 | 145.0 | 160.2 | 172.0 |
| CPI-RL | 100 | 103.7 | 111.7 | 119.7 | 131.9 | 150.0 | 165.0 | 177.7 |

Sources: Office of the Economic Adviser , Labour Bureau and CSO.
Note: The PFCED for 2011-12 (Advance Estimates (AE); CPI-IW and CPI-RL for 2011-12 (April-December 2011).

## Housing Price Index (NHB RESIDEX)

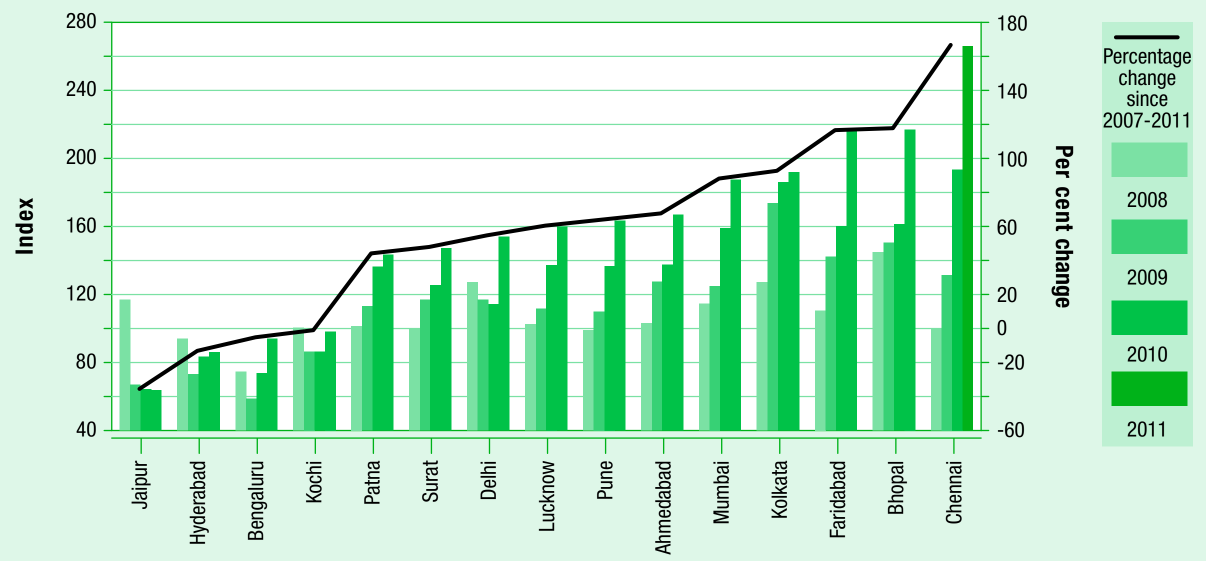
4.30 India is witnessing increasing levels of urban population. Nearly 30 per cent of the country's population lives in cities and urban areas and the figure is projected to reach 50 per cent in 2040. While cities are regarded as 'engines of growth', they continue to face enormous challenges. Increasing urbanization has led to tremendous pressure on urban land, civic infrastructure, transport, open spaces, etc. resulting in increase in proliferation of slum and squatter settlements.

4.31 A major policy concern, therefore, is the widening gap between demand and supply of housing units resulting from inadequate housing, and housing finance solutions. Though the housing finance sector in India has experienced buoyant growth over the past several years, homelessness amongst the lower segments of population has continued to increase. Despite significant growth of the housing loan portfolio in the sector, access to formal credit was mostly available to people in the formal sector. Sizeable segments of the informal segment market still remain untouched. To encourage lending institutions to expand their operations in meeting the housing credit needs of this segment, the Hon'ble Finance Minister in his Budget speech for financial year 2011-12 has proposed creation of a Mortgage Risk Guarantee Fund under the Rajiv Awas Yojana (RAY) to enable provision of credit to economically weaker sections (EWS) and low-income group (LIG) households. The major objective of this Fund will be to provide default guarantee for housing loans up to ₹ 5 lakh sanctioned and disbursed by the lending institutions without any collateral security and/or third party guarantees to new or existing borrowers in the EWS/ LIG categories. The proposed will be managed and administered by the National Housing Bank.

4.32 The NHB RESIDEX is an Initiative of the National Housing Bank (NHB) to provide an index of residential prices in India across cities and over time. The NHB began this initiative in the year 2005-6 and undertook a pilot study for examining the feasibility of preparing such an index at national level. It launched RESIDEX for tracking prices of residential properties in India in July 2007, covering data up to 2005 with 2001 as the base year. The NHB RESIDEX now covers 15 cities and is updated and released on a quarterly basis with 2007 as base year. It has been updated and released for the quarter ended December, 2011 (October - December 2011).

4.33 The prices of residential properties during the period 2007 to 2011 have witnessed increases in 11 cities with maximum increase in Chennai (166 per cent) followed by Bhopal (117 per cent), Faridabad (116 per cent), Kolkata (92 per cent), Mumbai (87 per cent), Ahmedabad (67 per cent), Pune (63 per cent), Lucknow (60 per cent), Delhi (54 per cent), Surat (47 per cent), and Patna (43 per cent), whereas 4 cities have witnessed decline in prices with maximum decrease observed in Jaipur (36 per cent) followed by Hyderabad (14 per cent), Bengaluru (6 per cent), and Kochi (2 per cent) (Figure 4.11). The possible reasons for increase in prices could be overall increase in inflation rate particularly relating to building materials, improvement in

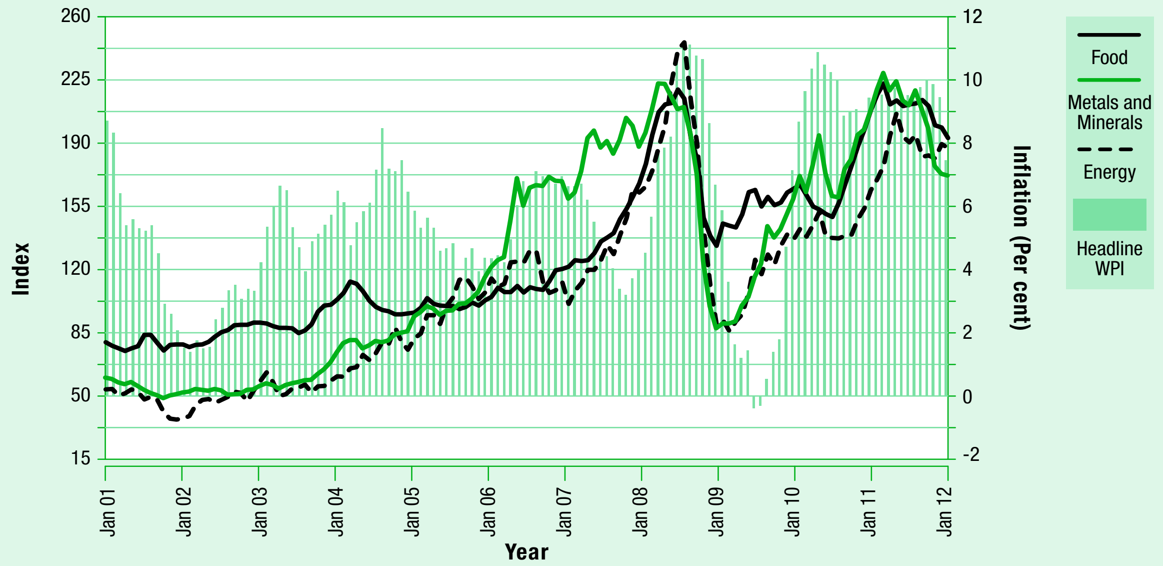
Figure 4.11 Change in residential prices in major cities (Base 2007=100)



## Box 4.4 : Inflation Forecasting

Price stability is a major objective of macroeconomic policy and improved forecasts make for better understanding and policy. Many studies show low and stable inflation as conducive to long-term growth. Maintaining low inflation and pushing growth in the short run is, however, often a knife-edge problem. The price of a good in a free market should be determined by its relative scarcity, i.e. supply relative to demand. But in a high-inflation environment, relative price shifts may not reflect underlying demand-supply conditions of different goods and services. As a result, dispersion in relative price increases lead to distortion in price signals. High inflation has adverse impact on growth through a variety of channels. First, high inflation leads to uncertainty which impacts investment and growth. As it is, investment decisions are subject to a lot of uncertainties. High and volatile inflation adds to these uncertainties. Second, high inflation results in movement of savings from financial assets to physical and other unproductive activities. Therefore, low and stable inflation is desirable from a number of perspectives. In that context, for monetary policy to be effective it is vital for central banks and macroeconomic policymakers to have reasonable forward-looking short-term forecasts of inflation on which to base decisions.

**Global commodity price indices vs WPI inflation**




Forecasting nevertheless remains difficult because of the possibility of exogenous shocks (and multiple channels)--demand and supply shocks, global prices, exchange rate movements and weather-related variables. Yet it is vital when inflation is high and volatile. It is useful to break up the problem by sources of price pressures:

(1) Primary food articles: the first step is a forecast of primary food article prices because they are central and drivers are primarily supply side. The size and monthly distribution of rainfall during June-September are a key determinant of output and prices; global commodity prices also have influence with a lag on domestic prices. Ministry of Finance (Working Paper No. 1, 2011) and RBI (Working paper, Jan. 2012) papers both validate this; the latter found that an increase of 10 per cent in global non-fuel commodity prices increases headline inflation by 70-90 basis points in the same quarter.

(2) Food and primary article's prices also tend to have a 'cost push' impact on manufacturing products. Wages and price expectations in a developing country tend to 'anchor' strongly around food prices. Therefore forecasts of food prices are essential not just in terms of their weight, but as an alternate sense of 'core' inflation.

(3) Forecasts of manufacturing inflation, the 'core' usually used in India by the RBI and others, can usefully incorporate three elements (a) expected food prices; (b) global raw material commodity prices; and (c) an index of demand conditions such as the index of industrial production (IIP) (suitably averaged to avoid high-frequency data noise).

(4) Needless to add, monetary and fiscal policies also impact on inflation although with substantial time-lags.

(5) All forecasts, especially near term, also benefit from and rely greatly on judgments. To quote from the US Fed Chairman, 'the forecasts of inflation…. that are provided to the Federal Open Market Committee are developed through an eclectic process that combines model-based projections, anecdotal and other "extra-model" information, and professional judgment. In short, for all the advances that have been made in modeling and statistical analysis, practical forecasting continues to involve art as well as science.'-Ben Bernanke (Inflation Forecasting, 10 July 2007)

Forecasts are, nevertheless, only a guide to policymakers and market participants and are based on a number of assumptions, which may turn out different and cause actual outcomes to diverge. Differences also arise as data used to make projections are provisional for most recent months and at times undergo large revisions. Finally, as mentioned earlier, it is important to account for country specifics and economic structures, both for forecasting and policy formulation.

infrastructural facilities like metro connectivity resulting in increased demand for housing, favourable political and economic environment, and increased business and employment opportunities.

## Measures to contain inflation

4.34 The government monitors the price situation regularly as price stability remains high on its agenda. Measures taken to contain prices of essential commodities include selective ban on exports and futures trading in foodgrains, zero import duty on select food items, permitting import of pulses and sugar by PSUs, distribution of imported pulses and edible oils through the PDS, and release of higher quota of non-levy sugar. In addition, state governments are empowered to act against hoarders of food items by holding in abeyance the removal of restrictions on licensing, stock limits, and movement of food articles under the Essential Commodities Act 1955. Some of the important anti-inflationary measures taken are given in Box 4.5.

### Box 4.5 : Measures to Contain Inflation, Particularly Food Inflation

**A. Fiscal Measures**

- Reduced import duties to zero for rice, wheat, onion, pulses, edible oils (crude) and to 7.5 per cent for refined and hydrogenated oils and vegetable oils.
- Permitted National Dairy Development Board (NDDB) to import 50,000 tonnes of skimmed milk powder and whole milk powder and 15,000 MT of butter, butter oil, and anhydrous milk fat at zero duty under tariff rate quota.
- Permitted the State Trading Corporation of India (STC)/Minerals and Metals Trading Corporation (MMTC)/Project Equipment Corporation (PEC) and National Agricultural Cooperative Marketing Federation of India (NAFED) to import duty-free white/refined sugar initially with a cap of 1 million tonnes. Later duty-free import was also allowed by other central / state government agencies and private trade without any cap on quantity.

**B. Administrative Measures**

- Removed levy obligation in respect of all imported raw sugar and white/refined sugar.
- Banned export of edible oils (except coconut oil and forest-based oil) and pulses (except Kabuli chana and organic pulses up to a maximum of 10,000 tonnes per annum).
- Imposed ban on export of non-basmati rice and wheat for short period of time.
- Permitted export of edible oils in branded consumer packs of up to 5 kg subject to a limit of 10,000 tonnes.
- Prohibited export of milk powders (including skimmed milk powder, whole milk powder, dairy whitener, and infant milk food), casein and casein products.
- Effected no change in tariff rate values of edible oils.
- Ban on export of onion was imposed for short period of time whenever required. Exports of onion were calibrated through the mechanism of minimum export prices (MEP) of onion.
- Maintained the central issue price (CIP) for rice (at ₹ 5.65 per kg for below poverty line [BPL] and ₹ 3 per kg for Antyodaya Anna Yopjana [AAY]) and wheat (at ₹ 4.15 per kg for BPL and ₹ 2 per kg for AAY) since 2002.
- Suspension of futures trading in rice, urad, and tur.
- Ten lakh tonnes of wheat and 10 lakh tonnes of rice allotted under the Open Market Sale Scheme (OMSS) and 15 lakh tonnes of wheat for bulk sale, including sale to small traders for the period October 2011to September 2012.
- An additional ad hoc allocation of 50 lakh tonnes of foodgrains made on 16 May 2011 to all states/UTs for BPL families at BPL issue price for distribution during the current year up to March, 2012.
- In addition, ad hoc allocation of 50 lakh tonnes of foodgrains made on 30 June 2011 to above poverty line (APL) families raising thereby monthly APL allocation up to 15 kg per family per month in 20 states and 35 kg per family per month in 4 north-eastern states, Sikkim, and 2 hilly states of Himachal Pradesh and Uttarakhand where it was less than that quantity for a period of ten months from June 2011 to March 2012.
- Extended the Scheme for distribution of subsidized imported edible oils through state governments/UTs with subsidy of ₹ 15 per kg for distribution to ration card holders at 1 litre per ration card per month.

**C. Monetary Measures**

As part of the monetary policy review stance, the RBI has taken suitable steps with 13 consecutive increases in policy rates and related measures to moderate demand to levels consistent with the capacity of the economy to maintain its growth without provoking price rise. As per the most recent announcement of the RBI on 24 January 2011, the cash reserve ratio (CRR) has been cut by 50 basis points (bps) from 6 per cent to 5.50 per cent and repo rate and reverse repo rate have remained unchanged at 8.5 per cent and 7.5 per cent respectively.

## Monetary Developments During 2011-12

4.35 The monetary policy focus during 2011-12 has been on controlling inflation and containing inflationary expectations. As an indication of strong anti-inflationary stance, the Reserve Bank of India (RBI) has raised policy rates 13 times since March 2010. The measures have helped contain inflation and anchor inflationary expectations, although both remain at elevated levels. The task was rendered difficult due to supply-side factors contributing to food inflation, low interest rates and repeated liquidity injections by industrial nations battling recessionary tendencies, and rise in international commodity prices. High inflation and some of the measures to control liquidity have also had detrimental effect on growth in the short run. The priority, however, has been to contain price rise so that long-term growth prospects are not affected. With inflation projected to follow a downward trajectory and downside risks to growth increasing, the RBI in the Third Quarter Review of Monetary Policy 2011-12 on 24 January 2012, has lowered the Cash Reserve Ratio (CRR) by 50 bps from 6.0 per cent to 5.5 per cent of net demand and time liabilities (NDTL) of scheduled banks to ease the liquidity situation in the banking system and revive growth.

4.36 Liquidity conditions for a large part of 2011-12 remained broadly around the comfortable level of liquidity deficit (1 per cent of NDTL of the banking system), with occasional stress on account of quarterly tax flows or divergence between deposit and credit mobilization. There has, however, been rapid tightening of liquidity since November 2011. This was on account of pressure created by foreign exchange outflows and quarterly advance tax collections in December. The RBI responded with a number of measures aimed at addressing the tightness in the foreign exchange market, including the conduct of open market operations (OMOs) to address rupee liquidity concerns.

## Trends in Monetary Aggregates

4.37 During the year 2011-12, the growth rates of reserve money ($M_0$) and narrow money ($M_1$) have been lower than in the preceding year while broad money ($M_3$) growth has been higher (Table 4.5). The moderation in growth of $M_1$ as against $M_3$ is on account of decline in the growth of demand deposits and currency, while time deposits have accelerated in response to hike in the deposit rates of banks. Box 4.6 lists some measures of money supply and liquidity aggregates.

### Reserve Money ($M_0$)

4.38 $M_0$ registered a growth of 19.1 per cent in 2010-11 as compared to 17.0 per cent in 2009-10. Net domestic assets (NDA), led largely by net RBI credit to the centre, were the main driver of increase in $M_0$ during 2010-11. Net RBI credit to the central government increased by ₹1,82,454 crore in 2010-11, as compared to an increase of ₹1,49,820 crore during 2009-10. The expansion in net RBI credit to the centre in 2010-11 reflected the combined effects of monetary operations conducted through OMOs, including liquidity adjustment facility (LAF) operations. The RBI's net foreign assets (NFA) increased by 7.8 per cent during 2010-11 as against a decrease of 3.7 per cent during 2009-10.

4.39 During 2011-12, on financial-year basis, reserve money increased marginally by 0.7 per cent (up to 2 December 2011), as compared to an increase of 6.4 per cent during the corresponding period of the preceding year (Table 4.6). The NFAs of the RBI increased by 16.2 per cent during this period, as against an increase of 6.2 per cent during the corresponding period of the previous year. The

**Table 4.5 : Movement of Select Monetary Parameters**

**(per cent)**

| Parameters | | | Growth rates as on 2 December 2011 | | | |
|---|---|---|---|---|---|---|
| | Yearly variation | | Financial-year basis | | Year-on-year basis | |
| | 2009-10 | 2010-11 | 2010-11 | 2011-12 | 2010-11 | 2011-12 |
| $M_0$ | 17.0 | 19.1 | 6.4 | 0.7 | 22.3 | 12.8 |
| $M_1$ | 18.2 | 9.8 | 4.0 | -0.5 | 17.0 | 5.0 |
| $M_3$ | 16.8 | 16.0 | 8.5 | 8.8 | 15.7 | 16.3 |

***Source*** **: RBI.**

## Box 4.6 : Measures of Money Supply and Liquidity Aggregates

Reserve Money ($M_0$) = Currency in Circulation + Bankers' deposits with the RBI + 'Other' deposits with the RBI.

Narrow Money ($M_1$) = Currency with the Public + Demand Deposits with the Banking System + 'Other' Deposits with the RBI.

$M_2$=$M_1$ + Savings Deposits of Post-office Savings Banks.

Broad Money ($M_3$) = $M_1$ + Time Deposits with the Banking System.

$M_4$ = $M_3$ + All deposits with Post Office Savings Banks (excluding National Savings Certificates).

While measures $M_0$, $M_1$ and $M_3$ are widely used in India, $M_2$ and $M_4$ are rarely used. The RBI initiated publication of a new set of monetary and liquidity aggregates as per the recommendations of the *Working Group on Money Supply: Analytics and Methodology of Compilation*. Following the submission of its report in June 1998, while no changes were made in the definitions of $M_0$ and $M_1$, new monetary aggregates $NM_2$ and $NM_3$ as well as liquidity aggregates $L_1$, $L_2$, and $L_3$ were introduced, the components of which are elaborated as follows.

$NM_1$ = Currency with the Public + Demand Deposits with the Banking System + 'Other' Deposits with the RBI.

$NM_2$ = $NM_1$ + Short Term Time Deposits of Residents (including and up to the contractual maturity of one year).

$NM_3$ = $NM_2$ + Long-term Time Deposits of Residents + Call/Term Funding from Financial Institutions.

$L_1$ = $NM_3$ + All Deposits with the Post Office Savings Banks (excluding National Savings Certificates)

$L_2$ = $L_1$ +Term deposits with Term Lending Institutions and Refinancing Institutions (FIs) + Term Borrowing by FIs + Certificates of Deposit issued by FIs

$L_3$= $L_2$ + Public Deposits of Non-banking Financial Companies.

Data on $M_0$ are published by the RBI on weekly basis, while those for $M_1$ and $M_3$ are available on fortnightly basis. Among liquidity aggregates, data on $L_1$ and $L_2$ are published monthly, while those for $L_3$ are disseminated once in a quarter.

large increase in NFAs witnessed in 2011-12 is primarily on account of the currency valuation effect. On year-on-year basis, as on 2 December 2011, the NFAs of the RBI increased by 18.0 per cent as compared to 0.7 per cent a year earlier. Net RBI credit to the central government increased by ₹12,019 crore during the financial year (up to 2 December 2011). This increase was primarily on account of open market purchases and increase in loans and advances to the central government, partially offset by decrease in repo operations under the LAF. On a year-on-year basis, increase in net

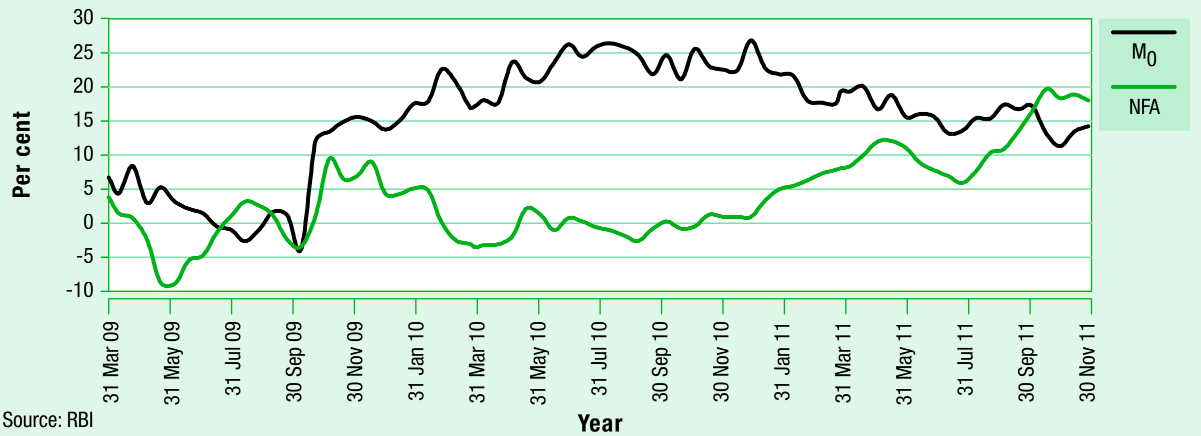
### Table 4.6 : Sources of change in $M_0$

(per cent)

| | Growth rate | | | | |
|---|---|---|---|---|---|
| | | Financial-year basis | | Year -on-Year | |
| | 2010-11 | 3 Dec. 2010 over 31 March, 2010 | 2 Dec. 2011 over 31 March, 2011 | 3 Dec. 2010 over 4 Dec. 2009 | 2 Dec. 2011 over 3 Dec. 2010 |
| $M_0$ | 19.1 | 6.4 | 0.7 | 22.3 | 12.8 |
| **A. Components** | | | | | |
| a) Currency in Circulation | 18.8 | 13.0 | 6.8 | 19.1 | 12.3 |
| b) Bankers' deposits with RBI | 20.2 | -8.7 | -12.8 | 32.2 | 14.8 |
| c) 'Other' deposits with RBI | -3.3 | 11.6 | -29.6 | 16.0 | -39.0 |
| **B. Select sources of $M_0$** | | | | | |
| 1. Net foreign exchange assets of RBI | 7.8 | 6.2 | 16.2 | 0.7 | 18.0 |
| 2. Government's currency liabilities to the public | 12.9 | 8.7 | 4.6 | 13.2 | 8.6 |
| 3. Net non-monetary liabilities of the RBI | 22.1 | 16.7 | 57.9 | -7.8 | 65.1 |

***Source*** **: RBI**

Figure 4.12 Reserve money and RBI net foreign exchange assets-annual growth rate




Source: RBI

RBI credit to the central government (as on 2 December 2011) has been ₹1,49,994 crore vis-a-vis an increase of ₹1,83,896 crore a year earlier.

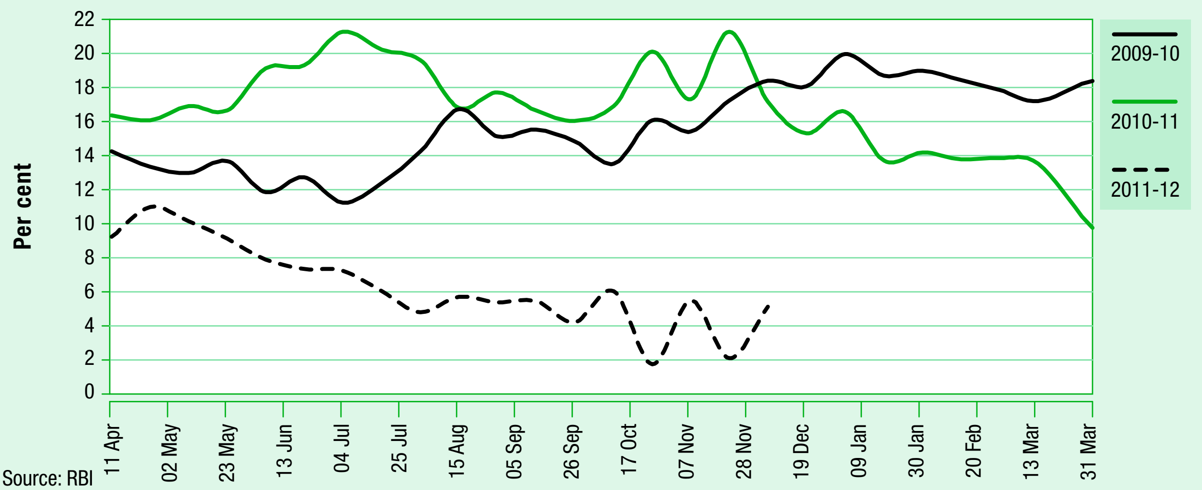
## Narrow Money ($M_1$)

4.40 During 2011-12, the growth in $M_1$ has been generally lower compared to that in 2010-11. On financial-year basis, $M_1$ declined by 0.5 per cent during the current year (up to 2 December 2011) compared to an increase of 4.0 per cent during the corresponding period of the previous year. On year-on-year basis, as on 2 December 2011, $M_1$ growth was 5.0 per cent as compared to 17.0 per cent a year earlier (Table 4.7 and Figure 4.13). During the current financial year (up to 2 December 2011), growth in 'currency with the public' decelerated to 6.4 per cent (₹58,262 crore), compared to an increase of 13.0 per cent (₹1,00,092 crore) during the corresponding period of the previous year. The other important component of $M_1$, namely demand deposits with banks, registered a decline of 9.2 per cent during the current financial year (up to 2 December 2011) as against a decline of 5.7 per cent during the corresponding period of the previous year. On year-on-year basis, as on 2 December 2011, the growth in 'currency with the public' was lower at 12.1 per cent as compared to 18.8 per cent during the corresponding period of the previous year. Over the same period, demand deposits registered a decline of 3.7 per cent as compared to a growth of 14.9 per cent a year earlier.

## Broad money ($M_3$)

4.41 $M_3$ increased by 16.0 per cent during 2010-11, which was lower than the 17.0 per cent indicative growth envisaged in the Annual Policy Statement of the RBI for 2010-11. During 2011-12 (up to 2 December 2011), growth in $M_3$ was 8.8 per cent as compared to 8.5 per cent during the corresponding period of the previous year. On year-on-year basis, $M_3$ grew by 16.3 per cent on 2 December 2011, as compared to a growth of 15.7 per cent on the

Figure 4.13 Narrow money ($M_1$) - annual growth rate



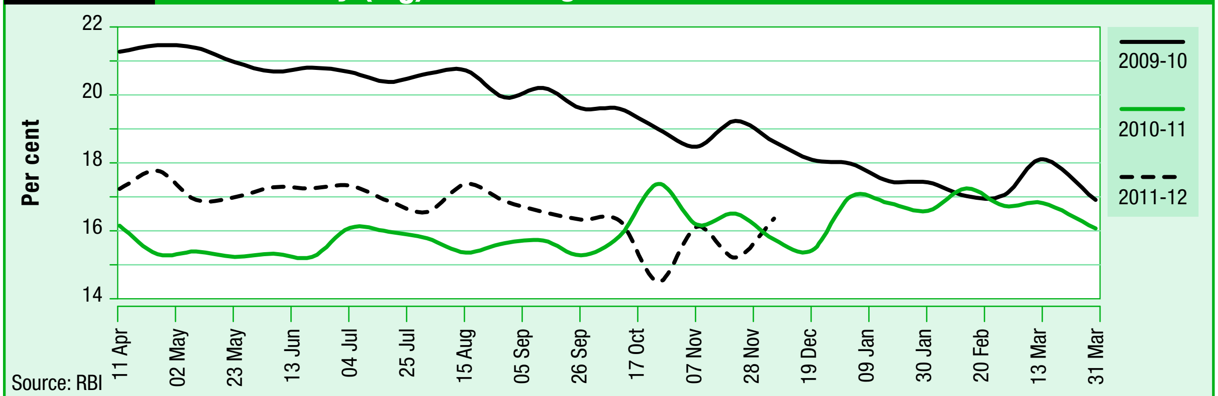

Source: RBI

**Table 4.7 : Sources of Change in Money Stock ($M_3$)**

| | Growth Rate (per cent) | | | | |
|---|---|---|---|---|---|
| | 31 March 2010 to 31 March 2011 | 31 March 2010 to 3 December 2010 | 31 March 2011 to 2 December 2011 | 4 December 2009 to 3 December 2010 | 3 December 2010 to 2 December 2011 |
| **I. $M_1$ (1+2+3)** | 9.8 | 4.0 | -0.5 | 17.0 | 5.0 |
| **1.** Currency with the public | 19.1 | 13.0 | 6.4 | 18.8 | 12.1 |
| **2.** Demand deposits with banks | 0.0 | -5.7 | -9.2 | 14.9 | -3.7 |
| **3.** 'Other' deposits with RBI | -3.3 | 11.6 | -29.6 | 16.0 | -39.0 |
| **II. $M_3$ ($M_1$+4)** | 16.0 | 8.5 | 8.8 | 15.7 | 16.3 |
| **4.** Time deposits with banks | 18.2 | 10.2 | 12.0 | 15.2 | 20.2 |
| **III. Sources of change in money stock ($M_3$)** | | | | | |
| **1.** Net bank credit to government | 18.8 | 9.3 | 12.6 | 19.7 | 22.3 |
| *of which:* Other banks credit to government | 8.8 | 7.6 | 15.0 | 8.0 | 16.3 |
| **2.** Bank credit to commercial sector | 21.3 | 11.0 | 7.0 | 22.6 | 17.0 |
| *of which:* Other banks' credit to commercial Sector | 21.3 | 11.0 | 7.1 | 22.8 | 17.0 |
| **3.** Net foreign exchange assets of the banking sector | 8.7 | 7.0 | 13.7 | 1.7 | 15.6 |
| **4.** Government's currency liabilities to the public | 12.9 | 8.7 | 4.6 | 13.2 | 8.6 |
| **5.** Banking sector's net non-monetary liabilities | 32.2 | 18.1 | 14.7 | 27.4 | 28.5 |
| **IV. *Memo Items:*** | | | | | |
| 1. Money multiplier ($M_3/M_0$) | 4.72 | | | | |
| 2. Velocity of money | 1.21 | | | | |
| 3. Net domestic assets | 18.2 | 9.0 | 7.5 | 20.5 | 16.6 |
| 4. Net domestic credit | 20.5 | 10.5 | 8.8 | 21.7 | 18.7 |

***Source*** **: RBI**

**Figure 4.14 Broad money ($M_3$) - annual growth rate**




Source: RBI

corresponding date of the previous year (Table 4.7 and Figure 4.14). $M_3$ growth was thus higher than the indicative projection of 15.5 per cent set out in the First Quarter Review of Monetary Policy 2011-12. Among the sources of $M_3$, bank credit to the commercial sector has been decelerating for most part of 2011-12 (Figure 4.15).

4.42 Time deposits with banks during 2011-12 grew at a higher rate of 12.0 per cent (up to 2 December 2011) as compared to 10.2 per cent during the corresponding period of the previous year. On year-on-year basis, as on 2 December 2011, the growth in time deposits increased to 20.2 per cent from 15.2 per cent a year earlier (Table 4.7).

### Money Multiplier

4.43 The higher rate of expansion in 'currency with the public' and reserves as compared to that in deposits, led to a decrease in the money multiplier during 2010-11. At end March 2011, this ratio was 4.7, marginally lower than the 4.8 registered at end March 2010. During 2011-12, the money multiplier has generally shown an increasing trend on account of $M_0$ registering a lower growth vis-a-vis $M_3$ (Figure 4.16).

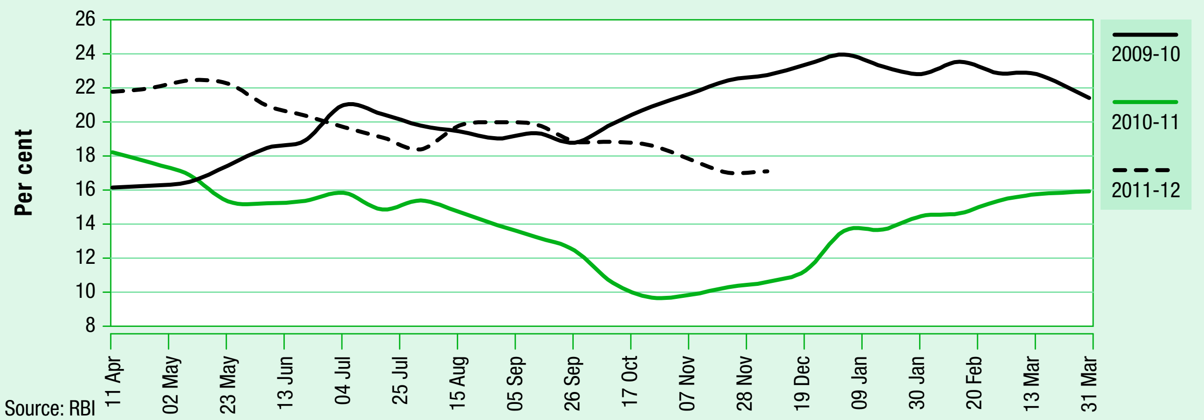
### Movement in Other Monetary Indicators

4.44 Monetary deepening (as measured by the ratio of average $M_3$ to GDP) registered a rise from 42.6 per cent in 1990-91 to 78.4 per cent in 2010-11. The rise may be attributed to the spread of banking services in the country and development of the financial sector. The monetization of the economy (as measured by the ratio of average $M_1$ to GDP) has also shown an upward trend, albeit at a slower rate, over the same period. In 1990-91, this ratio was 14.9 per cent and it increased to 20.1 per cent in 2010-11 (Table 4.8 and Figure 4.17).

## Liquidity Management

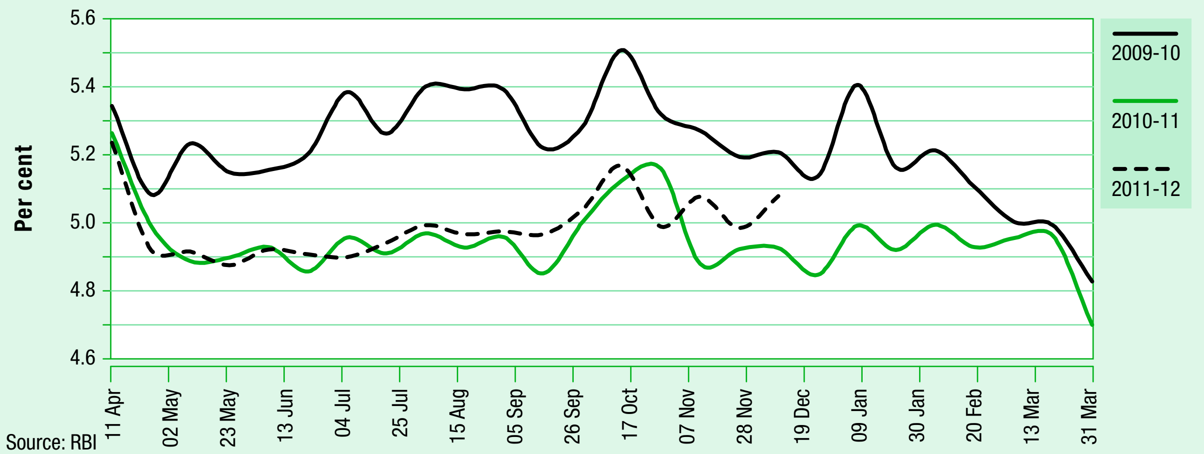
4.45 With the aim of containing inflation and anchoring inflationary expectations, the RBI actively managed liquidity through the appropriate use of LAF and OMOs, to ensure that it remained in

**Figure 4.15 Bank credit to commercial sector - annual growth rate**



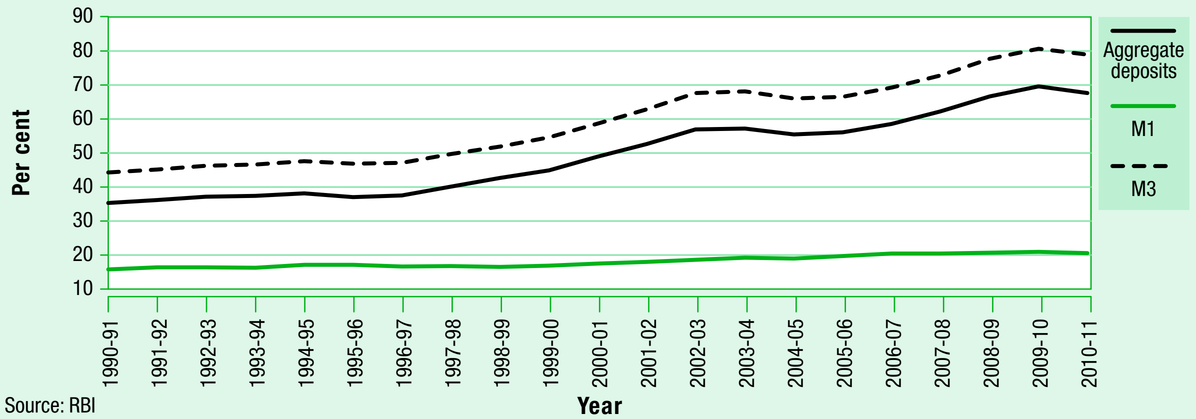

Source: RBI

**Figure 4.16 Movements in money multiplier**




Source: RBI

Figure 4.17 Select monetary aggregates as per cent of GDP




Source: RBI

**Table 4.8 : Select Monetary Aggregates**

| Year | As per cent of GDP at Market Prices | | | | | |
|---|---|---|---|---|---|---|
| | Currency with public | Demand deposits with banks | Time deposits with banks | Aggregate deposits | $M_1$ | $M_3$ |
| 1990-91 | 8.5 | 6.2 | 27.7 | 33.9 | 14.9 | 42.6 |
| 1991-92 | 8.5 | 6.7 | 28.0 | 34.7 | 15.4 | 43.4 |
| 1992-93 | 8.3 | 6.7 | 28.9 | 35.6 | 15.5 | 44.4 |
| 1993-94 | 8.6 | 6.4 | 29.5 | 35.8 | 15.3 | 44.8 |
| 1994-95 | 8.8 | 7.0 | 29.6 | 36.6 | 16.2 | 45.7 |
| 1995-96 | 9.1 | 6.5 | 28.9 | 35.5 | 16.2 | 45.1 |
| 1996-97 | 8.9 | 6.3 | 29.7 | 36.0 | 15.6 | 45.3 |
| 1997-98 | 9.0 | 6.5 | 32.0 | 38.5 | 15.8 | 47.8 |
| 1998-99 | 8.8 | 6.5 | 34.5 | 41.0 | 15.5 | 50.0 |
| 1999-00 | 9.2 | 6.6 | 36.5 | 43.1 | 15.9 | 52.5 |
| 2000-01 | 9.3 | 7.0 | 40.0 | 47.0 | 16.4 | 56.4 |
| 2001-02 | 9.7 | 7.1 | 43.5 | 50.7 | 16.9 | 60.5 |
| 2002-03 | 10.2 | 7.3 | 47.5 | 54.8 | 17.6 | 65.1 |
| 2003-04 | 10.4 | 7.6 | 47.5 | 55.1 | 18.1 | 65.6 |
| 2004-05 | 10.4 | 8.0 | 46.9 | 54.9 | 18.5 | 65.4 |
| 2005-06 | 10.4 | 8.8 | 47.0 | 55.8 | 19.3 | 66.3 |
| 2006-07 | 10.5 | 9.4 | 48.7 | 58.1 | 20.0 | 68.7 |
| 2007-08 | 10.4 | 9.5 | 52.3 | 61.8 | 20.0 | 72.3 |
| 2008-09 | 10.9 | 9.2 | 56.9 | 66.1 | 20.2 | 77.2 |
| 2009-10 | 11.0 | 9.3 | 59.7 | 69.1 | 20.4 | 80.2 |
| 2010-11 | 11.1 | 8.9 | 58.3 | 67.2 | 20.1 | 78.4 |

***Source*** **: RBI**

moderate deficit, consistent with effective monetary transmission.

4.46 Liquidity conditions changed course significantly during 2011-12. The LAF window that was in absorption mode briefly at the commencement of 2011-12, reverted to deficit mode from the second week of April 2011. Although the liquidity deficit generally persisted in April 2011, the average daily net outstanding liquidity injection declined significantly on account of high ways and means advances (WMA) /overdraft (OD) availed of by the central government from the RBI. The average daily net outstanding liquidity injection under the LAF declined to around ₹ 19,000 crore for the entire month (as compared to around ₹ 81,000 crore in March 2011), notwithstanding the rise in currency in circulation by around ₹ 32,000 crore during the month (Table 4.10).

4.47 Based on the recommendations of the Working Group to Review the Operating Procedure on Monetary Policy, the RBI (in its Annual Monetary Policy Statement for 2011-12 released on 3 May 2011) decided to effect changes to the operating procedure of monetary policy, the details of which are outlined in Box 4.7.

4.48 Some stress in liquidity conditions emerged in June 2011 on account of quarterly advance tax outflows. The liquidity deficit in the system increased significantly during the second half of the month, with the central government balance with the RBI turning into surplus. During June 2011, the liquidity deficit was around ₹ 74,000 crore of average daily net liquidity injection under the LAF, as compared to around ₹ 55,000 crore in May 2011 (Figure 4.18).

4.49 However, liquidity conditions eased in early July 2011, reflecting the drawdown of central government cash balances, *inter alia* through redemption of a security amounting to around ₹ 37,000 crore on 2 July 2011. The currency in circulation also decreased by around ₹ 16,000 crore during the month. Under the cumulative impact, the average daily net liquidity injection under the LAF declined to around ₹ 44,000 crore taking into consideration the entire month of July 2011.

4.50 Liquidity conditions continued to remain tight during August 2011 and eased at the beginning of September 2011. However, the deficit in liquidity conditions increased subsequently, as the balance of the central government with the RBI turned into surplus on account of second quarterly advance tax outflows. During September 2011, it remained around ₹ 56,000 crore of average daily net liquidity injection under the LAF as compared to ₹ 41,000 crore in August 2011.

4.51 During the first half of 2011-12, the deficit in liquidity conditions remained generally within the comfort zone. Over this period the injection of liquidity under the MSF was limited to two occasions (₹100 crore on 10 June 2011 and ₹ 4,105 crore on 15 July 2011).

4.52 Liquidity conditions eased significantly at the beginning of October 2011 on account of high WMA/OD availed of by the central government and drawdown of cash reserves maintained by the banks. However, liquidity conditions tightened again from 7 October 2011 with decline in the level of WMA/OD and rise in currency in circulation due to demand generated in the festive season. The currency in

**Table 4.9 : Liquidity Management**

(₹ crore)

| Outstanding as on last Friday | LAF | MSS# | Centre's surplus[1] | Total |
|---|---|---|---|---|
| **2011** | | | | |
| January | -76730 | 0 | 118371 | 41641 |
| February | -72005 | 0 | 77397 | 5392 |
| March* | -106005 | 0 | 16416 | -89589 |
| April | -39605 | 0 | -35399 | -75004 |
| May | -75795 | 0 | -9544 | -85339 |
| June | -96205 | 0 | 8339 | -87866 |
| July | -48555 | 0 | -25983 | -74538 |
| August | -49215 | 0 | -21192 | -70407 |
| September | -82645 | 0 | -24387 | -107032 |
| October | -58445 | 0 | -36153 | -94598 |
| November | -98760 | 0 | -21325 | -120085 |
| December | -101395 | 0 | -10986 | -112381 |

***Source*** **: RBI**

***Notes*** **: # MSS stands for Market Stabilization Scheme.**

**1. Excludes minimum cash balances with the RBI in case of surplus**

*** Data pertain to 31 March 2011.**

**(-)ve sign under LAF indicates injection of liquidity through the LAF.**

**(-)ve sign under the Centre's surplus indicates WMA/OD availed of by the central government.**

## Box 4.7 : Major Monetary Policy Tools and Operating Procedure

**a. The Call Money Market**

The call money market is an important segment of the money market where uncollateralized borrowing and lending of funds take place on overnight basis. Participants in the call money market in India currently include scheduled commercial banks (SCBs) (excluding regional rural banks), cooperative banks (other than land development banks), and primary dealers, both as borrowers and lenders (RBI's Master Circular dated 1 July 2011). Prudential limits in respect of both outstanding borrowing and lending transactions in the call money market for each of these entities are specified by the RBI.

**b. Open Market Operations**

OMOs are conducted by the RBI via the sale/purchase of government securities to/from the market with the primary aim of modulating rupee liquidity conditions in the market. OMOs are an effective quantitative policy tool in the armoury of the RBI, but are constrained by the stock of government securities available with it at a point in time.

**c. The Liquidity Adjustment Facility**

The LAF is the key element in the monetary policy operating framework of the RBI. On daily basis, the RBI stands ready to lend to or borrow money from the banking system, as per the latter's requirement, at fixed interest rates. The primary aim of such an operation is to assist banks to adjust to their day-to-day mismatches in liquidity, via repo and reverse repo operations.

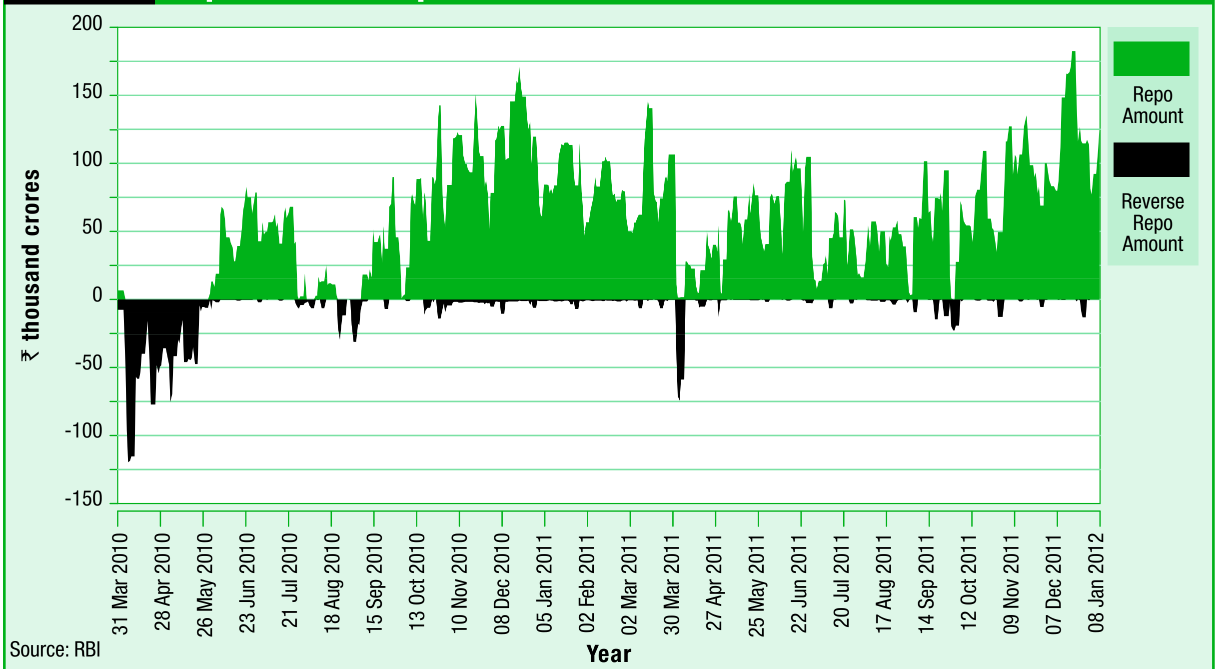
Under the repo or repurchase option, banks borrow money from the RBI via the sale of securities with an agreement to purchase the securities back at a fixed rate at a future date. The rate charged by the RBI to aid this process of liquidity injection is termed as the repo rate. Under the reverse repo operation, the RBI borrows money from the banks, draining liquidity out from the system. The rate at which the RBI borrows money is the reverse repo rate. The interest rate on the LAF is fixed by the RBI from time to time (with crucial changes introduced recently in the operating procedure of Monetary Policy detailed in the next paragraph). LAF operations help the RBI effectively transmit interest rate signals to the market.

**d. Changes in the Operating Procedure of Monetary Policy**

Effective 3 May 2011, based on the recommendations of the *Working Group on Operating Procedure of Monetary Policy*, the operating framework of monetary policy has been refined. The repo rate has been made the only independently varying policy rate. A new marginal standing facility (MSF) has been instituted, under which SCBs have been allowed to borrow overnight at their discretion, up to 1 per cent of their respective NDTL, at 100 bps above the repo rate. The revised MSF reverse repo corridor has been defined with a fixed width of 200 bps with the repo rate placed in the middle of the corridor. The reverse repo rate has been placed 100 bps below and the MSF rate 100 bps above the repo rate.

It is expected that the fixed interest rate corridor, set by the MSF rate and reverse repo rate, by reducing uncertainty and avoiding difficulties in communication associated with a variable corridor, will help in keeping the overnight average call money rate close to the repo rate.

**Figure 4.18 Repo - Reverse repo volume**




Source: RBI

**Note : The injection of liquidity through the Marginal Standing Facility has been included in the repo amount.**

**Table 4.10: Money Market Volumes (in ₹ crore)**

| Year/Month | LAF | Call money | Market repo | CBLO# | CP# Outstanding | CD# Outstanding |
|---|---|---|---|---|---|---|
| March 2010 | 37640 | 8812 | 19150 | 60006 | 75506 | 341054 |
| December 2010 | -120495 | 9436 | 12989 | 43784 | 82542 | 361408 |
| January 2011 | -92933 | 7758 | 11546 | 44815 | 101752 | 377640 |
| February 2011 | -78639 | 10356 | 13150 | 42292 | 101291 | 418524 |
| March 2011 | -80963 | 11278 | 15134 | 43201 | 80305 | 424740 |
| April 2011 | -18809 | 13383 | 14448 | 56160 | 124991 | 447354 |
| May 2011 | -54643 | 10973 | 15897 | 40925 | 121221 | 433287 |
| June 2011 | -74125 | 11562 | 16650 | 41313 | 104689 | 423767 |
| July 2011 | -43759 | 11513 | 11748 | 41006 | 133691 | 412189 |
| August 2011 | -40712 | 11290 | 14793 | 39131 | 148812 | 405685 |
| September 2011 | -55920 | 13782 | 13893 | 45119 | 144621 | 383472 |
| October 2011 | -54088 | 12858 | 13204 | 41649 | 168769 | 385936 |
| November 2011 | -91616 | 11048 | 13251 | 32906 | 173476 | 378433 |
| December 2011p | -116662 | 14880 | 9947 | 26493 | - | 382589* |

***Source*** **: RBI**

***Notes*** **: *As on 2 December 2011.**
**P is provisional.**
**# CBLO stands for collateralized borrowing and lending obligation.**
**CD stands for certificates of deposit.**
**CP stands for commercial paper.**
**(-)ve figure under the LAF indicates injection of liquidity.**

circulation increased by around ₹ 36,000 crore during the month.

4.53 During November 2011, liquidity conditions continued to remain in deficit mode. Anticipating liquidity stress, the RBI initiated liquidity injection via outright OMO purchases effective from 24 November 2011. The average daily net liquidity injection under the LAF, during November 2011, increased to around ₹ 92,000 crore vis-a-vis around ₹ 54,000 crore in October 2011, with a decline in WMA/OD availed of by the central government and foreign exchange market operations by the RBI (Table 4.10).

4.54 However, in December 2011, the liquidity deficit escalated partly on account of third quarterly advance tax outflows. Keeping in view the prevailing overall liquidity conditions, OMO purchases continued. In order to provide flexibility to SCBs in their liquidity management, the RBI conducted additional repo operations under the LAF on 16 December 2011 (over and above the existing LAF and MSF arrangements). Furthermore, the RBI decided (on 21 December 2011) to permit banks to avail of funds on overnight basis, under the MSF, against their excess statutory liquidity ratio (SLR) holdings, in addition to the existing facility under which they are already allowed to avail of funds (on overnight basis below the stipulated SLR) up to 1 per cent of their respective NDTL.

4.55 In December 2011, recourse was taken to the MSF, after a gap of almost five months, six times. The average daily net outstanding liquidity injection was around ₹ 1,17,000 crore. The deficit liquidity conditions persisted in January 2012 with average daily net liquidity injection around ₹ 1, 00,000 crore during 1-10 January 2012. In order to manage evolving liquidity conditions more effectively, ₹ 49,682 crore has been injected under OMO purchase auctions for government securities during the current year (up to 9 January 2012).

## Money Market

4.56 The money market generally remained orderly during 2011-12. The call rate declined at the commencement of the financial year with improvement in liquidity conditions. It, however, increased subsequently with tightening of liquidity and hikes in policy rates and generally hovered around the repo rate during the first half of 2011-12. The call rate firmed up further to average 8.26 per cent and 8.58 per cent respectively in the months of October and November 2011. Thereafter, it continued to harden, averaging 9.04 per cent during December 2011 (Figure 4.19).

4.57 The rates in the collateralized segments (i.e. CBLO and market repo) have moved in tandem with the call rate, but have generally remained below it during the financial year 2011-12. Broad trends noticed in 2010-11 in key segments, continued in the current fiscal with banks and primary dealers the major groups of borrowers in the collateralized segments; Mutual Funds being the major group of lenders in CBLO and market repo in the current financial year (though foreign banks were the major group in market repo in some of the recent months); and the collateralized segment of the money market remaining dominant, accounting for more than 80 per cent of total money market volume. The shares of call money, CBLO and market repo in total money market volume stood at 19 per cent, 60 per cent and 21 per cent respectively during 2011-12 (up to December 2011) vis-a-vis 14 per cent, 64 per cent and 22 per cent respectively, compared to the same period of the previous year.

## Certificates of Deposit

4.58 The average gross issuance of CDs[1] remained high during 2011-12. However, the amount of CDs outstanding witnessed a fall, indicating a decline in net issuances. The amount of outstanding CDs issued by SCBs declined from around ₹ 4,25,000 crore at the fortnight ended 25 March 2011 to around ₹ 3,83,000 crore at the fortnight ended 2 December 2011. The outstanding amount constituted 7.23 per cent (as on 2 December 2011) of aggregate deposits of CD-issuing banks with significant inter-bank variation. During the current financial year (2 December 2011), the average issuances remained at around ₹ 33,000 crore vis-a-vis around ₹ 23,000 crore during the same period of the previous year. The weighted average effective interest rate (WAEIR) of CDs declined from 9.96 per cent at the fortnight ended 25 March 2011 to 9.54 per cent at the fortnight ended 2 December 2011 (Table 4.11).

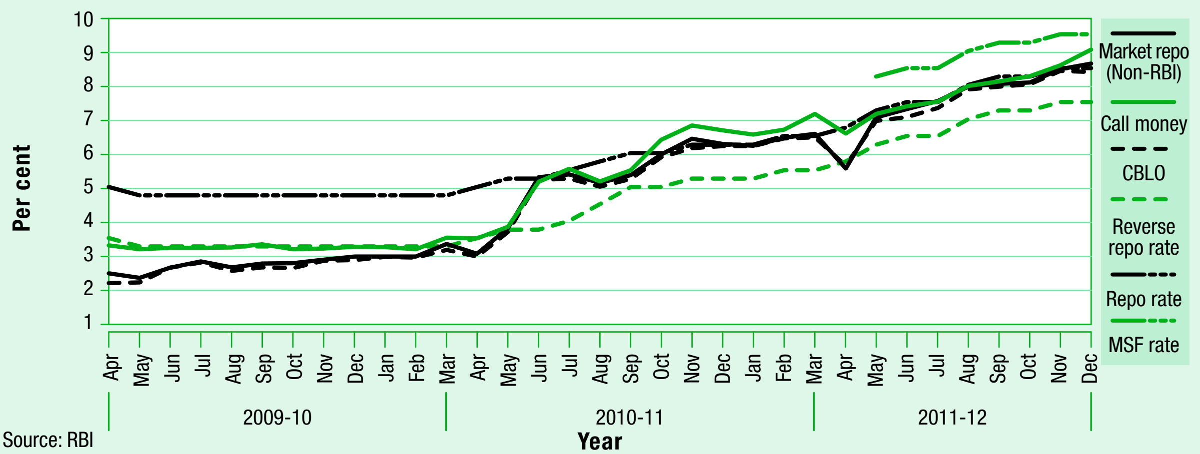
## Commercial Paper

4.59 During 2011-12 so far, the CP[2] market has picked up with the size of fortnightly issuance increasing significantly. The outstanding amount of CP rose from ₹ 80,305 crore at end March 2011 to ₹ 1,73,476 crore at end November 2011 (Table 4.10). The average issuance of CPs increased to around ₹ 24,000 crore in the current financial year (till end November 2011) as compared to around ₹16,000 crore during the same period of the previous year. The weighted average discount rate (WADR) in respect of aggregate CP issuances decreased to around 10.03 per cent at end November 2011, from 10.4 per cent at end March 2011 (Table 4.11). 'Leasing and finance' and 'manufacturing companies' continued to be the major issuers of CPs.

## Treasury Bills

4.60 The issuances of treasury bills (TBs) during the year 2011-12 were modulated keeping in view the deficit cash position of the Government of India. During 2011-12, the total amounts raised through 91-day, 182-day, and 364-day TBs were ₹ 3,22,193.2 crore, ₹ 65601.3 crore, and ₹ 66,371.4 crore

**Figure 4.19 Movement of money market rates**




Source: RBI

1. A certificate of deposit is a negotiable money market instrument and is issued in dematerialized form (or as a usance promissory note) against funds deposited at a bank or other eligible financial institutions for a specified time period.
2. A commercial paper is an unsecured money market instrument issued in the form of a promissory note.

**Table 4.11 : Rates in Domestic Financial Markets**

(per cent)

| Year/month | Call money | Market repo (non-RBI) | CBLO | CP WADR | CD WAEIR |
|---|---|---|---|---|---|
| March 2010 | 3.51 | 3.32 | 3.15 | 6.29 | 6.07 |
| December 2010 | 6.67 | 6.27 | 6.20 | 10.1 | 9.15 |
| January 2011 | 6.54 | 6.21 | 6.20 | 8.81 | 9.42 |
| February2011 | 6.69 | 6.45 | 6.43 | 9.05 | 10.04 |
| March 2011 | 7.15 | 6.56 | 6.46 | 10.4 | 9.96 |
| April 2011 | 6.58 | 5.55 | 5.63 | 8.62 | 8.66 |
| May 2011 | 7.15 | 7.05 | 6.94 | 9.49 | 9.30 |
| June 2011 | 7.38 | 7.30 | 7.06 | 9.71 | 9.61 |
| July 2011 | 7.51 | 7.53 | 7.33 | 9.33 | 9.19 |
| August 2011 | 7.97 | 7.95 | 7.87 | 9.56 | 9.19 |
| September 2011 | 8.11 | 8.04 | 7.95 | 9.90 | 9.30 |
| October 2011 | 8.26 | 8.08 | 8.03 | 9.84 | 9.35 |
| November 2011 | 8.58 | 8.47 | 8.42 | 10.03 | 9.47 |
| December 2011 | 9.04 | 8.63 | 8.39 | - | 9.54* |

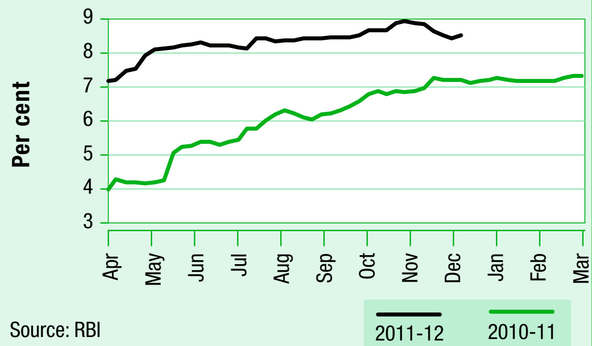
***Source*** **: RBI.** ***Note*** **: *: As on 2 December 2011.**

respectively (up to December 2011). The notified amount of TBs was increased by ₹ 65,000 crore during the fourth quarter after factoring in redemptions of dated securities to the extent of ₹ 59,000 crore. As a result, the net increase of TBs worked out to ₹ 1,17,000 crore as compared to the budget estimate of ₹ 15,000 crore. The primary market yield for 91-day, 182-day, and 364-day TBs increased gradually to 8.48 per cent, 8.27 per cent, and 8.35 per cent respectively in the auction held in December 2011 (Figures 4.20, 4.21, and 4.22).

## Cash Management

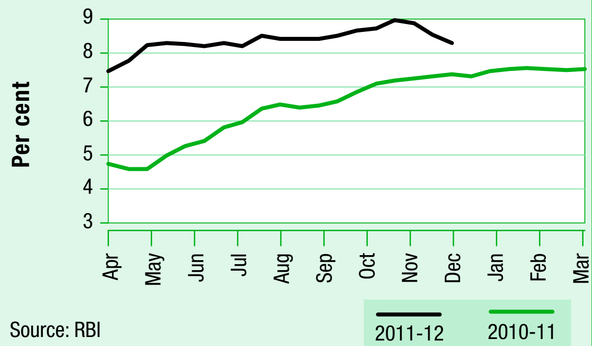
4.61 The Government of India started the year 2011-12 with a positive cash balance of ₹ 14,748 crore, that turned into WMA position on 5 April 2011. Up to December 2011, the Government of India was in WMA for 235 days and availed OD on eleven occasions. During 2011-12, cash management bills (CMBs) to the tune of ₹ 93,000 crore (face value) were issued (up to December 2011) to finance temporary mismatches in the cash position of the Government of India. CMBs are non-standard, discounted instruments issued for maturities of less than 91 days. During 2011-12, the initial WMA limit fixed at ₹ 30,000 crore for the first half, was revised to ₹ 45,000 crore for the period 21 April to 30 June. Similarly, the WMA limit fixed at ₹ 10,000 crore for the second half was revised to ₹ 20,000 crore for the period 1 October to 31 December.

**Figure 4.20** **Auction cut-off yield in 91-day T-bills**



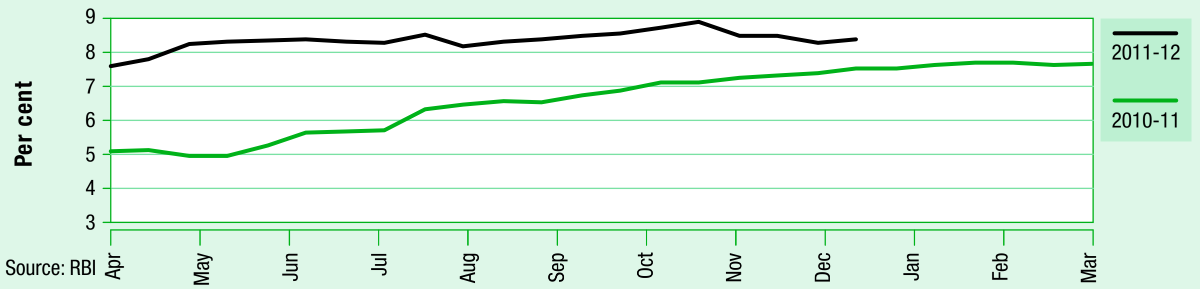

Source: RBI

**Figure 4.21** **Auction cut-off yield in 182-day T-bills**




Source: RBI

Figure 4.22 **Auction cut-off yield in 364-day T-bills**




Source: RBI

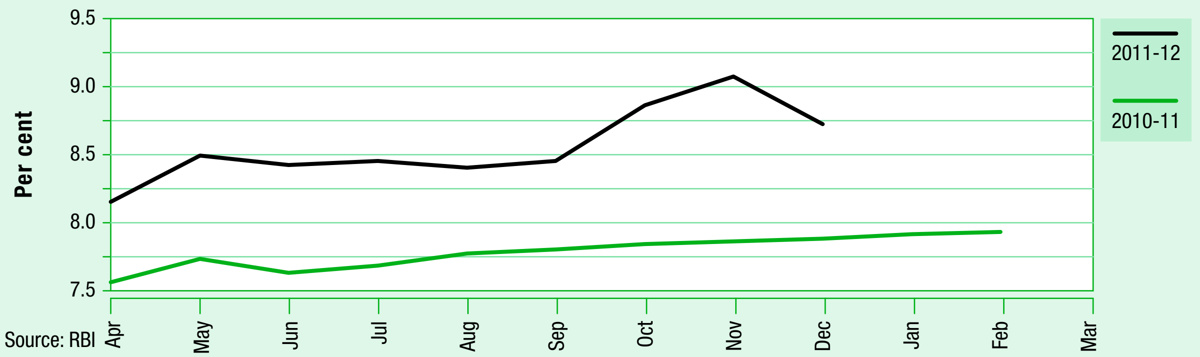
## Central Government's Market Borrowings

4.62 The gross market borrowings by the Government of India were originally budgeted at ₹ 4,17,128 crore (net ₹ 3,43,000 crore) that have been revised to ₹ 5,10,000 crore (net ₹ 4,35,872 crore) for 2011-12 (dated securities) as compared with ₹ 4,37,000 crore (net ₹ 3,25,414 crore) for 2010-11. Taking into account shortfall in other sources of financing of the fiscal deficit, particularly small savings and higher levels of expenditure outgo, the market borrowings have been scaled up by ₹ 92,872 crore as per the indicative borrowing calendar issued for the second half of 2011-12. The gross market borrowings through dated securities (up to December 2011) have been to the tune of ₹ 3,79,000 crore (74.31 per cent of the budgeted borrowing programme) as compared to ₹ 3,84,000 crore during the corresponding period of the previous year (87.87 per cent of the Revised Estimates). The weighted average yield of dated securities issued up to December 2011 stood at 8.56 per cent as compared to 7.87 per cent during the corresponding period of the previous year (Figure 4.23). Uncertainty regarding the trajectory of inflation has been one of the factors contributing to volatility in the bond market. The secondary market yield on 10-year benchmark Government of India securities averaged at 8.61 per cent (during the year up to December 2011) and stood in the range of 7.94-9.11 per cent. Keeping in view the flattening of yield curve during the recent period, long dated securities were issued for higher notified amounts and accordingly the weighted average maturity of the dated securities issued up to December 2011 worked out to 12.45 years vis-a-vis 11.54 years registered during the corresponding period of the previous year.

## Yields on 10-year Government Securities (G-sec)

4.63 At the commencement of financial year 2011-12, G-sec yields hardened as rising commodity prices, including that of crude oil, aggravated inflation concerns. The hardening of yields continued in May 2011 in response to a hike of 50 bps in policy rate by the RBI on 3 May 2011 and also due to persistence of inflation concerns amidst a hike in petrol prices. However, yields eased in the month of June, with international commodity and oil prices showing signs of moderation. Increased uncertainty about the resolution of the sovereign debt crisis in the euro zone also led to flight to safety that in turn affected yields. G-sec yields hardened marginally after another hike in petroleum prices was announced on 24 June 2011 with the 10-year generic yield standing at 8.34 per

Figure 4.23 **Weighted average yield of primary issues of GOI dated securities (cumulative)**




Source: RBI

cent as on 30 June 2011 vis-a-vis 8.01 per cent at end-March 2011 (Figure 4.24).

4.64 G-sec yields generally eased during the first three weeks of July 2011 but hardened in response to the RBI's decision to hike policy rate by 50 bps on 26 July 2011. During August 2011, G-sec yields eased, taking a cue from the rally in safe haven assets due to sell-off in risk assets witnessed globally after the S&P downgrade of long-term credit rating of the United States. During September 2011 G-sec yields rose following the Government of India's decision to increase its market borrowings by ₹ 52,800 crore. The 10-year generic yield stood at 8.44 per cent on 29 September 2011.

4.65 During the month of October, yields hardened once the second half borrowing programme of the government commenced. However, during November 2011 the G-Sec yields eased as market sentiments improved with the announcement of OMO purchase auctions by the RBI and increase in FII investment ceiling in government securities from US$ 10 billion to US$ 15 billion and in corporate bonds from US$ 15 billion to US$ 20 billion. The softening continued during December 2011 with 10-year generic yields standing at 8.54 per cent at end December 2011, as compared to 8.74 per cent at the end of November 2011. During January 2012 so far, yields have eased with moderation in inflation, further OMOs, and on expectations of easing of policy rates by the RBI. The 10-year generic yields stood at 8.25 per cent on 10 January 2012.

### State Governments' Market Borrowings

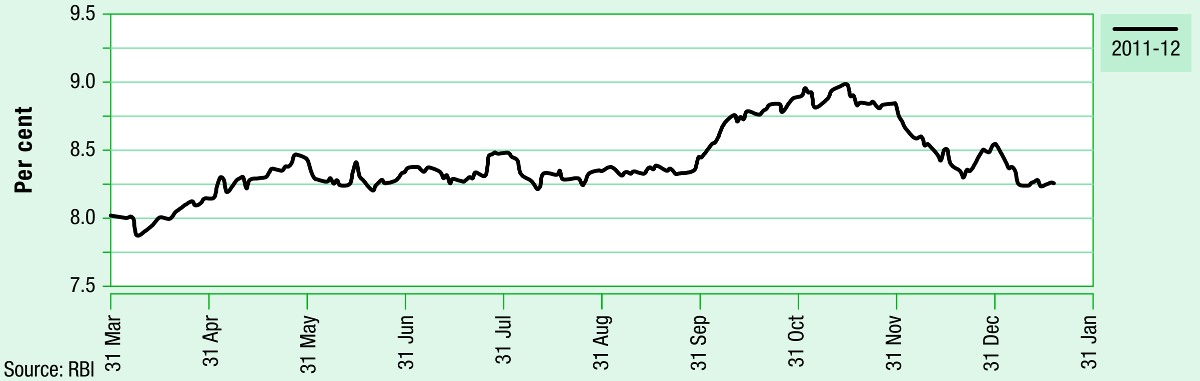
4.66 Up to end December 2011, 24 state governments have raised an aggregate amount of ₹ 1,02,155 crore on gross basis as compared to ₹ 74,104 crore raised by 22 state governments during the corresponding period of the previous year. The cut-off yields have ranged between 8.36 and 9.33 per cent as compared to 8.05 and 8.58 per cent during the corresponding period of the previous year. The weighted average yield worked out to 8.76 per cent up to December 2011 and 8.39 per cent for the financial year as a whole. Up to December 2011 the spread between the yield on state development loans (SDLs) and 10-year benchmark Government of India securities stood lower at 25-61 bps as compared to 32-69 bps during the corresponding period of the previous year.

## Monetary Policy Stance During 2011-12

4.67 The monetary policy stance during 2011-12 changed course during the year, from tightening driven by inflation concerns to gradual pause recognizing the risks to growth as inflation moderated, albeit marginally. The monetary policy stance during May-October 2011 was based on the premise that over the long run, high inflation is inimical to sustained growth as it harms investment by creating uncertainty. Bringing inflation down, even at the cost of sacrificing some growth in the short run, was therefore accorded precedence. Year-on-year headline WPI inflation remained stubbornly high, averaging around 9.6 per cent during May-September 2011. Inflation was driven by all the three major groups, namely primary articles; fuel and power; and manufactured products. Hence the focus of monetary policy stance during May-October 2011 was on containing inflation and anchoring inflation expectations even as it entailed sacrificing some growth.

4.68 The period from December 2011 to January 2012 marked a reversal of the cycle as policy rates were kept unchanged. Growth started moderating in 2011-12, in part anticipated as a consequence of

Figure 4.24 Movement in 10 year yield




Source: RBI

cumulative impact of past monetary policy action, but more importantly on account of investment uncertainties, worsening global scenario and the large linkages of the manufacturing sector with global demand. GDP growth moderated for the sixth consecutive quarter to 6.9 per cent in Q2 of 2011-12. The growth rate of GDP during 2011-12 is estimated at 6.9 per cent. Since November 2011, however, inflation has broadly followed the projected trajectory and has shown moderation with headline WPI inflation moderating to 7.5 per cent in December 2011. The decline in inflation was driven largely by a decline in primary food and non-food articles inflation. The momentum indicator of the WPI, as measured by the seasonally adjusted three-month moving average inflation rate, also showed a decline. Consistent with the RBI's earlier projections, inflation was expected to decelerate further to 7 per cent by March 2012.

4.69 In view of the slowdown in growth, especially investment activity, and expected moderation in inflation beginning December 2011, it was decided to pause repo rate hikes in the Mid Quarter Review of December 2011. During this period, despite the conduct of OMOs by the RBI, liquidity conditions have remained beyond comfort zone, with significant increase in the structural liquidity deficit in the system-- a development that was seen to potentially hamper the flow of credit to the productive sectors of the economy. Therefore, with the aim of injecting permanent liquidity into the system, the RBI has reduced the CRR of SCBs by 50 bps from 6.0 per cent to 5.5 per cent of their NDTLs in the Third Quarter Review (TQR) of monetary policy on 24 January 2012. The RBI has not announced any change in the policy interest rate. Accordingly, the repo rate under the LAF has been retained at 8.5 per cent. Consequently, the reverse repo rate, determined with a spread of 100 bps below the repo rate, will remain unchanged at 7.5 per cent and the MSF rate, determined with a spread of 100 bps above the repo rate, at 9.5 per cent. The stance of monetary policy as stated in the TQR is intended to:

- Maintain an interest rate environment to contain inflation and anchor inflation expectations.
- Manage liquidity to ensure that it remains in moderate deficit, consistent with effective monetary transmission.
- Respond to increasing downside risks to growth.

In its Third Quarter Review guidance the RBI observed that in reducing the CRR, the attempt was to address the structural pressures on liquidity in a way that is not inconsistent with the prevailing monetary stance.

4.70 Table 4.12 gives an overview of the changes in policy rates since 2009-10. Since the exit from the crisis-driven expansionary monetary policy stance, the RBI has raised the repo rate 13 times by 375 bps between March 2010 and January 2012. Out of this cumulative rise of 375 bps, between March 2010 and March 2011, the policy rate was raised eight times by 200 bps. In 2011-12 (up to 24 January 2012), it was further raised five times by 175 bps.

**Table 4.12 : Revision in Policy Rates**

(per cent)

| Effective Date | Repo rate | Reverse repo rate | CRR | SLR | MSF rate* |
|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 |
| **2009-10** | | | | | |
| 21Apr. 2009 | 4.75 | 3.25 | 5.00 | 24.0 | |
| 7 Nov. 2009 | 4.75 | 3.25 | 5.00 | 25.0 | |
| 13 Feb. 2010 | 4.75 | 3.25 | 5.50 | 25.0 | |
| 27 Feb. 2010 | 4.75 | 3.25 | 5.75 | 25.0 | |
| 19 Mar. 2010 | 5.00 | 3.50 | 5.75 | 25.0 | |
| **2010-11** | | | | | |
| 20 Apr. 2010 | 5.25 | 3.75 | 5.75 | 25.0 | |
| 24 Apr. 2010 | 5.25 | 3.75 | 6.00 | 25.0 | |
| 2 Jul. 2010 | 5.50 | 4.00 | 6.00 | 25.0 | |
| 27 Jul. 2010 | 5.75 | 4.50 | 6.00 | 25.0 | |
| 16 Sep. 2010 | 6.00 | 5.00 | 6.00 | 25.0 | |
| 2 Nov. 2010 | 6.25 | 5.25 | 6.00 | 25.0 | |
| 18 Dec. 2010 | 6.25 | 5.25 | 6.00 | 24.0 | |
| 25 Jan. 2011 | 6.50 | 5.50 | 6.00 | 24.0 | |
| 17 Mar. 2011 | 6.75 | 5.75 | 6.00 | 24.0 | |
| **2011-12** | | | | | |
| 3 May 2011 | 7.25 | 6.25 | 6.00 | 24.0 | |
| 9 May 2011 | 7.25 | 6.25 | 6.00 | 24.0 | 8.25 |
| 16 Jun. 2011 | 7.50 | 6.50 | 6.00 | 24.0 | 8.50 |
| 26 Jul. 2011 | 8.00 | 7.00 | 6.00 | 24.0 | 9.00 |
| 16 Sep. 2011 | 8.25 | 7.25 | 6.00 | 24.0 | 9.25 |
| 25 Oct. 2011 | 8.50 | 7.50 | 6.00 | 24.0 | 9.50 |
| 24 Jan. 2012 | 8.50 | 7.50 | 5.50 | 24.0 | 9.50 |

***Source*** **: RBI**

*** *Note* : The MSF commenced from 9 May 2011.**

## Challenges And Outlook

4.71 During the year 2011-12, higher inflationary pressures were evident, both in India and in the EDEs. Fortunately these are now moderating in India and high food production growth and lower global commodity prices, as well as a number of policy steps to moderate price pressures, have worked to sharply lower inflation in the past couple of months. Strong monetary tightening, with 13 adjustments in policy rates, has also slowed output growth and demand side inflationary expectations.

4.72 Global growth remains very weak and the renewed sluggishness in the global economy has led to some moderation in global commodity prices - particularly those of food and metals. Domestic food stocks are high and producer supply responses to higher prices for protein foods will dampen price pressures, while expected fiscal consolidation efforts will reduce inflationary pressures further, allowing more room for private-sector growth. The outlook therefore is for continued moderation in inflation in 2012-13, even as activity levels recover cyclically and structurally.

4.73 By March 2012, headline WPI inflation is expected to fall to 6.5-7 per cent and further moderate in the months ahead, barring unexpected shocks. Vigilance will nevertheless be required and steps taken to quickly deal with any unexpected developments. Recent geopolitical uncertainties are once again putting pressures on crude oil prices globally. This represents a major risk and challenge ahead and the best course of action would be to persist with regular step-adjustment of domestic energy prices, which will help with both reducing incipient structural inflationary pressures and fiscal consolidation efforts.

4.74 The hike in policy rates by the RBI was due to persistently high inflation. The high rates, however, have impacted growth in the short run. There is need to examine the linkages and trade-offs between policy rate changes and growth in the Indian context. Such understanding is important for better calibration of monetary policy both with respect to size and timing of rate changes. This is especially important since monetary policy primarily addresses demand-side factors relevant for inflation management whereas supply-side factors also play a key role in contributing to sustained increase in prices. Renewed attention to structural ways of improving medium-term supply responses in agriculture and supply chains and infrastructure more broadly may be vital.

4.75 Greater attention needs to be given to asset price bubbles in real estate and stock markets and their implications for the economy and to the strength of the financial system. Focus mainly has to be on credit-induced bubbles that create positive feedback loop with business-cycle implications. There is scope for sharpening monetary policy and macro-prudential tools to deal with such asset bubbles and other risks.

4.76 Overall, prudent macroeconomic policy will continue to be important for guarding against any unexpected supply-demand imbalances and price pressures re-emerging. As part of such a policy, greater attention to improved supply capacities--speeding private and public investment--rather than to demand-side management, is once again gaining heightened importance and will represent a major challenge. Getting back to a low-inflation/sustained high growth environment is both possible and necessary.

# Financial Intermediation and Markets

5

CHAPTER

*Financial markets in India have acquired greater depth and liquidity over the years. Steady reforms since 1991 have led to growing linkages and integration of the Indian economy and its financial system with the global economy. Weak global economic prospects and continuing uncertainties in the international financial markets therefore, have had their impact on the emerging market economies. Sovereign risk concerns, particularly in the euro area, affected financial markets for the greater part of the year, with the contagion of Greece's sovereign debt problem spreading to India and other economies by way of higher-than-normal levels of volatility.*

*The funding constraints in international financial markets could impact both the availability and cost of foreign funding for banks and corporates. Since the Indian financial system is bank dominated, banks' ability to withstand stress is critical to overall financial stability. Indian banks, however, remain robust, notwithstanding a decline in capital to risk-weighted assets ratio and a rise in non-performing asset levels in the recent past. Capital adequacy levels remain above the regulatory requirements. The financial market infrastructure continues to function without any major disruption. With further globalization, consolidation, deregulation, and diversification of the financial system, the banking business may become more complex and riskier. Issues like risk and liquidity management and enhancing skill therefore assume greater significance.*

## Bank Credit

5.2 During 2010-11, credit growth continued its momentum to reach the peak rate of 24.2 per cent by end December 2010. The pick-up in credit reflected the improved demand conditions associated with stronger industrial recovery and growth. Since January 2011, credit growth, however, has been decelerating, though it remained above the Reserve Bank of India's indicative trajectory of 20 per cent for the year.

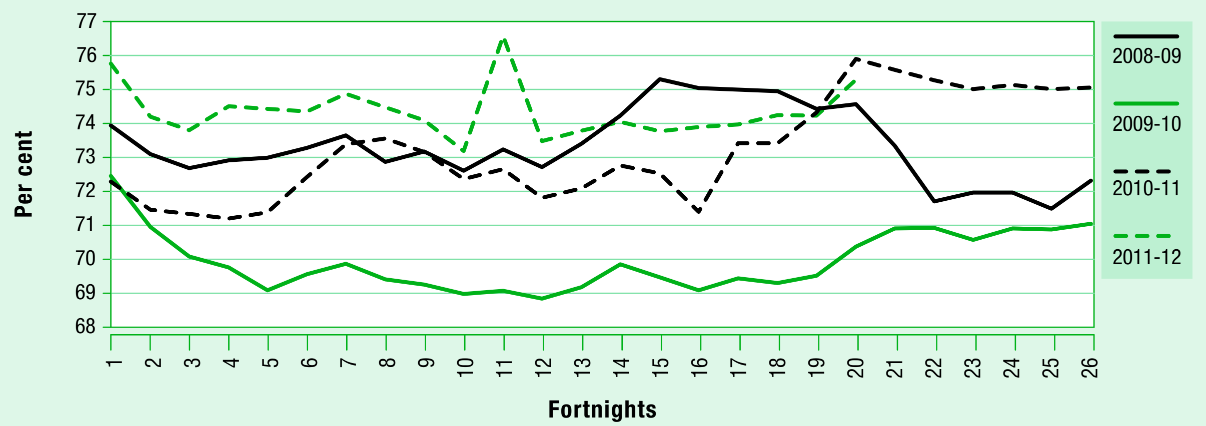
5.3 During financial year 2011-12, growth in bank credit extended by scheduled commercial banks (SCBs) stood at 8.2 per cent as on 16 December 2011 (12.3 per cent in the corresponding period of previsous year). The year-on-year growth was at 17.1 per cent as on 16 December 2011 (23.9 per cent in the corresponding period of the previous year). During the same period, growth in non-food credit stood at 7.9 per cent (12.1 per cent in the previous year). On year-on-year basis, growth moderated from 23.6 per cent at mid-December 2010 to 16.8 per cent as on 16 December 2011. This is below the RBI's indicative projected rate of 18 per cent for 2011-12 (Second Quarter Review of 2011-12 dated 25 October 2011), reflecting the combined effect of a slowing economy and increasing risk aversion of banks. In the Third Quarter Review of Monetary Policy for 2011-12 (24 January 2012), the RBI scaled down the indicative growth projection of non-food credit to 16.0 per cent for the full year. Growth in aggregate deposits during 2011-12 was higher at

**Table 5.1 : Flow of bank credit**

| | Outstanding as on end-March | | | Outstanding as on | | Financial Year so far | | Year-on-Year | |
|---|---|---|---|---|---|---|---|---|---|
| | | | ₹ crore | | | (Percentage variation) | | | |
| | 2009 | 2010 | 2011 | 16-Dec. 2011 | 17-Dec. 2010 | 2010-11 | 2011-12 | 2010-11 | 2011-12 |
| **1. Bank Credit** | 2775549 | 3244788 | 3942083 | 4266982 | 3644569 | 12.3 | 8.2 | 23.9 | 17.1 |
| (a) Food credit | 46211 | 48489 | 64283 | 82905 | 62521 | 28.9 | 29.0 | 38.8 | 32.6 |
| (b) Non-food credit | 2729338 | 3196299 | 3877800 | 4184077 | 3582048 | 12.1 | 7.9 | 23.6 | 16.8 |
| **2. Aggregate deposit** | 3834110 | 4492826 | 5207969 | 5672592 | 4806227 | 7.0 | 8.9 | 14.9 | 18.0 |
| (a) Demand deposits | 523085 | 645610 | 641705 | 559935 | 578514 | -10.4 | -12.7 | 10.1 | -3.2 |
| (b) Time deposits | 3311025 | 3847216 | 4566264 | 5112657 | 4227714 | 9.9 | 12.0 | 15.5 | 20.9 |
| **3.Investment** | 1166410 | 1384752 | 1501619 | 1678851 | 1445544 | 4.4 | 11.8 | 7.1 | 16.1 |
| (a) Govt securities | 1155785 | 1378395 | 1497148 | 1675247 | 1440782 | 4.5 | 11.9 | -6.8 | 16.3 |
| (b) Other approved | 10625 | 6358 | 4471 | 3605 | 4761 | -25.1 | -19.4 | 50.3 | -24.3 |

***Source*** : RBI.

**Figure 5.1 Credit deposit ratio**




18.0 per cent vis-à-vis 14.9 per cent during the corresponding period of 2010-11(Table 5.1). Consequently, there has been a moderation in the credit-deposit ratio between end-March 2011 and December, 2011 (Figure 5.1).

5.4 During financial year 2011-12, private-sector banks have been faring better in terms of growth in credit extended as compared to public-sector and foreign banks. Due to lower credit offtake, commercial banks' investment in government and other approved securities was higher at 11.8 per cent as compared to 4.4 per cent in the previous year. Consequently, the investment-deposit ratio increased from 28.8 per cent at end March 2011 to 29.6 per cent on 16 December 2011 (Figure 5.2).

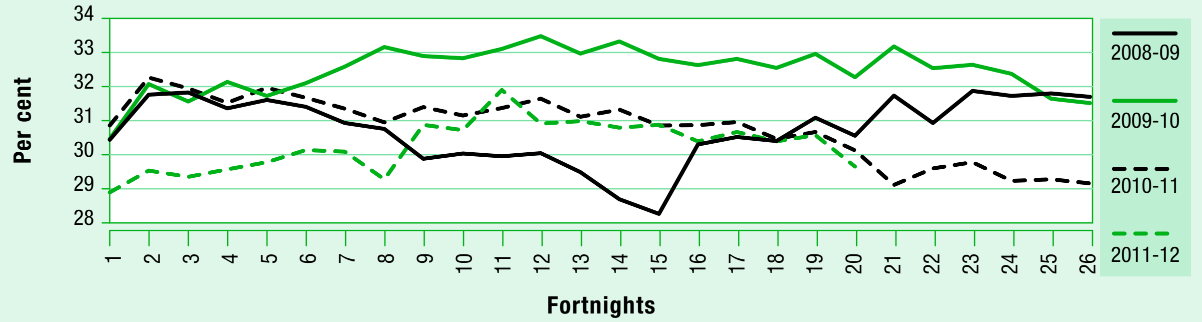
## Interest rates

### *i. Deposit Rates*

5.5 As part of a calibrated exit from its expansionary monetary policy and to combat inflation, the RBI increased the repo rate 13 times cummulatively by 375 basis points (bps) since March 2010. In response to the increase in policy rate by the RBI, banks have been raising their deposit and lending rates.

5.6 During 2011-12 (up to end December 2011), deposit rates of SCBs have increased across various maturities (Box 5.1). Interest rates offered by SCBs on deposits of one to three year maturity were placed in the 3.50-10.50 per cent range in December 2011, as compared to 3.50-10.10 per cent in March 2011,

Figure 5.2 **Investment deposit ratio**




while those on deposits of maturity of above three years were placed in the 4.25-10.10 per cent range as compared to 3.50-10.00 per cent in March 2011(Table 5.2).

### *ii. Lending Rates*

5.7 The base rate system, introduced since 1 July 2010, has improved the transparency in lending rates and also enabled a more informed assessment of the transmission of monetary policy impulses to banks' lending rates. The base rates of SCBs were placed in the 6.25-11.25 per cent range in December 2011 as compared to 6.25-10.00 per cent in March 2011 (Table 5.2).

### *iii. Interest Rates on Non-resident Indian (NRI) Deposits*

*5.8* With a view to provide greater flexibility to banks in mobilizing non-resident deposits and considering prevailing market conditions in the recent months, interest rates on both savings and term deposits of maturity of one year and above under non-resident (external) rupee (NRE) accounts, and savings deposits under ordinary non-resident (NRO) accounts were deregulated (interest rates on term deposits under NRO accounts were already deregulated),

**Table 5.2 : Movements in deposit and lending rates**

(per cent)

| Interest rates | Dec.- 2010 | Mar.- 2011 | Jun. -2011 | Sept.-2011 | Dec.-2011 |
|---|---|---|---|---|---|
| **I. Domestic deposit rates** | | | | | |
| **(i) Public Sector Banks** | | | | | |
| (a) Up to 1 year | 1.00-8.25 | 1.00-9.75 | 1.00-9.15 | 1.00-9.55 | 1.00-9.55 |
| (b) 1 - 3 years | 7.00-8.50 | 8.00-9.75 | 8.25-9.75 | 8.55-9.75 | 8.55-9.75 |
| (c) Above 3 years | 7.00-8.75 | 7.75-9.75 | 8.00-9.75 | 8.00-9.50 | 8.00-9.50 |
| **(ii) Private Sector Banks** | | | | | |
| (a) Up to 1 year | 2.50-8.50 | 2.50-9.30 | 2.50-9.30 | 3.00-9.40 | 3.00-9.25 |
| (b) 1 - 3 years | 7.25-9.00 | 7.75-10.10 | 8.00-10.50 | 8.00-10.50 | 8.00-10.50 |
| (c) Above 3 years | 7.00-9.25 | 7.00-10.00 | 8.00-10.00 | 8.00-10.00 | 8.00-10.10 |
| **(iii) Foreign banks** | | | | | |
| (a) Up to 1 year | 1.25-8.00 | 2.30-9.00 | 2.50-9.25 | 3.00-10.00 | 3.50-10.00 |
| (b) 1 - 3 years | 3.50-8.50 | 3.50-9.10 | 3.50-10.00 | 3.50-9.75 | 3.50-9.75 |
| (c) Above 3 years | 3.50-8.50 | 3.50-9.10 | 3.50-9.50 | 4.25-9.50 | 4.25-9.50 |
| **II. Base Rate** | | | | | |
| (i) Public-sector banks | 7.60-9.00 | 8.25-9.50 | 9.25-10.00 | 10.00-10.75 | 10.00-10.75 |
| (ii) Private-sector Banks | 7.00-9.00 | 8.25-10.00 | 8.50-10.50 | 9.70-11.00 | 10.00-11.25 |
| (iii) Foreign Banks | 5.50-9.00 | 6.25-9.50 | 6.25-9.50 | 6.25-10.75 | 6.25-10.75 |
| **III. BPLR** | | | | | |
| (i) Public-sector banks | 12.00-14.00 | 13.00-14.50 | 13.50-15.00 | 14.25-15.75 | 14.25-15.75 |
| (ii) Private-sector banks | 13.00-18.00 | 13.50-19.25 | 13.75-19.75 | 13.75-20.50 | 14.75-21.00 |
| (iii) Foreign banks | 10.50-16.00 | 10.50-16.00 | 10.50-16.00 | 10.50-16.50 | 10.50-16.50 |

***Source*** **: RBI.**

***Note*** **: BPLR is benchmark prime lending rate.**

## Box 5.1 : Deregulation of Interest Rate on Savings Bank Deposits

A major component of the financial sector reform process pursued by India has been deregulation of a complex structure of deposit and lending interest rates. On the deposit side, the only interest rate that remained regulated was the savings deposit interest rate. Keeping in view progressive deregulation of interest rates, in the Second Quarter Review of Monetary Policy 2010-11, the RBI proposed that a discussion paper on 'Deregulation of Savings Bank Deposit Interest Rate' would be prepared. After carefully weighing the pros and cons of deregulation of savings bank deposit interest rate, effective 25 October 2011, the RBI deregulated savings bank account interest rates, wherein banks will have to keep a uniform rate of interest for savings accounts with deposits up to ₹ 1 lakh, while differential interest rates could be set for savings bank deposits over ₹ 1 lakh.

The deregulation is expected to improve the transmission of monetary policy. It is also expected to enhance the attractiveness of savings accounts and encourage thrift behaviour in the economy by bringing the savings deposit rate in sync with the changing market conditions.

effective 16 December 2011. Following this, a large number of banks raised their NRE term deposit interest rates.

5.9 Interest rates on Foreign Currency Non-Resident [FCNR(B)] deposits continue to remain regulated by the RBI. At present, the prescribed ceiling interest rate on FCNR(B) deposits stands at LIBOR *plus* 125 bps effective 23 November 2011.

### *iv. Interest Rate on Rupee Export Credit*

5.10 The median interest rates (at which more than 60 per cent of business is contracted) on rupee export credit for pre-shipment credit (up to 180 days) of SCBs were in the 10.40-12.63 per cent range in September 2011 (9.13-11.50 per cent in March 2011). Those on rupee export credit for post-shipment credit (up to 180 days) were in the 8.88-12.75 per cent range in September 2011, as compared to 8.75-12.25 per cent in March 2011. The increase in rupee export credit rates may be seen in the context of a general rise in interest rates.

## Sectoral Deployment of Credit

5.11 Disaggregated data on sectoral deployment of gross bank credit from 47 banks, accounting for about 95 per cent of bank credit and non-food credit, available up to 18 November 2011 showed that

**Table 5.3 : Sectoral deployment of gross bank credit**

| Sl. No. | Sector | Outstanding as on (₹ crore) 26 Mar. 2010 | 19 Nov. 2010 | 25 Mar. 2011 | 18 Nov. 2011 | Variation Mar. 2011/ Mar. 2010 Absolute amount | Per cent | Nov. 2011/ Nov. 2010 Absolute amount | Per cent |
|---|---|---|---|---|---|---|---|---|---|
| | **Gross Bank Credit (1 + 2)** | **3088569** | **3371551** | **3731466** | **3950275** | **642897** | **20.8** | **578724** | **17.2** |
| **1.** | **Food Credit** | **48562** | **56248** | **64111** | **77890** | **15549** | **32.0** | **21642** | **38.5** |
| **2.** | **Non-food Credit (a to d)** | **3040007** | **3315303** | **3667354** | **3872386** | **627347** | **20.6** | **557083** | **16.8** |
| **a.** | **Priority Sector** | **1092179** | **1148808** | **1239386** | **1253947** | **147207** | **13.5** | **105139** | **9.2** |
| i. | Agriculture & Allied Activities | 416133 | 411816 | 460333 | 441841 | 44200 | 10.6 | 30025 | 7.3 |
| ii. | Micro & Small Enterprises | 373530 | 407872 | 454995 | 473573 | 81465 | 21.8 | 65701 | 16.1 |
| iii. | Other Priority Sector | 302516 | 329120 | 324058 | 338533 | 21542 | 7.1 | 9413 | 2.9 |
| **b.** | **Industry (Medium and Large)** | **1105051** | **1249843** | **1391747** | **1526358** | **286696** | **25.9** | **276515** | **22.1** |
| **c.** | **Wholesale Trade (other than food procurement)** | **86357** | **95002** | **103584** | **112747** | **17227** | **19.9** | **17745** | **18.7** |
| **d.** | **Other Sectors** | **756420** | **821650** | **932637** | **979334** | **176217** | **23.3** | **157684** | **19.2** |
| | **of Non-food Gross Bank Credit** | | | | | | | | |
| 1. | Housing (including Priority Sector Housing) | 300929 | 327391 | 346110 | 372503 | 45181 | 15.0 | 45112 | 13.8 |
| 2. | Consumer Durables | 8294 | 8928 | 10156 | 8168 | 1862 | 22.4 | -760 | -8.5 |
| 3. | Commercial Real Estate | 92128 | 105479 | 111836 | 116670 | 19708 | 21.4 | 11191 | 10.6 |
| 4. | Tourism, Hotels & Restaurants | 19410 | 26470 | 27729 | 30260 | 8319 | 42.9 | 3790 | 14.3 |
| 5. | Advances to individuals against shares, bonds, etc. | 2863 | 2935 | 3613 | 3612 | 750 | 26.2 | 677 | 23.1 |

***Source*** **: RBI.**

***Note*** **: Data are provisional and relate to select SCBs which account for 95 per cent of total bank credit extended by all SCBs.**

among the major sectors, credit (year-on-year) to agriculture recorded a growth of 7.3 per cent (10.6 per cent in March 2011), while that to industry (medium and large) 22.1 per cent as against 25.9 per cent in March 2011. Credit to wholesale trade recorded a growth of 18.7 per cent as compared to 19.9 per cent in March 2011.

5.12 Credit to the priority sector grew by 9.2 per cent (year-on-year) in November 2011 as compared to 13.5 per cent in March 2011. Among the priority sub-sectors, credit to micro and small enterprises (MSEs) (including service-sector enterprises) recorded a growth of 16.1 per cent (year-on-year) in November 2011 as compared to 21.8 per cent in March 2011 (Table 5.3).

### *Priority-sector Lending*

5.13 A target of 40 per cent of adjusted net bank credit (ANBC) or credit-equivalent amount of off-balance sheet exposures (OBE), whichever is higher as on 31 March of the previous year, has been stipulated for lending to the priority sector by domestic SCBs in the public and private sectors. Within this, sub-targets of 18 per cent and 10 per cent of ANBC or credit-equivalent amount of OBE, whichever is higher, have been stipulated for lending to agriculture and the weaker sections respectively.

5.14 A target of 32 per cent of ANBC or credit-equivalent amount of OBE, whichever is higher, has been stipulated for lending to the priority sector by foreign banks having offices in India. Within the overall target of 32 per cent to be achieved by foreign banks, the advances to micro and small enterprises and the export sector should not be less than 10 per cent and 12 per cent respectively of the ANBC or credit-equivalent amount of OBE, whichever is higher.

5.15 The outstanding advances granted by public-sector, private-sector, and foreign banks to the priority sector as on the last reporting Fridays of March 2009, 2010, and 2011 are presented in Table 5.4. There were shortfalls in achieving the targets in the case of a few public, private, and foreign banks.

**Table 5.4 : Particulars of Priority-sector Advances**

(₹ crore)

| As on the last reporting Friday of | March 2009 | March 2010 | March 2011(P) |
|---|---|---|---|
| **1. PUBLIC SECTOR BANKS** | | | |
| Total priority sector advances | 724150 (42.8) | 863777 (41.55) | 1028614 (41.25) |
| Total advances to agriculture# | 299415 (17.7) | 372463 (17.28) | 414991 (16.53) |
| Total advances to micro & small enterprises | 191408 (11.3) | 276318 (13.3) | 376625 (15.1) |
| Advances to weaker sections | 165829 (9.8) | 211376 (10.17) | 246316 (9.88) |
| **2. PRIVATE-SECTOR BANKS** | | | |
| Total priority sector advances | 187849 (46.2) | 214669 (45.8) | 248827 (46.64) |
| Total advances to agriculture# | 76103 (18.7) | 90737 (15.58) | 92135 (15.75) |
| Total advances to micro & small enterprises | 46656 (11.5) | 64824 (13.83) | 87856 (16.47) |
| Advances to weaker sections | 14262 (3.5) | 25532 (5.44) | 5989 (5.64) |
| **3. FOREIGN BANKS** | | | |
| Total priority sector advances | 55483 (34.3) | 59959 (36.03) | 66527 (38.61) |
| Total advances to micro & small enterprises | 18138 (11.2) | 21147 (12.70) | 21500 (12.48) |
| Total Export credit (includes SSI export) | 31511 (19.4) | 35167 (21.13) | 42486 (24.66) |

***Source*** **: RBI.**

***Notes*** **: # Indirect agriculture is reckoned only up to 4.5 per cent of the ANBC or credit-equivalent of OBE, whichever is higher.**

**Figures in parentheses show percentage of advances to ANBC or credit-equivalent amount of OBE, whichever is higher.**

**P : Provisional.**

5.16 The outstanding priority sector advances of public sector banks increased from ₹ 8,63,777 crore as on the last reporting Friday of March 2010 to ₹ 10,28,614 crore as on the last reporting Friday of March 2011, showing a growth of 19.1 per cent. Although public-sector banks as a group had achieved the overall priority-sector lending target as on the last reporting Friday of March 2011, seven out of 27 banks could not individually achieve the target.

5.17 The outstanding priority sector advances of private sector banks increased from ₹ 2,14,669 crore on the last reporting Friday of March 2010 to ₹ 2,48,827 crore on the last reporting Friday of March 2011, showing a growth of 15.9 per cent. Private-sector banks as a group had achieved the overall lending target on the last reporting Friday of March 2011 and only one of the 21 could not individually achieve the target.

5.18 The outstanding priority sector advances of foreign banks increased from ₹ 59,959 crore on the last reporting Friday of March 2010 to ₹ 66,527 crore on the last reporting Friday of March 2011, showing a growth of 11.0 per cent. Foreign banks as a group also achieved the overall priority sector lending target on the last reporting Friday of March 2011. However, three of the 30 foreign banks did not individually achieve the target.

## Micro-finance

5.19 RBI guidelines to banks for mainstreaming micro-credit and enhancing the outreach of micro-credit providers, inter alia, stipulated that micro-credit extended by banks to individual borrowers directly or through any intermediary would henceforth be reckoned as part of their priority sector lending However, no particular model was prescribed for micro-finance and banks have been extended freedom to formulate their own model[s] or choose any conduit/intermediary for extending micro-credit.

5.20 Though there are different models for purveying micro-finance, the Self-Help Group (SHG)-Bank Linkage Programme has emerged as the major micro-finance programme in the country. It is being implemented by commercial banks, regional rural banks (RRBs), and cooperative banks. Under the SHG-Bank Linkage Programme as on 31 March 2011, 74.62 lakh SHGs held savings bank accounts with total savings of ₹ 7,016 crore as against 69.53 lakh SHGs with savings of ₹ 6,199 crore as on 31 March 2010. By December 2011, another 2.98 lakh SHGs have come under the ambit of the Programme, taking the cumulative number of savings-linked groups to 77.60 lakh SHGs.

5.21 As on 31 March 2011, 47.87 lakh SHGs had outstanding bank loans of ₹ 31,221 crore, as against 48.5 lakh SHGs with bank loans of ₹ 28,038 crore as on 31 March 2010. This represents a decline of 1.3 per cent in the number of SHGs and a growth of 11.4 per cent in bank loans outstanding to SHGs (Table 5.5). During 2011-12 (up to December 2011), 4.51 lakh SHGs have been financed with an amount of ₹ 6,791.46 crore. As per NABARD data, as on 31 March 2011, gross non-performing assets (NPAs) in respect of SHGs were 4.7 per cent of the bank loans outstanding.

## Rural Infrastructure Development Fund (RIDF)

5.22 The annual allocation of funds under the RIDF has gradually increased from ₹ 2,000 crore in 1995-96 (RIDF I) to ₹ 18,000 crore in 2011-12 (RIDF XVII). Aggregate allocations have reached ₹ 1,34,000 crore.

**Table 5.5 : Progress of Micro-finance Programme**

| Year | New SHGs Financed by Banks During the Year | | | Bank Loan* Outstanding as on 31 March 2011 | | |
|---|---|---|---|---|---|---|
| | No. (lakh) | Amount (₹ crore) | Growth (%) | No.(lakh) | Amount (₹ crore) | Growth (%) |
| 2007-08 | 12.28 | 8,849.26 | - | 36.26 | 16,999.90 | - |
| 2008-09 | 16.09 | 12,256.51 | 38.50 | 42.24 | 22,679.85 | 33.41 |
| 2009-10 | 15.87 | 14,453.30 | 17.90 | 48.52 | 28038.28 | 23.62 |
| 2010-11 | 11.96 | 14,547.73 | 0.65 | 47.87 | 31221.17 | 11.35 |

***Source*** **: National Bank for Agriculture and Rural Development (NABARD).**
***Note*** **: * Includes repeat loans to existing SHGs.**

### Box 5.2 : Bank Loans to Micro-finance Institutions (MFIs) : Priority-sector Status

The RBI set up a committe to study issues and concerns in the micro-finance sector (Chairman: Shri Y. H. Malegam). Based on its recommendation, all SCBs have been advised by the RBI that bank credit to MFIs extended on, or after, 1 April 2011 for on-lending to individuals and also to members of SHGs / joint-liability groups (JLGs) will be eligible for categorization as priority-sector advance under the categories agriculture, MSE , and micro credit (for other purposes), as indirect finance, provided not less than 85 per cent of total assets of the MFI (other than cash balances with banks and financial institutions, government securities, and money market instruments) are in the nature of 'qualifying assets'. In addition, the aggregate amount of loan, extended for income-generating activity, should not be less than 75 per cent of the total loans given by MFIs.

The above commitee recommended that the existing guidelines on bank lending to the priority sectors be revisited. Accordingly, the Reserve Bank of India set up a Committee, under the Chairmanship of Shri M. V. Nair, CMD, Union Bank of India, to re-examine the existing classification and suggest revised guidelines with regard to priority-sector lending classification and related issues.

In addition, a separate window was introduced in 2006-07 for funding the rural roads component of the Bharat Nirman Programme, with a cumulative allocation of ₹ 18,500 crore till 2010-11.

**Table 5.6 : Sanctions and Disbursements under the RIDF and Bharat Nirman** (Rural Roads Components)

(As on 31 December 2011) (₹ crore)

| Region | Sanction | Disburse-ment | Disburse-ment as per cent of Sanction |
|---|---|---|---|
| South | 34573 | 23618 | 68 |
| West | 19211 | 13325 | 69 |
| North | 38416 | 26447 | 69 |
| Central | 10988 | 6779 | 62 |
| East | 23250 | 12960 | 56 |
| NER & Sikkim | 6369 | 3501 | 55 |
| **Sub Total** | **132808** | **86631** | **65** |
| **Bharat Nirman** (Rural Roads Component) | 18500 | 18500 | 100 |
| **Grand total** | **151308** | **105131** | **69** |

***Source*** **: NABARD.**

***Note*** **: NER is the north-east region.**

**Table 5.7 : Disbursements under the RIDF during 2011-12**

(As on 31 December 2011) (₹ crore)

| Region | Disbursement | | Achieve-ment (%) |
|---|---|---|---|
| | Target | Achievement | |
| South | 3200 | 1711 | 53 |
| West | 2060 | 514 | 25 |
| North | 4510 | 2254 | 50 |
| Central | 1080 | 411 | 38 |
| East | 3540 | 1014 | 29 |
| NER & Sikkim | 610 | 214 | 35 |
| **TOTAL** | **15000** | **6118** | **41** |

***Source*** **: NABARD.**

5.23 As against the total allocation of ₹ 1,34,000 crore, encompassing RIDF I to XVII, sanctions aggregating ₹ 1,32,808 crore have been accorded to various state governments and an amount of ₹ 86,631 crore disbursed up to end December 2011. The National Rural Roads Development Agency (NRRDA) had been disbursed the entire ₹ 18,500 crore sanctioned for it (under RIDF XII-XV) by March 2010 (Table 5.6). During 2011-12, ₹ 6,118 crore was disbursed to the states under the RIDF up to end December 2011(Table 5.7).

## Agricultural Credit

### Flow of Agricultural Credit

5.24 The Indian banking system disbursed credit of ₹ 4,46,779 crore to the agricultural sector as against a target of ₹ 3,75,000 crore in 2010-11, thereby exceeding the target by around 19 per cent. Commercial banks and RRBs together extended credit to 104.96 lakh new farmers during 2010-11 and cooperative banks to 22.30 lakh new farmers, thus taking the total number of new farmers brought under the banking system to 127.26 lakh. The total number of agricultural loan accounts financed as of March 2011 was 5.50 crore. The credit flow to agriculture during 2011-12 by commercial banks, cooperative banks, and RRBs together was ₹ 2,62,129 crore till October 2011, amounting to 55 per cent of the annual target of ₹ 4,75,000 crore (Table 5.8).

### Kisan Credit Card (KCC) Scheme

5.25 The banking system has issued 1,078.36 lakh KCCs involving a total sanctioned credit limit of

**Table 5.8 : Flow of Institutional Credit to Agriculture and Allied Activities**

(₹ crore)

| Sl. No. | Agency | 2006-07 | 2007-08 | 2008-09 | 2009-10 | 2010-11^ | 2011-12* |
|---|---|---|---|---|---|---|---|
| 1. | Co-operative banks$ | 42480 | 48258 | 46192 | 63497 | 70105 | 53187 |
| | Share (%) | 18 | 19 | 15 | 17 | 16 | 20 |
| 2. | RRBs | 20435 | 25312 | 26765 | 35218 | 43968 | 29073 |
| | Share (%) | 9 | 10 | 9 | 9 | 10 | 11 |
| 3. | Commercial banks | 166485 | 181088 | 228951 | 285799 | 332706 | 179869 |
| | Share (%) | 73 | 71 | 76 | 74 | 74 | 69 |
| Total (1+2+3) | | 229400 | 254658 | 301908 | 384514 | 446779 | 262129 |

*Source* : NABARD.
*Notes* : $: Including others, ^: Provisional, *: Up to 30 October 2011.

₹ 5,27,052 crore as on 31 October 2011. The share of commercial banks stood at 45.6 per cent of the total number, followed by cooperative banks at 39.4 per cent, and RRBs at 15.1 per cent. The year-wise and agency-wise position of the KCCs issued is given in Table 5.9.

## Agriculture Debt Waiver and Debt Relief (ADWDR) Scheme 2008

5.26 NABARD is the nodal agency for implementing the Agriculture Debt Waiver and Debt Relief (ADWDR) Scheme 2008 in respect of Co-operative Credit Institutions and Regional Rural Banks. NABARD has

**Table 5.9 : Agency-wise KCCs Issued and Amount Sanctioned**

(As on 31 October 2011)

| Agency | Cards Issued (lakh) | | | | | Amount Sanctioned (₹ crore) | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 2008-09 | 2009-10 | 2010-11 | 2011-12 | Total# | 2008-09 | 2009-10 | 2010-11 | 2011-12 | Total# |
| Co-operative banks | 13.44 | 17.43 | 28.12 | 17.58 | 424.57 | 8428 | 7606 | 10719 | 7461 | 158775 |
| RRBs | 14.15 | 19.50 | 17.74 | 10.57 | 162.53 | 5648 | 10132 | 11468 | 6568 | 71998 |
| Commercial banks | 58.34 | 53.13 | 55.83 | 11.79* | 491.26* | 39009 | 39940 | 50438 | 12652* | 296279* |
| Total | 85.92 | 90.06 | 101.69 | 39.94 | 1078.36 | 53085 | 57678 | 72625 | 26681 | 527052 |

*Source* : NABARD
*Notes* : #: Since inception of the scheme in 1998. *: Up to 30 June 2011.

**Box 5.3 : Interest Subvention Relief to Farmers**

Consequent upon the announcement by the Union Finance Minister in Budget Speech 2006-07, public-sector banks, regional rural banks and rural co-operative credit institutions were advised that with effect from Kharif 2006-07, Government would provide interest rate subvention of 2 per cent per annum in respect of short-term production credit up to ₹ 3.0 lakh. This subvention was available to public sector banks, regional rural banks and rural co-operatives on the condition that they made short-term credit available at 7 per cent per annum. In case of RRBs and rural cooperatives, this was applicable only to short-term production credit disbursed out of their own funds and did not include such credit supported by NABARD refinance.

Pursuant to the Union Budget announcement of 2010-11, it was decided to provide interest subvention of 1.5 per cent per annum for short-term agriculture loans up to ₹ 3.0 lakh disbursed by public-sector Banks, cooperatives, and RRBs. The additional subvention for prompt repayment has been enhanced to 2 per cent per annum so that the effective interest rate charged to such farmers is 5 per cent per annum up to ₹ 3.0 lakh. In the 2011-12 Budget, the Government of India proposed to provide interest subvention of 1.5 per cent per annum for short term agriculture loans up to ₹ 3.0 lakh disbursed by Public Sector Banks, co-operatives and RRBs. The additional subvention for prompt paying farmers is proposed to be enhanced to 3 per cent per annum so that the effective interest rate charged to these farmers is 4 per cent per annum upto ₹ 3.0 lakh.

**Table 5.10 : Release under ADWDR**

(as on 31 December 2011 ) (₹ crore)

| Agency | Debt Waiver | Debt Relief | Total |
|---|---|---|---|
| State Cooperative Banks | 15636.59 | 2650.57 | 18287.16 |
| SCARDB | 3424.40 | 418.05 | 3842.45 |
| RRBs | 6052.93 | 917.40 | 6970.33 |
| **Total** | **25113.92** | **3986.02** | **29099.94** |

*Source* : NABARD.
Note: SCARDB: State Cooperative Agriculture and Rural Development Bank. RRB: Regional Rural Bank

released ₹ 25,113.92 crore towards debt waiver and ₹ 3,986.02 crore towards Debt Relief claims as on 31 December, 2011. The agency-wise position of release under ADWDR is given in Table 5.10.

## Financial Performance of Banks

5.27 Despite the demanding operational environment, the Indian banking sector demonstrated continued revival from the peripheral spill over effects of the recent global financial turmoil in 2010-11. This was evident in the higher credit growth, deposit growth, better return on assets, sound capital to risk-weighted assets ratio and improvement in gross non-performing assets ratio, among others. However, certain concerns continued to persist in the Indian banking sector.

**Table 5.11 : Working Results of SCBs**

| Items | PSBs | | Foreign banks | | Old pvt. sector banks | | New pvt. sector banks | | All SCBs | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 2010 | 2011 | 2010 | 2011 | 2010 | 2011 | 2010 | 2011 | 2010 | 2011 |
| | | | | (₹ Crore) | | | | | | |
| A Income | 354876 | 414183 | 36341 | 39494 | 23649 | 26328 | 79580 | 91225 | 494446 | 571230 |
| (i) Interest income | 305983 | 366318 | 26390 | 28522 | 20497 | 23299 | 62309 | 73528 | 415179 | 491667 |
| (ii) Other income | 48893 | 47865 | 9951 | 10972 | 3152 | 3029 | 17271 | 17697 | 79267 | 79563 |
| B Expenditure | 315619 | 369282 | 31600 | 31775 | 21336 | 23226 | 68782 | 76614 | 437337 | 500897 |
| (i) Interest expended | 211940 | 231153 | 8938 | 10622 | 14076 | 14768 | 37130 | 42347 | 272084 | 298890 |
| (ii) Operating expenses | 66075 | 82965 | 11102 | 12558 | 4715 | 5600 | 18136 | 22006 | 100028 | 123129 |
| (iii) Provisions and contingencies | 37604 | 55164 | 11560 | 8595 | 2545 | 2858 | 13516 | 12261 | 65225 | 78878 |
| C Operating profits (A - Bi - Bii) | 76861 | 100065 | 16301 | 16314 | 4858 | 5960 | 24314 | 26872 | 122334 | 149211 |
| D Net profit (A - B) | 39257 | 44901 | 4741 | 7719 | 2313 | 3102 | 10798 | 14611 | 57109 | 70333 |
| E Net interest income (Spread) (Ai - Bi) | 94043 | 135165 | 17452 | 17900 | 6421 | 8531 | 25179 | 31181 | 143095 | 192777 |
| F Total assets | 4440827 | 5293817 | 435362 | 491528 | 268905 | 309011 | 881831 | 1089165 | 6026925 | 7183521 |
| G Net income (Aii + E) | 142936 | 183030 | 27403 | 28872 | 9573 | 11560 | 42450 | 48878 | 222362 | 272340 |
| | | | | As percentage of total assets | | | | | | |
| A Income | 7.99 | 7.82 | 8.35 | 8.03 | 8.79 | 8.52 | 9.02 | 8.38 | 8.20 | 7.95 |
| (i) Interest income | 6.89 | 6.92 | 6.06 | 5.80 | 7.62 | 7.54 | 7.07 | 6.75 | 6.89 | 6.84 |
| (ii) Other income | 1.10 | 0.90 | 2.29 | 2.23 | 1.17 | 0.98 | 1.96 | 1.62 | 1.32 | 1.11 |
| B Expenditure | 7.11 | 6.98 | 7.26 | 6.46 | 7.93 | 7.52 | 7.80 | 7.03 | 7.26 | 6.97 |
| (i) Interest expended | 4.77 | 4.37 | 2.05 | 2.16 | 5.23 | 4.78 | 4.21 | 3.89 | 4.51 | 4.16 |
| (ii) Operating expenses | 1.49 | 1.57 | 2.55 | 2.55 | 1.75 | 1.81 | 2.06 | 2.02 | 1.66 | 1.71 |
| (iii) Provisions and contingencies | 0.85 | 1.04 | 2.66 | 1.75 | 0.95 | 0.92 | 1.53 | 1.13 | 1.08 | 1.10 |
| C Operating profits (A - Bi - Bii) | 1.73 | 1.89 | 3.74 | 3.32 | 1.81 | 1.93 | 2.76 | 2.47 | 2.03 | 2.08 |
| D Net profit (A - B) | 0.88 | 0.85 | 1.09 | 1.57 | 0.86 | 1.00 | 1.22 | 1.34 | 0.95 | 0.98 |
| E Net interest income (Spread) (Ai - Bi) | 2.12 | 2.55 | 4.01 | 3.64 | 2.39 | 2.76 | 2.86 | 2.86 | 2.37 | 2.68 |

*Source* : Statistical Tables Relating to Banks in India 2010-11.

5.28 Overall growth in the consolidated balance sheet of SCBs in 2010-11 was 19.2 per cent, higher than the 15.0 per cent growth during the previous year. Moreover, growth in balance sheets could be seen across all bank groups except the old private sector banks. The working results of SCBs under different bank groups are given in Table 5.11. On the liability side of the balance sheet, growth was driven mainly by borrowings, capital, and other liabilities and provisions. Deposits also witnessed higher growth in 2010-11 as compared to the previous year. Growth in deposits of SCBs accelerated to 18.3 per cent in 2010-11 from 16.8 per cent in 2009-10. On the asset side of the balance sheet, growth was primarily driven by loans and advances. Credit growth was placed at 22.9 per cent in 2010-11 as compared to 16.6 per cent in 2009-10. The credit-deposit ratio at end March 2011 was 76.5 per cent, higher than the ratio of 73.6 per cent at end March 2010.

5.29 During 2010-11, the major drivers of credit growth were the services sector and personal loans. Growth of credit to the agriculture and industry sectors witnessed moderation during 2010-11 in comparison with the previous year.

5.30 Growth in investments by banks decelerated to 10.8 per cent in 2010-11 from 19.3 per cent in 2009-10. In 2010-11, almost three-fourths of total investments of the banking sector were in government securities, mainly to meet the statutory liquidity ratio (SLR) requirements and raise funds from the short-term money market. However, investments of the banking sector in government securities recorded lower growth in 2010-11 as compared to the previous year. The non-SLR investments of SCBs witnessed a decline in March 2011 as compared to the corresponding period of the previous year.

5.31 The consolidated net profits of the banking sector recorded higher growth in 2010-11, in contrast to the deceleration experienced in 2009-10, primarily because of higher growth in interest income. The most salient indicator of profitability, Return on Assets (ROA) improved to 1.10 per cent in 2010-11 from 1.05 per cent in 2009-10. Further, return on equity (ROE) too improved to 14.96 per cent in 2010-11 from 14.31 per cent in 2009-10.

5.32 Resources raised by banks through public issues witnessed substantial increase in 2010-11, particularly during March 2011 when 70 per cent of the total was raised. Resources raised by banks through private placements declined by 40 per cent in 2010-11 over the previous year, mainly on account of private-sector banks, which registered a decline of over 64 per cent.

## Capital Adequacy Ratio

5.33 The Capital to risk-weighted assets ratio (CRAR) of all bank groups both under Basel I and II remained well above the stipulated regulatory norm of 9 per cent in 2010-11. The CRAR of SCBs under Basel I was placed at 13.0 per cent and under Basel II at 14.2 per cent as at end-March 2011.

## Non-performing Assets (NPAs) of the Banking Sector

5.34 The asset quality of the banking sector improved in 2010-11 over the previous year. The gross NPAs (GNPAs) to gross advances ratio declined to 2.3 per cent in 2010-11 from 2.4 per cent in the previous year. The GNPAs, however, increased in absolute terms in 2010-11 over the previous year, though at a lower rate. The improvement in asset quality was visible in both private sector banks and foreign banks. Public-sector banks, however, witnessed deterioration in asset quality in 2010-11. During 2010-11, the banking sector has written off almost 10 per cent of the outstanding gross non-performing loans (at end March 2010), which helped in limiting their growth of gross non-performing loans.

## Technological Developments in Banks

5.35 In recent years, the pace and quality of banking have changed with the adoption of technological advancements. The adoption of technological solutions is particularly useful in expanding the banking network in a cost-effective manner. It is also being utilized to design and provide innovative banking services that enhance the efficiency and help reduce the cost of financial intermediation. Accordingly, the RBI has been encouraging banks to leverage upon the latest available technology to expand and handle their business in a cost effective manner.

5.36 Computerization as well as the adoption of core banking solutions has been a major step in improving the efficiency of banking services. Presently almost 98 per cent of the branches of public sector banks are fully computerized, of which almost 90 per cent are on the core banking platform.

5.37 Introduction of automated teller machines (ATMs) has enabled customers to do banking without visiting the bank branch. In 2010-11 the number of

ATMs witnessed a growth of 24 per cent over the previous year. More than 65 per cent of the total ATMs belonged to public sector banks at end March 2011. During 2010-11, the number of debit cards grew at the rate of 25 per cent over the previous year. In sync with the trend observed in case of ATMs, nearly three-fourths of the total debit cards were issued by public sector banks at end March 2011.

## Reform of the Payment System in India

5.38 The Payment system architecture in India is based on international benchmarks, and guiding principles. The Payment and Settlement System Act, 2007 provides a comprehensive legal framework for payment and settlement services in India for subjects like authorisation of payment system operators, netting and finality of payment and settlement. The payment system objectives of having a safe, sound, cost effective and wide distribution network of the system infrastructure are being met in so far as the large value and countrywide payment and settlement systems are concerned. The grand vision is that cash dominant economy may transit to a predominantly non-cash dominant economy with non-cash transactions primarily in electronic mode, which is the international norm. The existing payment system is being constantly reviewed to suggest an action plan for orderly growth of the payment systems.

## Capital Assistance to PSBs

5.39 As capital is a key measure of bank's capacity for generating loan assets and is essential for balance sheet expansion, Government of India has regularly been investing additional capital in the PSBs to support their growth and keep them financially sound and healthy so as to ensure that the growing credit needs of economy are adequately met. A sum of ₹ 12,000 crore has been provided in the Revised Estimates 2011-12, under plan, for capital infusion in Public Sector Banks to enable them to maintain a minimum Tier I CRAR at 8 per cent as on 31 March, 2012 and also to increase shareholding of the Government of India in the PSBs to 58 per cent. For the year 2012-13 also, the Government is committed to keep all the PSBs adequately capitalised so that the growth momentum of economy is sustained. Further, the Government has appointed a High Level Committee headed by Finance Secretary, to assess the need for capitalisation of various PSBs for the next 10 years keeping in view various challenges the PSBs have to face due to the impending implementation of Basel III norms and the credit needs of the fast growing economy; and to explore various options to raise resources to capitalize the PSBs and analyse various suggested / preferred modes of capitalisation. The Committee has submitted its report to the Government which is under consideration.

## Initiatives to Increase Efficiency in PSBs

5.40 Government is signing Memorandum of Understandings (MoUs) with the PSBs whereby capital infusion will be linked to achieving the targets by PSBs on various key parameters on productivity, including Return on Assets, Net Profit Per employee and Cost to Income Ratio. MOUs spanning over a period of four years, 2011-12 to 2014-15, have since been finalized with all the PSBs excluding SBI Associate Banks. SBI will be entering into MOU with its Associate Banks on similar parameters. Government has put in place a mechanism of Statement of Intent on Annual Goals (SOI) to monitor the performance of the PSBs on various performance parameters. In order to have greater focus on efficiency parameters and also to have a more realistic view of the quality of assets of PSBs, SOI parameters have been revised during 2011-12.

## Financial Inclusion

5.41 The objective of Financial Inclusion is to extend financial services to the large hitherto unserved population of the country to unlock its growth potential. In addition, it strives towards a more inclusive growth by making financing available to the poor in particular. Government of India has been actively pursuing the agenda of Financial Inclusion, with key interventions in four groups, viz. expanding banking infrastructure, offering appropriate financial products, making extensive and intensive use of technology and through advocacy and stakeholder participation.

5.42 Of the about 73,000 habitations having a population of over 2000 identified by banks for extending banking facilities by March, 2012 through Business Correspondents (BCs)/ Business Correspondent Agents (BCAs)/ Bank branches, about 55,000 villages have been provided with banking facilities till December 2011. Out of 81 unbanked blocks in the country as on 31 March 2011, with the persistent efforts of the Government, banking facilities have been provided in 39 blocks from April 2011 to November 2011. Banks have been further directed by the Government to provide banking facilities in all the unbanked blocks by March, 2012.

5.43 Detailed Strategy and Guidelines on Financial Inclusion have been issued by the Government to banks on 21 October 2011 which inter-alia provide emphasis on: (i) setting up more brick and mortar branches with the objective to have a bank branch within a radial distance of 5 km; (ii) to open bank branches by Sept 2012 in all habitations of 5,000 or more population in under banked districts and 10,000 or more population in other districts; (iii) to provide a Business Correspondent within a radial distance of 2 km; (iv) to cover villages of 1,000 and more population in 10 smaller States/UTs by September 2012; (v) to consider Gram Panchayat as a unit for allocation of area under Service Area Approach to bank branch and BC etc.

### Box 5.4 : Pilot Project on Mewat on Financial Inclusion

A Pilot Project on Financial Inclusion (FI) in Mewat district was also undertaken by all the public sector banks and the Gurgaon Gramin Bank functioning in the district. Banking facilities are now available in all the 95 FI villages, either through a brick and mortar branch or a business correspondent. 77 Ultra Small Branches are being set up by various banks. Training on e-payment was imparted to all the bank officials. Campaign to issue KCC to all eligible non defaulter farmers and GCC to non-farmers was organized. Wide publicity and financial literacy measures were initiated through broadcasting financial inclusion messages in the local Mewati language on the community radio, display of graffiti at prominent places, organization of Kisan Goshtis, mobilization of progressive farmers to form farmers clubs etc. A proof of concept in inter-operability between the Business Correspondents of different banks was also done. Syndicate Bank has tied up with SBI Life for providing micro insurance cover of ₹ 25,000 with a nominal premium of ₹ 32/- per annum. Solar Home Lighting Systems were popularized and 1500 loans have been given to establish Solar Home Lighting System.

5.44 Banks have also been advised to transfer subsidies through Electronic Benefit Transfer (EBT) under 32 schemes which are in operation and, funded by the Government of India, so that benefit gets credited directly to the account of the beneficiaries. Banks are also required to ensure that 25 per cent branches in the Annual Branch Expansion Plan (ABEP) should be in unbanked Tier 5 and Tier 6 centres (upto population of 9,999).

## Non-banking Financial Institutions (NBFIS)

### *Financial Institutions (FIs)*

5.45 At end-March 2011, there were four institutions, namely the Export Import Bank of India (EXIM Bank), National Bank for Agriculture and Rural Development (NABARD), the National Housing Bank (NHB), and Small Industries Development Bank of India (SIDBI), regulated by the RBI as all-India FIs. The outstanding of total resources mobilized at any point of time by an FI, including funds mobilized under the 'umbrella limit', as prescribed by the RBI, should not exceed 10 times its net owned funds as per its latest audited balance sheet. However, in view of the difficulties expressed by the NHB and EXIM Bank,

**Table 5.12 : Resources Mobilized by FIs**

(₹ crore)

| Financial Institutions | Total Resources Raised | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Long-term | | Short-term | | Foreign Currency | | Total | | Total Outstanding (as at the end of March) | |
| | 2009-10 | 2010-11 | 2009-10 | 2010-11 | 2009-10 | 2010-11 | 2009-10 | 2010-11 | 2010 | 2011 |
| EXIM Bank | 8150 | 11132 | 5052 | 1538 | 5193 | 11456 | 18395 | 24126 | 40509 | 47192 |
| NABARD | 16 | 9741 | 12330 | 15882 | - | 48 | 12346 | 25671 | 24922 | 34034 |
| NHB | 7518 | 7537 | 10306 | 3380 | - | - | 17824 | 10917 | 10598 | 22765 |
| SIDBI | 13253 | 11744 | 11500 | 5958 | 987 | 1700 | 25740 | 19402 | 30186 | 39269 |
| Total | 28937 | 40154 | 39188 | 26758 | 6180 | 13204 | 74305 | 80116 | 106215 | 143260 |

***Sources*** **: Respective FIs.**

***Notes*** **: -: Nil/Negligible.**

**Long-term rupee resources comprise borrowings by way of bonds/ debentures; and short-term resources comprise commercial papers (CPs), term deposits, indexed certificates of deposit (ICDs), certificates of deposit (CDs) and borrowing from term money. Foreign currency resources largely comprise bonds and borrowings in the international market.**

their aggregate borrowing limit has been enhanced to 11 times of their net owned funds (NOF) for one year (for NHB up to 30 September 2012 and for EXIM Bank up to 31 March 2012, subject to review).

5.46 Resources raised by FIs during 2010-11 were considerably higher than those during the previous year. While long-term resources and foreign currency resources raised witnessed a sharp rise during 2010-11, short-term resources raised declined substantially. NABARD mobilized the largest amount of resources, followed by EXIM Bank and SIDBI (Table 5.12).

5.47 Total sources/deployment of funds of FIs decreased modestly by 1.6 per cent to ₹ 2,97,784 crore during 2010-11. A major part of the funds was raised internally (54.8 per cent), followed by external sources (40.0 per cent) and other sources (5.2 per cent). A large part of the funds raised was used for fresh deployments (58.7 per cent), followed by repayment of past borrowings (28.2 per cent). Other deployments including interest payments formed a comparatively small part of the funds of FIs (Table 5.13).

**Table 5.13 : Pattern of Sources and Deployment of Funds of FIs***

(Amount in ₹ crore)

| Item | 2009-10 | 2010-11 | Percentage Variation in 2010-11 |
|---|---|---|---|
| **A) Sources of funds (i+ii+iii)** | **302610** | **297784** | **-1.6** |
| | (100.0) | (100.0) | |
| (i) Internal | 156733 | 163197 | 4.1 |
| | (51.8) | (54.8) | |
| (ii) External | 126813 | 119072 | -6.1 |
| | (41.9) | (40.0) | |
| (iii) Others@ | 19065 | 15515 | -18.6 |
| | (6.3) | (5.2) | |
| **B) Deployment of funds (i+ii+iii)** | **302610** | **297784** | **-1.6** |
| | (100.0) | (100.0) | |
| (i) Fresh deployment | 171922 | 174674 | 1.6 |
| | (56.8) | (58.7) | |
| (ii) Repayment of past borrowings | 115015 | 83971 | -27 |
| | (38.0) | (28.2) | |
| (iii) Other deployment | 15673 | 39139 | 149.7 |
| | (5.2) | (13.1) | |
| *of which:* Interest payments | 16561 | 14227 | -14.1 |
| | (5.5) | (4.8) | |

*Source* : Respective FIs.

*Note* : *:Exim Bank, NABARD, NHB, and SIDBI. @:Includes cash and balances with banks, balances with RBI and other banks. Figures in parentheses are percentages to the totals.

## Non-banking Financial Companies (NBFCs)

5.48 NBFCs account for 12.3 per cent of assets of the total financial system. There are two broad categories of NBFCs based on whether they accept public deposits, namely deposit-taking NBFCs (NBFCs-D) and non-deposit-taking NBFCs (NBFCs-ND). Total number of NBFCs registered with RBI, consisting of NBFCs-D and NBFCs-ND, declined from 12,630 at end June 2010 to 12,409 at end June 2011. The number of NBFCs-D declined from 308 to 297, mainly due to the exit of many NBFCs-D from deposit-taking activity, while non-deposit taking systemically important NBFCs (NBFCs-ND-SI with asset size ₹ 100 crore and above) increased from 260 to 330 during the same period. Under the NBFCs-D category there are two residuary non-banking companies (RNBCs) (Table 5.14).

5.49 The ratio of deposits of reporting NBFCs (including RNBCs) to the aggregate deposits of SCBs dropped to 0.21 per cent as on 31 March 2011 from 0.36 per cent in the previous year, mainly due to decline in deposits of RNBCs.

5.50 Total assets of NBFCs-D (including RNBCs) increased to ₹ 1,16,897 crore as on 31 March 2011 from ₹ 1,12,131 crore in the preceding year. Public deposits held by NBFCs-D and RNBCs together declined by 31.1 per cent to ₹ 11,964 crore as on 31 March 2011 from ₹ 17,352 crore in the previous year. Net owned funds (NOF) witnessed 9.4 per cent

**Table 5.14 : Number of NBFCs Registered with the RBI**

| End June | Number of Registered NBFCs | Number of NBFCs-D | Number of NBFCs-ND-SI |
|---|---|---|---|
| 2005 | 13261 | 507 | - |
| 2006 | 13014 | 428 | 149 |
| 2007 | 12968 | 401 | 173 |
| 2008 | 12809 | 364 | 189 |
| 2009 | 12740 | 336 | 234 |
| 2010 | 12630 | 308 | 260 |
| 2011 | 12409 | 297 | 330 |

*Source* : RBI.

growth for the year ended March 2011 and stood at ₹ 17,975 crore.

5.51 The consolidated balance sheet of NBFCs-D (excluding RNBCs) recorded 11.9 per cent growth for the year ended March 2011 (22.2 per cent in the previous year). Borrowings, which is the major source of funds for NBFCs-D, increased by 9.0 per cent during the year, while public deposits increased sharply by 43.5 per cent largely due to increase in public deposits of three NBFCs-D. On the assets side, loans and advances witnessed a growth of 9.5 per cent while investments increased by 14.1 per cent (primarily on account of increase in SLR investments) for the year ended March 2011.

5.52 Asset finance companies (AFCs) held the largest share in total assets/liabilities (70.2 per cent) of NBFCs-D (excluding RNBCs), while loan companies accounted for 29.8 per cent for the year ended March 2011. The increase in assets/liabilities of AFCs was mainly on account of reclassification of NBFCs, initiated in December 2006. Of the total deposits held by all NBFCs-D, AFCs held the largest share of 89.3 per cent, followed distantly by loan companies with a 10.7 per cent share.

5.53 CRAR norms were made applicable to NBFCs-D in 1998, according to which every NBFC-D is required to maintain a minimum capital, consisting of Tier I and Tier II capital, of not less than 12 per cent (15 per cent with effect from 31 March 2012) of its aggregate risk-weighted assets. As on 31 March 2011, 202 out of 204 reporting NBFCs-D had CRAR of more than 12 per cent as against 272 out of 275 NBFCs-D in the previous year. The NBFC sector has been witnessing a consolidation process in the last few years, wherein the weaker NBFCs are gradually exiting, paving the way for a stronger NBFC sector.

## Profile of NBFCs-ND-SI

5.54 The balance sheet size of the NBFCs-ND-SI sector increased by 24.0 per cent to ₹ 7,30,366 crore as on 31 March 2011 (against ₹ 5,88,806 crore on 31 March 2010). Significant increase in balance sheet size of the NBFCs-ND-SI sector is mainly attributed to sharp increase in owned funds, debentures, and bank borrowings. Owned funds (which accounted for 25.4 per cent of total liabilities) increased by 13.6 per cent during 2010-11. Total borrowings (secured and unsecured) of the sector increased sharply by 29.9 per cent to ₹ 5,00,938 crore and formed 68.6 per cent of total liabilities as on 31 March 2011. During the period ended June, 2011, total borrowings further increased by 4.7 per cent to ₹ 5,24,823 crore.

5.55 The pattern of deployment of funds by the NBFCs-ND-SI sector for the year ended March 2011 remained broadly in line with the pattern witnessed in the previous year. Secured loans continued to constitute the largest share (45.5 per cent of total assets), followed by unsecured loans with a share of 17.2 per cent, hire purchase assets (6.8 per cent), investments (18.6 per cent), cash and bank balances (4.1 per cent) and other assets (7.7 per cent) during the year ended March 2010.

5.56 The financial performance of the NBFCs-ND-SI sector improved as reflected in the increase in net profit of ₹ 15,619 crore during 2010-11 (as compared to ₹ 12,231 crore in the previous year). ROA (net profit as a percentage to total assets) of the sector stood at 2.1 per cent as on 31 March 2011.

5.57 Gross and net NPA ratios of the NBFCs-ND-SI sector improved for the year ended March 2011 indicating overall improvement in asset quality of the sector. Gross NPA ratio of the sector stood at 1.8 per cent for the year ended March 2011 (2.8 per cent in the previous year), while net NPA ratio was 0.7 per cent (1.2 per cent in the previous year).

5.58 CRAR norms were made applicable to NBFCs-ND-SI with effect from April 2007. In terms of the extant instructions, every NBFC-ND-SI is required to maintain a minimum capital, consisting of Tier I and Tier II capital, of not less than 15 per cent of its aggregate risk-weighted assets. As on March 2011, barring a few, most of the reporting companies maintained the stipulated minimum of 15 per cent CRAR.

## Major Policy Initiatives

5.59 The regulatory and supervisory framework of NBFCs continued to focus on prudential regulations with specific attention to the systemically important non-deposit taking companies (NBFC-ND-SI). Some of the important developments are given below:

(i) The RBI had earlier-issued guidelines on core investment companies(CICs) in August 2010 where CICs were defined and it was advised that systemically important CICs (CICs-ND-SI), i.e. CICs with asset size of ₹ 100 crore and above, are required to get registered with the RBI. Subsequently these guidelines were issued with slight modifications by means of a notification on 5 January 2011.

(ii) In the interest of counter cyclicality and also to ensure that NBFCs create a financial buffer to protect them from the effects of economic downturns, provisioning for standard assets was introduced to NBFCs at 0.25 per cent of outstanding standard assets.

(iii) To align the minimum capital ratio of all deposit-taking NBFCs with that of systemically important non-deposit—taking NBFCs, all deposit-taking NBFCs were advised to maintain a minimum capital ratio consisting of Tier I and Tier II capital at 15 per cent of their aggregate risk-weighted assets on balance sheet and risk-adjusted value of off-balance sheet items with effect from 31 March 2012.

(v) It was clarified that the term 'infrastructure loan' would now include 'telecom towers' also as an infrastructure facility for availing of credit facility. Further, NBFCs were also advised that only credit-rating agencies (CRAs) approved by the RBI can assign rating to infrastructure finance companies (IFCs).

(vi) Keeping in view the risks involved in NBFCs associating themselves with partnership firms, it was decided to prohibit NBFCs from contributing capital to any partnership firm or to be partners in partnership firms. In cases of existing partnerships, NBFCs were advised to seek early retirement from the partnership firms.

(vii) In partial modification of the guidelines for entry of NBFCs into insurance business, it was clarified that in case more than one company (irrespective of doing financial activity or not) in the same group as the NBFC wishes to take a stake in the insurance company, the contribution by all companies in the same group shall be counted for the limit of 50 per cent prescribed for the NBFC in an insurance JV. In this context the terms companies in the same group, subsidiary – parent, associate, promoter-promotee, related party, and common brand etc were also defined.

(viii) A Sub-Committee of the Central Board of the RBI (Chairman : Shri Y. H. Malegam) was constituted to study issues and concerns in the MFI sector. It was announced that the broad framework of regulations recommended by the Committee had been accepted by the Bank and it had been decided to create a separate category of NBFCs, viz; Non Banking Financial Company-Micro Finance Institution (NBFC-MFI). Consequently there would be seven categories of NBFCs namely Asset Finance Company (AFC), Investment Company (IC), Loan Company (LC), Infrastructure Finance Company (IFC), Core Investment Company (CIC), Infrastructure Debt Fund- Non- Banking Financial Company (IDF-NBFC) and Non-Banking Financial Company - Micro Finance Institution (NBFC-MFIs). Directions to such companies were issued on 2 December 2011. An NBFC-MFI is defined as a non-deposit taking NBFC (other than a company licensed under Section 25 of the Companies Act, 1956) that fulfils the conditions like (i) Minimum Net Owned Funds of ₹ 5 crore, (For NBFC-MFIs registered in the North Eastern Region of the country, the minimum NOF requirement shall stand at ₹ 2 crore), (ii) not less than 85 per cent of its net assets are in the nature of 'qualifying assets'

(ix) Entry-point norms, prudential norms for capital requirement, and asset classification and provisioning norms have been prescribed for NBFCs-MFI. NBFCs- MFI were also advised about pricing of credit, i.e. to maintain an aggregate margin cap of not more than 12 per cent. The interest cost will be calculated on average fortnightly balances of outstanding borrowings and interest income is to be calculated on average fortnightly balances of outstanding loan portfolio of qualifying assets. Interest on individual loans will not exceed 26 per cent per annum and will be calculated on reducing balance basis. Processing charges shall not be more than 1 per cent of gross loan amount. Processing charges need not be included in the margin cap or interest cap. Instructions related to fair practices in lending and transparency in interest rates were also issued.

(x) Multiple-lending, over-borrowing and ghost borrowers have been prohibited. NBFCs-MFI have been advised to follow non-coercive methods of recovery of loan. Further, corporate governance related instructions have also been issued. NBFC-MFIs have been advised to review their back office operations and make the necessary investments in information technology and systems to achieve better control, simplify procedures, and reduce costs.

**Box 5.5 : Setting up of Infrastructure Debt Funds (IDFs)**

Broad guidelines have been issued vide a press release dated 23 September 2011 for setting up of IDFs to facilitate flow of funds into infrastructure projects. The IDF will be set up either as a trust or as a company. A trust-based IDF would normally be a mutual fund (MF), while a company-based IDF would normally be an NBFC. An IDF- NBFC would raise resources through issue of either rupee- or dollar-denominated bonds of minimum five-year maturity. The investors would be primarily domestic and off-shore institutional investors, especially insurance and pension funds which would have long-term resources. An IDF-MF would be regulated by the Securities and Exchange Board of India (SEBI) while an IDF-NBFC would be regulated by the RBI. Detailed guidelines were issued on 21 November prescribing the regulatory framework for NBFCs to sponsor IDFs which are to be set up as Mutual Funds (MFs) and NBFCs. Such entities would be designated as "Infrastructure Debt Fund – Mutual Funds (IDF-MF) and "Infrastructure Debt Fund – Non-Banking Financial Company (IDF-NBFC)". All NBFCs, including Infrastructure Finance Companies (IFCs) registered with the bank may sponsor IDFs to be set up as MFs. However, only IFCs can sponsor IDF-NBFCs.

Eligibility parameters for NBFCs as sponsors of IDF-MFs include a minimum NOF of ₹ 300 crore; CRAR of 15 per cent; net NPAs less than 3 per cent; the NBFC to have been in existence for at least five years and earning profits for the last three years in addition to those prescribed by SEBI in the newly inserted Chapter VI B to the MF Regulations.

Only NBFC-IFCs can sponsor IDF-NBFCs with prior approval of the RBI and subject to the following conditions: the sponsor IFC would be allowed to contribute a maximum of 49 per cent to the equity of the IDF-NBFC with a minimum equity holding of 30 per cent of the equity of IDF-NBFC, post investment, in the IDF-NBFC; the sponsor NBFC-IFC must maintain minimum CRAR and NOF prescribed for IFCs; there are no supervisory concerns with respect to the IFC. The IDF is granted relaxation in credit concentration norms and in risk weights.

(xi) For off-balance sheet items already contracted by NBFCs, risk weights shall be applicable with effect from the financial year beginning 1 April 2012. For all new contracts undertaken including credit default swaps, the new risk weights shall be applicable from 26 December 2011.

### Securitization Companies/Reconstruction Companies (SCs/RCs): Major Policy Changes

5.60 Pursuant to the announcement made by the Finance Minister in Budget 2011-12, the Government of India notified the establishment of the Central Registry. The objective of setting it up is to prevent frauds in loan cases involving multiple lending from different banks on the same immovable property. The Central Registry of Securitization Asset Reconstruction and Security Interest of India (CERSAI), a government company licensed under Section 25 of the Companies Act 1956 has been incorporated for the purpose of operating and maintaining the Central Registry under the provisions of the Securitisation and Reconstruction of Financial Assets and Enforcement of Security Interest Act, 2002 (SARFAESI Act).

## Capital Markets

### Primary Market

5.61 During financial year 2011-12 (up to 31 December 2011) resource mobilization through the primary market witnessed a sharp decline over the year 2010-11 (Table 5.15). The cumulative amount mobilized as on 31 December 2011 through equity public issues stood at ₹ 9,683 crore as compared to

**Box 5.6 : Credit Default Swaps (CDS) for Corporate Bonds**

The objective of introducing CDS for corporate bonds is to provide market participants a tool to transfer and manage credit risk in an effective manner through redistribution of risk. CDS as a risk management product offers the participants the opportunity to hive off credit risk and also to assume credit risk which otherwise may not be possible. Since CDS have benefits like enhancing investment and borrowing opportunities and reducing transaction costs while allowing risk transfers, such a product would increase investors' interest in corporate bonds and would be beneficial to the development of the corporate bond market in India.

Guidelines on Credit Default Swaps for Corporate Bonds were issued by the RBI on 23 May 2011, outlining broad norms including the eligible participants and other requirements. It was also indicated that market participants would have to follow the capital adequacy guidelines for CDS issued by their respective regulators. Subsequently, guidelines have been issued stating that NBFCs shall participate in CDS market only as users. As users, they are permitted to buy credit protection only to hedge their credit risk on the corporate bonds they hold. They are not permitted to sell protection and hence not permitted to enter into short positions in the CDS contracts. However, they are permitted to exit their bought CDS positions by unwinding them with the original counterparty or by assigning them in favour of the buyer of the underlying bond.

**Table 5.15 : Resource Mobilization through the Primary Market**

(₹ crore)

| | Mode | 2008-09 | 2009-10 | 2010-11 | 2011-12# |
|---|---|---|---|---|---|
| 1. | Debt | 1500 | 2500 | 9451 | 4791 |
| 2. | Equity | 2082 | 46736 | 48654 | 9683 |
| | *of which IPOs* | 2082 | 24696 | 35559 | 5043 |
| | *Number of IPOs* | 21 | 39 | 53 | 30 |
| | *Mean IPO size* | 99 | 633 | 671 | 168 |
| 3. | Private placement | 173281 | 212635 | 218785 | 188530 |
| 4. | Euro issues (ADR/GDR) | NA | NA | NA | NA |
| | **Total (1+2+3+4)** | **176864** | **261871** | **276890** | **203005** |

*Source* : SEBI and RBI (for Euro Issues).
*Notes* : NA indicates not available. Equity issue consists of only public issue.
# as on 31 December 2011. Current financial figures are provisional.

₹ 48,654 crore in 2010-11. During 2011-12, (up to 31 December 2011), 30 new companies (initial public offers—IPOs) were listed at the National Stock Exchange (NSE) and Bombay Stock Exchange (BSE) amounting to ₹ 5,043 crore as against 53 companies amounting to ₹ 35,559 crore listed in 2010-11. The mean IPO size for the year 2011-12 was ₹ 168 crore as compared to ₹ 671 crore in 2010-11. Further, only ₹ 4,791 crore was mobilized through debt issue as compared to ₹ 9,451 crore in 2010-11. The amount of capital mobilized through private placement in corporate debt in 2011-12 (April-December) was ₹ 1,88,530 crore as compared to ₹ 2,18,785 crore in 2010-11.

## Resource Mobilization by Mutual Funds

5.62 During 2011-12 (up to 30 November 2011), MFs mobilized ₹ 1,00,338 crore from the market as compared to ₹ 49,406 crore liquidation in 2010-11 (Table 5.16). The market value of assets under management stood at ₹ 6,81,655 crore as on 30 November 2011 compared to ₹ 6,65,282 crore as on 31 March 2011, indicating an increase of 2.5 per cent.

## Secondary Market

5.63 As on 31 December 2011, Indian benchmark indices, BSE Sensex and Nifty, decreased by 20.4 per cent and 20.7 per cent respectively over the closing value of 2010-11. Nifty Junior and BSE 500 also decreased by 22.6 per cent and 26.1 per cent respectively during the same period (Table 5.17 and Figure 5.3).

5.64 The free float market capitalization of Nifty, Sensex, Nifty Junior, and BSE 500 stood at ₹ 14,05,066 crore, ₹ 12,66,639 crore, ₹ 2,47,531 crore, and ₹ 21,66,947 crore respectively in 2011-12 (upto 31 December 2011), indicating a decrease of 20.0 per cent, 18.6 per cent, 21.8 per cent, and 22.0 per cent, respectively over 2010-11.

**Table 5.16 : Trends in Resource Mobilization (net) by Mutual Funds**

(₹ crore)

| | Sector | 2007-08 | 2008-09 | 2009-10 | 2010-11 | 2011-12# |
|---|---|---|---|---|---|---|
| 1. | UTI | 10677 | -3659 | 15653 | -16636 | 5323 |
| 2. | Public | 9820 | 9380 | 12499 | -13555 | 3035 |
| 3. | Private | 133304 | -34018 | 54928 | -19215 | 91980 |
| | **Total (1+2+3)** | **153802** | **-28296** | **83080** | **-49406** | **100338** |

*Source* : SEBI.
*Note* : # As on 30 November, 2011.

**Figure 5.3 Movement of indices of NSE and BSE**

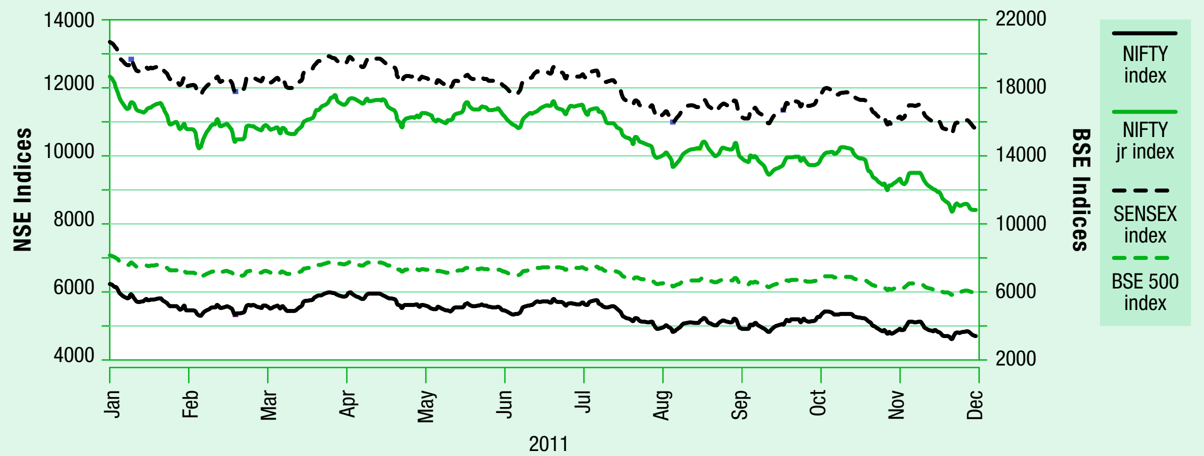



**Table 5.17 : Index Returns, Volatility, Market Capitalization and P/E ratio**

| Index | 2007-08 | 2008-09 | 2009-10 | 2010-11 | 2011-12# |
|---|---|---|---|---|---|
| **Nifty** | | | | | |
| Return (per cent) | 23.9 | -36.2 | 73.8 | 11.1 | -20.7 |
| Market capitalization (₹ crore) | 1240071 | 771483 | 1525162 | 1755468 | 1405066 |
| Daily volatility | 2.0 | 2.6 | 1.9 | 1.1 | 1.3 |
| P/E ratio | 20.6 | 14.3 | 22.3 | 22.1 | 16.8 |
| **Nifty Junior** | | | | | |
| Return (per cent) | 16.0 | -45.6 | 148.4 | 4.7 | -26.1 |
| Market capitalization (₹ crore) | 202809 | 113523 | 292316 | 316529 | 247531 |
| Daily volatility | 2.4 | 2.8 | 2.0 | 1.2 | 1.1 |
| P/E ratio | 16.7 | 8.7 | 15.8 | 17.6 | 13.5 |
| **BSE Sensex** | | | | | |
| Return (per cent) | 19.7 | -37.9 | 80.5 | 9.9 | -20.4 |
| Market capitalization (₹ crore) | 1071940 | 695152 | 1328862 | 1555322 | 1266639 |
| Daily volatility | 1.9 | 2.8 | 1.9 | 1.1 | 1.3 |
| P/E ratio | 20.1 | 13.7 | 21.3 | 21.2 | 16.4 |
| **BSE 500** | | | | | |
| Return (per cent) | 24.3 | -42.8 | 96.4 | 6.5 | -22.6 |
| Market capitalization (₹ crore) | 1996839 | 1168850 | 2444151 | 2776847 | 2166947 |
| Daily volatility | 2.0 | 2.6 | 1.8 | 1.1 | 1.2 |
| P/E ratio | 20.0 | 13.7 | 20.4 | 19.2 | 16.2 |

***Sources*** **: BSE and NSE.**
***Notes*** **: Market Capitalization is calculated on free float basis.P/E ratio is price-earnings ratio.**
**# as on 31 December2011.**

5.65 The P/E ratios of Nifty, Sensex, Nifty Junior, and BSE 500 as on 31 December 2011 were 16.8, 16.4, 13.5, and 16.2 respectively, indicating a decrease of 24.2 per cent, 23.4 per cent, 22.4 per cent, and 15.9 per cent respectively over 2010-11.

5.66 In the capital market segment, during 2011-12 (up to 31 December 2011), the total turnover of the BSE stood at ₹ 4,88,133 crore and of the NSE at ₹ 19,73,730 crore as compared to ₹ 11,05,027 crore and ₹ 35,77,410 crore respectively in 2010-11 (Table 5.18).

**Table 5.18 : Market Turnover** (₹ crore)

| Market | 2007-08 | 2008-09 | 2009-10 | 2010-11 | 2011-12# |
|---|---|---|---|---|---|
| **BSE** | | | | | |
| Cash | 1578670 | 1100074 | 1378809 | 1105027 | 488133 |
| Equity derivatives | 242308 | 12268 | 234 | 154 | 58173 |
| **NSE** | | | | | |
| Cash | 3551038 | 2752023 | 4138024 | 3577410 | 1973730 |
| Equity derivatives | 13090478 | 11010482 | 17663665 | 29248221 | 23715138 |

***Sources*** **: BSE and NSE.**
***Note*** **: # As on 31 December 2011.**

## Equity Derivative

5.67 In the equity derivative segment, the NSE witnessed a total turnover of ₹ 2,37,15,138 crore during 2011-12 (April-December) as compared to ₹ 2,92,48,221 crore during 2010-11. The total turnover in the equity derivative segment of the BSE stood at ₹ 58,173 crore in 2010-11 (April-December) as compared to ₹ 154 crore during 2010-11. Table 5.19 shows the volatility of weekly returns on Indian equity markets.

## Currency Derivative

5.68 So far during financial year 2011-12, the NSE has witnessed a turnover of ₹ 37,02,389 crore in the currency derivatives segment as compared to ₹ 34,49,788 crore in 2010-11. The turnover in the currency futures segment of the Multi-Commodities Exchange (MCX-SX) stood at ₹ 29,99,176 crore in 2011-12 (April-December) as against ₹ 41,94,017 crore in 2010-11. The United Stock Exchange of India Limited was launched on 20 September 2010. The United Stock Exchange (USE) witnessed a turnover of ₹ 14,69,293 crore during the same period as compared to ₹ 7,62,501 crore in 2010-11 (November 2010-March 2011) (Table 5.20).

## Interest Rate Derivative

5.69 Trading in interest rate futures (IRF) contracts on 91-day Government of India (GoI) treasury bills (T-Bill) was introduced at the NSE on 4 July 2011.

**Table 5.19 : Volatility of weekly returns on Indian equity markets**

| Index | 2008-09 | 2009-10 | 2010-11 | 2011-12# |
|---|---|---|---|---|
| **Nifty** | 5.5 | 3.8 | 2.5 | 3.1 |
| **Nifty Junior** | 6.6 | 4.5 | 2.7 | 2.7 |
| **Sensex** | 5.8 | 3.6 | 2.5 | 3.1 |
| **BSE 500** | 5.7 | 3.9 | 2.4 | 2.8 |

***Source*** **: BSE and NSE.**
***Note*** **: # As on 31 December 2011.**

**Table 5.21 : Trends in Interest Rate Futures**

| Year | 2009-10 | 2010-11 | 2011-12# |
|---|---|---|---|
| No. of contracts | 160894 | 3348 | 215200 |
| Trading value (₹ crore) | 2975 | 62 | 3959 |
| Average daily trading value (₹ crore) | 21 | 0 | 24.9 |

***Source*** **: NSE.**
***Note*** **: # As on 31 December 2011.**

**Table 5.20 : Trends in Currency Derivatives**

| Year | NSE | | MCX- SX | | USE | |
|---|---|---|---|---|---|---|
| | 2010-11 | 2011-12# | 2010-11 | 2011-12# | 2010-11 | 2011-12# |
| **No. of contracts** | 749602075 | 782233920 | 903185639 | 626686064 | 167772367 | 309903126 |
| **Trading value (₹ crore)** | 3449788 | 3702389 | 4194017 | 2999176 | 762501 | 1469293 |
| **Average daily trading value (₹ crore)** | 13855 | 20569 | 16843 | 16662 | 5733 | 8163 |

***Source*** **: NSE, MCX-SX, and USE.**
***Note*** **: * As on 31 December 2011.**

**Table 5.22 : Transactions of FIIs**

| Transactions | 2009-10 | 2010-11 | 2011-12# |
|---|---|---|---|
| **Number of FIIs(actual)** | 1635 | 1722 | 1767 |
| **Number of sub-accounts (actual)** | 5015 | 5686 | 6278 |
| 1. Equity market activity (₹ crore) | | | |
| *Gross buy* | 554585 | 771565 | 442898 |
| *Gross sell* | 602292 | 661444 | 443112 |
| *Net* | -47706 | 110121 | -213 |
| 2. Debt market activity (₹ crore) | | | |
| *Gross buy* | 59993 | 221034 | 221907 |
| *Gross sell* | 58098 | 184717 | 191319 |
| *Net* | 1895 | 36317 | 30590 |
| 3. Total activity (₹ crore) | | | |
| *Gross buy* | 846438 | 992599 | 664805 |
| *Gross sell* | 703780 | 846161 | 634431 |
| *Net* | 142658 | 146438 | 30376 |

***Source*** **: NSE, MCX-SX, and USE.**
***Note*** **: # As on 31 December 2011.**

During 2011-12 (April-December), the NSE witnessed a total turnover of ₹ 3,959 crore as compared to ₹ 62 crore in 2010-11 (Table 5.21).

## Foreign Institutional Investors (FIIs)

5.70 At the end of December 2011, there were 1,767 registered FIIs as compared to 1,722 on 31 March 2011. The number of registered sub-accounts also increased to 6,278 from 5,686 during the same period. In the Indian equity market, FIIs withdrew ₹ 213 crore during 2011-12 (April-December) compared to ₹ 110,121 crore investment in 2010-11. During the same period they invested ₹ 30,590 crore in the debt segment as compared to ₹ 36,317 crore in 2010-11. During 2011-12, (up to 31 December 2011), total investment in equity and debt by FIIs stood at ₹ 30,376 crore as compared to ₹ 146,438 crore in 2010-11 (Table 5.22).

## International Comparison

5.71 Among selected Asian Indices, the Jakarta Composite Index posted a maximum cumulative return of 419.5 per cent in 2011-12 (April-December) over 2003-04 followed by the BSE Sensex Index (176.4 per cent), S&P CNX Nifty Index (161.0 per cent), Kospi Index (107.4 per cent), Kuala Lumpur Comp Index (69.7 per cent), Hang Seng Index (45.4 per cent), SSE Composite Index (26.3 per cent), and TSEC weighted Index (8.4 per cent). The trend in major emerging markets and P/E ratios are presented in Tables 5.23 and 5.24 respectively.

# Market Movements

5.72 As on 30 December 2011, the markets stood 26 per cent down from the all-time peak achieved during the special one-hour *muhurut* trading on 5 November 2010 when the Sensex had touched 21004.96 and Nifty 6312.45. The indices closed at 15454.92 (-24.64 per cent for the Sensex) and 4624.3 (- 24.62 per cent for Nifty) in the calendar year. During financial year 2011-12 (up to 30 December 2011), the decline stood at 20.73 per cent in case of Nifty and 20.52 per cent for the Sensex.

## Reasons for Market Movement

5.73 Subdued FII inflows into the country led to a decline in Indian markets and contributed to the sharp depreciation of the rupee in the forex market, though much of the depreciation was due to 'flight to safety' by foreign investors, given the troubled European and inflation-hit emerging market economies. Moderation in the growth rate of the economy has also affected market sentiments. This moderation in growth is on account of several factors, including the uncertainty in the global environment and lag effect of monetary policy tightening. Monetary tightening in India has led to some correction in stock markets, just as it happened in other emerging market economies as their central banks tightened their grips.

5.74 Globally, the deepening European debt crisis and a historic downgrade of the US by S&P triggered

**Table 5.23 : Cumulative Change in Movement of Selected Global Indices**

| Index | Cumulative Change over March 31, 2004 | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 2004-05 | 2005-06 | 2006-07 | 2007-08 | 2008-09 | 2009-10 | 2010-11 | 2011-12# |
| BSE Sensex | 16.1 | 101.8 | 133.8 | 179.8 | 73.7 | 213.5 | 247.8 | 176.4 |
| S&P CNX Nifty | 14.9 | 92.0 | 115.7 | 167.2 | 70.5 | 196.2 | 229.2 | 161.0 |
| Hang Seng | 6.6 | 24.6 | 56.1 | 80.2 | 7.1 | 67.5 | 85.5 | 45.4 |
| Jakarta Composite | 46.8 | 79.8 | 148.9 | 232.7 | 94.9 | 277.5 | 400.0 | 419.5 |
| Nikkei 225 | -0.4 | 45.6 | 47.6 | 6.9 | -30.8 | -5.3 | -16.7 | -27.8 |
| Kospi | 9.7 | 54.4 | 65.0 | 93.5 | 37.0 | 92.3 | 139.3 | 107.4 |
| Kuala Lumpur Comp. | -3.4 | 2.7 | 38.3 | 38.3 | -3.2 | 46.4 | 71.3 | 69.7 |
| TSEC weighted | -7.9 | 1.4 | 20.9 | 31.4 | -20.1 | 21.4 | 33.1 | 8.4 |
| SSE Composite | -32.2 | -25.5 | 82.8 | 99.4 | 36.3 | 78.5 | 68.1 | 26.3 |

***Source*** **: Bloomberg.**
***Note*** **: # As on 31 December, 2011.**

**Table 5.24 : P/E Ratios in Selected Emerging Markets**

| Index | 2008-09 | 2009-10 | 2010-11 | 2011-12# |
|---|---|---|---|---|
| Kospi | 25.7 | 11.1 | 13.8 | 26.3 |
| SET | 15.7 | 12.3 | 13.2 | 12.6 |
| Jakarta Composite | 20.1 | 16.6 | 13.8 | 26.3 |
| Kuala Lumpur Comp. | 15.0 | 18.9 | 15.8 | 16.0 |
| TSEC weighted | 65.7 | 19.1 | 17.0 | 16.4 |
| BSE Sensex | 13.7 | 21.3 | 21.2 | 16.4 |
| S&P CNX Nifty | 14.3 | 22.3 | 22.1 | 16.8 |

***Source*** **: BSE, NSE and Bloomberg.**
***Note*** **: # As on 31 December, 2011.**

fears of another recession. The euro zone imbroglio kept the global markets fluctuating throughout the year. Unless the crisis in Europe is settled, volatility in global markets including India will tend to persist. However, the Indian economy has been less affected as compared to other major indices in the world. Further, the resilience of Indian markets is evident from the ratings given by some of the investment banks and financial firms.

## Major Policy Initiatives

### Increasing Access to Indian Capital Markets

#### *Direct Investment by QFIs in Indian Equity Markets*

5.75 QFIs were allowed to directly invest in the Indian equity market in January 2012. This was done to widen the class of investors, attract more foreign funds, reduce market volatility, and deepen the Indian capital market. The QFIs shall include individuals, groups, or associations, resident in a foreign country that is compliant with the Financial Action Task Force (FATF) and that is a signatory to International Organisation of Secruities Commissions (IOSCO's) multilateral memorandum of understanding (MoU). QFIs do not include FIIs/ sub-accounts. Earlier, only FIIs/sub-accounts and non-resident Indians (NRIs) were allowed to directly invest in the Indian equity market. Under this arrangement, a large number of QFIs, in particular a large set of diversified individual foreign nationals who were desirous of investing in the Indian equity market, did not have direct access to it. The RBI and SEBI have issued the relevant circulars on 13 January 2012 to operationalize this scheme.

### *Qualified Foreign Investor (QFI) scheme*

5.76 In order to further liberalize the portfolio investment route, the Budget for 2011-12 permitted SEBI-registered MFs to accept subscriptions for equity schemes from foreign investors who meet the KYC requirements. The scope of the Budget announcement has now been expanded to allow SEBI-registered MFs to accept subscriptions from QFIs for debt schemes in the infrastructure sector. The QFI scheme has been operationalized on 9 August 2011.

## FII investments in Government Securities and Corporate Bonds

5.77 In November 2011, the government reviewed the policy in the context of India's evolving macroeconomic situation and the need for enhancing capital flows and making available additional financial resources for the corporate sector and decided to (i) increase the current limit of FII investment in government securities by US $ 5 billion, raising the cap to US $ 15 billion (the incremental limit of US $ 5 billion can be invested in securities without any residual maturity criterion); and (ii) increase the current limit of FII investment in corporate bonds by US $ 5 billion, raising the cap to US $ 20 billion (the incremental limit of US $ 5 billion can be invested in listed corporate bonds). The investment limit in long-term infrastructure corporate bonds, however, has been kept unchanged at US$ 25 billion. With this, overall limit for FII investment in corporate bonds and government securities now stands at US$ 60 billion.

## External Commercial Borrowings (ECB) Policy

5.78 A prospective borrower can access ECBs under two routes, namely the automatic route and approval route. ECBs not covered under the automatic route are considered on case-by-case basis by the RBI under the approval route. The High Level Committee on ECB took a number of decisions on 15 September 2011 to expand the scope of ECBs. These include:

i. High networth individuals (HNIs) who fulfil the criteria prescribed by SEBI can invest in IDFs.

ii. IFCs have been included as eligible issuers for FII investment in the corporate bonds long-term infra category.

iii. ECB would be permitted for refinancing of rupee loans of infrastructure projects on the condition that at least 25 per cent of such ECBs shall be used for repayment of the said rupee loan and 75 per cent invested in new projects in the infrastructure sector. This would be permitted only under the approval route.

iv. Refinancing of buyer's/supplier's credit through ECBs for the purchase of capital goods by companies in the infrastructure sector was approved. This would also be permitted only under the approval route.

v. ECBs for interest during construction (IDC) that accumulates on a loan during the project execution phase for companies in the infrastructure sector would be permitted. This would be subject to the condition that the IDC is capitalized and is part of the project cost.

vi. Renminbi (RMB) was approved as an acceptable currency for raising ECBs subject to a limit of US$ 1 billion within the existing ECB ceiling. Such borrowings shall be allowed only through the approval route.

vii. The existing ECB limits under the automatic route were enhanced from US$ 500 million to US$ 750 million for eligible corporates as per the extant ECB guidelines. For borrowers in the services sector, the limit has been enhanced from US$ 100 million to US$ 200 million and for NGOs engaged in micro-finance activities from the existing US$ 5 million to US$ 10 million. All other conditions will apply as per the extant ECB guidelines.

viii. INR–denominated ECBs would be permitted from foreign equity holders to 'all eligible borrowers' except in the case of ECBs availed of by NGOs as per extant ECB guidelines under the automatic route.

5.79 In November 2011, ECB policy was modified keeping in view the developments in global financial markets and macro-economic conditions. The all-in-cost ceiling was enhanced and the proceeds of ECBs raised abroad for Rupee expenditure in India should be brought immediately. The change in the all-in-cost ceiling came into force on November 23, 2011 and is applicable up to 31 March 2012, subject to review thereafter.

## Financial Stability and Development Council (FSDC)

5.80 In pursuance of the announcement made in the Budget 2010–11, with a view to strengthening and institutionalizing the mechanism for maintaining financial stability and enhancing inter-regulatory coordination, an apex-level Financial Stability and Development Council under the Chairmanship of the Finance Minister has been set up. A sub-committee of the FSDC has also been set up under the chairmanship of the Governor RBI. So far, three meetings of the Council and five meetings of its sub-committee have been held in which a range of financial-sector stability and development issues have been discussed and decided. Under the aegis of the FSDC, two empowered Technical Groups (i.e. Technical Group on Financial Literacy and Financial Inclusion and Inter-Regulatory Technical Group) have been formed.

## Financial Sector Legislative Reforms Commission (FSLRC)

5.81 In pursuance of the announcement made in Budget 2010-11, the government set up the FSLRC with a view to rewriting and harmonizing financial-sector legislation, rules, and regulations to address the contemporaneous requirements of the sector. The Commission will examine financial-sector legislations, including subordinate legislations. It engaged two technical/research teams and decided to constitute various Working Groups (WG), each chaired by a Member of the Commission. Two WGs on Pensions, Insurance, PFs, and Small Savings and on Payment Systems have been set up. Other WGs on Securities, Banking, and Debt Management are being set up. The WGs will follow the broad principles and approaches approved by the Commission and examine sector-specific details, produce reports, draft laws thereon, and report to the Commission.

## Financial Action Task Force (FATF)

5.82 The FATF is an inter governmental policymaking body that has a ministerial mandate to establish international standards for combating money laundering and terrorist financing. India joined the FATF as its 34th member in June 2010. At present the FATF has 36 members comprising 34 countries and two organizations, namely the European Union and Gulf Cooperation Council. India participated in the FATF plenary and WG meetings held in Mexico from 20-24 June 2011. The FATF assessment team that came in April 2011 appreciated India for being on course for fulfilment of its medium-term commitment plan due in March 2012.

## Sovereign Credit Rating of India

5.83 The strong macroeconomic fundamentals of the Indian economy have been recognized by domestic and international investors. In the financial year, while most of the advanced economies are facing uncertain growth prospects and attendant difficulties in maintaining their credit ratings, two international sovereign credit rating agencies (DBRS and Moody's) have upgraded the outlook for and sovereign credit rating of India. S&P, Fitch Rating, and R&I have, however, maintained their previous ratings.

5.84 In December 2011, Moody's has upgraded the rating on long-term government bonds denominated in domestic currency from Ba1 to Baa3 (from speculative to investment grade). The long-term country ceiling on foreign currency bank deposits has been upgraded from Ba1 to Baa3 (from speculative to investment grade). The last time Moody's had upgraded any Indian long-term sovereign debt instrument from speculative to investment grade was in 2004. In addition, Moody's has upgraded short-term government bonds denominated in domestic currency from NP to P-3 (from speculative to investment grade). This short-term rating has been upgraded for the first time since it was newly assigned in 1998. Further, in January 2012, Moody's has confirmed the upgrade in the short-term country ceiling on foreign currency bank deposits from NP to P-3 (from speculative to investment grade).

5.85 Moody's has recognized that the 'diverse sources of Indian growth (no one industrial or service sector dominates) have enhanced its resilience to global shocks' and that '[India's] growth, product mix and destinations of Indian exports reflect improved international competitiveness, another source of economic resilience'. The present slowdown in growth rates 'could reverse some time in FY 2012/13, as inflation cools from current 9% levels'. Moody's has emphasized that the structural drivers of India's growth momentum will not be damaged by the present cyclical downturn.

5.86 Moody's report was preceded by DBRS's report in June 2011. DBRS upgraded the trend of India's long-term foreign and local currency debt ratings from BBB (low) Negative to Stable outlook. DBRS appreciated, inter-alia, the efforts of the government towards fiscal consolidation by noting that 'since early 2010, India's authorities have shown renewed commitment for reducing both its fiscal deficit and debt'. In addition, in June 2011, while affirming its existing ratings, Fitch has also appreciated the management of the economy by Indian authorities by pointing out that 'India's fiscal and monetary policy response to the global credit crisis helped restore the economy to a path of higher growth'.

## Financial Sector Assessment Programme (FSAP)

5.87 India's FSAP was initially completed by the IMF/World Bank in 2000-01 but it was not made public, as it was part of the pilot FSAP assessment of 12 countries. The Committee on Financial Sector Assessment (CFSA) – co-chaired by Deputy Governor RBI and Secretary, Department of Economic Affairs, Ministry of Finance – completed a self-assessment in 2009. Subsequently, in May 2010, India requested the IMF/World Bank to conduct a full-fledged FSAP. Accordingly, India's FSAP was conducted during 2011. The IMF/World Bank scoping mission visited the Ministry of Finance on 1 February 2011 to conduct an FSAP Update. The FSAP's two missions visited India from 14-27 June 2011 and from 3-18 October 2011. Findings and recommendations of the mission are in final stages of discussion. The FSAP process is likely to be completed by March 2012.

## Insurance and Pension Funds

### *Insurance Sector*

5.88 A healthy and developing insurance sector is of vital importance to every modern economy. It encourages the savings habit, provides a safety net to rural and urban enterprises and productive individuals, and generates long-term funds for infrastructure development. The insurance industry plays a significant role in India's modern economy. Insurance is necessary to protect enterprises against risks such as fire and natural disasters. Individuals require insurance services in such areas as health care, life, property and pension. Development of insurance is therefore necessary to support continued economic transformation. Social security and pension reforms also benefit from a mature insurance industry.

5.89 Since its opening up, the number of participants in the Insurance industry has gone up from seven insurers (including the Life Insurance Corporation of India [LIC], four public-sector general insurers, one specialized insurer, and the General Insurance Corporation as the national re-insurer) in 2000 to 49 insurers as on 30 September 2011 operating in the life, non-life, and re-insurance segments (including specialized insurers, namely Export Credit Guarantee Corporation and Agricultural Insurance Company [AIC]). Three of the general insurance companies, namely Star Health and Alliance Insurance Company, Apollo Munich Health Insurance Company, and Max BUPA Health Insurance Company function as standalone health insurance companies. Of the 23 insurance companies that have set up operations in the life segment post opening up of the sector, 20 are in joint venture with foreign partners. Of the eighteen private insurers who have commenced operations in the non-life segment, sixteen are in collaboration with foreign partners. Thus 36 insurance companies in the private sector are operating in the country in collaboration with established foreign insurance companies from across the globe as on 31 March 2011.

## Life Insurance

5.90 From being the sole provider for life insurance till financial year 1999-2000, LIC is today competing in an industry with 23 private-sector insurers who have commenced operations over the period 2000-10. The industry which reported an annual growth rate of 19.8 per cent during the period 1996-97 to 2000-01 has, post opening up of the sector, reported an annual growth rate of 24.3 per cent during 2001-02 to 2010-11. There has been an average growth of 34 per cent in the first year premium in the insurance sector between 2001-02 and 2010-11.

5.91 The life insurers underwrote new business of ₹ 1,26,381 crore during financial year 2010-11 as against ₹ 1,09,894 crore during the year 2009-10, recording a growth of 15.0 per cent. Of the new business premium underwritten, LIC accounted for ₹ 87012.35 crore (68.9 per cent market share) and private insurers accounted for ₹ 39368.65 crore (31.1 per cent market share). The market share of these insurers was 65.1 per cent and 34.9 per cent respectively in the corresponding period of 2009-10.

## Non-Life Insurance

5.92 The industry which reported a growth rate of around 10 per cent during the period 1996-97 to 2000-01 has, post opening up of the sector, reported average annual growth of 15.85 per cent over the period 2001-02 to 2010-11. In addition, the specialized insurers Export Credit Guarantee

Corporation and Agriculture Insurance Company (AIC) are offering credit guarantee and crop insurance respectively. AIC, which was initially offering coverage under the National Agriculture Insurance Scheme (NAIS), has now started providing crop insurance cover on commercial lines as well. It has introduced several innovative products such as weather insurance and specific crop-related products.

5.93 The premium underwritten by the non-life insurers during 2010-11 was ₹ 42,576 crore as against ₹ 34,620 crore in 2009-10. The growth was satisfactory, particularly in view of the across the broad cuts in the tariff rates. The private insurers underwrote premium of ₹ 17,424.6 crore as against ₹ 13,977 crore in 2009-10, reporting growth of 24.7 per cent vis-a-vis 13.4 per cent in 2009-10. The public-sector insurers, on the other hand, underwrote a premium of ₹ 25,151.8 in 2010-11 as against ₹ 20,643.5 crore in 2009-10, i.e. a growth of 21.8 per cent as against 14.5 per cent in 2009-10. The non-life insurers underwrote a premium of ₹ 42,576 crore in financial year 2010-11 as against ₹ 35,620 crore in 2009-10, recording a growth of 23.0 per cent. The market share of the public and private insurers at 60 and 40 per cent in 2010-11 remained the same as in the previous year.

## Insurance Penetration

5.94 The growth in the insurance sector is internationally measured based on the standard of insurance penetration. Insurance penetration is defined as the ratio of premium underwritten in a given year to the gross domestic product (GDP). Likewise, insurance density is another well-recognized benchmark and is defined as the ratio of premium underwritten in a given year to total population (measured in US dollars for convenience of comparison). The Indian insurance business has in the past remained under-developed with low levels of insurance penetration. Post liberalization, the sector has succeeded in raising the levels of insurance penetration from 2.3 (life 1.8 and non-life 0.7) in 2000 to 5.1 (life 4.4 and non-life 0.7) in 2010.

## Major Policy Initiatives

1) **Initiatives on Health Insurance: The Insurance Regulatory Development Authority (**IRDA) has been taking a number of proactive steps as part of the initiatives for the spread of health insurance. It had set up a National Health Insurance Working Group in 2003, which provided a platform for the various stakeholders in the health insurance industry to work together and suggest solutions on various relevant issues in the sector. During the last decade, the premium from health insurance products has grown from ₹ 675 crore in 2001-02 to ₹ 11,480 crore in 2010-11. The IRDA is also co-ordinating with and supporting insurance industry initiatives in standardizing certain key terminology used in health insurance documents, for better comprehension and in the interest of policyholders. The General Insurance Council, comprising all non-life insurers, evolved a consensus on a uniform definition of 'pre-existing diseases' and its exclusion wording, which has earlier been an expression with many definitions, still more interpretations, and certainly a whole lot of grievances. Such standardization, effective 1 June 2008 will help the insured by minimizing ambiguity and also by better comparability of health insurance products. Also, with effect from 1 October 2011, portability in health insurance has been started in which an insured, if not happy with services or the product of the existing insurer, can change to another insurer whilst enjoying the benefits (especially that of pre-existing diseases) of her/his existing policy.

2) **Micro Insurance:** Micro insurance regulations issued by the IRDA have provided a fillip to propagating micro insurance as a conceptual issue. With the positive and facilitative approach adopted under the micro insurance regulations, it is expected that all insurance companies would come out with a progressive business approach and carry forward the spirit of regulations thereby extending insurance penetration to all segments of society. There are 10,482 micro insurance agents operating in the micro insurance sector as at the end of 2010-11. In micro-insurance-life, the new business premium in the year was ₹ 130.4 crore under 36.5 lakh policies and the group business amounted to ₹ 155.2 crore premium under 1.5 crore lives. In micro-insurance-non-life the gross written premium was ₹ 393.4 crore in 2010-11 as compared to ₹ 193.1 crore in 2009-10.

3) **Insurance Laws (Amendment) Bill 2008:** The government introduced the Insurance Laws (Amendment) Bill 2008 in the Rajya Sabha on 22 December 2008. The Bill aimed to amend

the Insurance Act 1938, the General Insurance Business (Nationalisation) Act 1972, and the Insurance Regulatory and Development Authority Act 1999. The Standing Committee on Finance has submitted its report to the Parliament on 13 December 2011. The report of the Committee is under examination by the government.

Amendments to the LIC Act 1956: The LIC (Amendment) Bill, 2011 was passed by Parliament on 12 December 2011 by the Lok Sabha and on 14 December 2011 by the Rajya Sabh). The amendments will enable the LIC to raise its equity capital from ₹ 5 crore to ₹ 100 crore and create a reserve fund to be used for its business expansion and meeting its corporate social responsibility.

### Pension Sector

5.95 The corpus being managed under the New Pension System (NPS) is ₹ 12,407.4 crore. From 1 May 2009, the NPS was opened up for all citizens in India to join on a voluntary basis. Although the NPS is perhaps one of the cheapest financial products available in the country, in order to make it affordable for economically disadvantaged people, the Pension Fund Regulatory and Development Authority (PFRDA) in September 2010 introduced a lower cost version of the NPS, known as 'Swavalamban', which enables groups of people to join the NPS at a substantially reduced cost.

### Recent Initiatives

5.96 The Government is extremely concerned about the old age income security of the working poor and is focused on encouraging and enabling them to join the NPS. To encourage workers in the unorganized sector to save voluntarily for their old age, an initiative called the Swavalamban Scheme was launched on 26 September 2010. It is a co-contributory pension scheme whereby the central government would contribute a sum of ₹ 1,000 per annum in each NPS account opened having a saving of ₹ 1,000 to ₹ 12,000 per annum.

5.97 The Swavalamban Scheme was initially announced for three years for beneficiaries who enrolled themselves in 2010-11. It has now been extended to five years for beneficiaries enrolled in 2010-11 and 2011-12. Recently the incentive on per subscriptions basis for aggregators and Points of Presence (PoPs) has been increased. A total of 3,01,920 subscribers during 2010-11 and 90,256 during 2011-12 (up to 30 December 2011) have been enrolled under the scheme.

### Performance of the NPS

5.98 Several state governments, autonomous bodies, and undertakings are in dialogue with the PFRDA for extending the NPS to their employees. In the non-government NPS segment, clearly NPS-Lite/Swavalamban has emerged as the vehicle of choice. 'Swavalamban' and concerted efforts from 24 aggregators can play a significant role in financial inclusion. The PFRDA had appointed an expert Committee to Review implementation of Informal Sector Pension (CRIISP) to look into a range of issues connected with the NPS, such as reasons for sluggish public response, viability of the NPS as a financial product, ways and means of marketing/ popularizing the NPS and the agency best suited to perform this role, a sustainable and viable economic incentive model for the NPS, and the role of the Pension Fund Managers (PFMs) in the entire NPS architecture, and suggest remedial measures. Step-by-step implementation of the recommendations of the Committee is in process.

## Challenges and Outlook

5.99 An important reason India emerged largely unscathed from the global crisis of 2008 is the strict ECB policy that places all-in-cost, end-use, and maturity restrictions on foreign borrowings by corporates. As a result, India's external debt to GDP ratio declined from 38.7 per cent in 1991-92 to 17.8 per cent in 2010-11, while the debt service ratio declined from 30.2 per cent to 4.2 per cent. Corporates were therefore not exposed to balance sheet recession that could have happened due to excessive foreign borrowings. The liberalization of ECB policy, as a result, has to keep in view the need to maintain sustainable levels of external debt ratios. This is more important because of the fact that high levels of external debt ratios contributed to the BOP crisis of the early 1990s.

5.100 Infrastructure development is the key to long-term sustainable growth of the economy. However, infrastructure finance remains a constraining factor with heavy dependence on bank financing. Development of the corporate bond market therefore is the key to infrastructure development. While, the introduction of CDS is expected to help in the process, innovative steps are needed to bring the corporate bond market centre stage of infrastructure financing.

5.101 The recent regulatory prescriptions for European banks have raised fears of deleveraging. Indian banks are not expected to bear any direct impact on account of their negligible exposure to the troubled zone. However, they could be indirectly affected on account of funding pressures. The scope for countercyclical financial policy could be explored in financial regulations in order to minimize negative impact of accumulated financial risks. This will go a long way in providing needed stability to the financial system.

5.102 Pension reform is important. It will not only facilitate the flow of long-term savings for development but also help establish a credible and sustainable social security system in the country. Lower levels of financial literacy, particularly among workers in unorganized sector, non-availability of even moderate surplus, and lukewarm response so far from most of the state/UT governments to a co-contributory Swavalamban Scheme are the major challenges to universal inclusion of poorer sections of Indian society into the pension network.

5.103 The development of the financial sector is critically dependent on financial inclusion, which is seen as an important determinant of economic growth. Banks need to take into account various behavioural and motivational attributes of potential consumers for a financial inclusion strategy to succeed. Besides, access to financial products is constrained by lack of awareness, unaffordable products, high transaction costs, and products which are not customized and are of low quality. A major challenge in the times ahead would be to meet financing requirements, particularly of the unorganized sector and the self-employed in the micro and small business sector.

5.104 Internationally, the insurance and pension segments, in view of their typically long-term-long-only investment style, are believed to contribute to financial stability. The Indian insurance sector is well capitalized but significantly exposed to the banking system. Inter-linkages between the insurance and banking sectors are a matter of concern, with many insurance companies being part of financial conglomerates. Any financial stability issue regarding banks in the conglomerate may have an amplifying effect on the insurer. Efforts therefore have to be made towards building firewalls to prevent contagion from one sector to another, especially in times of stress. The ability to raise capital and adequate reinsurance capacity are expected to be important determinants for the insurance sector's continued stability.

# Balance of Payments

CHAPTER 6

*No country in today's globalized world can be fully insulated from what happens in the global economy and India is no exception to the rule. As the country is increasingly integrated into the world, it cannot remain impervious to developments abroad. The unfolding of the euro zone crisis and uncertainty surrounding the global economy have impacted the Indian economy causing drop in growth, higher current account deficit (CAD) and declining capital inflows. As in 2008, the transmission of the crisis has been mainly through the balance-of-payments (BoP) channel. Export growth has decelerated in the third quarter of fiscal 2011-12, while imports have remained high, partly because of continued high international oil prices. At the same time, foreign institutional investment flows have declined, straining the capital account and the rupee exchange rate that touched an all-time low of ₹ 54.23 per US dollar on 15 December 2011.*

6.2 The situation, however, is showing signs of improvement in 2012. The rupee has appreciated by 2.6 per cent in January 2012 due to Reserve Bank of India (RBI) intervention, measures to augment supply of foreign exchange in the domestic market, steps to curb speculative activities, and general improvement in India's economic outlook. FII inflows have resumed, lending support to the balance of payments and exchange rate. The global outlook, however, remains uncertain with the situation in Greece teetering on the brink and increasing risk that the contagion will spread to the Portuguese economy. Such a scenario could have serious repercussions for the Indian economy.

## Balance of Payment (BoP)

6.3 As per the Balance of Payment Manual (Fifth Edition), BoP comprises current account, capital account, errors and omissions, and change in foreign exchange reserves. Under current account of the BoP, transactions are classified into merchandise (exports and imports) and invisibles. Invisible transactions are further classified into three categories. The first component is Services comprising travel, transportation, insurance, government not included elsewhere (GNIE), and miscellaneous. Miscellaneous services include communication, construction, financial, software, news agency, royalties, management, and business services. The second component of invisibles is income. Transfers (grants, gifts, remittances, etc.) which do not have any *quid pro quo* form the third category of invisibles.

6.4 Under capital account, capital inflows can be classified by instrument (debt or equity) and maturity (short- or long-term). The main components of capital account include foreign investment, loans, and banking capital. Foreign investment comprising foreign direct investment (FDI) and portfolio investment consisting of foreign institutional investor (FIIs) investment and American depository receipts /global depository receipts (ADRs/GDRs) represents non-debt liabilities. Loans (external assistance, external commercial borrowings [ECB], and trade credit) and banking capital including non-resident Indian (NRI) deposits are debt liabilities.

6.5 The highlights of BoP developments during 2010-11 were higher exports, imports, invisibles, trade, CAD and capital flows in absolute terms as compared to fiscal 2009-10. Both exports and imports showed substantial growth of 37.3 per cent and 26.8 per cent respectively in 2010-11 over the previous year. The trade deficit increased by 10.5 per cent in 2010-11 over 2009-10. However, as a proportion of gross domestic product (GDP), it improved to 7.8 per cent in 2010-11 (8.7 per cent in 2009-10). Net invisible balances showed improvement, registering a 5.8 per cent increase in 2010-11. The CAD widened to US$ 45.9 billion in 2010-11 from US$ 38.2 billion in 2009-10, but improved marginally as a ratio of GDP to 2.7 per cent in 2010-11 vis-a-vis 2.8 per cent in 2009-10. Net capital flows at US$ 62.0 billion in 2010-11 were higher by 20.1 per cent as against US$ 51.6 billion in 2009-10, mainly due to higher inflows under ECBs, external assistance, short-term trade credit, NRI deposits, and bank capital. In 2010-11, the CAD of US$ 45.9 billion was financed by the capital account surplus of US$ 62.0 billion and it resulted in accretion to foreign exchange reserves to the tune of US$ 13.1 billion (US$ 13.4 billion in 2009-10).

**Table 6.1: Balance of Payments : Summary** (US$ million)

| Sl. No. | Item | 2006-07 | 2007-08 | 2008-09 | 2009-10 | 2010-11PR | 2010-11 H1 (April-Sept. 2010)PR | 2011-12 H1 (April-Sept. 2011)P |
|---|---|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| **I** | **Current Account** | | | | | | | |
| 1 | Exports | 128888 | 166162 | 189001 | 182442 | 250468 | 107331 | 150909 |
| 2 | Imports | 190670 | 257629 | 308520 | 300644 | 381061 | 176213 | 236674 |
| 3 | Trade balance | -61782 | -91467 | -119519 | - 118203 | -130593 | -68883 | -85765 |
| 4 | Invisibles (net) | 52217 | 75731 | 91604 | 80022 | 84647 | 39283 | 52923 |
| | a Non-factor services | 29469 | 38853 | 53916 | 36016 | 48816 | 21517 | 31060 |
| | b Income | -7331 | -5068 | -7110 | -8038 | -17309 | -8238 | -9025 |
| | c Transfers | 30079 | 41945 | 44798 | 52045 | 53140 | 26004 | 30887 |
| 5 | Goods & services balance | -32313 | -52614 | -65603 | -82187 | -81777 | -47366 | -54705 |
| 6 | Current account balance | -9565 | -15737 | -27914 | -38181 | -45945 | -29599 | -32842 |
| **II** | **Capital Account** | | | | | | | |
| 1 | Capital account balance | 45203 | 106585 | 7395 | 51634 | 61989 | 38950 | 41061 |
| | i External assistance (net) | 1775 | 2114 | 2439 | 2890 | 4941 | 3036 | 705 |
| | ii External commercial borrowings (net) | 16103 | 22609 | 7861 | 2000 | 12506 | 5674 | 10592 |
| | iii Short-term debt | 6612 | 15930 | -1985 | 7558 | 10990 | 6937 | 5940 |
| | iv Banking capital (net) | 1913 | 11759 | -3245 | 2083 | 4962 | 839 | 19344 |
| | of which Non-resident deposits (net) | 4321 | 179 | 4290 | 2922 | 3238 | 2163 | 3937 |
| | v Foreign investment (net) | 14753 | 43326 | 8342 | 50362 | 39652 | 30836 | 13657 |
| | of which | | | | | | | |
| | a FDI (net) | 7693 | 15893 | 22372 | 17966 | 9360 | 7040 | 12311 |
| | b Portfolio (net) | 7060 | 27433 | -14030 | 32396 | 30293 | 23796 | 1346 |
| | vi Rupee debt service | -162 | -122 | -100 | -97 | -68 | -16 | -32 |
| | vii Other flows (net) | 4209 | 10969 | -5916 | -13162 | -10994 | -8356 | -9145 |
| **III** | **Errors and omissions** | 968 | 1316 | 440 | -12 | -2993 | -2320 | -2500 |
| **IV** | **Overall balance** | **36606** | **92164** | **-20080** | **13441** | **13050** | **7030** | **5719** |
| **V** | **Reserves [increase (-) / decrease (+)]** | **(-) 36606** | **(-) 92164** | **20080** | **(-) 13441** | **(-)13050** | **(-)7030** | **(-)5719** |

*Source* : RBI. *Notes* : PR: Partially Revised. P: Preliminary.

6.6 During the first half (H1–April-September 2011) of 2011-12, CAD in absolute terms was higher than in the corresponding period of the previous year, mainly due to higher trade deficit. The net capital flows in absolute terms were also higher during H1 of 2011-12 vis-a-vis the corresponding period of 2010-11 (Table 6.1).

## Current Account

### Merchandise trade

6.7 During 2010-11, exports crossed the US$ 200 billion mark for the first time, increasing by 37.3 per cent from US$ 182.4 billion in 2009-10 to US$ 250.5 billion. This increase was largely driven by engineering goods, petroleum products, gems and jewellery, and chemicals and related products. The improvement in exports was accompanied by a structural shift in the composition of the export basket from labour-intensive manufacture to higher value-added engineering and petroleum products. There was also a diversification of export destinations with developing countries becoming our largest export market in recent years.

6.8 Like exports, imports also recorded a 26.8 per cent increase to US$ 381.1 billion in 2010-11 from US$ 300.6 billion in 2009-10. Oil imports showed an increase of 19.3 per cent in 2010-11 (as against a decline of 7.0 per cent a year ago) and accounted for 28.1 per cent of total imports (30.2 per cent in 2009-10). Growth in imports has primarily been led by petroleum and related products and pearls and semi-precious stones. Detailed analysis is given in the chapter on international trade.

6.9 The trade deficit increased by 10.5 per cent to US$ 130.6 billion as compared to US$ 118.2 billion in 2009-10. This was primarily on account of higher increase in imports relative to exports on the back of a robust domestic economic performance in 2010-11. In terms of GDP, however, the trade deficit improved from 8.7 per cent in 2009-10 to 7.8 per cent in 2010-11 due to relatively higher increase in GDP at market prices vis-a-vis trade deficit.

6.10 The widening of India's CAD during H1 of 2011-12 reflects the impact of growth asymmetry between India and the rest of the world. India's export and import growth momentum, gained in 2010-11, continued during H1 of 2011-12.

6.11 During H1 of 2011-12, exports increased from US$ 107.3 billion during H1 of 2010-11 to US$ 150.9 billion, registering a growth of 40.6 per cent as compared to 30 per cent in H1 of 2010-11 over H1 of 2009-10. Exports in 2011-12 were driven mainly by buoyancy in items such as engineering goods and petroleum products. The resilience in export performance appeared to have resulted from a supportive government policy, focusing on diversification in terms of higher value-added products in the engineering and petroleum sectors and destinations across developing economies. Trade policy is supporting exports through schemes like the Focus Market Scheme (FMS), Focus Product Scheme (FPS), and Duty Entitlement Passbook Scheme (DEPB).

6.12 Imports of US$ 236.7 billion recorded an increase of 34.3 per cent during H1 of 2011-12 as against an increase of 27.3 per cent in H1 of 2010-11 over H1 of 2009-10. Rising crude oil prices, along with increase in gold and silver prices, have contributed significantly to the burgeoning import bill during H1 of 2011-12.

6.13 The trade deficit widened by 24.5 per cent to US$ 85.8 billion (9.4 per cent of GDP) during H1 of 2011-12 vis-a-vis US$ 68.9 billion (8.9 per cent of GDP) in H1 of the previous year, despite the higher export growth compared with imports in H1 of 2011-12

### Invisibles

6.14 The invisibles account of the BoP reflects the combined effect of transactions relating to international trade in services, income associated with non-resident assets and liabilities, labour and property, and cross-border transfers, mainly workers' remittances.

6.15 In 2010-11, there was a sharp increase in both exports and imports of services. Services exports increased by 38.4 per cent from US$ 96.0 billion in 2009-10 to US$ 132.9 billion in 2010-11. Business services increased by 113.3 per cent from US$ 11.3 billion in 2009-10 to US$ 24.8 billion in 2010-11 and financial services by 75.7 per cent to US$ 6.5 billion in 2010-11 from US$ 3.7 billion in 2009-10. Receipts on account of software services also witnessed a rise, mainly on account of improved efficiency and diversified export destinations. Software receipts at US$ 55.5 billion, accounting for 41.8 per cent of total service receipts, showed an increase of 11.7 per cent in 2010-11 (7.3 per cent a year earlier). Software receipts were 12.4 per cent of total current receipts. Net service exports increased to US$ 48.8 billion in 2010-11 from 36.0 billion in 2009-10, registering 35.5 per cent increase.

6.16 Private transfer receipts, comprising mainly remittances from Indians working overseas, also increased by 3.7 per cent to US$ 55.6 billion in 2010-11 from US$ 53.6 billion in the previous year. Private transfer receipts constituted 12.4 per cent of current receipts (15.5 per cent in 2009-10). A modest increase was observed in other categories of receipts (transportation, insurance, communication, and GNIE).

6.17 Invisible payments increased by 36.2 per cent from US$ 83.4 billion in 2009-10 to US$ 113.6 billion in 2010-11. The growth of 36.2 per cent in invisible payments outstripped the 21.3 per cent growth recorded in 2010-11. Increase in invisible payments was mainly attributed to business services, financial services, travel, and investment income. Even though the surplus on account of service-sector exports was significantly higher in 2010-11, growth in net receipts on account of transfers was moderate and net outflow of investment income increased during the same period. As a result, the net invisible balance (receipts minus payments) posted an increase of 5.5 per cent to US$ 84.6 billion in 2010-11 as against US$ 80.0 billion in 2009-10. As a proportion of GDP, net invisible balance declined from 5.9 per cent in 2009-10 to 5.0 per cent in 2010-11. At this level, the invisible surplus financed 64.8 per cent of trade deficit as against 67.7 per cent during 2009-10.

6.18 During H1 of 2011-12, invisible receipts recorded an increase of 17.4 per cent to US$ 106.0 billion vis-a-vis US$ 90.3 billion during the corresponding period of 2010-11. All broad categories

**Table 6.2 : Selected Indicators of the External Sector**

| Sl. No. | Item | 2006-07 | 2007-08 | 2008-09 | 2009-10 | 2010-11PR | 2010-11 H1 (April-Sept. 2010)PR | 2011-12 H1 (April-Sept. 2011)P |
|---|---|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 1 | Growth of exports – BoP (%) | 22.6 | 28.9 | 13.7 | -3.5 | 37.3 | 30.0 | 40.6 |
| 2 | Growth of imports – BoP (%) | 21.4 | 35.1 | 19.8 | -2.6 | 26.7 | 27.3 | 34.3 |
| 3 | Growth of non-factor services (credit) (%) | 28.0 | 22.4 | 17.3 | -9.4 | 38.4 | 32.7 | 17.1 |
| 4 | Growth of non-factor services (debit) (%) | 28.5 | 16.2 | 1.1 | 15.3 | 40.0 | 48.3 | 1.0 |
| 5 | Exports/imports-BoP (%) | 67.6 | 64.5 | 61.3 | 60.7 | 65.7 | 60.9 | 63.8 |
| 6 | Exports/imports of goods and services (%) | 86.2 | 83.0 | 81.8 | 77.2 | 82.4 | 77.7 | 80.0 |
| 7 | Import cover of FER (No. of months) | 12.5 | 14.4 | 9.8 | 11.1 | 9.6 | 10.0 | 7.9 |
| 8 | External assistance (net)/ TC (%) | 3.9 | 2.0 | 33.0 | 5.6 | 8.0 | 7.8 | 1.7 |
| 9 | ECB (net)/TC (%) | 35.6 | 21.2 | 106.3 | 3.9 | 20.2 | 14.6 | 25.8 |
| 10 | NRI deposits / TC (%) | 9.6 | 0.2 | 58.0 | 5.7 | 5.2 | 5.6 | 9.6 |
| | | | | | As per cent of GDP mp | | | |
| 11 | Exports | 13.6 | 13.4 | 15.2 | 13.4 | 14.8 | 13.9 | 16.5 |
| 12 | Imports | 20.1 | 20.8 | 25.0 | 22.0 | 22.6 | 22.8 | 25.8 |
| 13 | Trade balance | -6.5 | -7.4 | -9.7 | -8.7 | -7.8 | -8.9 | -9.4 |
| 14 | Invisible balance | 5.5 | 6.1 | 7.5 | 5.9 | 5.0 | 5.1 | 5.8 |
| 15 | Goods and services balance | -3.4 | -4.2 | -5.3 | -6.0 | -4.9 | -6.1 | -6.0 |
| 16 | Current account balance | -1.0 | -1.3 | -2.3 | -2.8 | -2.7 | -3.8 | -3.6 |
| 17 | ECBs | 1.7 | 1.8 | 0.6 | 0.1 | 0.7 | 0.7 | 1.2 |
| 18 | FDI (net) | 0.8 | 1.3 | 1.8 | 1.3 | 0.6 | 0.9 | 1.3 |
| 19 | Portfolio investment (net) | 0.7 | 2.2 | -1.2 | 2.4 | 1.8 | 3.1 | 0.1 |
| 20 | Total capital account (net) | 4.7 | 8.6 | 0.5 | 3.8 | 3.7 | 5.0 | 4.5 |

***Source*** **: RBI.** **PR: Partially Revised.** **P: Preliminary.**

***Notes:*** **FER: Foreign Exchange Reserves; TC: Total Capital Flow (net); GDPmp: Gross Domestic Product at current market prices.**

of invisibles, namely services, transfers, and income, showed increase. Growth in exports of services moderated to 17.1 per cent during H1 of 2011-12 as against 32.7 per cent during H1 of 2010-11, while growth in imports was substantially lower at 1.0 per cent during H1 of 2011-12 as against 48.3 per cent during H1 of 2010-11. On net basis, the services surplus increased to US$ 31.1 billion in H1 of 2011-12 from US$ 21.5 billion in the corresponding period a year earlier. Investment income receipts declined by 3.8 per cent to US$ 4.2 billion during H1 of 2011-12, while payments amounted to US$ 13.6 billion (US$ 12.2 billion a year earlier). Transfer receipts that primarily comprise personal transfers increased to US$ 32.3 billion during H1 of 2011-12 (US$ 27.2 billion a year earlier).

6.19 Invisible payments of US$ 53.0 billion during H1 of 2011-12 recorded an increase of 3.9 per cent over US$ 51.0 billion in H1 of 2010-11. Net invisibles balance (receipts minus payments) recorded a 34.6 per cent increase to US$ 52.9 billion (5.8 per cent of GDP) in H1 of 2011-12 from US$ 39.3 billion (5.1 per cent of GDP) in H1 of the previous year. At this level, the invisibles surplus financed about 62.0 per cent of trade deficit during H1 of 2011, as against 57.0 per cent during the same period a year earlier.

6.20 Goods and services deficit (i.e. trade balance plus services) decreased marginally to US$ 81.8 billion (4.9 per cent of GDP) during 2010-11 as compared to US$ 82.2 billion (6.0 per cent of GDP) in 2009-10. In fiscal 2011-12, it widened to US$ 54.7 billion up to H1 as compared to US$ 47.4 billion during the corresponding period a year earlier on account of increase in trade deficit. However, as a ratio of GDP, it marginally declined to 6.0 per cent in 2011-12 (up to H1) from 6.1 per cent in 2010-11 (up to H1) (Table 6.2).

## Current Account Balance

6.21 The CAD increased to US$ 45.9 billion in 2010-11 from US$ 38.2 billion in 2009-10, despite improvement in net invisibles, mainly on account of higher trade deficit. However, as a proportion of GDP, CAD marginally improved to 2.7 per cent in 2010-11 as compared to 2.8 per cent in 2009-10 (Figure 6.1).

6.22 The CAD increased to US$ 32.8 billion in H1 of 2011-12, as compared to US$ 29.6 billion during the corresponding period of 2010-11, mainly on account of higher trade deficit. As a proportion of GDP, it was marginally lower at 3.6 per cent during H1 of 2011-12 vis-à-vis 3.8 per cent in H1 of the preceding year (Figure 6.2).

6.23 As per the latest data available from the Ministry of Commerce, at US$ 242.8 billion during April 2011-January 2012, exports registered a growth of 23.5 per cent over exports of US$ 196.6 billion during the same period in 2010-11. At US$ 391.5 billion, imports recorded 29.4 per cent growth during April 2011-January 2012 over the figure of US$ 302.6 billion during the corresponding period of the previous year. Consequently, trade deficit increased by 40.3 per cent to US$ 148.7 billion during April 2011-January 2012 as compared to US$ 106 billion in April 2010-January 2011.

**Figure 6.1** **Current account balance, goods and services balance, trade balance, invisibles balance and net capital inflows as a per cent of GDP during 2006-07 to 2010-11**

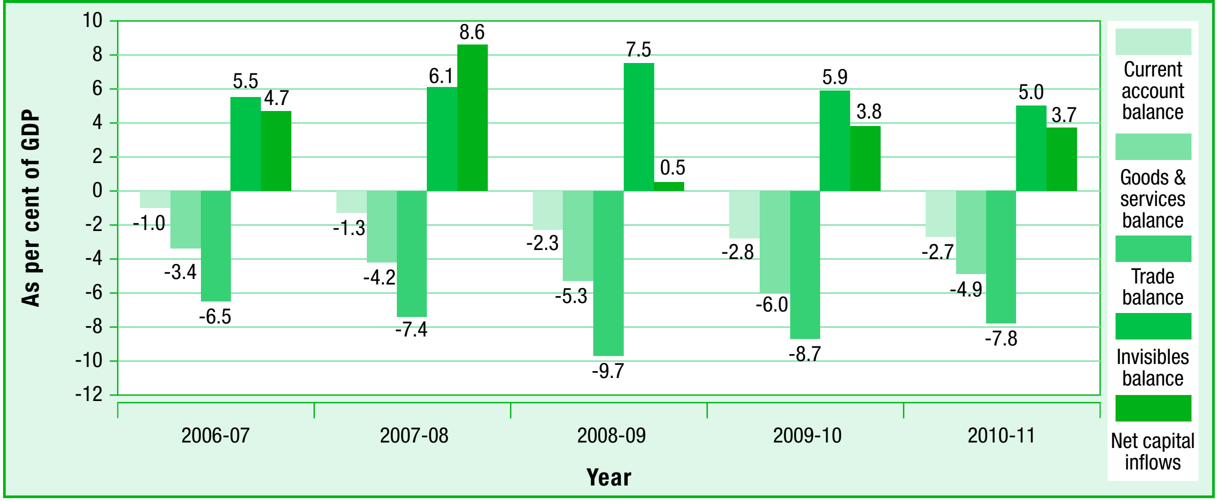
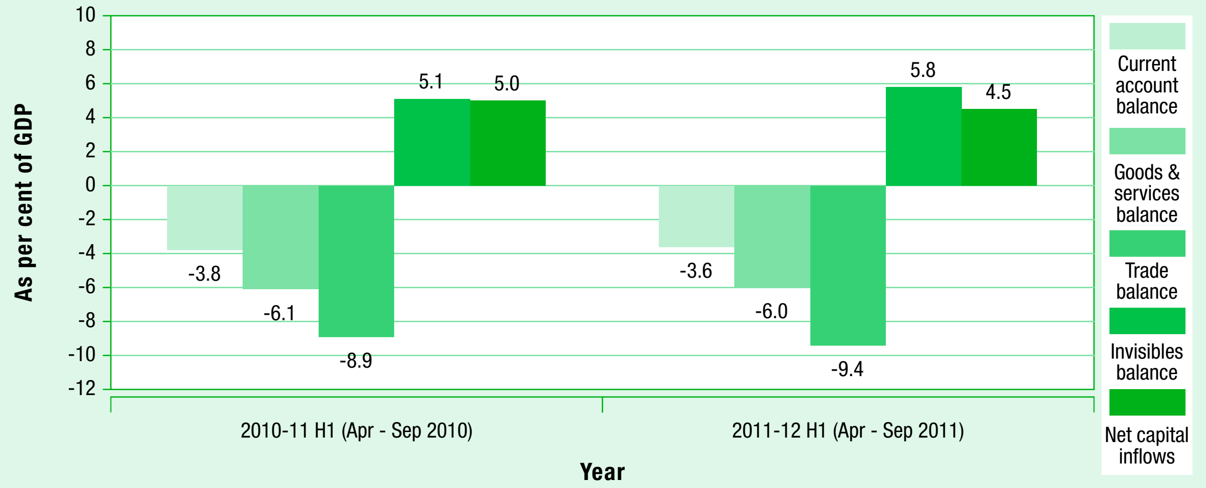


Figure 6.2 Current account balance, goods and services balance, trade balance, invisibles balance and net capital inflows as a per cent of GDP during H1 of 2010-11 and 2011-12




## Capital Account

6.24 Capital inflows can be classified by instrument (debt or equity) and maturity (short-term or long-term). The main components of capital account include foreign investment, loans, and banking capital. Foreign investment comprising FDI and portfolio investment represents non-debt liabilities, while loans (external assistance, ECBs, and trade credit) and banking capital including NRI deposits are debt liabilities. In India, FDI is preferred over portfolio flows as the FDI flows tend to be more stable than portfolio and other forms of capital flows. Rupee-denominated debt is preferred over foreign currency debt and medium- and long-term debt is preferred over short-term.

6.25 Push and pull factors explain international capital flows. Push factors are external to an economy and inter alia include parameters like low interest rates, abundant liquidity, slow growth, or lack of investment opportunities in advanced economies. Pull factors like robust economic performance and improved investment climate as a result of economic reforms in emerging economies are internal to an economy.

6.26 In 2010-11, both gross inflows of US$ 499.4 billion and outflows of US$ 437.4 billion under the capital account were higher than gross inflows of US$ 345.8 billion and outflows of US$ 294.1 billion in the preceding year. In net terms, capital inflows increased by 20.2 per cent to US$ 62.0 billion (3.7 per cent of GDP) in 2010-11 vis-a-vis US$ 51.6 billion (3.8 per cent of GDP) in 2009-10 mainly on account of trade credit and loans (ECBs and banking capital).

6.27 The Non-debt flows or foreign investment comprising FDI and portfolio investment (ADRs/GDRs and FIIs) on net basis decreased by 21.4 per cent from US$ 50.4 billion in 2009-10 to US$ 39.7 billion in 2010-11. Decline in foreign investment was offset by the debt flows component of loans and banking capital which increased by 130.3 per cent from US$ 14.5 billion in 2009-10 to US$ 33.4 billion in 2010-11.

6.28 Inward FDI showed a declining trend while outward FDI showed an increasing trend in 2010-11 vis-a-vis 2009-10. Inward FDI declined from US$ 33.1 billion in 2009-10 to US$ 25.9 billion in 2010-11. Sector-wise, deceleration during 2010-11 was mainly on account of lower FDI inflows under manufacturing, financial services, electricity, and construction. Country-wise, investment routed through Mauritius remained the largest component of FDI inflows to India in 2010-11 followed by Singapore and the Netherlands. Outward FDI increased from US$ 15.1 billion in 2009-10 to US$ 16.5 billion in 2010-11. With lower inward FDI and rise in outward FDI, net FDI (inward minus outward) to India stood considerably lower at US$ 9.4 billion during 2010-11 (US$ 18.0 billion a year earlier).

6.29 Net portfolio investment flow witnessed marginal decline to US$ 30.3 billion during 2010-11 as against US$ 32.4 billion in 2009-10. This was due to decline in ADRs/GDRs to US$ 2.0 billion in 2010-11 from US$ 3.3 billion in 2009-10, even though FII inflows showed marginal increase to US$ 29.4 billion in 2010-11 from US$ 29.0 billion in 2009-10.

6.30 Other categories of capital flows, namely debt flows of ECBs, banking capital, and short-term credit recorded a significant increase in 2010-11. Net ECB inflow increased significantly to US$ 12.5 billion in 2010-11 as against US$ 2.0 billion in 2009-10. Similarly, short-term trade credit increased from US$ 7.6 billion in 2009-10 to US$ 11 billion in 2010-11, indicating strong domestic economic performance. Further, external assistance increased from US$ 2.9 billion in 2009-10 to US$ 4.9 billion in 2010-11.

6.31 The capital account surplus improved by 20.1 per cent to US$ 62.0 billion during 2010-11 from US$ 51.6 billion in 2009-10. However, as a proportion of GDP, it declined marginally to 3.7 per cent in 2010-11 from 3.8 per cent in 2009-10.

6.32 Net accretion to reserves (on BoP basis) in 2010-11, at US$ 13.1 billion, remained at more or less the same level as in 2009-10 (US$ 13.4 billion).

6.33 In fiscal 2011-12 (up to H1), under the capital account both gross inflows of US$ 244.2 billion and outflows of US$ 203.1 billion were higher than the gross inflows of US$ 207.5 billion and outflows of US$ 168.5 billion during the same period a year ago. In net terms, capital inflows increased moderately to US$ 41.1 billion in H1 of 2011-12 as against US$ 39.0 billion in H1 of 2010-11. While net FDI was higher at US$ 12.3 billion in H1 of 2011-12 as against US$ 7 billion in H1 of 2010-11, net portfolio investment substantially declined from US$ 23.8 billion to US$ 1.3 billion during the same period. This was on account of a major decline in FII flows to US$ 0.9 billion in 2011-12 (up to H1) from US$ 22.3 billion in H1 of 2010-11. Other capital flows, including ECBs and banking capital, also substantially increased. Net capital inflow as a proportion of GDP has shown moderation from 5.0 per cent in H1 of 2010-11 to 4.5 per cent in H1 of 2011-12.

6.34 Net accretion to reserves (on BoP basis) during H1 of 2011-12 was lower at US$ 5.7 billion as compared to US$ 7 billion in H1 of the previous year mainly due to widening of the CAD.

6.35 As per the latest available information on capital inflows, FDI inflows were US$ 35.3 billion during April-December 2011 (US$ 16.0 billion in the corresponding period of the preceding year). Portfolio inflows fell sharply to US$ 3.3 billion during April-December 2011 from US$ 31.3 billion a year earlier mainly reflecting uncertainty and risk in the global economy on account of the euro zone crisis.

## Foreign Exchange Reserves

6.36 India's foreign exchange reserves comprise foreign currency assets (FCA), gold, special drawing rights (SDRs), and reserve tranche position (RTP) in the International Monetary Fund (IMF). The level of foreign exchange reserves is largely the outcome of the RBI's intervention in the foreign exchange market to smoothen exchange rate volatility and valuation changes due to movement of the US dollar against other major currencies of the world. Foreign exchange reserves are accumulated when there is absorption of the excess foreign exchange flows by the RBI through intervention in the foreign exchange market, aid receipts, and interest receipts and funding from the International Bank for Reconstruction and Development (IBRD), Asian Development Bank (ADB), International Development Association (IDA), etc.

6.37 FCAs are maintained in major currencies like the US dollar, euro, pound sterling, Australian dollar, and Japanese yen. Both the US dollar and euro are intervention currencies; however, reserves are denominated and expressed in the US dollar only, which is the international numeraire for the purpose. The movement of the US dollar against other currencies in which FCAs are held therefore impacts the level of reserves in US dollar terms. The level of reserves declines when the US dollar appreciates against major international currencies and vice versa. The twin objectives of safety and liquidity have been the guiding principles of foreign exchange reserves management in India with return optimization being embedded strategy within this framework.

### India's foreign exchange reserves

6.38 Beginning from a low level of US$ 5.8 billion at end March 1991, India's foreign exchange reserves gradually increased to US$ 25.2 billion by end March 1995, US$ 38.0 billion by end March 2000, US$ 113.0 billion by end March 2004, and US$ 199.2 billion by end March 2007. The reserves stood at US$ 314.6 billion at end May 2008, before declining to US$ 252.0 billion at the end of March 2009. The decline in reserves in 2008-09 was inter alia a fallout of the global crisis and strengthening of the US dollar vis-à-vis other international currencies. During 2009-10, the level of foreign exchange reserves increased to US$ 279.1 billion at end March 2010, mainly on account of valuation gain as the US dollar depreciated against most of the major international currencies. In fiscal 2010-11, foreign exchange reserves have shown an increasing trend and reached

US$ 304.8 billion at end March 2011, up by US$ 25.7 billion from the US$ 279.1 billion level at end March 2010. Of the total increase in reserves, US$ 12.6 billion was on account of valuation gains arising out of depreciation of the US dollar against major currencies and the balance US$ 13.1 billion was on BoP basis. In 2011-12, the reserves increased by US$ 6.7 billion from US$ 304.8 billion at end March 2011 to US$ 311.5 billion at end September 2011. Out of this total increase, US$ 5.7 billion was on BoP basis and the balance US$ 1.0 billion was on account of valuation effect (Table 6.3). The component-wise details of foreign exchange reserves from 1950-51 to 2011-12 (up to December 2011) in rupee and US dollar are given in Appendices 6.1 (A) and 6.1 (B).

6.39 In the current fiscal, on month-on-month basis, the foreign exchange reserves have shown twin trends. The reserves reached an all time high level of US$ 322.0 billion at end August 2011. However, they declined to US$ 311.5 billion at end September 2011 before increasing to US$ 316.2 billion at end October 2011. In the months of November and December 2011, reserves again showed a declining trend. At end December 2011, they stood at US$ 296.7 billion, indicating a decline of US$ 8.1 billion from US$ 304.8 billion at end March 2011 (Figure 6.3). The decline in reserves is partly due to intervention by the RBI to stem the slide of the rupee against the US dollar. This level of reserves provides about eight months of import cover.

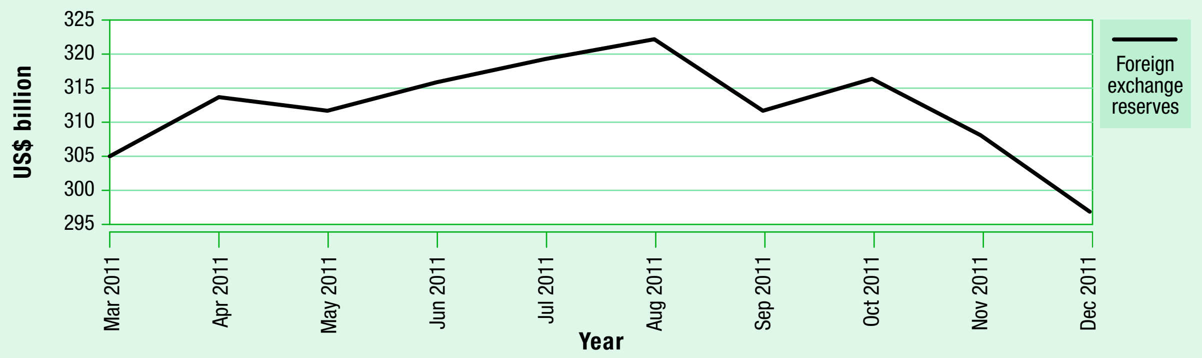
**Table 6.3 : Sources of Variation in Foreign Exchange Reserves on BoP Basis and Valuation Effect**

(US$ billion)

| Sl. No. | Items | 2009-10 | 2010-11PR | April-September 2010-11PR | April-September 2011-12P |
|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 |
| I | **Current account balance** | **-38.2** | **- 45.9** | **-29.6** | **-32.8** |
| II | **Capital account (net) (a to f)** | **51.6** | **62.0** | **38.9** | **41.1** |
| | a Foreign investment (i+ii) | 50.4 | 39.7 | 30.8 | 13.6 |
| | (i) FDI | 18.0 | 9.4 | 7.0 | 12.3 |
| | (ii) Portfolio investment | 32.4 | 30.3 | 23.8 | 1.3 |
| | of which: | | | | |
| | FIIs | 29.0 | 29.4 | 22.3 | 0.9 |
| | ADRs/GDRs | 3.3 | 2.0 | 1.6 | 0.5 |
| | b ECBs | 2.0 | 12.5 | 5.7 | 10.6 |
| | c Banking capital | 2.1 | 5.0 | 0.8 | 19.3 |
| | of which: NRI deposits | 2.9 | 3.2 | 2.2 | 3.9 |
| | d Short-term trade credit | 7.6 | 11.0 | 6.9 | 5.9 |
| | e External assistance | 2.9 | 4.9 | 3.0 | 0.7 |
| | f Other items in capital account (includes Rupee Debt Service) | -13.3 | - 11.1 | -8.4 | -9.2 |
| III | **Errors and omissions** | **-0.01** | **- 3.0** | **-2.3** | **-2.5** |
| IV | **Overall balance (I+II+III)** | **13.4** | **13.1** | **7.0** | **5.7** |
| V | **Reserve change on BoP basis [increase (-) / decrease (+) ]** | **-13.4** | **- 13.1** | **-7.0** | **-5.7** |
| VI | **Valuation change** | **13.7** | **12.6** | **6.8** | **1.0** |
| VII | **Total reserve change (V+VI)** (increase in reserves (+) / decrease in reserves (-) | **27.1** | **25.7** | **13.8** | **6.7** |

***Source*** **: RBI. PR: Partially Revised. P: Preliminary.**
***Note*** **: Total may not tally due to rounding off.**

Figure 6.3 **Foreign exchange reserves**




6.40 A summary of changes in the foreign exchange reserves since 2006-07, with a breakdown into increase / decrease on BoP basis and valuation effect is presented in Table 6.4.

## FCAs

6.41 FCAs are the major constituent of India's foreign exchange reserves. FCAs decreased by US$ 11.3 billion from US$ 274.6 billion at end March 2011 to US$ 263.3 billion at end December 2011.

6.42 In line with the principles of preserving the long-term value of the reserves in terms of purchasing power, minimizing risk and volatility in returns, and maintaining liquidity, the RBI holds FCAs in major convertible currency instruments. These include deposits of other country central banks, the Bank for International Settlements (BIS), and top-rated foreign commercial banks and securities representing debt of sovereigns and supranational institutions with residual maturity not exceeding 10 years, to provide a strong bias towards capital preservation and liquidity. The annualized rate of return, net of depreciation, on the multi-currency multi-asset portfolio of the RBI declined from 4.2 per cent in 2008-09 to 2.1 per cent in 2009-10 and further to 1.7 per cent in 2010-11.

## Foreign exchange reserves of other countries

6.43 India continues to be one of the largest holders of foreign exchange reserves. Country-wise details of foreign exchange reserves reveal that India is the sixth largest foreign exchange reserves holder in the

**Table 6.4 : Summary of changes in Foreign Exchange Reserves (US$ billion)**

| Sl. No. | Year | Foreign exchange reserves at the end of financial year (end March) | Total Increase(+)/ decrease (-) in reserves | Increase/decrease in reserves on a BoP basis | Increase/decrease in reserves due to valuation effect |
|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 |
| 1 | 2006-07 | 199.2 | + 47.6 | +36.6 (76.9%) | + 11.0 (23.1%) |
| 2 | 2007-08 | 309.7 | + 110.5 | +92.2 (83.4%) | + 18.3 (16.6%) |
| 3 | 2008-09 | 252.0 | - 57.7 | -20.1 (34.8%) | - 37.6 (65.2) |
| 4 | 2009-10 | 279.1 | +27.1 | +13.4 (49.4%) | +13.7 (50.6%) |
| 5 | 2010-11 | 304.8 | +25.7 | +13.1 (51.0%) | +12.6 (49.0%) |
| 6 | 2011-12 (up to Sept. 2011) | 311.5 | +6.7 | +5.7 (85.1%) | +1.0 (14.9%) |

***Source*** **: RBI.**
***Note*** **: Figures in parentheses indicate percentage shares of total change.**

**Table 6.5 : Foreign Exchange Reserves of some major countries**

| Sl. No. | Country | Foreign exchange reserves (end Dec. 2011) (US$ billion) |
|---|---|---|
| 1 | 2 | 3 |
| 1 | China | 3181.1 |
| 2 | Japan | 1326.1 |
| 3 | Russia | 499.5 |
| 4 | Brazil | 352.0 |
| 5 | Switzerland | 340.6 |
| 6 | India | 296.7 |
| 7 | China P R Hong Kong | 285.5 |
| 8 | Germany | 262.3 |
| 9 | Singapore | 237.7 |
| 10 | France | 233.6 |

***Source*** **: IMF except for China.**

world, after China, Japan, Russia, Brazil, and Switzerland (Table 6.5) at end December 2011.

6.44 A comparative picture of foreign exchange reserves and import cover, as measured by the ratio of foreign exchange reserves to import of goods and services for select country groups and countries including India, is presented in Table 6.6. The ratio of reserves to import of goods and services of 'Emerging and Developing Economies' witnessed an improvement from 75.5 per cent in 2006 to 109.1 per cent in 2009 before declining to 102.4 per cent in 2010. Among the country groups, the ratio of 'Developing Asia including China and India' increased from 89.5 per cent in 2006 to 145 per cent in 2009, before declining to 131.2 per cent in 2010. In case of 'Middle East and North Africa' the ratio has improved steadily from 104.3 in 2006 to 118.9 in 2010.

## Exchange Rate

6.45 The exchange rate policy is guided by the broad principle of careful monitoring and management of exchange rates with flexibility, while allowing the underlying demand and supply conditions to determine exchange rate movements over a period in an orderly manner. Subject to this predominant objective, RBI intervention in the foreign exchange market is guided by the objectives of reducing excess volatility, preventing the emergence of destabilizing speculative activities, maintaining adequate level of reserves, and developing an orderly foreign exchange market.

6.46 During 2010-11, the average monthly exchange rate of the rupee against the US dollar appreciated by 1.2 per cent from ₹ 45.50 per US dollar in March 2010 to ₹ 44.97 per US dollar in March 2011. Similarly, on point-to-point basis, the average exchange rate of the rupee [average of buying and selling rate of the Foreign Exchange Dealers Association of India (FEDAI)] appreciated by 1.1 per cent from ₹ 45.14 per US dollar on 31 March 2010 to ₹ 44.65 per US dollar on 31 March 2011. This was mainly on account of weakening of the US dollar in the international market in 2010-11.

6.47 The monthly average exchange rate of the rupee vis-a-vis the pound sterling, euro, and Japanese yen, however, depreciated in 2010-11. The monthly average exchange rate of the rupee vis-a-vis the pound sterling depreciated by 5.9 per cent from ₹ 68.44 per pound sterling in March 2010 to ₹ 72.71 in March 2011. Similarly, against the euro and Japanese yen, the monthly average exchange rate of the rupee depreciated by 1.9 per cent from ₹ 61.77 per euro in March 2010 to ₹ 62.97 per euro in March 2011 and by 8.7 per cent from ₹ 50.18 per 100 Japanese yen in March 2010 to ₹ 54.98 per 100 Japanese yen in March 2011.

6.48 On an annual average basis, the rupee appreciated against major international currencies except the Japanese yen in fiscal 2010-11. The annual average exchange rate of the rupee was ₹ 47.44 per US dollar in 2009-10, appreciating by 4.1 per cent to ₹ 45.56 per US dollar in 2010-11. Similarly, the annual average exchange rate of the rupee in 2009-10 was ₹ 75.76 per pound sterling and ₹ 67.03 per euro, which appreciated by 6.9 per cent and 11.3 per cent to ₹ 70.87 per pound sterling and ₹ 60.21 per euro respectively during 2010-11. The annual average exchange rate of the rupee per Japanese yen however depreciated by 4.1 per cent from ₹ 51.11 per 100 Japanese yen in 2009-10 to ₹ 53.27 per 100 Japanese yen in 2010-11.

6.49 In the current fiscal, there are two distinct phases in the exchange rate of the rupee. The rupee continued exhibiting a two-way movement with an appreciating trend till about July 2011, after which the trend reversed and it started declining sharply from September 2011 onwards, due to factors relating to the uncertain global economy.

6.50 On month-to-month basis the rupee depreciated by 14.6 per cent from the level of ₹ 44.97 per US dollar in March 2011 to ₹ 52.68 per US dollar in December 2011. On point-to-point basis, it depreciated by 16.2 per cent from ₹ 44.65 per US

**Table 6.6 : International Comparison of Foreign Exchange Reserves (US$ billion) and Ratio of Reserves to Imports of Goods and Services**

| Sl. No. | Country / Country Group | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 (Projection) | 2012 (Projection) |
|---|---|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| **I** | **Country** | | | | | | | |
| 1 | Russia | 296.2 | 467.6 | 412.7 | 417.8 | 454.5 | 527.4 | 582.5 |
| | | (141.7) | (165.5) | (112.3) | (164.8) | (141.6) | (129.4) | (130.2) |
| 2 | China | 1069.5 | 1531.3 | 1950.3 | 2417.9 | 2889.6 | 3479.5 | 4112.7 |
| | | (125.4) | (148.0) | (158.2) | (217.2) | (190.0) | (188.4) | (195.4) |
| 3 | India | 171.3 | 267.6 | 248.0 | 266.2 | 291.5 | 319.7 | 354.9 |
| | | (75.5) | (95.1) | (71.3) | (73.8) | (66.4) | (62.1) | (60.3) |
| 4 | Brazil | 85.2 | 179.5 | 192.9 | 237.4 | 287.5 | 366.1 | 412.9 |
| | | (70.7) | (113.8) | (87.6) | (135.9) | (117.7) | (120.3) | (128.0) |
| 5 | Mexico | 76.3 | 87.1 | 95.1 | 99.6 | 120.3 | 140.3 | 150.3 |
| | | (27.4) | (28.5) | (28.5) | (38.7) | (36.8) | (35.9) | (37.1) |
| **II** | **Country Group** | | | | | | | |
| 1 | Developing Asia (excluding China & India) | 248.7 | 330.0 | 335.8 | 393.9 | 488.0 | 581.3 | 658.2 |
| | | (42.6) | (49.1) | (41.7) | (60.6) | (58.3) | (58.2) | (60.6) |

***Source*** **: World Economic Outlook Database, September 2011.**

***Note*** **: 1. Reserves are based on official holding of gold valued at SDR 35 an ounce. This convention results in a marked underestimation of reserves for countries that have substantial gold holdings.**

**2. Figures in parentheses indicate ratios of reserves to imports of goods and services.**

dollar on 31 March 2011 to ₹ 53.26 per US dollar on 30 December 2011. The rupee reached a peak of ₹ 43.94 per US dollar on 27 July 2011, and a low of ₹ 54.23 per US dollar on 15 December 2011 indicating depreciation of 19.0 per cent. Similarly, the monthly average exchange rate of the rupee depreciated by 11.5 per cent against the pound sterling, 9.1 per cent against the euro, and 18.7 per cent against the Japanese yen between March 2011 and December 2011.

6.51 A sharp fall in rupee value may be explained by the supply-demand imbalance in the domestic foreign exchange market on account of slowdown in FII inflows, strengthening of the US dollar in the international market due to the safe haven status of the US treasury, and heightened risk aversion and deleveraging due to the euro area crisis that impacted financial markets across emerging market economies (EMEs). Apart from the global factors, there were several domestic factors that have added to the weakening trend of the rupee, which include increasing CAD and high inflation.

6.52 As the rupee has been under pressure since July 2011, efforts have been made by the RBI to augment supply of foreign exchange and curb speculation in the foreign exchange market to stem rupee decline. These measures are discussed in detail in Box 6.1.

6.53 As a result of these measures, and increase in capital inflows, the depreciating trend in rupee exchange rate reversed. The monthly average exchange rate of the rupee appreciated by 2.6 per cent from ₹ 52.68 per US dollar in December 2011 to ₹ 51.34 per US dollar in January 2012. On point-to-point basis, the average exchange rate of the rupee has appreciated by 9.2 per cent from its lowest value of ₹ 54.23 per US dollar on 15 December 2011 to ₹ 49.67 per US dollar on 31 January 2012.

6.54 The month-wise exchange rate of the rupee against major international currencies and the RBI's sale/purchase of foreign currency in the foreign exchange market during 2011-12 are indicated in Table 6.7.

## Box 6.1 : Recent Policy Initiatives to Stem Slide in Rupee Exchange Rate

A number of steps have been taken recently to stimulate capital inflows and curb speculation in foreign exchange market to stabilize the value of the rupee. Key details are as follows:

**I Measures to increase supply of foreign exchange**

**Trade Credit**

- All-in-cost ceiling for trade credit has been increased from 6 months Libor + 200 basis points (bps) to 6 months Libor + 350 bps.

**ECBs**

- The existing ECB limit under automatic approval route has been enhanced from US$ 500 million to US$ 750 million for eligible corporates. For borrowers in the services sector, the limit was enhanced from US$ 100 million to US$ 200 million.
- All-in-cost ceiling for ECB was revised as under:

| Average maturity period | All-in-cost over 6 months LIBOR* | |
|---|---|---|
| | Existing | Revised |
| 3 years and up to 5 years | 300 bps | 350 bps |
| More than 5 years | 500 bps | 500 bps |

* for the respective currency of credit or applicable benchmark

- The change in the all-in-cost ceiling came into force with effect from 23 November 2011 and is applicable up to 31 March 2012, subject to review thereafter.
- The proceeds of ECBs raised abroad for rupee expenditure in India should be brought immediately. In other words, ECB proceeds meant only for foreign currency expenditure can be retained abroad pending utilization. The rupee funds however will not be permitted to be used for investment in capital marketsor real estate or for inter-corporate lending.

**FII Investment**

- The FII limit for investment in government securities and corporate bonds has been increased by US$ 5 billion each to US$ 15 billion and US $ 20 billion respectively, from earlier limits of US$ 10 billion and US$ 15 billion. The investment limit in long-term infrastructure corporate bonds, however, has been kept unchanged at US$ 25 billion. With this, overall limit for FII investment in corporate bonds and government securities now stands at US$ 60 billion.

**NRI Deposits**

- With effect from close of business on 23 November 2011, ***interest rates on fresh non-resident (external) rupee (NRE) term deposits*** for one to three years maturity increased to Libor/SWAP + 275 bps. The interest rates will also be applicable to deposits with maturity period exceeding three years and to deposits renewed after their present maturity period. ***Interest rate on Foreign Currency Non Resident Bank Deposit [FCNR (B)] deposits*** of all maturities contracted effective from the close of business in India as on 23 November 2011, will be within the ceiling rate of Libor/SWAP rates plus 125 bps for the respective currency/corresponding maturities.

**II Major administrative measures as per RBI Press Release dated 15 December 2011**.

i. Forward contracts involving the rupee as one of the currencies, booked by residents irrespective of the type and tenor of the underlying exposure, once cancelled, cannot be rebooked.

ii. All cash/tom/spot transactions by authorized dealers on behalf of clients will be undertaken for actual remittances/ delivery only and cannot be cancelled / cash settled.

iii. Forward contracts booked by FIIs, once cancelled, cannot be rebooked. They may, however, be rolled over on or before maturity.

iv. The Board of Directors of Authorized Dealers was allowed to fix suitable limits for various treasury functions with net overnight open exchange position and aggregate gap limits required to be approved by the RBI.

   a. Net overnight open position limit (NOOPL) of authorized dealers would be reduced across the board and revised limits in respect of individual banks are being advised to the authorized dealers separately.

   b. Intra-day open position / daylight limit of authorized eealers should not exceed existing NOOPL approved by the RBI.

*Source* : **RBI**

**Table 6.7 : Exchange Rates of Rupee per Foreign Currency and RBI's Sale/Purchase of US Dollar in the Exchange Market during 2010-11 and 2011-12**

| Month | Average exchange rates (₹ per foreign currency)* | | | | RBI Net sale (-) / purchase (+) (US$ million) |
|---|---|---|---|---|---|
| | US dollar | Pound sterling | Euro | Japanese yen** | |
| 1 | 2 | 3 | 4 | 5 | 6 |
| **2010-11 (annual average)** | 45.56 | 70.87 | 60.21 | 53.27 | (+)1690 |
| | (4.1) | (6.9) | (11.3) | (-4.1) | |
| March-2011 | 44.97 | 72.71 | 62.97 | 54.98 | |
| | (1.0) | (0.8) | (-1.4) | (0.1) | |
| **2011-12 (monthly average)** | | | | | |
| April-2011 | 44.37 | 72.72 | 64.25 | 53.31 | - |
| | (1.4) | (-0.02) | (-2.0) | (3.1) | |
| May-2011 | 44.90 | 73.41 | 64.48 | 55.32 | - |
| | (-1.2) | (-0.9) | (-0.4) | (-3.6) | |
| June-2011 | 44.83 | 72.79 | 64.52 | 55.65 | - |
| | (0.2) | (0.9) | (-0.1) | (-0.6) | |
| July-2011 | 44.42 | 71.65 | 63.46 | 55.91 | - |
| | (0.9) | (1.6) | (1.7) | (-0.5) | |
| August-2011 | 45.25 | 74.11 | 64.94 | 58.68 | - |
| | (-1.8) | (-3.3) | (-2.3) | (-4.7) | |
| September-2011 | 47.63 | 75.12 | 65.47 | 62.03 | (-) 845.0 |
| | (-5.0) | (-1.3) | (-0.8) | (-5.4) | |
| October-2011 | 49.26 | 77.49 | 67.45 | 64.11 | (-) 943.0 |
| | (-3.3) | (-3.1) | (-2.9) | (-3.2) | |
| November-2011 | 50.86 | 80.25 | 68.91 | 65.60 | (-) 2,918.0 |
| | (- 3.1) | (- 3.4) | (- 2.1) | (- 2.3) | |
| December-2011 | 52.68 | 82.13 | 69.29 | 67.63 | (-)7809.0 |
| | (- 3.5) | (- 2.3) | (- 0.6) | (- 3.0) | |

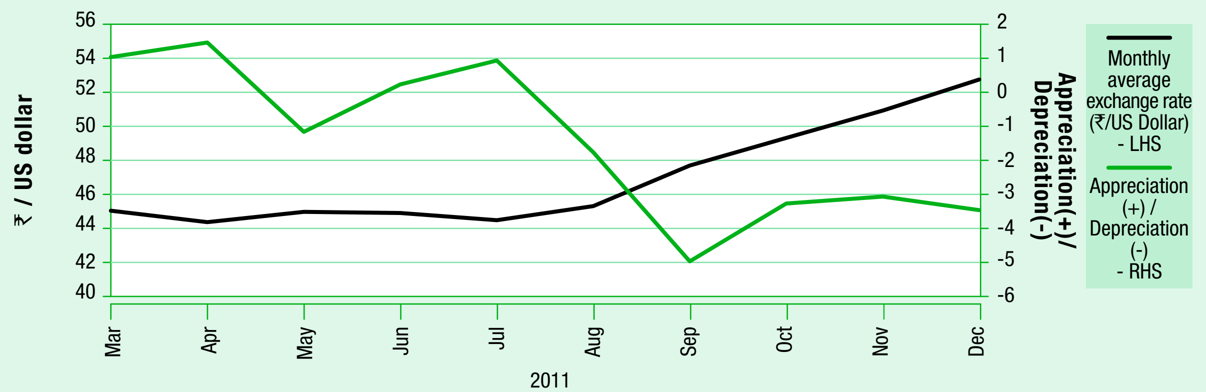
***Source*** **: RBI.**
***Notes :*** *** FEDAI indicative rate; ** Per 100 yen; Figures in parentheses indicate percentage appreciation (+) and depreciation (-) over the previous month / year. Some percentage figures may not tally due to rounding off.**

6.55 The monthly average exchange rate of the rupee per US dollar and its appreciation / depreciation during 2011-12 are depicted in Figure 6.4 .

## Exchange Rate of Other Emerging Economies

6.56 Currency depreciation during 2011-12 was not specific to India. The currencies of other emerging

**Figure 6.4 Monthly average exchange rate (₹/US dollar) during March 2011 to December 2011 and appreciation/depreciation over the previous month**



economies, such as the Brazilian real, Mexican peso, Russian rouble, South Korean won, and South African rand, also depreciated against the US dollar, reflecting the increased demand for the US dollar as a safe haven asset in the wake of the sovereign debt crisis in the euro zone. Between July and November 2011, the Brazilian real has depreciated by 11.9 per cent, Russian rouble by 9.3 per cent, South Korean won by 6.2 per cent, and South African rand by 17.63 per cent.

6.57 The exchange rates of the rupee vis-à-vis select international currencies since 1991-92, year-wise, and during 2011-12, month-wise, are given in Appendix 6.5.

### *Nominal Effective Exchange Rate (NEER) and Real Effective Exchange Rate (REER)*

The NEER and REER indices are used as indicators of external competitiveness of the country over a period of time. NEER is the weighted average of bilateral nominal exchange rates of the home currency in terms of foreign currencies, while REER is defined as a weighted average of nominal exchange rates, adjusted for home and foreign country relative price differentials. REER captures movements in cross-currency exchange rates as well as inflation differentials between India and its major trading partners. The RBI has been constructing six-currency (US dollar, euro for euro zone, pound sterling, Japanese yen, Chinese renminbi, and Hong Kong dollar) and 36-currency NEER and REER indices.

6.58 The six-currency trade-based NEER (base: 2004-05=100) depreciated by 2.1 per cent between March 2010 and March 2011 and by 13.5 per cent between March 2011 and December 2011. As compared to this, the monthly average exchange rate of the rupee appreciated by 1.2 per cent between March 2010 and March 2011, while in the current fiscal it depreciated by 14.6 per cent against the US dollar from ₹ 44.97 per US dollar in March 2011 to ₹ 52.68 per US dollar in December 2011 (Table 6. 8 and Appendix 6.6).

6.59 The six-currency trade-based REER (base: 2004-5=100) of the rupee appreciated by 4.1 per cent between March 2010 and March 2011. During 2011-12 (up to December 2011), the six-currency index showed depreciation of 10.8 per cent over March 2011 largely reflecting depreciation of the rupee in nominal terms, which mainly happened during the period August-December 2011.

**Table 6.8 : Indices of NEER and REER of the Indian Rupee (Six-Currency Trade- based Weights) Base 2004-05 (April-March) = 100**

| Month averages | NEER | Appreciation (+)/ depreciation (-) NEER over Previous Period/Month | REER | Appreciation (+)/ depreciation (-) REER over privious Period/Month |
|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 |
| March 2010 | 92.19 | | 111.43 | |
| March 2011 | 90.29 | -2.1 | 115.97 | 4.1 |
| 2011-12 | | | | |
| April 2011 | 90.43 | 0.2 | 117.43 | 1.3 |
| May 2011 | 89.33 | -1.2 | 116.46 | - 0.8 |
| June 2011 (P) | 89.32 | 0 | 116.13 | - 0.3 |
| July 2011 (P) | 90.34 | 1.1 | 117.72 | 1.4 |
| August 2011 (P) | 88.13 | -2.4 | 115.68 | - 1.7 |
| September 2011 (P) | 85.08 | - 3.5 | 112. 46 | - 2.8 |
| October 2011 (P) | 82.35 | - 3.2 | 108.92 | - 3.1 |
| November 2011 (P) | 80.00 | -2.9 | 105.92 | - 2.8 |
| December 2011(P) | 78.06 | - 2.4 | 103.46 | - 2.3 |

***Source*** **: RBI. P: Provisional**

**Table 6.9 : Exchange Rate of US dollar against International Currencies**

| Month/Year | GBP/USD | Euro/USD | USD/JPY | AUD/USD |
|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 |
| March 2010 | 1.5082 | 1.3543 | 90.885 | 0.9095 |
| March 2011 | 1.60315 | 1.4162 | 83.21 | 1.0336 |
| US$ Appreciation (+) / Depreciation (-) (End March 2010– End March 2011) | -5.9 | - 4.4 | - 8.4 | - 12.0 |
| 2011-12 | | | | |
| April 2011 | 1.6707 | 1.4806 | 81.11 | 1.0964 |
| May 2011 | 1.6445 | 1.4392 | 81.545 | 1.0672 |
| June 2011 | 1.6047 | 1.4503 | 80.535 | 1.0721 |
| July 2011 | 1.6418 | 1.4384 | 76.895 | 1.0990 |
| August 2011 | 1.6246 | 1.4374 | 76.61 | 1.0692 |
| September 2011 | 1.5589 | 1.3391 | 77.14 | 0.9668 |
| October 2011 | 1.6087 | 1.3858 | 78.185 | 1.0536 |
| November 2011 | 1.5712 | 1.3448 | 77.55 | 1.0275 |
| December 2011 | 1.5537 | 1.2942 | 76.95 | 1.0221 |
| US$ Appreciation (+) / Depreciation (-) (End March 2011– End December 2011) | 3.2 | 9.4 | - 7.5 | 1.1 |

***Source*** **: RBI.**

## US dollar exchange rate in international market

6.60 In so far as international currencies are concerned, during 2010-11 the US dollar depreciated by 5.9 per cent against the pound sterling, 4.4 per cent against the euro, 8.4 per cent against the Japanese yen, and 12.0 per cent against the Australian dollar. In the current fiscal (up to end December 2011), the US dollar appreciated by 3.2 per cent against the pound sterling, 9.4 per cent against the euro, and 1.1 per cent against the Australian dollar. However, it depreciated by 7.5 per cent against the Japanese yen (Table 6. 9).

## External Debt

6.61 At end March 2011, India's external debt stock was US$ 306.4 billion (₹ 13,68,477 crore) recording an increase of US$ 45.4 billion (17.4 per cent) over the end March 2010 level of US$ 261.0 billion (₹ 11,78,994 crore). Component-wise, long-term debt increased by 15.7 per cent to US$ 241.4 billion at end March 2011 from US$ 208.7 billion at end March 2010 while short-term debt based on original maturity, showed an increase of 24.2 per cent to US$ 65.0 billion from US$ 52.3 billion at end March 2010. Appendices 8.4(A) and 8.4(B) present the disaggregated data on India's external debt outstanding for the period from March 2001 to September 2011 in Indian rupee and US dollar terms respectively.

6.62 India's external debt stock increased by US$ 20.2 billion (6.6 per cent) to US$ 326.6 billion at end September 2011 over end March 2011 estimates of US$ 306.4 billion. This increase was primarily on account of higher commercial borrowings and short-term debt, which together contributed over 80 per cent of the total increase in external debt. The rise in short-term trade credits is in line with the increase in imports associated with reasonably strong domestic economic activity.

6.63 The maturity profile of India's external debt indicates the dominance of long-term borrowings. Long-term external debt at US$ 255.1 billion at end September 2011, accounted for 78.1 per cent of total external debt. Long-term debt at end September 2011 increased by US$ 13.6 billion (5.6 per cent) over the end March 2011 level, while short-term debt (original maturity) registered an increase of US$ 6.5 billion (10.1 per cent) (Table 6.10.).

**Table 6.10 : India's External Debt Stock**

| At end-March | In US$ million | | | In ₹ crore | | |
|---|---|---|---|---|---|---|
| | Long-term | Short-term | Total | Long-term | Short-term | Total |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 2005 | 116279 | 17723 | 134002 | 508777 | 77528 | 586305 |
| 2006 | 119575 | 19539 | 139114 | 533367 | 87155 | 620522 |
| 2007 | 144230 | 28130 | 172360 | 628771 | 122631 | 751402 |
| 2008 | 178669 | 45738 | 224407 | 714409 | 182881 | 897290 |
| 2009 | 181185 | 43313 | 224498 | 921469 | 220656 | 1142125 |
| 2010 | 208685 | 52329 | 261014 | 942806 | 236188 | 1178994 |
| 2011PR | 241448 | 64990 | 306438 | 1078330 | 290147 | 1368477 |
| 2011 (end-June) PR | 249010 | 68474 | 317484 | 1116205 | 306248 | 1422453 |
| 2011 (end-Sept.) QE | 255071 | 71530 | 326601 | 1247863 | 349889 | 1597752 |

***Source*** **: Ministry of Finance and RBI**
***Note*** **: PR : Partially Revised QE : Quick Estimates.**

6.64 Under long-term debt, components such as commercial borrowings, NRI deposits, and multilateral borrowings taken together accounted for 61.3 per cent of total external debt at the end of September 2011 while other long-term debt components (bilateral borrowings, export credit, IMF, and rupee debt) accounted for 16.8 per cent. Thus long-term debt, taking into account all the components, accounted for 78.1 per cent of total external debt, while the remaining (21.9 per cent) was short-term debt at end September 2011 (Table 6.11.).

6.65 The currency composition of India's total external debt shows that the share of US dollar denominated debt was the highest in external debt stock at 55.8 per cent at end September 2011, followed by Indian rupee (18.2 per cent), Japanese yen (12.1 per cent), SDR (9.1 per cent), and euro (3.5 per cent). The currency composition of government (sovereign) debt indicates predominance of SDR denominated debt (37.3 per cent), which is attributable to borrowing from the IDA, i.e. the soft loan window of the World Bank under the multilateral agencies, and SDR allocations by the IMF. The share

**Table 6.11 : Composition of External Debt** (per cent of total external debt)

| Sl. No. | Component | March 2010 PR | March 2011 PR | June 2011 PR | September 2011 QE |
|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 |
| 1 | Multilateral | 16.4 | 15.8 | 15.6 | 15.0 |
| 2 | Bilateral | 8.7 | 8.4 | 8.3 | 8.4 |
| 3 | IMF | 2.3 | 2.1 | 2.0 | 2.0 |
| 4 | Export credit | 6.5 | 6.1 | 5.9 | 6.0 |
| 5 | Commercial borrowings | 27.1 | 29.0 | 29.5 | 30.3 |
| 6 | NRI deposits | 18.3 | 16.9 | 16.6 | 16.0 |
| 7 | Rupee debt | 0.6 | 0.5 | 0.5 | 0.4 |
| 8 | Long-term debt (1 to 7) | 79.9 | 78.8 | 78.4 | 78.1 |
| 9 | Short-term debt | 20.1 | 21.2 | 21.6 | 21.9 |
| 10 | Total external debt (8+9) | 100.0 | 100.0 | 100.0 | 100.0 |

***Source*** **: Ministry of Finance and RBI. PR : Partially Revised. QE : Quick Estimates.**

**Table 6.12 : Currency Composition of India's External Debt and Sovereign External Debt**

| Sl. No. | Currency | Total external debt March 2010 | March 2011PR | June 2011PR | Sept. 2011QE | Sovereign external debt March 2010 | March 2011PR | June 2011PR | Sept. 2011QE |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| 1 | US dollar | 53.2 | 53.6 | 54.3 | 55.8 | 26.5 | 26.8 | 26.7 | 26.5 |
| 2 | SDR | 10.7 | 9.7 | 9.5 | 9.1 | 41.7 | 38.1 | 38.2 | 37.3 |
| 3 | Indian rupee | 18.7 | 19.5 | 19.1 | 18.2 | 8.9 | 12.4 | 12.2 | 12.5 |
| 4 | Japanese yen | 11.5 | 11.4 | 11.1 | 12.1 | 18.6 | 18.8 | 18.9 | 19.9 |
| 5 | Euro | 3.6 | 3.7 | 3.7 | 3.5 | 4.3 | 3.9 | 3.9 | 3.8 |
| 6 | Pound sterling | 1.8 | 1.7 | 1.7 | 0.8 | 0.0 | 0.0 | 0.0 | 0.0 |
| 7 | Others | 0.5 | 0.5 | 0.6 | 0.5 | 0.0 | 0.0 | 0.0 | 0.0 |
| | **Total** | **100.0** | **100.0** | **100.0** | **100.0** | **100.0** | **100.0** | **100.0** | **100.0** |

***Source*** **: Ministry of Finance and RBI.**

***Note*** **: PR : Partially Revised QE-Quick Estimates.**

of US dollar-denominated debt was 26.5 per cent followed by Japanese yen denominated (19.9 per cent) (Table 6.12.).

6.66 Under India's external debt, government (sovereign) external debt stood at US$ 79.3 billion, while non-government debt amounted to US$ 247.3 billion at end September 2011. The share of government external debt in total external debt declined from 25.5 per cent at end March 2011 to 24.3 per cent at end September 2011. The ratio of government debt to GDP also posted a decline and remained in the range of 4.6 to 5.1 per cent over the past three years.

6.67 Over the years, India's external debt stock has witnessed structural change in terms of composition. The share of concessional in total debt has declined due to the shrinking share of official creditors and government debt and the surge in non-concessional private debt. The proportion of concessional in total debt declined from 42.9 per cent (average) during the period 1991-2000 to 28.1 per cent in 2001-10 and further to 14.7 per cent at end September 2011. The rising share of non-government debt is evident from the fact that such debt accounted for 65.6 per cent of total debt during the 2000s vis-a`-vis 45.3 per cent in the 1990s. Non-government debt accounted for over 70 per cent of total debt in the last five years and stood at 75.7 per cent at end September 2011.

6.68 The share of ECBs in India's total external debt has increased substantially over the past few years. While between end March 2001 and end March 2006, the share of ECBs in total external debt declined from 24.1 per cent to 19.0 per cent, the compound annual growth in such borrowings was 1.7 per cent. However, between end March 2006 and end March 2011, ECBs have registered a compound annual growth rate of 27.4 per cent with the share in total external debt climbing up to 30.3 per cent at end September 2011. The increase in ECBs in the recent period caused some concern given the depreciation of the rupee as it would mean a higher debt service burden in rupee terms that could impact profitability and the balance sheets of corporate borrowers.

6.69 The key external debt indicators are presented in Table 6.13. India's foreign exchange reserves provided a cover of 95.4 per cent to the total external debt stock at end September 2011 vis-à-vis 99.5 per cent at end March 2011. The ratio of short-term external debt to foreign exchange reserves was at 22.9 per cent at end September 2011 as compared to 21.3 per cent at end March 2011. The ratio of concessional debt to total external debt declined steadily and worked out to 14.7 per cent at end September 2011 as against 15.5 per cent at end March 2011.

6.70 India's external debt has remained within manageable limits as indicated by the external debt to GDP ratio of 17.8 per cent and debt service ratio of 4.2 per cent in 2010-11. This has been possible due to an external debt management policy of the government that emphasizes monitoring long- and short-term debt, raising sovereign loans on concessional terms with long maturities, regulating ECBs through end-use and all-in-cost restrictions, and rationalizing interest rates on NRI deposits.

**Table 6.13 : India's Key External Debt Indicators (per cent)**

| Year | External Debt (US$ billion) | Total External Debt to GDP | Debt-Service Ratio | Foreign Exchange Reserves to Total External Debt | Concessional Debt to Total External Debt | Short-term External Debt* to Foreign Exchnage Reserves | Short-term External Debt* to Total Debt |
|---|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| 1990-91 | 83.8 | 28.7 | 35.3 | 7.0 | 45.9 | 146.5 | 10.2 |
| 1995-96 | 93.7 | 26.9 | 26.2 | 23.1 | 44.7 | 23.2 | 5.4 |
| 2000-01 | 101.3 | 22.5 | 16.6 | 41.7 | 35.4 | 8.6 | 3.6 |
| 2005-06 | 139.1 | 16.8 | 10.1# | 109.0 | 28.4 | 12.9 | 14.1 |
| 2006-07 | 172.4 | 17.5 | 4.7 | 115.6 | 23.0 | 14.1 | 16.4 |
| 2007-08 | 224.4 | 18.0 | 4.8 | 138.0 | 19.7 | 14.8 | 20.4 |
| 2008-09 | 224.5 | 20.3 | 4.4 | 112.1 | 18.7 | 17.2 | 19.2 |
| 2009-10 | 261.0 | 18.3 | 5.5 | 106.9 | 16.8 | 18.8 | 20.0 |
| 2010-11PR | 306.4 | 17.8 | 4.2 | 99.5 | 15.5 | 21.3 | 21.2** |
| End-June 2011 PR | 317.5 | - | 4.6 | 99.6 | 15.1 | 21.7 | 21.6 |
| End-Sept. 2011 QE | 326.6 | - | - | 95.4 | 14.7 | 22.9 | 21.9 |

***Source*** **: Ministry of Finance and RBI.**

***Notes*****: - Not worked out for the broken period. PR : Partially Revised QE-Quick Estimates.**

***: Short-term debt is based on original maturity.**

****: Based on residual maturity, the short-term debt (US$ 129.1 billion) accounted for 42.2 per cent of total external debt at end March 2011 (RBI Press Release, dated 30 June 2011). Short-term debt by residual maturity comprises all the components of short-term debt with original maturity of up to one year and amounts falling due under long-term debt including NRI deposits during the one-year reference period.**

**#: Works out to 6.3 per cent, with the exclusion of India millennium deposits (IMDs) repayments of US$ 7.1 billion and prepayment of US$ 23.5 million.Debt-service ratio is the proportion of gross debt service payments to external current receipts (net of official transfers).**

## International Comparison

6.71 A cross-country comparison of external debt of twenty most indebted developing countries, based on the data given in the World Bank's Global Development Finance 2012 which contains the debt numbers for the year 2010 and has a time lag of two years, showed that India was the *fifth* most indebted country, after the China, the Russian Federation, Brazil, and Turkey in 2010 in terms of stock of external debt. The ratio of India's external debt stock to gross national income (GNI) at 16.9 per cent was fourth lowest, with China having the lowest ratio at 9.3 per cent (Table 6.14.).

6.72 In terms of the cover of external debt provided by foreign exchange reserves, India's position was fifth highest at 103.5 per cent after China, Thailand, Malaysia, and Russia. A comparison of the share of short-term debt in total external debt across countries reveals that India's position was eighth lowest, with Pakistan having the lowest ratio.

## Challenges and Outlook

6.73 A trade deficit of more than 8 per cent of GDP and CAD of more than 3 per cent is a sign of growing imbalance in the country's balance of payments. There is scope therefore to discourage unproductive imports like gold and consumer goods to restore balance. In this respect, some weakening of the rupee is a positive development, as it improves trade balance in the long run by increasing export competitiveness and lowering imports.

6.74 High trade and current account deficits, together with high share of volatile FII flows are making India's BoP vulnerable to external shocks. Greater attention therefore has to be given to improving the composition of capital flows towards FDI.

**Table 6.14 : International Comparison of Top Twenty Developing Debtor Countries, 2010**

| Sl | Countries | Total External Debt Stock (US$ million) | Total Debt to GNI (per cent) | Short-term to Total External Debt (per cent) | Foreign Exchange Reserves to Total Debt (per cent) |
|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 |
| 1 | China | 548551 | 9.3 | 63.4 | 531.2 |
| 2 | Russian Federation | 384740 | 26.9 | 10.1 | 124.6 |
| 3 | Brazil | 346978 | 16.9 | 18.9 | 83.2 |
| 4 | Turkey | 293872 | 40.4 | 26.6 | 29.3 |
| 5 | India | 290282 | 16.9 | 19.4 | 103.5 |
| 6 | Mexico | 200081 | 19.5 | 19.5 | 60.3 |
| 7 | Indonesia | 179064 | 26.1 | 17.5 | 53.7 |
| 8 | Argentina | 127849 | 36.1 | 27.4 | 40.8 |
| 9 | Romania | 121505 | 76.4 | 20.6 | 39.5 |
| 10 | Kazakhstan | 118723 | 94.3 | 7.6 | 23.8 |
| 11 | Ukraine | 116808 | 85.9 | 22.7 | 29.6 |
| 12 | Chile | 86349 | 45.9 | 30 | 32.2 |
| 13 | Malaysia | 81497 | 35.4 | 43 | 130.7 |
| 14 | Philippines | 72337 | 36.2 | 8.7 | 86.2 |
| 15 | Thailand | 71263 | 23.4 | 54 | 241.4 |
| 16 | Colombia | 63064 | 22.8 | 13 | 44.5 |
| 17 | Pakistan | 56773 | 31.3 | 4 | 30.4 |
| 18 | Venezuela | 55572 | 14.3 | 27.8 | 53.4 |
| 19 | Bulgaria | 48077 | 104.8 | 32 | 35.8 |
| 20 | South Africa | 45165 | 12.7 | 27.2 | 97 |

***Source*** **: World Bank, Global Development Finance 2012.**

***Note*** **: Countries are arranged based on the magnitude of debt presented in Column 3 in the Table.**

6.75 The rupee has experienced high volatility in the last few years. Such volatility impairs investor confidence and has implications for corporate balance sheets and profitability in case of high exposure to ECBs when currency is depreciating. A more aggressive stance to check rupee volatility is therefore necessary.

6.76 The size of foreign exchange reserves could be a constraining factor in checking depreciation of local currency in the event of external shock and reversal of capital. It is therefore imperative that during times of surge in capital flows, when currency is under pressure to appreciate, measures are taken to build up reserve levels.

# International Trade

7

CHAPTER

*Just when the world economy and trade, reeling under the jolt given by the 2008 global economic crisis started recovering with output and trade in many developed and emerging economies reaching pre-crisis levels and in some countries even surpassing pre-crisis trends, came the second shock in the form of the crisis in the euro area and slowdown in the US. The structural sovereign debt crisis in the euro zone area and the fiscal imbalance in the US which led to the present setback emanated from the earlier crisis. The tumultuous recession-ridden years of 2008 and 2009 seem to be re-emerging with fall in world trade being steeper than the decline in real gross domestic product (GDP). India's exports which had surpassed not only pre-crisis levels but also pre-crisis trends have started feeling the heat of this second global downturn which has come in quick succession to the first, though the country is in a better position than many others to weather the crisis.*

## World Trade

7.2 World trade value, which fell sharply from US$ 16 trillion in 2008 to US$ 12.4 trillion in 2009, recovered to US$ 15.1 trillion in 2010 though it was still below the pre-crisis level. World trade volume growth also picked up sharply to 12.7 per cent in 2010 from -10.7 per cent in 2009, though this was also still below pre-crisis growth. In the absence of the earlier low base effect, it moderated to 6.9 per cent in 2011 (Table 7.1).

7.3 In the first half of 2011, world trade had reached US$ 8.7 trillion with a value growth of 23.1 per cent. But with the escalating euro area crisis entering a perilous new phase in the fourth quarter of 2011,

**Table 7.1 : Trends in growth in trade volumes**

(per cent change)

| | | | Projections | | Difference from Sept. 2011 WEO Projections | |
|---|---|---|---|---|---|---|
| | 2010 | 2011 | 2012 | 2013 | 2012 | 2013 |
| **World trade volume (goods and services)** | **12.7** | **6.9** | **3.8** | **5.4** | **-2.0** | **-1.0** |
| **Imports** | | | | | | |
| Advanced economies | 11.5 | 4.8 | 2.0 | 3.9 | -2.0 | -0.8 |
| Emerging and developing economies | 15.0 | 11.3 | 7.1 | 7.7 | -1.0 | -1.0 |
| **Exports** | | | | | | |
| Advanced economies | 12.2 | 5.5 | 2.4 | 4.7 | -2.8 | -0.8 |
| Emerging and developing economies | 13.8 | 9.0 | 6.1 | 7.0 | -1.7 | -1.6 |

***Source*** **: IMF, WEO, January 2012.**

world trade volume growth is expected to decelerate to 3.8 per cent in 2012 as per the International Monetary Fund's (IMF), World Economic Outlook (WEO), January 2012. This near halving of trade growth in 2012 is an ominous sign of the impending crisis as in 2008.

7.4 With the IMF moderating its growth projections of world output to 3.3 per cent in 2012 and 3.9 per cent in 2013 and with limited policy options in their armoury, the advanced economies are expected to grow at 1.2 per cent in 2012. This is also reflected in their expected import and export trade volume growths at 2.0 and 2.4 per cent respectively. The emerging and developing economies are expected to grow at a relatively better rate of 5.4 per cent in 2012 with import and export volume growths at 7.1 per cent and 6.1 per cent respectively.

## Trade Credit

7.5 Trade credit, both its availability and cost is an important barometer of international trade. There have been many ups and downs on this front in recent years.

### Trade Credit: International Scenario

7.6 According to the latest quarterly survey conducted by the Institute of International Finance (IIF) in the second half of September 2011, banks domiciled in emerging market economies continued to experience tight bank-lending conditions. The overall index of bank-lending conditions dipped to its weakest ever level in Q3(third quarter) 2011. There has thus been a significant deterioration in emerging market bank-lending conditions over the three quarters of 2011, during which time the overall index has moved from its strongest to its weakest level. The most significant deterioration has occurred in funding conditions facing banks in emerging economies. While local funding conditions are broadly unchanged over Q3, funding conditions in international markets have deteriorated significantly, and across all major regions. This is clear evidence of a spillover to emerging economies from the growing problems in mature economies – most notably, the challenges resulting from the severe debt problems in the euro area.

7.7 Conditions for international trade finance have also been adversely affected by current unstable financial conditions. Although the overall diffusion index for international trade finance conditions is still almost above the 50 threshold level (the reading is 49.3 for Europe), the mood is weaker than in the previous quarter. ( A diffusion index reading of above 50 means greater strength, below 50 means weakness, and 50 is a neutral reading.) In Q3 2011, 23 per cent of banks said conditions for international trade finance had improved, whereas it was 44 per cent in Q2(second quarter) 2011. The strongest improvement was witnessed in Asia. Demand for international trade finance has deteriorated slightly in Europe, while it remained robust in the other regions. In Europe, 17 per cent of the participants said that the demand decreased over the last three quarters. On the supply side, banks in Latin America reported a decline in willingness to supply trade finance, while the supply conditions continued to improve in Africa and the Middle East (AFME) and Asia. Overall, 19 per cent of banks acknowledged improvement in supply conditions (as against 42 per cent in Q2 2011).

### Trade Credit: Indian scenario

7.8 Reflecting improved global financial conditions, the gross inflow of short-term trade credit to India had reached US$ 75.7 billion during 2010-11, which was 42.2 per cent higher than recorded during 2009-10. Trade credit at US$ 50.6 billion continued to show an uptrend in the first half of 2011-12 and grew by 43.5 per cent as compared to 59.8 per cent in the first half of 2010-11. However, growth in outflow on account of trade credit was higher at 57.7 per cent in the first half of 2011-12 as against 28.1 per cent in the first half of 2010-11. As a result, net inflow was marginally lower at 5.9 billion in the first half of 2011-12 as compared to US$ 6.9 billion in the first half of 2010-11.

7.9 Export credit growth has decelerated to 8.4 per cent in 2011-12 (up to 30 December 2011) over end March 2011 as against 22.2 per cent growth in the full financial year (FY) 2010-11. Export credit as a per cent of net bank credit (NBC) has been decelerating over the years and accounted for only 4.2 per cent as on 30 December 2011 compared to the 9.8 per cent as on 24$^{th}$ March 2000 (Table 7.2).

7.10 As concerns relating to the euro area crisis have intensified since September 2011, the downward risks to trade credit in the coming quarters seem to have increased. Keeping in view the tight liquidity conditions and widening of credit spreads due to recent developments in international financial markets, on 15 November 2011 the ceiling rate on export credit in foreign currency by banks was increased to London Interbank Offered Rate (LIBOR)

**Table 7.2 : Export Credit**

| Outstanding as on | Export Credit (₹ Crore) | Variations (Per cent) | Export credit as per cent of NBC |
|---|---|---|---|
| 24 March 2000 | 39118 | 9.0 | 9.8 |
| 22 March 2002 | 42978 | -0.8 | 8.0 |
| 21 March 2003 | 49202 | 14.5 | 7.4 |
| 19 March 2004 | 57687 | 17.2 | 7.6 |
| 18 March 2005 | 69059 | 19.7 | 6.3 |
| 31 March 2006 | 86207 | 24.8 | 5.7 |
| 30 March 2007 | 104926 | 21.7 | 5.4 |
| 28 March 2008 | 129983 | 23.9 | 5.5 |
| 27 March 2009 | 128940 | -0.8 | 4.6 |
| 26 March 2010 | 138143 | 7.1 | 4.3 |
| 25 March 2011 | 168841 | 22.2 | 4.3 |
| 30 December 2011 | 183004 | 8.4* | 4.2 |

***Source*** **: Reserve Bank of India (RBI).**

***Notes*** **:**

***Variation over 25 March 2011.**

**Data pertain to all scheduled commercial banks excluding regional rural banks (RRBs) availing of export credit refinance from the Reserve Bank of India (RBI).**

plus 350 basis points (bps) from the earlier ceiling rate of LIBOR plus 200 bps with immediate effect and till 31 March 2012, subject to the express condition that the banks will not levy any other charges like service charge and management charge except for recovery towards out-of-pocket expenses incurred. Similar changes were effected in interest rates in cases where EURO LIBOR / EURIBOR has been used as the benchmark. The ceiling interest rate on the lines of credit with overseas banks has also been increased from six months LIBOR / EURO LIBOR / EURIBOR plus 100 basis points to six months LIBOR / EURO LIBOR / EURIBOR plus 250bps. These changes are applicable till 31 March 2012 and would be subject to review thereafter. Similarly, recognizing the fact that domestic importers were experiencing difficulties in raising trade credit within the existing all-in-cost (AIC) ceiling, on 15 November 2011, the Reserve Bank revised the AIC ceiling for trade credits from six months LIBOR plus 200 bps to LIBOR plus 350 basis points for trade credit up to one year as well as that with maturity period of more than one year and up to three years. The AIC ceiling includes arranger fee, upfront fee, management fee, handling/ processing charges, out-of-pocket and legal expenses, if any. The enhancement in AIC ceiling is also applicable up to 31 March 2012 and subject to review thereafter.

## India's Merchandise Trade

7.11 India's exports and imports registered a five- to seven fold increase in the last decade from US$ 44.6 billion and US$ 50.5 billion respectively in 2000-01 to US$251.1 billion and US$369.8 billion in 2010-11 respectively. While the compound annual growth rates (CAGR) of India's exports and imports (in US dollar terms) were 8.2 per cent and 8.4 per cent respectively in the 1990s, they increased to 19.5 per cent and 25.1 per cent during 2000-01 to 2008-09. The resilience of India's trade can be seen from the fact that its export and import growth, which fell to -3.5 per cent and -5 per cent in 2009-10 as a

**Table 7.3 : Trade Performance : Growth in Value, Volume, Unit Values & Terms of Trade**

(Annual per cent change)

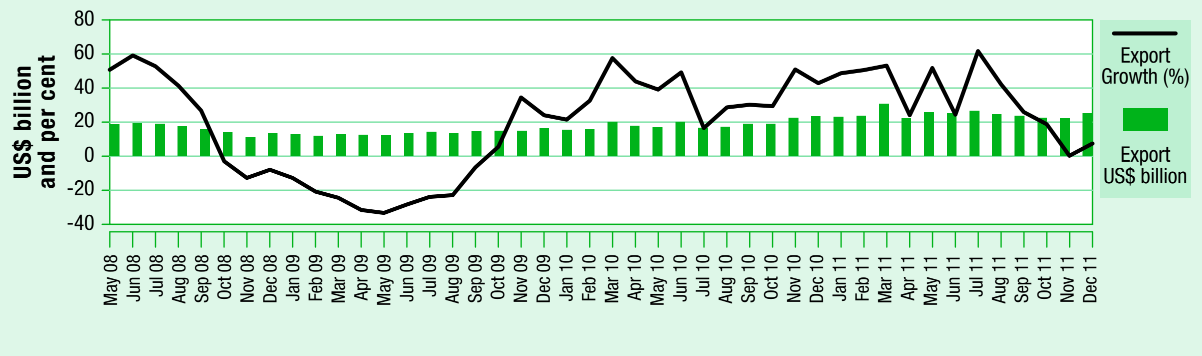
| | Exports | | | | Imports | | | | Terms of Trade | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Value | | | | Value | | | | | |
| | Rupee terms | US$ terms | Volume | Unit Value | Rupee terms | US$ terms | Volume | Unit Value | Net | Income |
| 2001-02 | 2.7 | -1.6 | 0.8 | 1.0 | 6.2 | 1.7 | 4.0 | 2.8 | -2.1 | -1.3 |
| 2002-03 | 22.1 | 20.3 | 19.0 | 2.9 | 21.2 | 19.4 | 5.8 | 14.3 | -9.8 | 7.4 |
| 2003-04 | 15.0 | 21.1 | 7.3 | 7.5 | 20.8 | 27.3 | 17.4 | 3.1 | 3.6 | 11.2 |
| 2004-05 | 27.9 | 30.8 | 11.2 | 14.9 | 39.5 | 42.7 | 17.2 | 18.9 | -3.5 | 7.3 |
| 2005-06 | 21.6 | 23.4 | 15.1 | 6.1 | 31.8 | 33.8 | 16.0 | 14.0 | -6.0 | 8.2 |
| 2006-07 | 25.3 | 22.6 | 10.2 | 13.7 | 27.3 | 24.5 | 9.8 | 15.1 | -1.3 | 8.8 |
| 2007-08 | 14.7 | 29.0 | 7.9 | 5.1 | 20.4 | 35.5 | 14.1 | 1.9 | 2.6 | 10.7 |
| 2008-09 | 28.2 | 13.6 | 9.0 | 16.9 | 35.8 | 20.7 | 20.2 | 13.8 | 2.5 | 11.7 |
| 2009-10 | 0.6 | -3.5 | -1.1 | 1.0 | -0.8 | -5.0 | 9.9 | -10.0 | 12.3 | 11.1 |
| 2010-11 | 35.1 | 40.5 | 43.2 | -5.1 | 23.4 | 28.2 | 10.1 | 11.2 | -14.3 | 22.7 |
| 2011-12[a] | 28.7 | 23.5 | - | - | 34.8 | 29.4 | - | - | - | - |

***Source*** **: Directorate General of Commercial Intelligence and Statistics (DGCI&S), Kolkata**

***Note:*** **[a] 2011-12 (April-January).**

**Volume and unit value index of exports and imports are with new base (1999-2000=100)**

Figure 7.1 Monthly trends in India's exports: values and growth




***Source*** **: Based on DGCI&S and RBI data.**

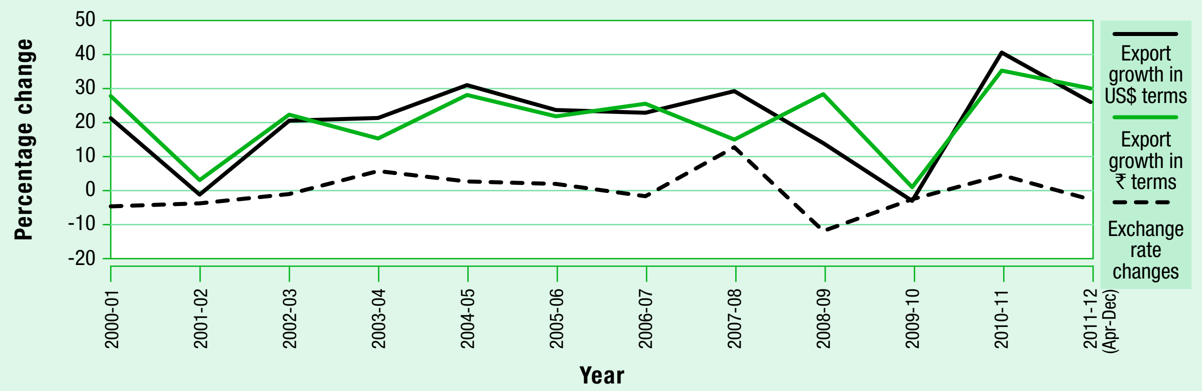
result of the shock from the 2008 global economic crisis, rebounded to 40.5 per cent and 28.2 per cent in 2010-11 (Table 7.3). India not only reached pre-crisis levels in exports, but surpassed pre-crisis trends in export growth rate unlike many other developing and even developed countries (Figure 7.1). India's share in global exports and imports also increased from 0.7 per cent and 0.8 per cent respectively in 2000 to 1.5 per cent and 2.2 per cent in 2010 (1.4 and 2.1 per cent as per WTO). Its ranking in the leading exporters and importers improved from 31 and 26 in 2000, to 20 and 13 in 2010 respectively.

7.12 During the first half of 2011-12, India's exports witnessed a high growth of 40.6 per cent. However, since October 2011 there has been a deceleration in export growth as a result of the crisis originating in the periphery of the euro zone area and spreading to the core economies resulting in a now evident mild recession in the euro area.

7.13 Exports registered a high growth of 61.1 per cent in July 2011. After that growth decelerated to 41.5 per cent, 25.2 per cent, and 18.1 per cent in August, September, and October 2011 respectively. In November 2011, export growth was negative at - 0.5 per cent but in December 2011 and January 2012, it was positive but low at 6.7 per cent and 10.1 per cent respectively. Cumulative exports were at US $242.8 billion, registering a growth of 23.5 per cent during 2011-12 (April- January). During April-December 2011, the export sectors that have done well are petroleum and oil products registering a growth of 55 per cent; gems and jewellery 38.5 per cent; engineering 21.6 per cent; cotton fabrics made ups, etc. 13 per cent; electronics 21.1 per cent; readymade garments 23.7 per cent; and drugs 21.5 per cent.

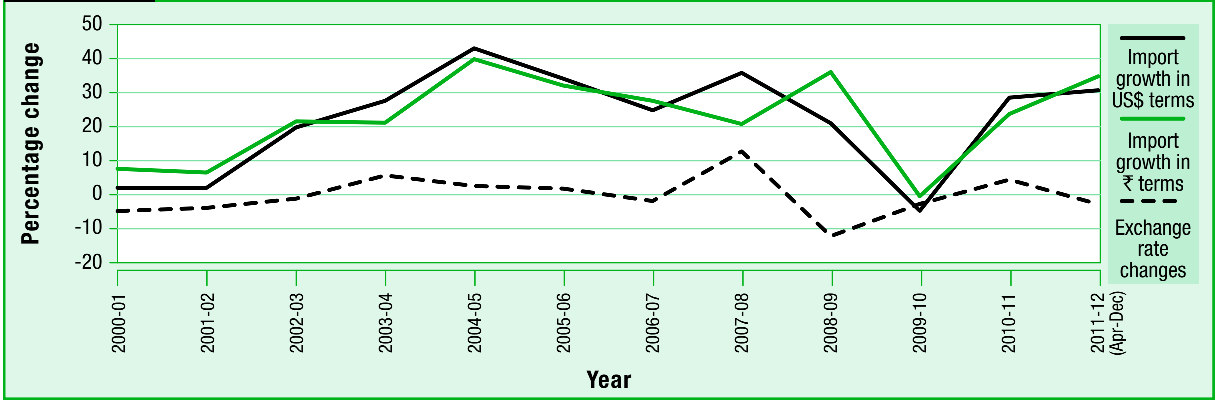
7.14 While export growth in dollar terms decelerated slightly in 2011-12 (April-December) over the corresponding period compared to the growth in 2010-11 full year, it was stable or decelerated less in rupee terms which is a direct reflection of the depreciation of 3.1 per cent in 2011-12 (April-December). On the other hand import growth in rupee terms accelerated more sharply than in dollar terms (Figure 7.2 and 7.3).

Figure 7.2 Export growth and exchange rate changes




***Source*** **: Based on DGCI&S and RBI data.**

Figure 7.3 Import growth and exchange rate changes




***Source*** **: Based on DGCI&S and RBI data.**

7.15 The improvement in export growth of 35.1 per cent in rupee terms in 2010-11 was mainly due to a large improvement in growth in volume (43.2 per cent) despite decline in the growth of unit value index. High growth of exports in volume terms is a positive sign and is mainly due to the growth in machinery and transport equipment (85.1 per cent), manufactured goods classified chiefly by material (41.2 per cent), food and food articles (29.9 per cent), and mineral fuels, lubricants, and related materials (26 per cent). In 2010-11, the growth of unit value index of exports declined to - 5.1 per cent, mainly due to decline in machinery and transport equipment (-18.2 per cent) and beverages and tobacco (-11.1 per cent). A dissection of the export quantum indices country-wise shows that the high growth in this index in 2010-11 is due to the high export quantum growth to China, South Africa, and the UAE.

7.16 The increase in growth of imports in rupee terms in 2010-11 was due to growth in both volume and unit value indices. The volume index witnessed a growth of 10.1 per cent in 2010-11, due to the high growth of manufactured goods classified chiefly by materials (56 per cent), beverages and tobacco (31.1 per cent), and chemicals and related products (8.9 per cent). The unit value index of imports registered a growth of 11.2 per cent mainly due to growth in unit values of crude materials, inedible, except fuels (23 per cent), mineral fuels, lubricants and related materials (17.1 per cent), and machinery and transport equipment (10.1 per cent).

7.17 The net terms of trade, which measures the unit value index of exports as a proportion of unit value index of imports, declined to - 14.3 per cent, due to the positive growth in unit value index of imports and negative growth in unit value index of exports for the first time in this decade. Income terms of trade, reflecting the capacity to import, grew by 22.7 per cent in 2010-11 which is the highest in this decade, despite the highest decadal negative growth in net terms of trade, as the export volume growth was robust.

7.18 India's share in world merchandise exports which had started rising fast since 2004, reached 1.3 per cent in 2009 and 1.5 per cent in 2010. It increased to 1.9 per cent in the first half of 2011, mainly due to the relatively higher Indian export growth of 55 per cent compared to the 23.1 per cent export growth of the world (Table 7.4). The increase in China's share in world exports between 2000 and 2010 at 6.5 percentage points is 48 per cent of the total increase in the share of emerging and developing countries over this period, while India's rise in share of 0.8 percentage points forms only 6 per cent of the total increase. However, China's export growth rate at 31.3 per cent in 2010 and 24 per cent in the first half of 2011 was relatively lower than that of India. Latest monthly growth rates of exports and imports of some of India's major trading partners are not encouraging with import and export growth rates of EU and Hong Kong decelerating and import growth rates of China and Singapore being low (Table 7.5).

7.19 India's merchandise imports which fell to US$288.4 billion with a negative growth of - 5.0 per cent in 2009-10 due to the global recession recovered sharply to US$ 369.8 billion in 2010-11 with a growth of 28.2 per cent. This was due to the increase in growth of petroleum, oil, and lubricant (POL) imports by 21.6 per cent and non-POL imports by 31.1 per cent. POL import growth was high mainly due to increase in import price of the Indian crude oil import basket by 22 per cent in 2010-11 as against - 16.5

**Table 7.4 : Export growth and share in world exports : India and other select countries**

| | Value (US$ billion) | CAGR | Growth rate % Annual | | | Share in world exports (%) | | | | change in shares |
|---|---|---|---|---|---|---|---|---|---|---|
| | 2010 | 2000-08 | 2009 | 2010 | 2011 (Jan-June) | 2000 | 2009 | 2010 | 2011 (Jan-June) | 2010/2000 |
| China | 1578 | 24.4 | -15.9 | 31.3 | 24.0 | 3.9 | 9.7 | 10.5 | 10.1 | 6.5 |
| Korea | 466 | 11.9 | -14.3 | 29.0 | 24.2 | 2.7 | 2.9 | 3.1 | 3.2 | 0.4 |
| Hong Kong | 390 | 7.6 | -12.2 | 22.5 | 15.3 | 3.2 | 2.6 | 2.6 | 2.4 | -0.6 |
| Russia | 400 | 20.6 | -35.7 | 32.0 | 31.5 | 1.7 | 2.5 | 2.7 | 2.9 | 1.0 |
| Singapore | 352 | 11.9 | -20.2 | 30.4 | 21.9 | 2.2 | 2.2 | 2.3 | 2.3 | 0.2 |
| Mexico | 298 | 7.3 | -21.3 | 29.8 | 21.3 | 2.6 | 1.9 | 2.0 | 2.0 | -0.6 |
| Taiwan | 275 | 7.1 | -20.1 | 34.8 | NA | 2.3 | 1.6 | 1.8 | NA | -0.5 |
| India | 223 | 21.0 | -15.2 | 35.1 | 55.0 | 0.7 | 1.3 | 1.5 | 1.9 | 0.8 |
| Malaysia | 199 | 9.9 | -24.9 | 26.2 | 17.6 | 1.5 | 1.3 | 1.3 | 1.3 | -0.2 |
| Brazil | 202 | 17.3 | -22.7 | 32.0 | 32.6 | 0.9 | 1.2 | 1.3 | 1.4 | 0.5 |
| Thailand | 195 | 12.4 | -13.6 | 28.6 | 17.3 | 1.1 | 1.2 | 1.3 | 1.3 | 0.2 |
| Indonesia | 158 | 9.9 | -14.4 | 32.1 | 27.6 | 1.0 | 1.0 | 1.0 | 1.1 | 0.0 |
| South Africa | 82 | 13.9 | -26.0 | 30.6 | 29.2 | 0.5 | 0.5 | 0.5 | 0.5 | 0.1 |
| EDEs | 5894 | 18.0 | -24.4 | 28.4 | 29.2 | 25.4 | 37.1 | 39.1 | 39.8 | 13.6 |
| **World** | **15087** | **12.2** | **-22.7** | **21.9** | **23.1** | **100.0** | **100.0** | **100.0** | **100.0** | **-** |

***Source*** **: Computed from IMF, International Financial Statistics, November 2011.**
***Note*** **: EDEs stand for emerging and developing economies.**

**Table 7.5 : Recent Month-wise Growth Rates of Exports and Imports of some of India's Major Trading Partners**

| | USA | | EU | | China | | Hong Kong | | Japan | | Singapore | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Export | Import | Export | Import | Export | Import | Export | Import | Export | Import | Export | Import |
| 2011m1 | 19.0 | 22.0 | 16.5 | 16.9 | 37.6 | 27.3 | 18.7 | 18.7 | 11.9 | 23.8 | 27.1 | 19.3 |
| 2011m2 | 16.8 | 16.8 | 19.9 | 20.4 | 2.3 | 24.5 | 24.8 | 24.8 | 19.3 | 20.4 | 21.7 | 12.8 |
| 2011m3 | 18.8 | 17.4 | 20.1 | 20.2 | 35.8 | 21.0 | 18.4 | 18.4 | 8.1 | 23.9 | 24.4 | 29.3 |
| 2011m4 | 20.9 | 16.1 | 20.7 | 21.6 | 29.8 | 3.9 | 6.0 | 6.0 | -1.9 | 22.1 | 16.1 | 15.7 |
| 2011m5 | 17.6 | 20.6 | 37.5 | 35.3 | 19.3 | 10.3 | 13.2 | 13.2 | 1.3 | 26.9 | 23.2 | 32.7 |
| 2011m6 | 14.7 | 13.6 | 22.4 | 22.8 | 17.9 | 9.3 | 11.6 | 11.6 | 11.2 | 24.0 | 20.1 | 17.4 |
| 2011m7 | 15.7 | 13.7 | 17.3 | 17.9 | 20.4 | 9.1 | 10.0 | 10.0 | 6.8 | 21.4 | 16.8 | 8.4 |
| 2011m8 | 18.6 | 14.2 | 26.0 | 24.7 | 24.4 | 6.5 | 13.7 | 13.7 | 13.8 | 32.0 | 16.7 | 31.0 |
| 2011m9 | 18.2 | 13.0 | 14.8 | 13.5 | 17.0 | -3.3 | 2.0 | 2.0 | 12.4 | 23.2 | 14.3 | 14.1 |
| 2011m10 | 12.1 | 12.2 | 4.2 | 4.5 | 15.8 | 11.2 | 10.7 | 10.7 | 2.6 | 25.7 | 4.0 | 10.8 |
| 2011m11 | 11.9 | 12.8 | 6.4 | 3.5 | 13.8 | 1.7 | 8.4 | 8.4 | 1.6 | 18.4 | 9.2 | 18.0 |
| 2011m12 | - | - | - | - | 13.4 | 7.4 | 8.1 | 8.1 | -1.3 | 15.9 | 8.5 | 4.9 |

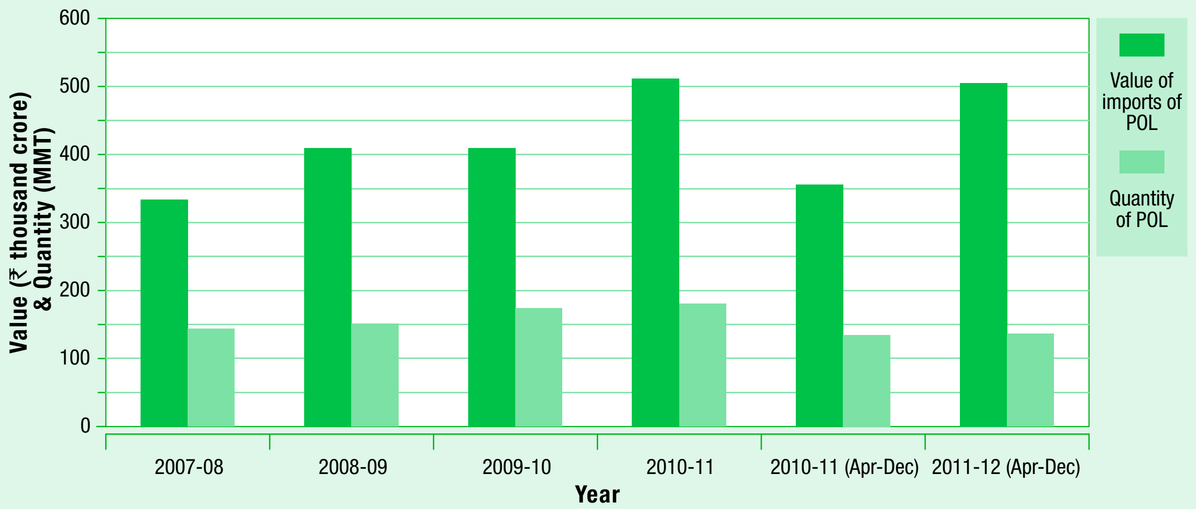
***Source*** **: Computed from WTO data.**

per cent in 2009-10 (Figure 7.4). POL import volume growth decelerated from 15 per cent in 2009-10 to 4 per cent in 2010-11.

7.20 International oil prices (Indian Basket) which reached a high of US$ 132.47/bbl in July 2008 declined sharply to US$40.61 /bbl in December 2008, following the global recession. From 2009 onwards, oil price has been increasing with intermittent volatility reaching US$ 118.46/bbl in April 2011 and falling marginally with volatility in the following months. Till recently, Brent oil price has been hovering around US$105-115/bbl (Figure 7.5).

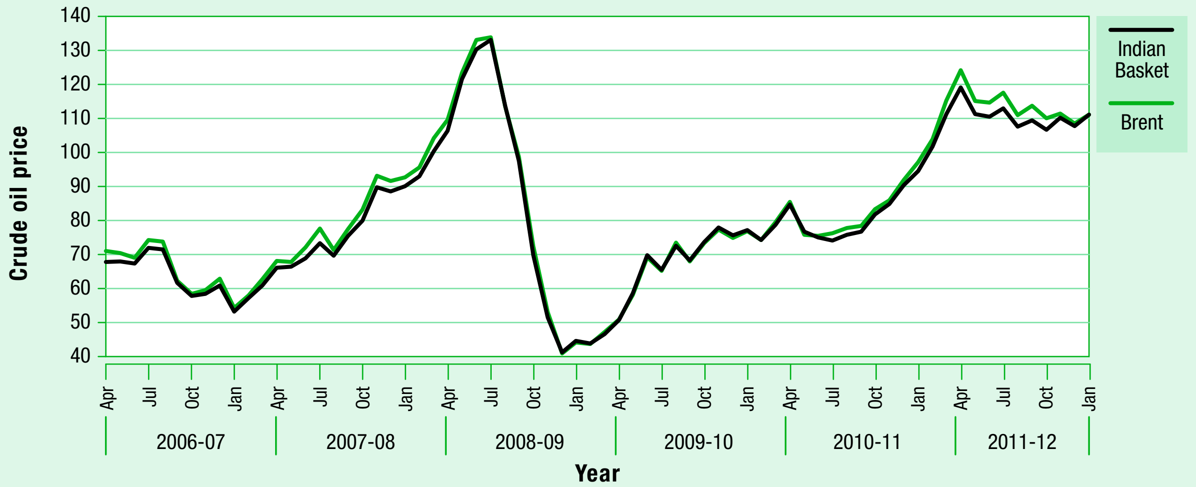
7.21 Non-POL non-bullion imports increased by 29.3 per cent in 2010-11 compared to the negative (-7.9 per cent) growth in 2009-10 reflecting the growing demand for imports for industrial activity and higher demand for imports of inputs needed for exports.

Figure 7.4 **POL Imports**




***Source*** **: Based on MOPNG data.**

Figure 7.5 **Crude oil price (US$/bbl)**




***Source*** **: Based on MOPNG data.**

7.22 Imports in 2011-12 (April-January) at US$391.5 billion registered a growth of 29.4 per cent with estimated growth in 2011-12 (April-December) of the important sectors at 40.4 per cent for POL; 53.8 per cent for gold and silver; 27.7 per cent for machinery; 24 per cent for electronics; 35 per cent for fertilizer and 62 per cent for coal. During 2011-12 (April-January) POL imports at US $ 118 billion, grew by 38.8 per cent. Non-POL imports at US $ 273.5 billion grew by 25.7 per cent. Gold and silver imports of US $ 50 billion grew by 46.2 per cent. Non-POL and non-bullion imports which basically reflect the imports of capital goods needed for industrial activity and imports needed for exports valued at US $ 223 billion grew by 21.7 per cent.

7.23 Trade deficit (on customs basis) increased by 8.2 per cent to US $ 118.6 billion in 2010-11 from US$ 109.6 billion in 2009-10. However, trade deficit for 2011-12 (April-January) at US $ 148.7 billion was 40.4 per cent higher than the US $ 105.9 billion in 2010-11 (April- January). Low export growth and moderate import growth which have led to the high trade deficit in 2011-12 (April-January) have raised the alarm of a possible unmanageable current account deficit. Net POL import growth, which has been positive since 2002-3 and became negative at -8.9 per cent in 2009-10 turned positive again in 2010-11 with a growth of 9.8 per cent. In the first half of 2011-12 the growth was 34 per cent reflecting the higher international crude oil price affecting the

**Table 7.6 : Growth in POL trade and non-POL imports (US$ terms)**

| | Total imports | POL imports | POL exports | Net POL imports | Non- POL imports | Gold & silver imports | Non-POL, non-gold & silver imports |
|---|---|---|---|---|---|---|---|
| 2001-02 | 1.7 | -10.5 | 12.0 | -13.6 | 7.2 | -3.1 | 8.9 |
| 2002-03 | 19.4 | 26.0 | 21.6 | 26.8 | 17.0 | -6.9 | 20.4 |
| 2003-04 | 27.3 | 16.6 | 38.5 | 12.9 | 31.5 | 59.9 | 28.5 |
| 2004-05 | 42.7 | 45.1 | 95.9 | 34.4 | 41.8 | 62.6 | 39.0 |
| 2005-06 | 33.8 | 47.3 | 66.5 | 41.4 | 28.8 | 1.5 | 33.1 |
| 2006-07 | 24.5 | 30.0 | 60.5 | 19.0 | 22.2 | 29.4 | 21.4 |
| 2007-08 | 35.5 | 39.4 | 51.8 | 33.3 | 33.6 | 22.0 | 35.1 |
| 2008-09 | 20.7 | 14.7 | -5.2 | 25.7 | 20.8 | 22.3 | 20.6 |
| 2009-10 | -5.0 | -5.0 | 4.6 | -8.9 | -3.3 | 35.5 | -7.9 |
| 2010-11 | 28.2 | 22.0 | 46.5 | 9.8 | 31.4 | 43.5 | 29.3 |
| 2011-12 (Apr.-Sept.) | 32.7 | 47.7 | 72.7 | 34.0 | 26.8 | 72.8 | 19.1 |

***Source*** **: Computed from DGCI&S data.**

dominant import side more than the export side (Table 7.6). However, with the share of POL in total imports remaining steady at around 31 percent both in 2000-01 and 2011-12 (April-September) and share of POL exports to total exports increasing from 4.3 percent to 20.9 per cent, share of net POL imports in total imports has fallen from 27.2 per cent to 18.4 per cent during this period. The high growth of 53.8 per cent in imports of gold and silver particularly in 2011-12 (April-December) also contributed to the high growth in trade deficit.

## Trade Composition

### *Export composition*

7.24 Great changes in the sectoral composition of India's export basket seen in the 2000s decade have accelerated in the beginning of this decade. While the share of petroleum crude and products increased by 11.8 percentage points during the 10-year period from 2000-1 to 2009-10, it further increased by 4.8 percentage points from 2009-10 to the first half of 2011-12. The share of the other two sectors, i.e. manufactures and primary products fell almost proportionately by 11.6 and 1.1 percentage points respectively during 2000-1 to 2009-10 and 1.4 and 2.2 percentage points from 2009-10 to the first half of 2011-12. The inter-sectoral composition changes within manufactures exports have also been great with the biggest losers being labour-intensive manufactures like textiles, leather and leather manufactures, and handicrafts from 23.6, 4.4, and 2.8 per cent respectively in 2000-1 to 8.7, 1.6, and 0.3 per cent in the first half of 2011-12. The biggest gainer is the engineering goods sector with its share increasing from 15.7 per cent in 2000-1 to 22.2 per cent in the first half of 2011-12. Another sector is electronics, the share of which increased from 2.5 per cent to 3.5 per cent in 2010-11, but fell to 2.9 per cent in the first half of 2011-12. While the share of chemicals and related products increased marginally from 10.4 per cent to 11.6 per cent, that of gems and jewellery fell marginally from 16.6 per cent to 16.1 per cent during 2000-1 to the first half of 2011-12 (Table 7.7 and Appendix Table 7.3 (B)). A point to be noted is that most of the petroleum exports of India are refined exports and qualify for the category of manufactures. Similarly there are many items in the agricultural and allied sector like marine exports and processed foods which are manufactured items. If these are included under the definition of manufactures, then the share of manufactures in total exports has not fallen.

7.25 Export growth was high in 2010-11 and the first half of 2011-12 in case of agriculture and allied products due to export growth in cereals, meat preparations, oil meals, and coffee. Among manufactured exports, engineering goods, gems and jewellery, and chemicals and related products registered high growth, while textiles export growth was moderate (Box 7.1). Export growth of petroleum, crude, and products was also very high due to the high prices of crude oil and also due to increase in refining capacity. Ores and minerals is the only item with negative growth in the first half of 2011-12 due to a ban on export of iron ore by the state governments of Karnataka and Odisha.

7.26 The compositional change from 2000-1 to the first half of 2011-12 can also be seen in the destination-wise exports of major items. While the gain in share of petroleum, crude and products in India's export to the EU has been higher than to US

## Table 7.7 : Composition of exports by major markets

| | Percentage share | | | | | | Growth rate* | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 2000-01 | 2008-09 | 2009-10 | 2010-11 | 2010-11 (Apr.-Sept.) | 2011-12 (Apr.-Sept.) | 2008-09 | 2009-10 | 2010-11 | 2010-11 (Apr.-Sept.) | 2011-12 (Apr.-Sept.) |
| **I Primary Products** | | | | | | | | | | | |
| World | 16.0 | 13.9 | 14.9 | 13.9 | 12.8 | 12.7 | 1.7 | 3.8 | 31.1 | 24.2 | 39.4 |
| USA | 9.4 | 7.2 | 6.8 | 7.5 | 7.6 | 10.9 | 2.9 | -13.5 | 44.2 | 42.5 | 101.6 |
| EU | 13.1 | 8.4 | 8.6 | 7.7 | 8.5 | 9.8 | 1.7 | -5.7 | 16.3 | 15.5 | 51.7 |
| China | 45.2 | 64.3 | 65.7 | 43.3 | 62.9 | 44.1 | -26.0 | 26.9 | 11.3 | 61.7 | -5.9 |
| others | 18.9 | 12.9 | 13.1 | 13.2 | 10.7 | 11.3 | 19.7 | -1.7 | 43.4 | 11.4 | 51.3 |
| (a) Agri & Allied Products | | | | | | | | | | | |
| World | 14.0 | 9.6 | 10.0 | 9.9 | 8.4 | 9.9 | 9.7 | 1.1 | 38.2 | 18.1 | 64.9 |
| USA | 9.0 | 6.0 | 5.8 | 6.6 | 6.5 | 10.1 | 13.1 | -12.1 | 49.7 | 45.1 | 118.1 |
| EU | 11.9 | 6.9 | 7.1 | 6.6 | 7.2 | 7.5 | 6.6 | -6.4 | 21.2 | 17.2 | 38.9 |
| China | 18.9 | 8.3 | 14.8 | 13.1 | 8.1 | 13.7 | -51.9 | 122.9 | 49.2 | 39.5 | 126.6 |
| others | 16.8 | 11.2 | 11.3 | 11.0 | 9.2 | 10.2 | 19.1 | -3.3 | 39.1 | 14.3 | 59.6 |
| (b) Ores and minerals | | | | | | | | | | | |
| World | 2.0 | 4.3 | 4.9 | 4.0 | 4.3 | 2.8 | -12.5 | 9.9 | 16.5 | 37.9 | -10.3 |
| USA | 0.4 | 1.2 | 1.0 | 0.9 | 1.1 | 0.8 | -29.6 | -21.0 | 12.5 | 28.9 | 4.1 |
| EU | 1.3 | 1.4 | 1.5 | 1.1 | 1.4 | 2.3 | -16.7 | -2.6 | -6.8 | 7.2 | 118.6 |
| China | 26.3 | 56.0 | 50.9 | 30.2 | 54.8 | 30.4 | -19.6 | 12.8 | 0.3 | 65.6 | -25.5 |
| others | 2.2 | 1.6 | 1.8 | 2.2 | 1.5 | 1.1 | 24.2 | 9.6 | 69.8 | -3.7 | 1.1 |
| **II Manufactured goods** | | | | | | | | | | | |
| World | 78.8 | 68.9 | 67.2 | 67.9 | 68.6 | 65.8 | 23.1 | -5.9 | 42.0 | 25.5 | 34.9 |
| USA | 90.6 | 90.2 | 89.1 | 87.6 | 88.2 | 82.1 | 7.1 | -8.7 | 28.5 | 31.5 | 30.8 |
| EU | 86.8 | 79.3 | 73.2 | 72.8 | 73.0 | 74.3 | 20.6 | -15.4 | 29.2 | 15.0 | 34.7 |
| China | 54.6 | 30.9 | 32.2 | 51.6 | 35.2 | 43.4 | 14.8 | 29.5 | 170.1 | 12.8 | 65.5 |
| others | 71.4 | 64.5 | 65.1 | 65.4 | 66.8 | 62.6 | 29.6 | -2.5 | 43.3 | 28.5 | 34.5 |
| (a) Textiles incl. RMG | | | | | | | | | | | |
| World | 23.6 | 10.2 | 10.5 | 8.7 | 9.6 | 8.7 | 4.4 | -1.2 | 17.1 | 10.6 | 27.0 |
| USA | 27.2 | 18.4 | 18.4 | 16.3 | 16.8 | 13.8 | -4.8 | -7.6 | 15.9 | 16.0 | 15.2 |
| EU | 29.2 | 18.2 | 18.5 | 15.4 | 15.9 | 16.3 | 7.9 | -6.7 | 7.9 | -3.1 | 35.7 |
| China | 9.3 | 1.5 | 1.7 | 2.1 | 2.8 | 3.2 | 31.6 | 44.1 | 102.9 | 120.4 | 48.9 |
| others | 20.2 | 6.7 | 7.4 | 6.4 | 7.1 | 6.2 | 5.9 | 6.3 | 22.9 | 17.0 | 25.6 |
| (b) Gems & Jewellery | | | | | | | | | | | |
| World | 16.6 | 15.1 | 16.2 | 14.7 | 14.3 | 16.1 | 42.1 | 3.7 | 27.0 | 9.4 | 58.4 |
| USA | 29.3 | 21.7 | 24.2 | 20.7 | 21.2 | 22.3 | -7.7 | 2.8 | 11.9 | 15.6 | 47.6 |
| EU | 11.5 | 8.3 | 6.7 | 6.6 | 6.5 | 8.6 | 24.8 | -26.2 | 29.9 | 14.8 | 75.2 |
| China | 0.0 | 8.0 | 3.8 | 0.4 | 0.7 | 0.7 | 2040.3 | -41.4 | -81.0 | -82.5 | 33.5 |
| others | 14.4 | 16.8 | 19.2 | 17.8 | 16.5 | 18.2 | 60.5 | 10.7 | 32.2 | 9.6 | 59.1 |
| ( c) Engineering Goods | | | | | | | | | | | |
| World | 15.7 | 21.6 | 18.2 | 23.8 | 21.7 | 22.2 | 18.7 | -18.7 | 83.9 | 45.0 | 43.6 |
| USA | 13.4 | 23.9 | 17.1 | 22.4 | 21.9 | 21.3 | 16.1 | -33.9 | 71.1 | 75.6 | 37.0 |
| EU | 14.0 | 25.4 | 20.8 | 22.5 | 22.3 | 21.5 | 25.7 | -25.1 | 40.4 | 22.0 | 27.5 |
| China | 9.9 | 9.4 | 12.4 | 37.3 | 17.3 | 21.3 | -10.0 | 63.6 | 409.2 | 52.2 | 65.3 |
| others | 17.5 | 20.8 | 18.2 | 22.8 | 21.9 | 22.6 | 17.9 | -15.8 | 79.1 | 48.1 | 48.1 |
| (d) Chemical & Related Products | | | | | | | | | | | |
| World | 10.4 | 12.3 | 12.8 | 11.5 | 12.2 | 11.6 | 7.2 | 0.9 | 26.5 | 24.8 | 34.2 |
| USA | 5.7 | 14.8 | 17.2 | 17.1 | 17.3 | 15.1 | 12.8 | 7.4 | 29.9 | 45.0 | 22.5 |
| EU | 9.7 | 13.0 | 12.5 | 12.6 | 13.1 | 13.3 | 7.4 | -11.8 | 30.5 | 28.8 | 34.3 |
| China | 15.5 | 4.9 | 5.1 | 4.3 | 5.2 | 6.5 | -38.0 | 28.1 | 44.3 | 23.4 | 68.2 |
| others | 12.4 | 12.1 | 12.9 | 11.2 | 11.6 | 11.0 | 8.6 | 3.2 | 23.7 | 19.4 | 36.0 |
| (e) Leather & leather mnfrs | | | | | | | | | | | |
| World | 4.4 | 1.9 | 1.9 | 1.5 | 1.7 | 1.6 | 1.5 | -5.5 | 12.1 | 13.9 | 27.3 |
| USA | 3.7 | 1.7 | 1.5 | 1.3 | 1.4 | 1.2 | 16.1 | -17.8 | 12.8 | 15.4 | 23.4 |
| EU | 11.4 | 5.9 | 6.3 | 5.2 | 5.9 | 5.9 | 1.0 | -2.1 | 8.4 | 7.3 | 32.4 |
| China | 1.1 | 0.5 | 0.4 | 0.4 | 0.6 | 0.7 | -10.2 | -2.2 | 49.7 | 58.0 | 48.2 |
| others | 1.6 | 0.7 | 0.7 | 0.6 | 0.7 | 0.5 | -1.6 | -9.9 | 20.4 | 30.4 | 14.4 |
| **III Petroleum, crude & products** | | | | | | | | | | | |
| World | 4.3 | 14.9 | 16.1 | 16.8 | 17.0 | 20.9 | -5.2 | 4.6 | 46.5 | 62.6 | 72.7 |
| USA | 0.0 | 0.8 | 2.3 | 3.7 | 2.7 | 5.9 | -76.2 | 180.3 | 110.8 | 61.9 | 204.7 |
| EU | 0.0 | 10.6 | 16.9 | 18.4 | 17.4 | 15.2 | 5.7 | 45.4 | 41.8 | 68.0 | 14.9 |
| China | 0.0 | 1.1 | 0.8 | 4.5 | 1.0 | 12.8 | -35.1 | -8.3 | 805.8 | 80.1 | 1565.8 |
| others | 8.1 | 20.0 | 19.9 | 20.0 | 20.8 | 25.7 | -4.8 | -3.9 | 43.2 | 61.2 | 77.4 |
| **Total Exports** | | | | | | | | | | | |
| World | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 13.6 | -3.5 | 40.5 | 30.0 | 40.6 |
| USA | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 2.0 | -7.6 | 30.8 | 31.9 | 40.5 |
| EU | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 13.9 | -8.4 | 30.0 | 21.6 | 32.3 |
| China | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | -14.0 | 24.2 | 68.8 | 40.7 | 34.2 |
| others | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 19.0 | -3.4 | 42.6 | 31.4 | 43.5 |

*Source* : Computed from DGCI&S data.
*Growth rate in US dollar terms
*Note* : 1. RMG stands for ready-made garments.
2. Share in a particular item means share of each country in total exports of India to that country.
3. Totals may not add up mainly due to some unclassified items.

## Box 7.1 : India's Major Manufactured Exports

The top four items in India's manufactured exports are engineering goods, gems and jewellery, chemicals and related products, and textiles (see Table 1). Since 2007-8, electronic goods have displaced leather and manufactures from fifth place with the share of the former increasing and the latter decreasing. There has been a gradual shift in India's manufactures exports from labour-intensive sectors like textiles, leather and manufactures, handicrafts, and carpets to capital- and skill-intensive sectors.

Engineering goods exports has seen an almost steady rise in shares from 1999-2000 to the first half of 2011-12 and high growth rates of 84 per cent and 43.6 per cent in 2010-11 and the first half of 2011-12 respectively mainly due to the high growth rates of two major items machinery & instruments and transport equipments besides residual engineering items with very high growth rates. The major markets for Indian engineering exports in 2010-11 were China, the USA, the UAE, Singapore, Saudi Arabia, South Africa, Germany, Sri Lanka, and the UK. All these markets showed tremendous export growth with China topping at 409 per cent.

With the highest growth rate among manufactures at 58.4 per cent in the first half of 2011-12,gems and jewellery, the second major export item, has retained its share of around 16-17 per cent since 2000-1. In 2010-11, this sector accounted for 14.7 per cent of India's total merchandise exports. India is the largest cutting and polishing centre for diamonds in the world. Of the global polished diamond market, India's share is estimated to be 70 per cent in terms of value, 85 per cent in terms of volume, and 92 per cent in terms of pieces. As per the Gem and Jewellery Export Promotion Council (GJEPC), this sector as a whole supports about 34 lakh jobs. The gems and jewellery manufacturing sector consists of large number of small and medium enterprise (SME) units, employing skilled and semi-skilled labour, almost entirely in the unorganized sector.

The share of chemicals and related products has fallen marginally over the years mainly because of the fall in shares of basic chemicals, pharmaceuticals, and cosmetics. The growth in 2010-11 and the first half of 2011-12, however, have been higher by 26.5 per cent and 34.2 per cent respectively. The steady fall in share of the textiles sector to single digits since 2000-1 is mainly due to a fall in shares of ready-made garments and cotton, yarn, fabrics, made-ups, etc. Clearly, India has not been able to utilize the opportunity provided by the phasing out of the Multi Fibre Agreement (MFA) in 2005.

The rise of the electronics sector, though long overdue, is a welcome sign. This is due to the recent policies of the government to help this sector like including many electronic items in the Focus Product Scheme and customs duty exemption to many electronic components. The Tsunami in Japan which led to disruption of supply chains in Japan could also have benefitted India at a time when support measures were taken by India for this sector.

### Table 1 : Performance of Top Four Items in India's Manufactured Exports

| | Shares | | | | CAGR | Growth rate | | |
|---|---|---|---|---|---|---|---|---|
| | 1999-00 | 2010-11 | 2010-11 Apr.-Sept. | 2011-12 Apr.-Sept. | 1999-00 to 2008-09 | 2009-10 | 2010-11 | 2011-12 (Apr.-Sept.) |
| 1. Engineering Goods | 11.9 | 23.8 | 21.7 | 22.2 | 28.0 | -18.7 | 84.0 | 43.6 |
| 1) Machinery | 5.6 | 12.2 | 13.1 | 13.1 | 30.5 | -13.3 | 55.7 | 40.2 |
| a) Machine tools | 0.2 | 0.1 | 0.1 | 0.1 | 20.6 | -26.4 | 12.8 | 18.3 |
| b) Machinery & instruments | 3.2 | 4.8 | 4.9 | 4.6 | 28.1 | -13.3 | 25.2 | 31.6 |
| c) Transport equipments | 2.2 | 7.3 | 8.1 | 8.4 | 33.9 | -12.9 | 86.6 | 45.7 |
| 2) Iron & steel | 2.3 | 2.6 | 2.3 | 2.2 | 24.5 | -39.2 | 80.0 | 31.5 |
| a) Iron & steel bar rod etc | 0.3 | 0.4 | 0.4 | 0.5 | 30.4 | -34.2 | 49.4 | 50.2 |
| b) Primary & semi-finished iron & steel | 2.0 | 2.2 | 1.9 | 1.7 | 23.5 | -40.4 | 87.8 | 27.1 |
| 3) Other engineering items | 4.1 | 9.1 | 6.2 | 7.0 | 25.9 | -21.7 | 145.7 | 56.8 |
| a) Ferro alloys | 0.2 | 1.2 | 1.0 | 0.6 | 43.6 | -43.1 | 234.6 | -14.2 |
| b) Aluminum other than products | 0.4 | 0.4 | 0.3 | 0.2 | 14.5 | 11.3 | 79.2 | 0.3 |
| c) Non-ferrous metals | 0.1 | 3.7 | 1.2 | 1.1 | 60.5 | 5.4 | 323.2 | 29.5 |
| d) Manufacture of metals | 3.3 | 3.8 | 3.7 | 2.9 | 22.5 | -27.2 | 70.5 | 10.6 |
| e) Residual engineering items | 0.1 | 0.1 | 0.1 | 2.1 | 21.3 | -5.9 | 47.4 | 3512.9 |
| 2. Gems & Jewellery | 20.4 | 14.7 | 14.3 | 16.1 | 15.9 | 3.7 | 27.0 | 58.4 |
| 3. Chemicals & Related Products | 13.4 | 11.5 | 12.2 | 11.6 | 19.3 | 0.9 | 26.5 | 34.2 |
| 1) Basic chemicals, pharma & cosmetics | 8.4 | 7.7 | 8.2 | 7.5 | 19.8 | 0.7 | 22.0 | 29.2 |
| 2) Plastics & linoleum | 1.6 | 1.8 | 2.0 | 2.2 | 19.7 | 10.4 | 37.7 | 56.1 |
| 3) Rubber, glass & other products | 2.4 | 2.2 | 2.4 | 2.6 | 18.7 | -0.5 | 33.2 | 51.4 |
| 4) Residual chemicals & allied products | 0.9 | 0.6 | 0.5 | 0.5 | 14.6 | -5.2 | 43.7 | 29.9 |
| 4. TEXTILES | 25.0 | 8.7 | 9.6 | 8.7 | 8.6 | -1.2 | 17.1 | 27.0 |
| 1) Ready-made garments | 13.0 | 4.5 | 4.8 | 4.5 | 9.7 | -2.0 | 4.6 | 29.4 |
| 2) Cotton, yarn, fabrics, made-ups, etc | 8.4 | 2.2 | 2.5 | 2.2 | 3.4 | -11.1 | 48.8 | 22.6 |
| 3) Man made textiles & made-ups, etc | 2.3 | 1.8 | 2.0 | 1.9 | 16.2 | 19.7 | 16.9 | 35.0 |
| 4) Natural silk textiles | 0.6 | 0.1 | 0.1 | 0.1 | 4.9 | -18.4 | 21.2 | -34.4 |
| 5) Wool & woolen mfrs | 0.1 | 0.0 | 0.0 | 0.1 | 8.0 | -10.3 | 16.6 | 59.9 |
| 6) Coir & coir mfrs | 0.1 | 0.1 | 0.1 | 0.1 | 13.9 | 7.7 | -4.9 | 31.3 |
| 7) Jute mfrs | 0.3 | 0.2 | 0.2 | 0.2 | 10.3 | -28.4 | 110.2 | -4.2 |

*Source* : **Computed from DGCI&S data** with an increase of around 17 percentage points, the decrease in share of manufactured goods in India's exports to the EU is also high at around 13.7 percentage points. However, there has been a dramatic rise in the share of petroleum, crude and products in India's exports to China. The share of ores & minerals has started falling in India's exports to China since 2008-09 reaching 30 per cent in the first half of 2011-12 resulting in rise in share of manufactured goods. Among manufactures, the fall in share of textiles to EU and US and 'Others' from 2000-1 to the first half of 2011-12 has been more or less the same at above 10 percentage points. There has been a rise in share of India's exports of engineering goods to all the four markets. While there has been a big jump in the share of this item in India's export to China in 2010-11 and then a moderation, in the case of the other three markets, the share is at a uniform 21-22 per cent range in the first half of 2011-12. While the share of gems and jewellery exports to the US and EU markets have fallen, it has increased in the case of 'Others'. China's share is insignificant in this item. The share of chemicals and related products in India's exports registered a near 10 percentage point increase to the US market and around 3.5 percentage point increase to the EU market (Table 7.7).

### *Export diversification*

7.27 Similar to 2009, India had a global export share of 1 per cent or more in 48 out of a total of 99 commodities at the two-digit harmonized system (HS) level. However, its share of 5 per cent or more in 12 items in 2009 has declined to 10 items with the categories 'bird skin, leather, artificial flowers, human hair' and 'ores, slag, and ash' moving out of the list (Table 7.8). Except pearls, precious stones, metals, coins, etc. all the other nine items witnessed an increase in global share in 2010 over 2009, with cotton being at the top of the list. However, most of these 10 items except pearls, precious stones, metals, coins, etc. have a very small share in total world exports.

7.28 While India has made major strides in its diversification of export markets, a lot needs to be done to not only diversify the export basket but also have a perceptible share in the top items of world trade (Box 7.2).

### *Import composition*

7.29 In case of imports, there are no major compositional changes other than the sudden rise in share of gold and silver imports from 9.3 per cent in 2000-1 to 13.3 per cent in the first half of 2011-12

**Table 7.8 : India's Share in World Exports: Commodity-wise (Share of more than 5 per cent)**

| Sl. No. | Product code | Product label | 2006 | 2007 | 2008 | 2009 | 2010 | Change in share 2010/2009 |
|---|---|---|---|---|---|---|---|---|
| 1 | '52 | Cotton | 6.84 | 8.47 | 8.60 | 7.61 | 11.86 | 4.25 |
| 2 | '13 | Lac, gums, resins, vegetable saps, and extracts nes | 10.55 | 9.48 | 9.67 | 7.57 | 11.56 | 3.99 |
| 3 | '50 | Silk | 11.39 | 10.53 | 10.17 | 9.73 | 10.30 | 0.57 |
| 4 | '57 | Carpets and other textile floor coverings | 9.56 | 8.73 | 8.40 | 8.37 | 9.51 | 1.14 |
| 5 | '53 | Vegetable textile fibres nes, paper yarn, woven fabric | 4.21 | 4.59 | 6.09 | 6.28 | 9.50 | 3.21 |
| 6 | '71 | Pearls, precious stones, metals, coins, etc. | 6.49 | 6.60 | 5.70 | 10.20 | 7.80 | -2.39 |
| 7 | '14 | Vegetable plaiting materials, vegetable products nes | 4.46 | 4.83 | 5.45 | 5.09 | 7.25 | 2.17 |
| 8 | '63 | Other madeup textile articles, sets, worn clothing, etc. | 6.37 | 5.73 | 5.39 | 5.46 | 6.01 | 0.55 |
| 9 | '09 | Coffee, tea, mate, and spices | 5.01 | 5.18 | 5.31 | 4.98 | 5.41 | 0.43 |
| 10 | '54 | Manmade filaments | 2.55 | 2.88 | 3.71 | 5.25 | 5.33 | 0.07 |

***Source*** **: Calculated from National Centre for Trade Information (NCTI) data based on UN-ITC Trade Map Data 2010**

## Box 7.2 : Need for India's Export Basket Diversification

An internal study of India's exports of world's top import items at the four-digit HS level using the latest UN comtrade data shows the following results:

- In the top 100 imports of the world, India has only 6 items with a share of 5 per cent and above in 2010.
- In the top 100 imports of the world in 2010, India has only 15 items with a share of 2 per cent and above. Of these only 3 items are in the top 25 and 4 in the top 30. Among these 15 items, there are 9 where India's export growth in 2010, is higher than that of world import growth. There are 3 items, namely iron ores and concentrates, including roasted iron pyrites (code 2601), diamonds, whether or not worked, but not mounted or set (code 7102) and flat rolled products iron etc (code 7210) where world import growth is higher than that of India's export growth with no negative growth for India. Of these there is need to focus on the third item which is a manufactured item and world import growth is more than double that of India. There are also three items where India's export growth is negative and world import growth positive. But this is mainly due to the base effect (see Table 1).

### Table 1 : Export Items of India with 2 per cent and above share in Top 100 World Imports at Four Digit

| Rank | HS4 | Items | India's share in world 2010 | Growth rate in 2010 India (Export) | Growth rate in 2010 World (Import) |
|---|---|---|---|---|---|
| 1 | 2710 | Petroleum oils and oils | 5.8 | 57.8 | 33.1 |
| 12 | 2601 | Iron ores and concentrates, etc. | 4.2 | 16.0 | 72.8 |
| 15 | 7102 | Diamonds, whether or not worked. | 18.0 | 33.4 | 47.9 |
| 29 | 8803 | Parts of goods of heading no. 88.01 or 88.02 | 2.1 | 57.5 | 7.0 |
| 31 | 7403 | Refined copper and copper alloys, unwrought | 6.6 | 341.6 | 44.2 |
| 40 | 6204* | Women's or girls' suits, ensembles, jackets, blazers, etc. | 3.2 | -4.6 | 3.4 |
| 44 | 6403 | Footwear with outer soles of rubber, plastics, leather, etc. | 2.4 | 13.7 | 11.0 |
| 53 | 7210 | Flat-rolled products of iron or non-alloy steel, etc. | 3.0 | 15.9 | 35.9 |
| 62 | 7113* | Articles of jewellery and parts thereof, etc. | 18.2 | -26.1 | 30.1 |
| 64 | 2902 | Cyclic hydrocarbons. | 3.4 | 40.2 | 35.8 |
| 67 | 6109* | T-shirts, singlets, & other vests, knitted or crocheted | 4.3 | -12.7 | 9.6 |
| 70 | 7202 | Ferro-alloys | 5.8 | 170.7 | 58.3 |
| 72 | 3902 | Polymers of propylene or of other olefins, etc. | 2.3 | 115.5 | 34.2 |
| 88 | 8419 | Machinery, plant or laboratory equipment ,etc. | 2.4 | 35.1 | -0.9 |
| 97 | 2304 | Oil-cake and other solid residues, etc. | 5.6 | 21.9 | 1.1 |

**Source: Computed form UN comtrade data extracted on 8th February 2012.**

**Note: * World import growth was negative in earlier years and India's export growth was positive in earlier years while it was the opposite in 2010.**
*** Rank is in top 100 world imports.**

- Among the top 100 items there are many where India has already developed competence but India's share is very small. Some of them are simple items like taps, cocks, valves, and similar parts for pipes, boiler shells, tanks, vats, or the like, including pressure-reducing valves and thermostatically controlled valves (8481); new pneumatic tyres, of rubber (4011); flat-rolled products of iron or non-alloy steel, of a width of 600 mm or more, hot-rolled, not clad, plated or coated (7208); trunks, suit-cases, vanity-cases, executive-cases, briefcases, school satchels, spectacle cases, binocular cases, camera cases, musical instrument cases, gun cases, holsters and similar containers (4202); other toys; reduced-size ('scale') models and similar recreational models, working or not; puzzles of all kinds (9503); flat-rolled products of stainless steel, of a width of 600mm or more (7219); electric motors and generators (excluding generating sets) (8501); screws, bolts, nuts coach-screws, screw hooks, rivets, cotters, cotter-pins, washers (including spring washers) and similar articles of iron or steel(7318); and many textiles items.
- Thus there is need for greater export basket diversification by India with a perceptible share in the top items of world demand.

*Source*: **Internal study, Economic Division, Department of Economic Affairs.**

and fall in the share of pearls, precious, and semi-precious stones from 9.6 per cent in 2000-1 to 6.0 per cent in the first half of 2011-12. The share of capital goods imports which increased from 10.5 per cent in 2000-1 to 15.5 per cent in 2008-9 started declining again to reach 11.6 per cent in the first half of 2011-12. The share of POL imports, which fell from 31.3 per cent in 2000-1 to 28.6 per cent in 2010-11 rose again to 31.4 per cent in the first half of 2011-12 due to high prices of crude oil (Table 7.9).

## Direction of Trade

7.30 India is a success story in terms of diversification of export and import markets. The share of Asia and ASEAN in total trade increased from 33.3 per cent in 2000-1 to 57.3 per cent in the first half of 2011-12, while that of Europe and America fell from 42.5 per cent to 30.8 per cent respectively. This has helped India weather the global crisis emanating from Europe and America. In fact, today we have only five advanced western countries among the top 15 trading partners while in 2000-1 we had seven countries. While the top 15 countries still hold a share of around 60 per cent in 2010-11 and 2011-12 (April-September) (Table 7.10), the top 15 countries themselves have changed over the years. The major changes are the entry of Indonesia, Korea, Iran, and Nigeria in the new list in place of Italy, Malaysia, France, and Australia. If we see the share of the top 15 countries of 2000-1 today it is 59.6 per cent while the share of today's top countries in 2000-1 was 55.5 per cent. An interesting development in the direction of India's trade is that the USA which was in first position in 2007-8 has been relegated to third position in the following years, with the UAE becoming India's largest trading partner, followed by China. This position continued from 2008-9 to 2010-11.

7.31 India's trade deficit as a per cent of GDP at 5.7 percent in 2010, is one of the highest. Among major countries, only two trading nations Hong Kong and UK have higher ratio than India. Export-import

**Table 7.9 : Commodity Composition of India's Imports**

| | Commodity Group | Percentage share | | | | | CAGR | Growth rate[a] | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 2000-01 | 2009-10 | 2010-11 | 2010-11 | 2011-12 | 2000-01 to | 2009-10 | 2010-11 | 2010-11 | 2011-12 |
| | | | | | (Apr. - Sept.) | | 2008-09 | | | (Apr. - Sept.) | |
| **I.** | **Food and allied products, of which** | **3.3** | **3.7** | **2.9** | **3.1** | **3.1** | **18.0** | **69.0** | **0.8** | **19.7** | **35.0** |
| | 1. Cereals | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 15.6 | 123.0 | 14.3 | 253.1 | -54.5 |
| | 2. Pulses | 0.2 | 0.7 | 0.4 | 0.5 | 0.3 | 36.0 | 58.8 | -24.1 | 6.3 | -2.6 |
| | 3. Edible oils | 2.6 | 1.9 | 1.8 | 1.8 | 2.1 | 12.6 | 62.3 | 17.4 | 25.0 | 56.1 |
| **II.** | **Fuel, of which** | **33.5** | **33.2** | **31.3** | **31.6** | **35.1** | **24.9** | **-5.5** | **20.8** | **33.7** | **47.6** |
| | 4 POL | 31.3 | 30.1 | 28.6 | 28.2 | 31.4 | 24.4 | -5.0 | 22.0 | 33.0 | 47.7 |
| **III.** | **Fertilizers** | **1.3** | **2.3** | **1.9** | **2.5** | **1.7** | **44.6** | **-48.3** | **3.4** | **30.4** | **-11.8** |
| **IV.** | **Capital goods, of which** | **10.5** | **15.0** | **13.1** | **12.8** | **11.6** | **31.2** | **-8.2** | **12.4** | **10.8** | **20.9** |
| | 5. Machinery except elec. & machine tools | 5.9 | 7.4 | 6.4 | 6.5 | 6.3 | 29.6 | -10.2 | 11.7 | 12.0 | 30.2 |
| | 6. Electrical machinery | 1.0 | 1.1 | 1.0 | 1.0 | 1.0 | 28.6 | -15.1 | 23.4 | 19.3 | 29.5 |
| | 7. Transport equipment | 1.4 | 4.1 | 3.1 | 2.8 | 1.8 | 44.0 | -11.6 | -2.2 | -10.3 | -12.8 |
| **V.** | **Others, of which** | **46.3** | **42.6** | **47.7** | **46.8** | **45.7** | **22.7** | **1.3** | **43.5** | **51.6** | **29.6** |
| | 8. Chemicals | 5.9 | 5.2 | 5.2 | 5.5 | 5.1 | 22.2 | 0.0 | 27.9 | 34.0 | 23.8 |
| | 9. Pearls, precious, semi-precious stones | 9.6 | 5.6 | 9.4 | 8.5 | 6.0 | 16.4 | -2.4 | 114.0 | 173.4 | -5.8 |
| | 10. Gold & silver | 9.3 | 10.3 | 11.5 | 10.3 | 13.3 | 21.1 | 35.5 | 43.5 | 55.5 | 72.8 |
| | 11. Electronic goods | 7.0 | 7.3 | 7.2 | 7.6 | 7.2 | 26.4 | -10.0 | 26.7 | 25.4 | 26.2 |
| | **Total imports** | **100.0** | **100.0** | **100.0** | **100.0** | **100.0** | **25.0** | **-5.0** | **28.2** | **37.6** | **32.7** |

***Source*** **: Computed from DGCI&S data.**

ratios reflecting bilateral trade balance (Table 7.10) show that among its top 15 trading partners, India had bilateral trade surplus with five countries, namely the UAE, USA, Singapore, the UK, and Hong Kong in 2008-9, 2009-10, and 2010-11. An interesting point to be noted is that India has trade surplus with the UAE from which it imports large quantities of oil, while it has a high trade deficit with similar oil exporters like Saudi Arabia, Iran, and Nigeria. However, in the first half of 2011-12 (April-September), India's trade surplus with the UAE has turned into deficit, though very low, due to the rising oil prices. Another important trend is the high trade deficit of India with China and Switzerland which increased from US$ 19.2 billion and US$14.1 billion in 2009-10 respectively, to US$ 23.9 billion and US$ 24.1 billion in 2010-11 and further to US$ 20 billion and US$ 14.8 billion in the first half of 2011-12. The reasons for this are the rising imports of machinery from China and gold from Switzerland. The above analysis indicates the need for a more focused strategy with respect to bilateral balance of trade.

7.32 Region-wise, India's diversification in exports is evident from the fact that the share of Asia and ASEAN increased from 38.7 per cent in 2000-1 to 56.2 per cent in 2010-11, while the share of Europe and the USA fell from 46.9 per cent to 30.8 per cent during the same period. The UAE has displaced the USA as the topmost destination of India's exports in 2008-9 and continues to be in the top position in 2009-10, 2010-11, and first half of 2011-12 with export shares of 13.4 per cent, 13.7 per cent, and 11.9 per cent respectively. India's exports to all the top three destinations, i.e. the UAE followed by the USA and China, registered growth of 43.3, 30.8, and 69.1 per cent in 2010-11 and 21.9 per cent, 40.7 per cent, and 34.2 per cent in the first half of 2011-12 respectively.

7.33 Asia and ASEAN continued to be the major source of India's imports. The composition of imports in the first half of 2011-12 compared to 2000-1 shows a rise in share of Asia and ASEAN from 28.6 per cent to 61.5 per cent and fall in share of Europe and

**Table 7.10 : India's Trade Share and Export-Import Ratio with Major Trading Partners**

| Sl. No. | Country | Share in total trade 2008-09 | 2009-10 | 2010-11 | 2010-11 (Apr-Sept) | 2011-12 (Apr-Sept) | Export/Import ratio[a] 2008-09 | 2009-10 | 2010-11 | 2010-11 (Apr-Sept) | 2011-12 (Apr-Sept) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | UAE | 9.76 | 9.29 | 10.81 | 10.87 | 9.25 | 1.04 | 1.23 | 1.05 | 0.88 | 0.99 |
| 2 | China | 8.59 | 9.09 | 10.16 | 9.72 | 9.27 | 0.29 | 0.37 | 0.45 | 0.26 | 0.28 |
| 3 | USA | 8.18 | 7.83 | 7.35 | 7.85 | 7.23 | 1.14 | 1.15 | 1.27 | 1.16 | 1.52 |
| 4 | Saudi Arabia | 5.09 | 4.49 | 4.13 | 4.27 | 4.44 | 0.26 | 0.23 | 0.26 | 0.23 | 0.22 |
| 5 | Switzerland | 2.54 | 3.26 | 4.10 | 3.55 | 4.28 | 0.07 | 0.04 | 0.03 | 0.03 | 0.05 |
| 6 | Hong Kong | 2.71 | 2.70 | 3.18 | 3.11 | 3.15 | 1.02 | 1.67 | 1.10 | 1.24 | 1.26 |
| 7 | Germany | 3.80 | 3.37 | 3.00 | 2.97 | 3.04 | 0.53 | 0.52 | 0.57 | 0.49 | 0.52 |
| 8 | Singapore | 3.26 | 3.01 | 2.81 | 3.02 | 3.62 | 1.09 | 1.17 | 1.44 | 1.19 | 1.92 |
| 9 | Indonesia | 1.91 | 2.52 | 2.60 | 2.40 | 2.79 | 0.38 | 0.36 | 0.63 | 0.50 | 0.47 |
| 10 | Belgium | 2.09 | 2.09 | 2.40 | 2.26 | 2.09 | 0.78 | 0.62 | 0.73 | 0.62 | 0.87 |
| 11 | Korea | 2.62 | 2.57 | 2.35 | 2.33 | 2.14 | 0.46 | 0.40 | 0.39 | 0.30 | 0.37 |
| 12 | Japan | 2.24 | 2.22 | 2.23 | 2.39 | 2.15 | 0.39 | 0.54 | 0.60 | 0.60 | 0.48 |
| 13 | Iran | 3.04 | 2.87 | 2.20 | 2.14 | 1.68 | 0.21 | 0.16 | 0.25 | 0.21 | 0.24 |
| 14 | Nigeria | 2.12 | 1.86 | 2.10 | 2.06 | 2.39 | 0.18 | 0.19 | 0.21 | 0.18 | 0.14 |
| 15 | UK | 2.58 | 2.29 | 2.02 | 2.02 | 2.06 | 1.13 | 1.40 | 1.33 | 1.36 | 1.13 |
| | Total of top 15 countries | 60.54 | 59.45 | 61.45 | 60.97 | 59.55 | 0.57 | 0.60 | 0.63 | 0.55 | 0.59 |
| | **Total trade** | **100.00** | **100.00** | **100.00** | **100.00** | **100.00** | **0.61** | **0.62** | **0.68** | **0.60** | **0.63** |

*Source* : Computed from DGCI&S data.

*Note* : [a] A coefficient of export and import ratio between 0 and 1 implies that India's imports are greater than exports and if the coefficient is greater than one, India exports more than what it imports.

the USA from 27.5 and 5.7 per cent to 18.6 and 4.7 per cent respectively. Country-wise, China remained the largest source with an 11.7 per cent share in India's total imports followed by the UAE (7.6 per cent), Switzerland (6.6 per cent), Saudi Arabia (6 per cent), and the USA (4.7 per cent) in 2011-12 (April-September). Among the top 15 trading partners, India's imports from Nigeria, Switzerland, and Indonesia registered a growth of above 60 per cent in 2011-12 (April-September) due to imports of crude oil, gold and silver, and edible oils along with crude oil respectively. However, India's imports from Iran, the USA, the UAE, and Belgium registered low growths.

## World Trade in Services

7.34 The US$ 3.7 trillion world exports of commercial services are dominated by the developed western countries in terms of share except for China, India, and Singapore which also appear in the list of top traders of services. While the United States, Germany, the United Kingdom, China, and Japan represent a third of world trade in commercial services, Europe alone accounts for 45 per cent of total trade in commercial services. While in terms of share, the developed western countries are the major traders, in terms of growth the Asian countries are the leaders with their exports of commercial services expanding on an average by 13 per cent annually since 2008. While world merchandise exports bounced back strongly in 2010 and increased by 14 per cent in volume terms, world exports of commercial services grew by only 9 per cent in 2010, to reach US$ 3,695 billion according to International Trade Statistics, 2011. However, both world merchandise and services exports have not reached the pre-crisis (2008) level. The recovery has not been even across regions. The most rapid growth of commercial services has been in Asia, where exports rose by 22 per cent in 2010, led by India and China. EU exports grew by only 3 per cent. Exports of commercial services from Central and South America and the Caribbean as well as from the Commonwealth of Independent States grew by 12 per cent; North America by 9 per cent; and Africa by 10 per cent.

7.35 Taking the EU (27) as a whole by excluding intra-EU trade, the top five exporters and importers of commercial services are the EU(27), the US, China, Japan, and India with the same ranks both in exports and imports of commercial services. Only China and Japan are net importers of commercial services in the top five. Emerging economies like China and India are now playing an increasing role in commercial services trade. In 2010, China's commercial services trade totalled US$ 362 billion, accounting for a global share of 6.6 per cent, up from 4.4 per cent in 2005 with exports expanding by 32 per cent. India is an important player in commercial services trade with its share reaching 4.3 per cent, compared to 2.8 per cent five years earlier. Its exports grew by 33 per cent and imports by 45 per cent in 2010, making it the most dynamic exporter of commercial services. Only Macao, China, ranking 19 in exports has a higher growth of 52 per cent, though it is not in the top 40 importers. Even if intra-EU trade is not excluded and the EU countries are taken individually, India is in the top 10 with seventh rank in both exports and imports of commercial services.

7.36 All the three broad categories of commercial services, namely transport, travel and other commercial services bounced back to positive zone with reasonably good growth in 2010. Of them transport has surpassed the 2000-5 average annual growth partly due to the high negative growth in 2009 (Table 7.11).

7.37 In world travel exports, accounting for a quarter of world exports of commercial services in 2010, Europe accounted for 41.1 per cent, a decline of almost 8 percentage points from 2005. In exports of transportation services, accounting for a 21.3 per cent share in global exports of commercial services,

**Table 7.11 : World Exports of Commercial Services by Major Category, 2009**

| | Value (US$ billion) 2010 | Annual percentage change | | | |
|---|---|---|---|---|---|
| | | 2000-05 | 2005-2010 | 2009 | 2010 |
| Commercial services | 3695 | 11 | 8 | -12 | 9 |
| Transport | 785 | 11 | 7 | -23 | 15 |
| Travel | 940 | 8 | 6 | -9 | 8 |
| Other commercial services | 1970 | 13 | 10 | -8 | 7 |

*Source* : Compiled from WTO, International Trade Statistics 2011.

the shares of European countries, Asia, and North America are 47.6, 28.8, and 10.7 per cent respectively. 'Other commercial services' is a major component of global exports of commercial services, accounting for a 53.3 per cent share and half of these exports originate from Europe, largely the European Union. Asia's share of 'other commercial services' exports was 25.4 per cent and North America's 18.2 per cent. While trade in services bounced back, the recovery has not been uniform in all regions and subsectors of 'other commercial services'. Even pre-crisis levels have not been reached in case of most of the services. The recovery in exports of transportation services was mainly driven by Asia's exports with major exporting countries achieving double-digit growth rates. In China, exports rose by 45 per cent and in the Republic of Korea by 33 per cent. Exports from Hong Kong and Japan expanded by 28 per cent and 23 per cent respectively. Europe recovered at a much slower pace with EU export growth at 8 per cent and that of Norway at only 2 per cent.

7.38 According to the United Nations World Tourism Organization, a 6.6 per cent surge in global international tourist arrivals in 2010 more than offset the decline triggered by the recession. Travel exports rose rapidly in Asian economies. Thanks to its thriving gaming sector, Macao, China became the world's fifth-largest exporter of travel in 2010, recording a 53 per cent increase in its travel receipts and its share in world travel exports more than doubling in five years, to reach 2.9 per cent. Travel exports expanded rapidly in other Asian countries as well, where the tourism sector experienced very strong growth. China's travel exports grew by 15 per cent, while in Hong Kong, the increase was by 35 per cent. Thailand's travel exports were up by 26 per cent and Malaysia's by 16 per cent. In the United States, travel receipts grew by 9 per cent, reflecting higher inflows of foreign tourists. However, in the European Union, travel exports fell by 2 per cent, while in Turkey, they stagnated. Recovery in all sub sectors of other commercial services was not uniform in 2010. While world exports of financial services increased by 7 per cent in 2010 following a sharp fall during the economic crisis, insurance services exports stagnated. Europe's financial services sector, which accounted for 49 per cent of global exports of financial services in 2010, was the hardest hit by the global crisis. It struggled to recover in 2010 with extra-EU exports rising marginally by 3 per cent, while in Switzerland, it declined by 2 per cent. US exports of financial services expanded by 5 per cent in 2010. But Asia experienced a strong recovery in financial services, with Singapore's exports up by 31 per cent, and Hong Kong's by 12 per cent. India's exports grew by 64 per cent but Japan's fell by 25 per cent. Exports of computer and information services and royalties and licence fees increased by 13 and 11 per cent respectively. While exports of communications services dropped by 8 per cent in value, reflecting a significant drop in prices, construction exports declined in nearly all regions in 2010 in the aftermath of the economic crisis. Global exports of construction contracted by 1 per cent in 2010, indicating that the effects of the global recession were still persisting in this sector. All leading exporters, with the exception of China, recorded negative growth. In the European Union, the world's major region in construction, exports declined by 7 per cent, in Japan by 10 per cent, and in Russia and the Republic of Korea by 20 per cent. China was the only top exporter with strong growth, with exports expanding by 53 per cent, due to its several infrastructure projects especially in Africa.

7.39 In 2010, India had good growth in trade of all the three major categories of commercial services. Even among other commercial services, its export growth has been good in all sub-sectors except communication services due to lower prices and personal, cultural, and recreational services. On the import side, only construction services show negative growth. India has improved its ranking in most of these services as other countries, particularly in Europe, did not perform well (Table 7.12).This analysis clearly indicates that the effects of the 2008 global crisis continued in the case of services trade, particularly in construction services in most countries and financial services in European countries. Thus the signs of the current crisis were more evident in the services sector.

## India's Services Trade

### India's Services Exports

7.40 For more than a decade, Indian growth story has been dominated by the services sector. This domination was also evident from the trend in export of services (receipts) which grew at a CAGR of 23.4 per cent during 2000-1 to 2010-11 while merchandise exports grew at a CAGR of 18.6 per cent during the same period. Having recorded a contraction of 9.4 per cent in 2009-10 due to the global financial crisis, services exports bounced back to grow by 38.4 per cent to US$ 132.9 billion in 2010-11. However, growth

**Table 7.12 : India's sector-wise Rank and Share in World Exports / Imports of Services**

| Services | | Rank 2009 | Rank 2010 | Share 2005 | Share 2010 | Per cent Change 2010 |
|---|---|---|---|---|---|---|
| Transportation Services | Export | 13 | 10 | 1.0 | 1.7 | 21 |
| | Import | 13 | 5 | 3.0 | 4.8 | 31 |
| Travel Services | Export | 14 | 12 | 1.1 | 1.5 | 27 |
| | Import | | ... | ... | ... | ... |
| Other Commercial Services | Export | 4 | 3 | 3.1 | 4.9 | 36 |
| | Import | 8 | 5 | 1.9 | 3.5 | 66 |
| Communication Services* | Export | 4 | 5 | ... | 2.1 | -5 |
| | Import | 11 | 7 | ... | 2.0 | -7 |
| Construction Services* | Export | 12 | ... | ... | ... | ... |
| | Import | 13 | 10 | ... | 1.6 | -8 |
| Insurance Services* | Export | 7 | 8 | ... | 2.0 | 17 |
| | Import | 7 | 7 | ... | 3.1 | 24 |
| Financial Services* | Export | 7 | 7 | ... | 1.5 | 64 |
| | Import | 5 | 3 | ... | 3.9 | 81 |
| Computer and Information Services* | Export[a] | 2 | 2 | ... | 19.2 | ... |
| | Import[a] | 4 | 7 | ... | 2.6 | 12 |
| Other Business Services* | Export[a] | 6 | 7 | ... | 3.8 | ... |
| | Import | 6 | 6 | ... | 3.3 | 89 |
| Personal, Cultural and Recreational Services* | Export | 5 | 8 | ... | 1.3 | -28 |
| | Import | 12 | ... | ... | ... | ... |

***Source*** **: Compiled from WTO, International Trade Statistics 2011.**
***Note*** **: *share relates to 2009; a WTO Secretariat estimates.**

in exports of services moderated during the first half of 2011-12 to 17.1 per cent compared to 32.7 per cent during the first half of 2010-11 (Table 7.13).

7.41 While growth in exports of travel, transportation, and insurance services was higher in the first half of 2011-12 than in the first half of

**Table 7.13 : India's Exports of Services**

| Sl. No. | Commodity Groups | Value (US $ Billion) 2010-11 | Percentage share 2000-01 | Percentage share 2010-11 | Percentage share April-September 2010-11 | Percentage share April-September 2011-12 | CAGR 2000-01 to 2008-09 | Growth rate* 2009-10 | Growth rate* 2010-11 | Growth rate* April-September 2010-11 | Growth rate* April-September 2011-12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Travel | 15.3 | 21.5 | 11.5 | 10.9 | 12.9 | 15.3 | 8.9 | 28.8 | 26.2 | 38.7 |
| 2 | Transportation | 14.3 | 12.6 | 10.7 | 11.0 | 12.8 | 23.8 | -1.2 | 27.7 | 26.5 | 36.1 |
| 3 | Insurance | 1.9 | 1.7 | 1.5 | 1.5 | 1.7 | 23.1 | 11.9 | 22.5 | 10.2 | 38.8 |
| 4 | GNIE | 0.5 | 4.0 | 0.4 | 0.4 | 0.4 | -6.2 | 13.4 | 21.3 | 9.5 | 30.6 |
| 5 | Miscellaneous | 100.9 | 60.3 | 75.9 | 76.2 | 72.1 | 30.4 | -12.4 | 42.1 | 35.3 | 10.7 |
| | a) Software services | 55.5 | 39.0 | 41.7 | 42.7 | 45.2 | 28.2 | 7.4 | 11.6 | 11.6 | 24.1 |
| | b) Non-software services | 45.4 | 21.3 | 34.2 | 33.5 | 26.9 | 33.8 | -40.3 | 113.0 | 85.6 | -6.3 |
| | Of which: | | | | | | | | | | |
| | i) Business services | 24.1 | 2.1 | 18.1 | 18.5 | 15.9 | 65.3 | -39.4 | 112.4 | 111.4 | 0.3 |
| | ii) Financial services | 6.5 | 2.1 | 4.9 | 5.2 | 4.2 | 37.5 | -16.6 | 76.3 | 64.9 | -6.7 |
| | iii) Communication services | 1.6 | 7.0 | 1.2 | 1.3 | 1.1 | 9.2 | -46.6 | 27.2 | 2.3 | 1.1 |
| | **Total services exports** | **132.9** | **100.0** | **100.0** | **100.0** | **100.0** | **26.4** | **-9.4** | **38.4** | **32.7** | **17.1** |

***Source*** **: Computed from RBI data.**
***Note*** **: * Growth rate in US dollar terms.**
**GNIE= Government not included elsewhere.**

2010-11, overall growth moderation in services exports in the first half of 2011-12 was due to low export growth (10.7 per cent) of miscellaneous services which accounted for nearly 72 per cent of total services exports. Within miscellaneous services, non-software services exports had negative growth of - 6.3 per cent. Growth in exports of business services, which are the major component of non-software services, registered a sharp deceleration in export growth from 111.4 per cent in the first half of 2010-11 to 0.3 per cent in the first half of 2011-12 reflecting the slowdown in business activity in the world economy. Exports of financial services declined by 6.7 per cent in the first half of 2011-12 as against an increase of 64.9 per cent in the first half of 2010-11, which is again a reflection of the impact of the current financial crisis in European countries. However, software exports which account for nearly 45 per cent of total services exports, continued to remain buoyant at US$ 30.8 billion and grew by 24.1 per cent in the first half of 2011-12. As per NASSCOM, software exports are likely to grow at 11-14 per cent in 2012-13. Going forward, if the euro zone debt crisis remains unresolved and the contagion impact spreads to other advanced countries, companies in the US and EU countries could reduce their information technology (IT) budgets which can affect the prospects of India's software exports. Similarly, weakening of economic activity in advanced economies can lead to a further downtrend in business and financial services which was also observed during Q4(fourth quarter) of 2008-9 to Q4 of 2009-10.

## India's Services Imports

7.42 Import growth of services rebounded in 2010-11 with growth at 40 per cent. But in the first half of 2011-12 it grew by only 1.0 per cent as against 48.3 per cent in the first half of 2010-11. Growth deceleration in import of services was mainly on account of lower imports of miscellaneous services in the first half of 2011-12. Within miscellaneous services, imports of software and business services declined by 47.5 per cent and 1.7 per cent respectively during the first half of 2011-12 as against a growth of 39.9 per cent and 62.6 per cent respectively in the first half of 2010-11. In the first half of 2011-12, import growth of financial and transportation services moderated to 21.1 per cent and 14.5 per cent respectively. However, travel services import growth more than doubled to 39.7 per cent (Table 7.14).

## India's Balance of Trade in Services

7.43 A consistent increase in surplus on account of India's services exports has been a cushioning factor for financing a large part of the trade deficit on the merchandise account in recent years. During 2005-6 to 2009-10, surplus in services exports, on

**Table 7.14 : India's Imports of Services**

| Sl. No. | Commodity Groups | Value (US $ Billion) | Percentage share | | | | CAGR | Growth rate* | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | April-September | | 2000-01 to | | | April-September | |
| | | 2010-11 | 2000-01 | 2010-11 | 2010-11 | 2011-12 | 2008-09 | 2009-10 | 2010-11 | 2010-11 | 2011-12 |
| 1 | Travel | 11.1 | 19.2 | 13.2 | 13.8 | 19.1 | 16.4 | -0.9 | 18.9 | 15.1 | 39.7 |
| 2 | Transportation | 13.9 | 24.4 | 16.5 | 18.2 | 20.7 | 17.4 | -6.9 | 16.3 | 33.2 | 14.5 |
| 3 | Insurance | 1.4 | 1.5 | 1.7 | 1.9 | 2.0 | 22.5 | 13.7 | 8.9 | 6.3 | 3.6 |
| 4 | GNIE | 0.8 | 2.2 | 1.0 | 1.0 | 1.0 | 12.1 | -33.8 | 56.2 | 49.4 | 9.2 |
| 5 | Miscellaneous | 56.9 | 52.6 | 67.6 | 65.1 | 57.2 | 17.5 | 32.5 | 53.9 | 65.5 | -11.2 |
| | a) Software Services | 2.2 | 4.1 | 2.6 | 3.2 | 1.6 | 20.1 | -42.7 | 49.5 | 39.9 | -47.5 |
| | b)Non Software Services | 54.7 | 48.6 | 65.0 | 61.9 | 55.6 | 17.3 | 40.1 | 54.1 | 67.1 | -9.4 |
| | of which: | | | | | | | | | | |
| | i) Business Services | 27.8 | 7.0 | 33.0 | 35.2 | 34.3 | 40.3 | 17.8 | 53.8 | 62.6 | -1.7 |
| | ii)Financial Services | 7.5 | 13.5 | 8.9 | 9.1 | 10.9 | 5.2 | 56.9 | 61.2 | 68.0 | 21.1 |
| | iii) Communication Services | 1.2 | 0.9 | 1.4 | 1.4 | 2.0 | 30.8 | 24.7 | -15.0 | -14.2 | 42.8 |
| | **Total Services Imports** | 84.1 | 100.0 | 100.0 | 100.0 | 100.0 | 17.2 | 15.3 | 40.0 | 48.3 | 1.0 |

***Source*** **: Computed from RBI data.**
***Note*** **: * Growth rate in US dollar terms.**

**Table 7.15 : India's Exports, Imports and Balance of Trade in Services**

(US $ billion)

| | Exports | Imports | Balance |
|---|---|---|---|
| 2000-1 | 16.3 | 14.6 | 1.7 |
| 2001-2 | 17.1 | 13.8 | 3.3 |
| 2002-3 | 20.8 | 17.1 | 3.6 |
| 2003-4 | 26.9 | 16.7 | 10.1 |
| 2004-5 | 43.2 | 27.8 | 15.4 |
| 2005-6 | 57.7 | 34.5 | 23.2 |
| 2006-7 | 73.8 | 44.3 | 29.5 |
| 2007-8 | 90.3 | 51.5 | 38.9 |
| 2008-9 | 106.0 | 52.0 | 53.9 |
| 2009-10 | 96.0 | 60.0 | 36.0 |
| 2010-11 | 132.9 | 84.1 | 48.8 |
| 2010-11 (Apr.-Sept.) | 58.1 | 36.6 | 21.5 |
| 2011-12 (Apr.-Sept.) | 68.0 | 36.9 | 31.1 |

***Source*** **: Compiled from RBI data.**

average, financed around 41 per cent of merchandise trade deficit. Net services surplus which was increasing over the years registered a dip in 2009-10 with services exports falling due to the global economic crisis but services imports increasing. However, in 2010-11, net services surplus again increased and was at US$ 48.8 billion. During the first half of 2011-12, a surplus of US$ 31.1 billion has been recorded in net services which is 44.7 per cent higher than that recorded during the first half of 2010-11 (Table 7.15). Going forward, downward risks to export of services cannot be ruled out as certain weaknesses have re-emerged in the global economy, particularly the crisis in the euro zone and slowdown in the US economy.

## Trade Policy

### Recent Trade Policy measures

7.44 Many trade policy measures were announced by the government in the Annual Supplement to the Foreign Trade Policy (FTP) on 13 October 2011 (Box 7.3). Many measures were also taken by the government in Union Budget 2011-12 and the RBI in its monetary and credit policies during the course of the year which include the following.

#### *Budget related*

- The peak rate of customs duty retained at 10 per cent in view of the continued uncertainties in the global economy.
- A concessional rate of basic customs duty of 2.5 per cent for specified agricultural machinery and parts of such machinery to encourage their domestic production.
- De-oiled rice bran cake exempted from basic customs duty. Simultaneously, an export duty of 10 per cent levied to discourage its exports.
- Reduction in basic customs duty from 30 per cent to 5 per cent on raw silk (not thrown); from 5 per cent to 2.5 per cent on certain textile intermediates and inputs for chemicals, ferro-nickel, and paper; from 7.5 per cent to 5 per cent on specified inputs for manufacture of certain technical textile; from 30 per cent to 10 per cent on raw pistachio and bamboo for agarbatti; and from 25 per cent to 10 per cent on lactose for the manufacture of homeopathic medicines.
- Full exemption of stainless steel scrap from basic customs duty.
- The raw material list for manufacture of specified electronic components that are fully exempt from basic customs duty expanded.
- Specified parts of hybrid vehicles fully exempted from basic customs duty and special additional duty of customs (SAD).
- Full exemption from excise duty extended to air-conditioning equipment and refrigeration panels for cold chain infrastructure and conveyor belts and to enzyme-based preparations for pre-tanning.
- Self-assessment in customs to usher in a new era of trust based customs-trade partnership, modernize the customs administration and quicken the clearance of cargo.
- Mega Cluster Scheme extended to leather products.
- Export duty on all kinds of iron ore unified at 20 per cent ad valorem.

#### *Credit related (also see trade finance section paras 7.8 to 7.10)*

- Interest subvention of 2 per cent re-introduced on rupee export credit with effect from 1 April 2011 to 31 March 2012 in handicrafts, handlooms, carpet, and SME sectors.
- In order to reduce the cost (interest cost on overdue export bills), exporters with overdue export bills permitted to extinguish their overdue post shipment rupee export credit from their rupee resources.

## Box 7.3 : Foreign Trade Policy Measures in 2011-12

Some important Trade Policy and facilitation measures are the following:

**Trade Policy Measures**

- The Duty Entitlement Pass Book (DEPB) scheme was discontinued with effect from 30-09-2011. Since a Duty Drawback Scheme was already in existence, the erstwhile DEPB products were incorporated in the Duty Drawback Schedule (DDS) 2011-12 with effect from 01-10-2011. Approximately 1100 additional entries were made in the DDS for those erstwhile DEPB products that were not already specifically mentioned in the DDS. Appropriate rates of duty drawback were provided across the DDS. These range from 1 per cent to 17 per cent of FOB value. Many of the export goods with duty drawback rates more than 3 per cent have been provided with drawback caps.
- Special Bonus Benefit Scheme, within the Focus Product Scheme, covering 49 products in Engineering, Pharmaceutical and Chemical sectors, was introduced to provide special assistance @1 per cent of FOB value of exports for 6 months from 1.10.2011 to 31.3.2012.
- Special Focus Market Scheme, within the Focus Market Scheme, for exports to 41 countries. (12 from Latin American region, 22 from African region and 7 from CIS region) introduced with a view to increase the competitiveness of exports with a geographical targeting. The scheme provides additional 1 per cent duty credit when exports are made to these countries resulting in total duty credit scrip @4 per cent of the FOB value of exports.
- To help Apparel exports, MLFPS has been extended to all items covered under Chapters 61 and 62 of ITC HS Classification entitling them with duty credit @ 2 per cent of FOB value of exports when these products are exported to USA and EU during 2011-12.
- About 130 additional items mainly from Chemical/ Pharmaceuticals, Textiles, Handicrafts, Engineering and Electronics sectors have been included in the FPS for duty credit scrip @ 2 per cent of FOB value of exports for exports made with effect from 1.4.2011.
- The list of items under MLFPS has been extended to cover new items to specified countries and entitled to get duty credit scrip @ 2 per cent of FOB value of exports. These include Agricultural tractors> 1800cc capacity to Turkey and sugar machinery & high-pressure boilers to Brazil, Kenya, South Africa, Tanzania and Egypt. The scheme has also been extended to all existing MLFPS Countries for printing inks, writing ink, etc.
- Status Holders Incentive Scrip extended for 2012-2013.
- The towns of Firozabad for glassware, Bhubaneswar for marine products and Agartala for bamboo and cane products have been notified as towns of export excellence.

**Trade facilitation measures:**

- Filing of applications for various authorizations through EDI mode has been made mandatory in almost all schemes.
- 24 out of 37 EPCs have registered on DGFT's website for uploading of Registration cum Membership Certificate (RCMC) data. This would avoid repetitive filing of RCMC hard copies, eliminate redundancy and reduce transaction cost.
- Two additional banks namely (i) Bank of Baroda (ii) United Bank of India, have been included for Electronic Fund Transfer (EFT) facility for DGFT users in addition to the existing 11 banks.
- An offline data entry module has been provided for Advance Authorization and EPCG applications in August, 2010 to provide flexibility in filing applications by exporters, and reducing online server time which would improve efficiency and reduce cost.
- 'On-line' filing of Importer Exporter Code (IEC) application and processing has been initiated with effect from 1.1.2011. The linkage of on-line IEC filing and issuance system with the PAN data base through National Securities Depository Limited (NSDL) for on-line PAN validation is being integrated.
- As of now the message exchange with Customs is implemented for advance authorization, EPCG and Duty Free Import Authorization (DFIA). The message exchange is being extended to other schemes also i.e. annual advance authorization, annual EPCG, SFIS and SHIS.
- A Software system for 'on-line' filing of Policy Relaxation Committee (PRC) cases, it's processing and status tracking has been developed.
- A web based Tracking and Monitoring package for advance authorization and EPCG authorization has been uploaded on the DGFT's website, the access of which will be available to all Regional Licencing Authorities (RLAs) for monitoring of export obligation.
- DGFT has also become India's first digital signature enabled department in government of India, which has introduced a higher level of Encrypted 2048 bit Digital Signature. The 2048 bit DSC's have been issued to all offices.

- The limit for export credit refinance facility retained at pre-crisis level of 15 per cent.

*Inflation-management related*

- Levy obligation in respect of all imported raw sugar and white/refined sugar removed.
- Export of edible oils (except coconut oil and forest-based oil) and pulses (except Kabuli chana and organic pulses up to a maximum of 10,000 tonnes per annum) banned.
- No change in tariff rate values of edible oils;
- Ban on export of non-basmati rice and wheat for a short period of time.
- Permitted export of edible oils in branded consumer packs of up to 5 kg subject to a limit of 10,000 tonnes.
- Export of milk powders (including skimmed milk powder, whole milk powder, dairy whitener, and infant milk food), casein and casein products prohibited.
- Ban on export of onion imposed for a short period of time whenever required. Exports of onion calibrated through the mechanism of minimum export price (MEP).
- Import duties reduced to zero – for rice, wheat, onion, pulses, edible oils (crude) and to 7.5 per cent for refined and hydrogenated oils and vegetable oils.
- The National Dairy Development Board (NDDB) allowed to import 50,000 tonnes of skimmed milk powder and whole milk powder and 15,000 million tonnes (MT) of butter, butter oil, and anhydrous milk fat at zero duty under tariff rate quota.
- Sugar mills permitted to import duty-free raw sugar under open general licence (OGL). Later this facility was extended to private trade on job basis.
- The State Trading Corporation (STC)/Minerals and Metals Trading Corporation (MMTC)/ Projects and Equipment Corporation (PEC) and National Agricultural Cooperative Marketing Federation of India (NAFED) permitted to import duty-free white/refined sugar initially with a cap of 1 million tonnes. Later, duty-free import was also allowed by other central / state government agencies and private trade without any cap on the quantity.

## Policy for Promoting State-wise Exports

7.45 Two States, namely Gujarat and Maharashtra, account for 46 per cent of exports from India as per the data on state of origin of exports of goods. If Tamil Nadu, Karnataka, and Andhra Pradesh, the next three states with more than 5 per cent share, are added to the top two, the share of the top five states would be 65.7 per cent. In 2010-11, the growth of exports from states was robust. Only Goa had negative export growth due to fall in ore exports owing to a ban on exports of iron ore by the Karnataka government. High export growth was registered by Odisha followed by West Bengal and Gujarat. In the first half of 2011-12 there was robust export growth in case of Karnataka, Uttar Pradesh, and Tamil Nadu (Table 7.16).

7.46 The state-wise exports given in Table 7.16 are only indicative as there are many weaknesses in the data. These include the following. The figures are compiled as per the reporting from customs and no validation is done at the DGCI&S end. Only one state of origin code can be given by the exporter in a single shipping Bill. In case of shipping bills with multiple invoices containing items originating from more than one state, there is no provision for making different entries. In the customs daily trade returns (DTRs) the non-reporting of state of origin (STON) is considerable and exporters have a tendency to report the state to which they belong/ the state to which the port (through which the export has taken place) belongs/ the state from where they 'procured' the goods as the state of origin for those particular goods instead of the actual state of origin of goods. The problem is acute in the case of non-manufacturing exporters, who only know the place of procurement and not production of the goods. These weaknesses need to be rectified to improve the quality of data.

7.47 To encourage exports, outlay under the Assistance to States for Developing Export Infrastructure and Allied Activities (ASIDE) Scheme for the Eleventh Five year plan was increased to ₹ 3,793 crore. The allocations for the years 2007-8, 2008-9, 2009-10, 2010-11, and 2011-12 were ₹ 569 crore, ₹ 570 crore, ₹ 570 crore, ₹ 662.98 crore, and ₹ 850.96 crore respectively. State-wise allocation under state component of ASIDE shows that the top six states in terms of allocation in 2011-12 are Maharastra and Gujarat followed by Tamil Nadu Karnataka, Uttar Pradesh and Andhra Pradesh. Compared to earlier years the share of Maharastra has fallen, while the share of Tamil Nadu, Andhra

**Table 7.16 : Exports of Top 15 States of India**

(US$ million)

| Sl. No. | State | 2009-10 | 2010-11 | (April-September) 2010-11 | (April-September) 2011-12 | Share(%) 2010-11 | Growth rate (%) 2010-11 | Growth rate (%) 2011-12 (Apr-Sept.) |
|---|---|---|---|---|---|---|---|---|
| 1 | Gujarat | 38775 | 61694 | 24647 | 31246 | 24.6 | 59.1 | 26.8 |
| 2 | Maharashtra | 43356 | 53788 | 23394 | 33140 | 21.4 | 24.1 | 41.7 |
| 3 | Tamil Nadu | 16085 | 23378 | 8541 | 14179 | 9.3 | 45.3 | 66.0 |
| 4 | Karnataka | 9093 | 13603 | 5006 | 8509 | 5.4 | 49.6 | 70.0 |
| 5 | Andhra Pradesh | 8559 | 12567 | 6524 | 8533 | 5.0 | 46.8 | 30.8 |
| 6 | Haryana | 5679 | 8584 | 3574 | 4240 | 3.4 | 51.2 | 18.6 |
| 7 | Uttar Pradesh | 5524 | 8208 | 3849 | 6529 | 3.3 | 48.6 | 69.6 |
| 8 | West Bengal | 4197 | 7111 | 2886 | 3970 | 2.8 | 69.4 | 37.6 |
| 9 | Odisha | 3230 | 6990 | 2698 | 2075 | 2.8 | 116.4 | -23.1 |
| 10 | Kerala | 5843 | 6547 | 2646 | 3717 | 2.6 | 12.1 | 40.5 |
| 11 | Delhi | 5187 | 6051 | 2907 | 4038 | 2.4 | 16.7 | 38.9 |
| 12 | Rajasthan | 3339 | 5214 | 1749 | 2626 | 2.1 | 56.2 | 50.2 |
| 13 | Punjab | 2732 | 4099 | 1904 | 2645 | 1.6 | 50.0 | 38.9 |
| 14 | Madhya Pradesh | 2357 | 3112 | 1147 | 1637 | 1.2 | 32.0 | 42.7 |
| 15 | Goa | 2481 | 1642 | 1074 | 774 | 0.7 | -33.8 | -27.9 |
| | **Total exports** | **178751** | **251136** | **105241** | **147949** | **100.0** | **40.5** | **40.6** |

***Source*** **: Computed from data of DGCI&S, Kolkata.**

Pradesh, Uttar Pradesh and Gujarat have increased. In the North East region, Assam is the only state with significant share.

## Special Economic Zones (SEZs)

7.48 In short span of about five years since the SEZs Act and Rules were notified in February 2006, formal approvals have been granted for setting up of 583 SEZs out of which 380 have been notified. Out of the total employment provided to 8,15,308 persons in SEZs as a whole, incremental employment generated after February 2006 when the SEZ Act came into force was 6,80,609 persons. This is apart from million man-days of employment created by the developer for infrastructure activities. Physical exports from the SEZs have increased from ₹ 2,20,711.39 crore in 2009-10 to ₹ 3,15,867.85 crore in 2010-11, registering a growth of 43.11 per cent in rupee terms. There has been overall growth of exports of 2180 per cent over past eight years (2003-4 to 2010-11). The total physical exports from SEZs as on 31 December 2011, i.e. in the first three quarters of the current financial year, has been to the tune of ₹ 2,60,972.9 crore, registering a growth of 14.5 per cent over the exports of corresponding period of the previous year. The total investment in SEZs till 31 December 2011 is ₹ 2,49,630.8 crore, including ₹ 2,31,160 crore in the newly notified zones. As per the provisions of the SEZ Act 2005, 100 per cent foreign direct investment (FDI) is allowed in SEZs through the automatic route. A total of 154 SEZs are making exports, out of which 88 are IT/ ITeS, 17 multiproduct and 49 other sector-specific SEZs. The total number of units in these SEZs is 3,400.

## Trade Promotion and Other Initiatives in the North East Region (NER)

7.49 The North East Cell in the Department of Commerce helps in the promotion of exports from the NER. The Export Development Fund (EDF) provides assistance for activities which have a linkage with exports from the region. So far (24th February 2012) 68 projects amounting to ₹ 67.78 crores have been sanctioned under the EDF-NER. Major projects approved/being considered under the EDF-NER include floriculture items like anthurium, gerbera, cut flower, orchid, and rose cultivation; cultivation and processing of passion fruit, orange, kiwi, ginger, turmeric, canned mushroom, safed musli, large cardamom; bee keeping and honey processing; infrastructure development of food testing laboratories, border trade points, etc.; handicrafts, handloom, silk; rubber wood-based door manufacturing; and workshops on mentoring, monitoring and export awareness.

## Contingency Trade Policy and Non-Tariff Measures (NTMs)

7.50 Anti-dumping investigations initiated by all countries which went up in 2008 with the global economic crisis, fell marginally in 2009 to 209 cases and substantially in 2010 and the first half of 2011 to only 170 and 68 cases respectively (Table 7.17). India has been the top user of anti-dumping measures in terms of the investigations initiated in the last decade except for the year 2004 when the EU followed by China and the US topped the list. In line with global developments, India's anti-dumping initiations increased to 55 in 2008, fell to 31 in 2009, but again increased to 41 in 2010. Brazil with 37 initiations stood second in 2010. In the first half of 2010, Brazil with 11 anti-dumping initiations relegated India with 10 to second position.

7.51 During 2011-12 (up to 31 December 2011), six fresh anti dumping investigations have been initiated by the Directorate General of Anti-dumping and Allied Duties (DGAD). The products involved are phthalic anhydride, grinding media balls, digital offset printing plates, plain gypsum plaster board of 9.5 mm, 12.5 mm and 15 mm (+/- 0.6 mm), choline chloride, and resin or other organic substances bonded wood or ligneous fiber boards of thickness below 6mm except insulation boards laminated fiber board and boards which are not bonded either by resin or organic substances. The countries involved in these investigations are Korea RP, Chinese Taipei (Taiwan), Israel, Iran, Thailand, China PR, Japan, Indonesia, the UAE, the EU, Malaysia, and Sri Lanka.

7.52 The uncertainty in the international economic environment could lead to a rise in anti- dumping measures by countries in the coming months. India has been getting a lot of undue flak internationally for the highest anti-dumping initiations, though the value of imports prior to the imposition of anti-dumping duties on these items is negligible. The share of imports from the target countries in the total imports of India in the year prior to imposition of duties i.e., 2009-10 for the 12 items for which antidumping duties were imposed by India during 2010- 11 (April-March) is only 0.6 per cent. In 2010-11, it was 0.4 per cent (Table 7.18). This too is because of one single item i.e, synchronous digital hierarchy transmission equipment from China with 66 percent share in the imports of these items from target countries.

7.53 Though India's anti-dumping policy has been directed to checking genuine cases of dumping there is a need for some fine-tuning of its strategy to avoid unnecessary international criticism. Meanwhile the domestic economy needs to be adequately protected from the cheap imports of dumped or smuggled goods through the porous Indian borders. The hype around the high number of anti dumping cases of India needs to be dispelled by highlighting comparative value figures of other countries.

**Table 7.17 : Investigations initiated by top ten users of Anti-Dumping Measures 1995-2011**

| Country | 1995 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011* | 1995-2011* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| India | 6 | 79 | 81 | 46 | 21 | 28 | 35 | 47 | 55 | 31 | 41 | 10 | 647 |
| United States | 14 | 77 | 35 | 37 | 26 | 12 | 8 | 28 | 16 | 20 | 3 | 9 | 452 |
| European Union | 33 | 28 | 20 | 7 | 30 | 24 | 35 | 9 | 19 | 15 | 15 | 8 | 428 |
| Argentina | 27 | 28 | 14 | 1 | 12 | 12 | 11 | 8 | 19 | 28 | 14 | 4 | 288 |
| Brazil | 5 | 17 | 8 | 4 | 8 | 6 | 12 | 13 | 23 | 9 | 37 | 11 | 227 |
| Australia | 5 | 24 | 16 | 8 | 9 | 7 | 11 | 2 | 6 | 9 | 7 | 2 | 219 |
| South Africa | 16 | 6 | 4 | 8 | 6 | 23 | 3 | 5 | 3 | 3 | 0 | 1 | 213 |
| China | 0 | 14 | 30 | 22 | 27 | 24 | 10 | 4 | 14 | 17 | 8 | 0 | 186 |
| Canada | 11 | 25 | 5 | 15 | 11 | 1 | 7 | 1 | 3 | 6 | 2 | 0 | 153 |
| Turkey | 0 | 15 | 18 | 11 | 25 | 12 | 8 | 6 | 23 | 6 | 2 | 1 | 147 |
| All countries | 157 | 372 | 315 | 234 | 220 | 201 | 204 | 165 | 213 | 209 | 170 | 68 | 3922 |

***Source*** **: WTO** ***Upto June 2011.**

**Table 7.18 : Anti dumping duty by India in 2010-11 (April-March)**

| No. of Items | No. of cases | No. of countries involved | Value of imports of the items from target countries (US$ million) | | Value of imports of the items from all countries (US$ million) | |
|---|---|---|---|---|---|---|
| | | | 2009-10 | 2010-11 | 2009-10 | 2010-11 |
| 12 | 19 | 10 | 1767 | 1304 | 7226 | 6392 |
| | | | (0.6) | (0.4) | (2.5) | (1.7) |

*Source* : Computed from the data of the Directorate General of Anti-Dumping & Allied Duties, Department of Commerce.

*Note* : Percentage share in total imports of India in brackets

## WTO Negotiations and India

### Trade Negotiations

7.54 The Doha Round of trade negotiations in the WTO effectively made very little progress after 2008. Throughout 2009 and 2010, discussions continued but no headway was made on any substantive issue in the negotiations. (A summary of India's stand on key negotiabing issues is given in Box 7.4). However, the subject featured on the agenda of almost every major international meeting and there were strong affirmations of political support for an early conclusion of the Doha Round. Discussions continued in Geneva during March and April 2011, in a variety of formats. Reports on each area of the negotiations were issued on 21 April 2011. These documents provided an overview of the status of negotiations in each area covered in the Doha Development Agenda. While they indicated significant progress in many areas, they also captured the wide gaps remaining on many issues.

7.55 The focus then shifted to the possibility of selecting some issues for finalization as an 'early harvest' in time for the Eighth Ministerial Conference of the WTO in December 2011. It began with an attempt to select issues of particular importance to least developed countries (LDCs). However, these attempts did not meet with any success and proved not only unproductive but very divisive as well. Members could not agree on the issues to be included and sought to selectively bring in various issues of commercial interest to them. Gradually, as Members brought in non-LDC issues, the discussion veered away from the LDC issues. The LDC issues include (i) duty free quota free (DFQF) market access; (ii) the rules of origin for DFQF market access; (iii) LDC waiver in services; and (iv) issues relating to cotton (domestic and export subsidies for cotton and tariffs). Some of the issues suggested in addition for an 'LDC plus' package were trade facilitation and the export competition pillar of the agriculture negotiations. There was however little progress in arriving at a consensus on the elements of the early harvest package. The LDCs made it clear that if the LDC package was not delivered at the December 2011 Ministerial Conference, they would be very disappointed. The African Group, the African-Caribbean-Pacific Group, and other groups of developing countries supported an effort to harvest an LDC package for the Conference. India too, supported this stand.

7.56 In October-November 2011, concerted efforts were made by some of the developed country members of the WTO to use the G20 Leaders Summit in November 2011 to advance an agenda for the Eighth WTO Ministerial Conference scheduled to be held in Geneva in December 2011. Specifically, they wanted to set the stage for plurilateral agreements on selected issues in the WTO negotiations (rather than multilateral agreements); get WTO members to agree to a commitment abjuring the use of export restrictions; and introduce new issues for negotiation, namely climate change, energy security, and food security. The weeks preceding the Eighth WTO Ministerial Conference saw hectic activity in the WTO as some members attempted to put various issues on the agenda for ministerial decision. These proposals, however, did not receive support amongst WTO members. At the Eighth Ministerial Conference from 15 to 17 December, ministers adopted a number of decisions on intellectual property (IP), electronic commerce, small economies, LDCs' accession, a services waiver for LDCs, and trade policy reviews. A number of members expressed strong reservations about plurilateral approaches. Many members stressed that any different approaches in the work ahead should conform to the Doha mandate, respect the single undertaking, and be truly multilateral,

### Box 7.4 : India's stand on key negotiating issues: A summary

**Agriculture**

- Substantial and effective reductions in overall trade-distorting domestic support (OTDS) of the US and EU;
- Self-designation of an appropriate number of special products (SPs);
- An operational and effective Special Safeguard Mechanism (SSM);
- Simplification and capping of developed country tariffs.

**Non-Agricultural Market Access (NAMA)**

- Adequate and appropriate flexibilities for protecting economically vulnerable industries;
- Participation in sectoral initiatives only on a non-mandatory and good faith basis without prejudgment of the final outcome, with substantial special and differential treatment provisions for developing countries;
- Serious consideration of non-tariff barrier (NTB) textual proposals with wide support such as the horizontal mechanism.

**Services**

- Need for qualitative improvement in the revised offers especially on Modes 1(cross-border supply) and 4 (movement of natural persons);
- Appropriate disciplining of domestic regulations by developed countries.

**Rules**

- Tightening of disciplines on anti-dumping (deletion of zeroing clause and reiteration of the lesser duty rule)
- Effective special and differential treatment for developing countries on fisheries subsidies.

**Trade-related Aspects of Intellectual Property Rights (TRIPS)**

- Establishing a clear linkage between the TRIPS Agreement and the Convention on Bio-diversity (CBD) by incorporating specific disclosure norms for patent applications;
- Enhanced protection for geographical indications (GIs) other than wines and spirits.

transparent, and inclusive. In looking at future work, a large number of ministers stressed the centrality of development. Many underlined the need to give priority to issues of interest to LDCs, including cotton. Many mentioned the importance of all three pillars in the agriculture negotiations. Many also mentioned trade facilitation, special and differential (S&D) treatment, S&D monitoring mechanism and NTMs. In an unprecedented display of unity, a coalition of more than a hundred developing countries, including India, Brazil, China, and South Africa, met on the sidelines of the Conference and issued a declaration emphasizing the development agenda. They roundly criticized suggestions for plurilateral agreements to replace decision making by multilateral consensus.

## Fifth Trade Policy Review (TPR) of India

7.57 In order to promote transparency and provide better understanding of the trade policies and practices of its members, the WTO has a mechanism for regular review of their trade policies. Depending upon its share in world trade, each member's trade policy is reviewed by the WTO at fixed periodic intervals. India's TPR is carried out every four years. The TPR offers an opportunity to other WTO members to ask questions and raise concerns on different aspects of policies and practices of the country under review. The Fifth TPR of India was held on 14 and 16 September 2011 in the WTO. Before the meeting, the WTO Secretariat circulated a compilation of India's written replies to 886 advance questions raised by 26 WTO members. During the review, most of the members commended the resilience of the Indian economy that smoothly withstood the adverse effects of global financial crisis without taking recourse to protectionist measures. Members appreciated India for using its trade policy to promote sustainable development and inclusive growth. Members also noted India's positive engagement in Doha Round negotiations. Some of the members, notably the US, raised concerns in certain areas, namely tariffs and duties, licensing and restrictions, trade defence measures (anti-dumping), SPS & TBT, government procurement, incentive schemes to promote investments and exports and protect agriculture, tariff protection on agriculture, services and investments. Responses to the issues raised were provided in India's Closing Statement on 16 September 2011 (Box 7.5).

## Box 7.5 : Fifth Trade Policy Review: Issues Raised and India's Responses

**The Openness of India's Trading Regime:** Questions were asked about the openness of India's trading regime. In response India pointed out that year after year, India's imports had outpaced exports. In terms of percentage of GDP, the country's merchandise trade deficit is one of the highest in the world. India has been autonomously reducing its tariffs over the years. The simple average most favoured nation (MFN) tariff rate declined from 15.1 per cent in 2006-7 to 12 per cent in 2010-11. Both the average agricultural and industrial average tariffs have declined over time. The tariffs on 71 per cent of India's tariff lines are between 5 and 10 per cent.

**Gap between India's Bound and Applied Rates on Agricultural Products:** Some members mentioned the large gap between India's bound and applied rates on agricultural products. India responded that the large gap reflected India's steady and continued autonomous tariff liberalization. During the four years since the last TPR, the tariffs on some agricultural commodities had to be adjusted in the face of high volatility in food prices. In most cases tariffs have been brought down and have stayed down. In a few instances they have been raised again but never above their original levels.

**Export Incentives:** Questions were asked about export promotion schemes. It was explained that India's export promotion schemes are based on the concept of duty neutralization and providing a level playing field. These schemes are reviewed regularly.

**FDI Policy:** To a number of questions on FDI policy, India explained that the continuing thrust, during the period since India's last TPR in 2007, has been on making the FDI policy more liberal and investment friendly. The FDI guidelines have been significantly rationalized, simplified, and consolidated, with the aim of providing a single policy platform for reference of foreign investors. Several new sectors, such as petroleum and natural gas and civil aviation were either opened up to foreign investment or significantly liberalized during this period. Efforts were also being made to streamline and simplify the business environment and make regulations conducive to business.

**India's IP Policies and Enforcement:** On questions related to India's IP policies, India replied that a number of initiatives have been taken to enhance IP protection and enforcement. The changes proposed in the Copyright and Trademark Acts would enhance protection to intellectual property rights (IPRs) in digital technology particularly with regard to the dissemination of protected material over digital networks. These have been supplemented by administrative as well as judicial measures to strengthen the IPR regime. The provisions on IP protection in these laws are further supplemented by border measures to prevent the import of goods involving copyright piracy and counterfeit trademarks. Another initiative taken by Indian customs is the facility for online registration by the right holders through the web-based Automatic Recordation and Targeting for IPR Protection System.

**Government Procurement:** On this subject, India explained that the procurement of high tech items and high value tenders, above US$ 50,000 is generally open to international bidders. Major reforms are on the anvil for increasing coverage, improving transparency and efficiency, and better enforcement, which are triggered by domestic concerns relating to enhancing the value for money. An omnibus procurement law applicable to the entire country and to all procuring entities, including public-sector enterprises, is being deliberated upon.

**Sanitary and Phyto-sanitary (SPS) and Technical Barriers to Trade (TBT) measures:** In response to question on India's SPS and TBT measures, India explained that specific trade concerns raised against India have been largely addressed. Regulations adopted in the past have been on the basis of scientific risk analysis.

**Export Restrictions:** There were some questions on India's use of export restrictions. India responded that export restrictions have been used on some occasions for purposes of domestic supply management but these have been purely on a temporary basis. The ban on the export of rice and wheat had to be extended in 2009 due to a dislocation in production and again in 2010 due to the severest drought in the country in the last forty years. However, the export of wheat and non-basmati rice is now completely free. The export of basmati rice is and has always been free. Restrictions on cotton exports were imposed for only a brief period last year. Cotton yarn exports have been made completely free. Similarly, cotton is also freely exportable.

**Other Issues:** There were questions related to customs valuation, tariffs, and other charges, internal taxation, import licensing, and the use of trade remedies. In response it was pointed out that India cannot be accused of protectionist intent in its use of trade remedies. If that were the case, then the easy route of increasing the tariffs up to the bound rates could have been used; that has not been done. Anti-dumping measures are legitimate instruments against unfair trade practices. Investigations are carried out in a fair and transparent manner and subjected to strict scrutiny. As a rule India only imposes the lesser duty and not the full dumping margin as is done by some WTO members. This underscores the fact that trade remedies are not used as a protectionist tool. Despite the fact that many members, with very deep pockets, use subsidies as part of their trade policy, India has not imposed a single anti-subsidy measure. As on date, there is only one safeguard duty in force. In the wake of the economic crisis, there was a spurt in application of safeguard investigations in 2009. A total of 14 applications were received but in nine cases, investigations were either terminated or a decision was taken not to impose any safeguard duty. Duties were imposed only in five cases and those too have since been withdrawn. Moreover, India has never taken recourse to quantitative restrictions as safeguard measures. Import licensing affects only a few restricted items primarily on grounds of protection of human, animal, and plant life and the environment. The licensing regime is open and transparent. Licences are granted on a non-discriminatory basis. The relevant regulations are all available in the public domain and the DGFT acts as the nodal agency.

## Bilateral and Regional Cooperation

7.58 India has always stood for an open, equitable, predictable, non-discriminatory, and rule-based international trading system. Considering that regional and bilateral trade and economic cooperation agreements serve as building blocks towards achieving the multilateral trade liberalization objective, India is actively engaging in regional and bilateral negotiations with her trading partner countries/blocs to diversify and expand the markets for its exports. Some of the recent developments related to major Free Trade Agreements (FTAs) are the following:

- **India-Japan Comprehensive Economic Partnership Agreement (CEPA)**

  The India-Japan CEPA was signed on 16 February 2011 and has come into force on 1st August 2011. CEPA is a single undertaking covering goods, services, investment, and other areas of cooperation. The agreement covers more than 90 per cent of the trade, a vast gamut of services, investment, IPR, customs, and other trade-related issues. This is India's third CEPA (after Singapore and Korea) and first with a developed country.

- **India-Malaysia Comprehensive Economic Cooperation Agreement (CECA)**

  The India-Malaysia CECA was signed on 18 February 2011 and it has come into force on 1 July 2011. It is a single undertaking covering goods, services, investment, and other areas of cooperation. Taking into account the India-ASEAN Trade in Goods Agreement that was implemented from January 2010 between India and Malaysia, both sides have offered 'ASEAN Plus' market access in goods.

- **India-ASEAN Trade in Goods Agreement**

  A Framework Agreement on Comprehensive Economic Cooperation was signed between India and ASEAN on 8 October 2003. The India-ASEAN Trade in Goods Agreement has come into force on 1 January 2010 in respect of India and Malaysia, Singapore, Thailand; on 1 June 2010 in respect of India and Vietnam; 1 September 2010 in respect of India and Myanmar; 1 October 2010 in respect of India and Indonesia; 1 November 2010 in respect of India and Brunei; 24 January 2011 in respect of India and Laos; 1 June 2011 in respect of India and the Philippines; and 1 August 2011 in respect of India and Cambodia. Negotiations on the India-ASEAN CECA covering Trade in Services and Investment are under way.

- **India-EU Trade and Investment Agreement Negotiations**

  A High Level Trade Group (HLTG) was set up as mandated by the India-EU Summit in New Delhi on 7 September 2005. Negotiations for a Broad-based Bilateral Trade and Investment Agreement (BTIA) between India and the EU have commenced in June 2007 and are continuing.

- **India – European Free Trade Association (EFTA) BTIA (Iceland, Norway, Liechtenstein, and Switzerland)**

  Thirteen rounds of negotiations have so far been held alternately in Brussels and New Delhi. The thirteenth round was held from 31 March to 6 April 2011 in New Delhi. A meeting of the Commerce Secretary and EU's Director General (DG) Trade was held on 25 October 2011 at Delhi. A Chief Negotiator's Meeting was held in Brussels from 5–6 December 2011. Apart from these meetings, sector-specific inter-sessionals and digital video conferences (DVCs) have also frequently been held between the two sides.

  Both sides have intensified negotiations with a view to finalizing them in early 2012. Areas covered in the negotiations include trade in goods, SPS and TBT, trade in services, investment, IPRs and GIs, rules of origin, competition policy, customs and trade facilitation, trade defence, dispute settlement, mediation mechanism, government procurement, and sustainable development.

- **India-Canada CEPA**

  Both countries have agreed to initiate negotiations towards a CEPA covering trade in goods, services, and other areas of economic cooperation. Four Rounds of negotiations have been held.

- **India-New Zealand FTA/ CECA**

  Seven Rounds of the India–New Zealand FTA/ CECA negotiations have so far been held and negotiations are continuing.

- **India-Australia CECA**

  In April 2008, a Joint Study Group (JSG) was constituted to examine the feasibility for establishing an FTA between India and Australia. Based on the recommendations of the JSG, India and Australia are negotiating a CECA covering trade in goods, services, investment, and IPR related issues. Two Rounds of negotiations have so far been held.

## Challenges And Outlook

### Outlook

7.59 The prospects for India's Trade Sector which was performing very well in the first half of 2011-12, seems to have slightly deteriorated since the second half of the year with the deepening euro zone crisis casting a shadow on the trade prospects of countries with close linkages to the euro zone area. While India has successfully diversified its markets with reduced dependence on the EU and US, Europe still has a 19.5 per cent share in India's exports. Besides, some of India's trading partners are dependent on Europe, thus affecting India's trade indirectly. The Baltic Dry Index has again been in the red plunging to its lowest level on 3 February 2012 at 647 points, nearly 20 points lower than the previous low of 663 points recorded during the 2008 global financial meltdown. This comes as a double whammy as it not only reflects the fall in world trade activity but is also a blow to the shipping services sector. While the rise in Chinese inventory of iron ore and the Chinese New Year holiday from 23 January to 28 January 2012 could be the main reasons, the mild recession in the euro zone forecasted by IMF could be another reason. All this does not bode well for world trade in the near future and is likely to impact Indian trade as well. Recent import figures also indicate a fall not only in imports of the EU, but also imports of other Asian and South East Asian countries like China, Hong Kong, and Singapore. The December 2011 import figures are in no way encouraging. Import growth rates of China and Hong Kong from the world were low, while their import growth rates from India were only 1 per cent and 5 per cent respectively. This may be a one-off situation peculiar to the Chinese New Year holiday. In the case of the US and Japan, while the import growth rates from the world in December 2011 are moderate, their import growth rates from India are encouraging at 23 per cent and 34 per cent, Singapore's import growth from India is very high at 138 per cent. Though we have to keep our fingers crossed and wait some more time to see the trade effect on India of the emerging global situation, exports are likely to grow slowly in the coming months. On the other hand, import growth may only moderate with oil prices still above the US$100 per barrel mark and gold prices still at a high of US$ 1745 per troy ounce as on 8 December 2011. The rising geo-political tensions in countries like West Asia coming in quick succession after the Arab spring also needs to be factored as oil prices (Brent) have started boiling at US$ 119.8 per barrel as on 21/02/2012

7.60 The situation in services trade is no different. Shipping services depend directly on merchandise trade and are at an all time low as indicated by the Baltic Dry Index, though it could be a temporary phenomenon. Performance of software exports could largely depend on the developments in the major economies like the US, UK, and major euro area economies. While the US accounts for nearly 60 per cent of India's software exports, the EU economies account for around 30 per cent. However, there is no significant exposure to the countries which are presently facing crisis. To that extent, there may not be a significant loss of business for Indian software companies. Nevertheless, software exports may show some sluggishness. The euro zone accounts for around 30 per cent of total tourist arrivals in India and travel exports may also suffer because of lower tourist arrivals from the euro zone particularly the affected countries. Business services (comprising many services) exports are usually less stable service depending on the vagaries of business conditions abroad. They declined sharply in 2009-10 following the global economic crisis and have already declined in the first half of this year (2011-12). There are no signs of this getting better. As a result, as in 2009-10, surplus in export of services may be squeezed in the last two quarters of 2011-12 if subdued growth prospects continue in US and EU economies. Import growth of services appears to be less elastic downwards as seen during the 2008 global crisis. However in the first half of 2011-12, it was only 1 per cent. The decelerating growth rates of exports in goods and services coupled with only a moderation in growth rates of imports of goods and services could, therefore, strain the balance of trade in goods and services with merchandise trade deficit on customs basis in April-January 2011 already at an all time high of $ 148.7 billion—a phenomenon not witnessed even during or in the aftermath of the 2008 global crisis.

## Challenges

7.61 The challenges for India on the trade front are many. Some are due to the current emerging global situation and some are systemic and long term in nature. If the global situation worsens, the pressure for stimulus measures could again resurface and protectionist measures from trading partners could increase. Already the pitch for protectionist measures is on the rise with rising anti-dumping initiations by the US and in the rhetoric on visa restrictions in the UK and on outsourcing in the US. Though domestic food inflation has already been tamed and may not put much strain on merchandise imports, the higher wages due to the built up inflation till now coupled with creation of greater employment opportunities in India could narrow down the wage differential between India and the Gulf countries for low-skilled jobs leading to a gradual drying up of inward workers' remittances.

7.62 The challenges in the medium and long term are the following. While India is less vulnerable to the situation in the US, EU, and other developed countries due to its diversification of exports to Asia and ASEAN, concerns have increased on the bilateral trade deficit front with India's high and growing trade deficits with countries like China and Switzerland. A lot more needs to be done on diversification of India's export basket as its export presence is limited in the top items of world trade. While India has made new forays in skill-and capital-Intensive exports like information technology (IT), gems and jewellery, and engineering goods, it is losing steam in its traditional area of strength, i.e. in the labour-intensive exports like textiles, leather and leather manufactures, handicrafts, and carpets. Greater trade facilitation by removing the delays and high costs due to procedural and documentation factors, besides infrastructure bottlenecks is another major challenge. As per the World Bank and International Finance Corporation (IFC) publication Doing Business 2012, India is ranked 132 on 'ease of doing business'. While Singapore is in first place, even neighbouring countries like Sri Lanka, Vietnam, Pakistan and Bangladesh are ahead of India. On 'trading across borders', India is ranked 109 with Singapore at first rank and China at 60$^{th}$. India requires 8 export documents to be cleared and China 5 with good practice economies like France at 2. Time to export is 16 days for India, 21 for China, and 5 for Denmark. Cost to export is $1095 per container for India, compared to $500 in China and $450 in Malaysia. Number of import documents that need clearance are 9 in India, 5 in China, and 2 in France. Time to import is 20 days in India, 24 in China, and 4 in Singapore. Cost to import is $1070 per container in India, $545 in China, and $439 in Singapore. Thus a lot needs to be done on the trade facilitation front. While India has achieved a fair amount of stability in software services exports, there is less stability in business services exports. Despite the rhetoric in India on the potential of tourism services exports, results on the ground could improve further. Finally, while there are no signs of any meaningful conclusion of WTO negotiations in the near horizon, India's push towards regional and bilateral agreements should result in meaningful and result-oriented FTAs and CECAs. The challenges for India on the trade front are daunting but needs to be addressed with speed and dexterity as the opportunities are equally great and still untapped.

# Agriculture and Food

8

CHAPTER

*Agriculture has been a way of life and continues to be the single most important livelihood of the masses. Agricultural policy focus in India across decades has been on self-sufficiency and self-reliance in foodgrains production. Considerable progress has been made on this front. Foodgrains production rose from 52 million tonnes in 1951-52 to 244.78 million tonnes in 2010-11. The share of agriculture in real GDP has fallen given its lower growth rate relative to industry and services. However, what is of concern is that growth in the agricultural sector has quite often fallen short of the Plan targets. During the period 1960-61 to 2010-11, foodgrains production grew at a compounded annual growth rate (CAGR) of around 2 per cent. In fact, the Ninth and Tenth Five Year Plans witnessed agricultural sectoral growth rate of 2.44 per cent and 2.30 per cent respectively compared to 4.72 per cent during Eighth Five Year Plan. During the current Five Year plan, agriculture growth is estimated at 3.28 per cent against a target of 4 per cent. The Approach Paper to the Twelfth Five Year Plan emphasises the need to "redouble our efforts to ensure that 4.0 per cent average growth" is achieved during the Plan if not more. Without incremental productivity gains and technology diffusion across regions, achieving this higher growth may not be feasible and has implications for the macroeconomic stability given the rising demand of the 1.2 billion people for food. Achieving minimum agricultural growth is a pre-requisite for inclusive growth, reduction of poverty levels, development of the rural economy and enhancing of farm incomes.*

8.2 Agriculture including allied activities, accounted for 14.5 per cent of gross domestic product (GDP) at 2004-05 prices, in 2010-11 as compared to 14.7 per cent in 2009-10. Notwithstanding the declining trend in agriculture's share in the GDP, it is critical from the income distribution perspective as it accounted for about 58 per cent employment in the country according to Census 2001. Hence growth in agriculture and allied sectors remains a 'necessary condition' for inclusive growth. In terms of composition, out of the total share of 14.5 per cent that agriculture and allied sectors had in GDP in 2010-11, agriculture alone accounted for 12.3 per cent, followed by forestry and logging at 1.4 per cent and fishing at 0.7 per cent (Table 8.1). Reasonable growth in agriculture is important both from the nutritional point of view as well as to control food prices and overall headline inflation.

## Performance of the Agriculture Sector during the current five Year Plan (2007-2012)

8.3 The average annual growth in agriculture and allied sectors realized during the first four years of the Eleventh Plan Period, i.e. 2007-08 to 2010-11, is 3.5 per cent against the targeted growth rate of 4 per cent. Agriculture and allied sectors recorded

**Table 8.1 : Agriculture Sector: Key Indicators**

(per cent)

| Sl. No. | Item | 2009-10@ | 2010-11* | 2011-12 ** |
|---|---|---|---|---|
| 1 | GDP – share and growth (at 2004-05 prices) | | | |
| | Growth in GDP in agriculture & allied sectors | 1.0 | 7.0 | 2.5 |
| | Share in GDP - Agriculture and allied sectors | 14.7 | 14.5 | 13.9 |
| | *Agriculture* | 12.4 | 12.3 | |
| | Forestry and logging | 1.5 | 1.4 | |
| | *Fishing* | 0.8 | 0.7 | |
| 2 | Share in total Gross Capital Formation in the Country (per cent at 2004-05 prices) Share of agriculture & allied sectors in total Gross Capital *Formation* | 7.1 | 7.2 | |
| | *Agriculture* | 6.6 | 6.6 | |
| | *Forestry and logging* | 0.1 | 0.1 | |
| | *Fishing* | 0.5 | 0.5 | |
| 3 | Employment in the agriculture sector as share of total workers as per census 2001 | 58.2 | | |

***Source*** **: Central Statistics Office (CSO) and Department of Agriculture and Cooperation.**

**Notes*:* @ Provisional Estimates *Quick Estimates **Advance Estimates**

slightly lower average growth than targeted in the Eleventh Plan period due to severe drought experienced in most parts of the country during 2009-10 and drought/deficient rainfall in some states, namely Bihar, Jharkhand, eastern UP and West Bengal in 2010-11. However, timely and corrective measures taken by the government helped boost agricultural production and growth in agriculture and allied sectors reached 7.0 per cent in 2010-11, the highest growth rate achieved during the last six years. In 2011-12 agriculture and allied sectors are estimated to achieve a growth rate of 2.5 per cent. However a matter of great concern is the fact that agricultural growth is still, to an extent, characterized by fluctuations due to the vagaries of nature.

## Gross capital formation in agriculture and allied sectors

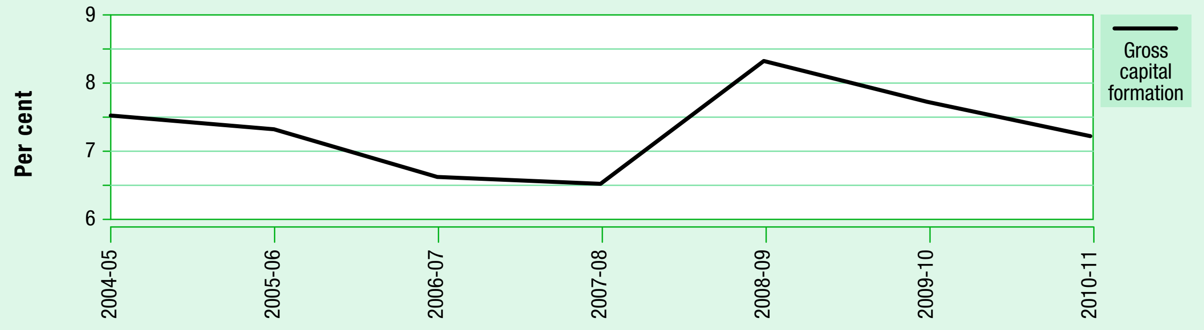
8.4 As a proportion of the value added by agriculture to GDP, Gross Capital Formation (GCF) in agriculture and allied sectors rose to 20.1 per cent in 2010-11 from 13.5 per cent in 2004-05 at 2004-05 prices (Table 8.2). This is a positive trend. However, the share of agriculture and allied sectors' GCF in overall GCF of the economy at 2004-05 prices shows a mixed trend during the same period (Figure 8.1)

**Table 8.2 : GCF in Agriculture and Allied Activities (Figures in ₹ crore at 2004-05 prices)**

| Year | Agriculture & allied activities | | GCF/GDP in agriculture & allied activities |
|---|---|---|---|
| | GCF | GDP | |
| 2004-05 | 76096 | 565426 | 13.5 |
| 2005-06 | 86604 | 594487 | 14.6 |
| 2006-07 | 92057 | 619190 | 14.9 |
| 2007-08 | 105741 | 655080 | 16.1 |
| 2008-09 | 127127 | 655689 | 19.4 |
| 2009-10 | 131139 | 662509 | 19.8 |
| 2010-11 | 142254 | 709103 | 20.1 |

***Source*** **: Central Statistics Office.**

Figure 8.1 Share of agriculture and allied sector's Gross Capital Formation in total GCF (at 2004-05 prices)




## Crop Production

8.5 For five consecutive years, from 2004-05 to 2008-09, foodgrains production recorded an increasing trend. However, it declined to 218.11 million tonnes in 2009-10 due to severe drought conditions in various parts of the country. Normal monsoon in the subsequent year, 2010-11, helped the country reach a significantly higher level of 244.78 million tonnes of foodgrains production. As per the second Advance Estimates, production of foodgrains during 2011-12 is estimated at an all time record level of 250.42 million tonnes which is a significant achievement mainly due to increase in the production of rice and wheat (Table 8.3).

### Growth Rates of Area, Production, and Yield of Major Agricultural Crops

8.6 Growth in the production of agricultural crops depends upon acreage and yield. Given the obvious limitations in expansion of agricultural land, long-term growth primarily depends on improvement in yields. An analysis of trends in indices of area, production, and yield indices of different crops during the period 1980-81 to 2011-12 (base triennium ending (T.E.) 1981-82=100) indicate a mixed picture (Table 8.4.).

8.7 **Rice and Wheat:** During the 1980s, growth in area under rice was marginal at 0.41 per cent; however, growth in production and yield was above 3 per cent. During 2000-01 to 2011-12 the situation changed, whereas growth in area is 0.04 per cent, the growth in production and yield at 1.72 per cent and 1.68 per cent respectively. In wheat also, during 1980s growth in area was marginal at 0.46 per cent but growth in production and yield was above 3 per cent. During 2000-01 to 2011-12, although growth in area under wheat was 1.22 per cent, growth in production and yield was 2.37 per cent and 1.14 per cent respectively. This clearly reflects that in these two crops the growth rate in yield levels are plateauing and there is need for renewed research efforts to

**Table 8.3 : Agricultural Production (Kharif) (million tonnes)**

| Crops | 2010-2011 | 2011-2012 (2nd Advance Estimates) | Percentage increase |
|---|---|---|---|
| Rice | 95.98 | 102.75 | 7.1 |
| Coarse cereals | 43.68 | 42.08 | -3.7 |
| Pulses | 18.24 | 17.28 | -5.3 |
| Oilseeds | 32.48 | 30.53 | -6.0 |
| Sugarcane | 342.38 | 347.87 | 1.6 |
| Cotton (Million bales of 170 kgs each) | 33.00 | 34.09 | 3.3 |
| Jute and Mesta (Million bales of 180 kgs each) | 10.60 | 11.61 | 9.3 |

*Source* : Department of Agriculture and Cooperation.

**Table 8.4 : Compound Growth Rates of Area, Production, and Yield Indices of Principal Crops during 1980-1990, 1990-2000 and 2000-2011 (Base: TE 1981-82=100)**

| | 1980-81 to 1989-90 | | | 1990-91 to 1999-2000 | | | 2000-01 to 2011-12* | | |
|---|---|---|---|---|---|---|---|---|---|
| | Area | Production | Yield | Area | Production | Yield | Area | Production | Yield |
| Rice | 0.41 | 3.62 | 3.19 | 0.68 | 2.02 | 1.34 | 0.04 | 1.72 | 1.68 |
| Wheat | 0.46 | 3.57 | 3.10 | 1.72 | 3.57 | 1.83 | 1.22 | 2.37 | 1.14 |
| Coarse Cereals | -1.34 | 0.40 | 1.62 | -2.12 | -0.02 | 1.82 | -0.75 | 3.01 | 4.39 |
| Total Pulses | -0.09 | 1.52 | 1.61 | -0.60 | 0.59 | 0.93 | 1.70 | 3.47 | 1.91 |
| Sugarcane | 1.44 | 2.70 | 1.24 | -0.07 | 2.73 | 1.05 | 1.37 | 1.96 | 0.58 |
| Total Oilseeds | 1.51 | 5.20 | 2.43 | -0.86 | 1.63 | 1.15 | 2.08 | 4.45 | 3.39 |
| Total Foodgrains | -0.23 | 2.85 | 2.74 | -0.07 | 2.02 | 1.52 | 0.43 | 2.32 | 2.91 |

***Source*** **: Department of Agriculture and Cooperation.**

***Notes*** **: * Growth rates are based on the second advance estimates (AE) 2011-12 released on 03 February 2012;Total oilseeds include nine oilseeds, cotton seed, and coconut.**

boost production and productivity (Figures 8.2 and 8.3). Both public and private-sector investment in research and development (R&D) in these crops needs to be encouraged.

8.8 **Coarse Cereals**: The growth rate in index of area of total coarse cereals during 1980-81 to 2011-12 was negative reflecting either shift to other crops or relatively dry area remaining fallow. However, the growth in production and yield which was 0.40 per cent and 1.62 per cent respectively in the 1980s has improved significantly to 3.01 per cent and 4.39 per cent respectively in the 2000-01 to 2011-12 period. This increase is primarily driven by rise in production and yield of maize and bajra. It also refectes growing popularity of coarse cereals as nutri-food (Figure 8.4).

8.9 **Pulses**: Pulses are the main source of protein for a large section of population in India. Gram and tur are the major contributors to total production of pulses in the country. During the 1980s there was negative growth in area of total pulses and growth in production and yield was 1.52 per cent and 1.61 per cent respectively. During the period 2000-01 to 2011-

**Figure 8.2** Indices of area, production and yield of rice

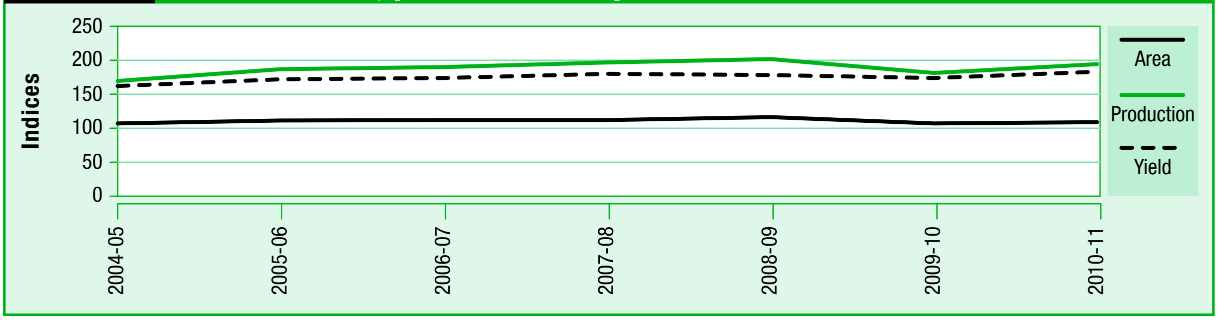



**Figure 8.3** Indices of area, production and yield of wheat

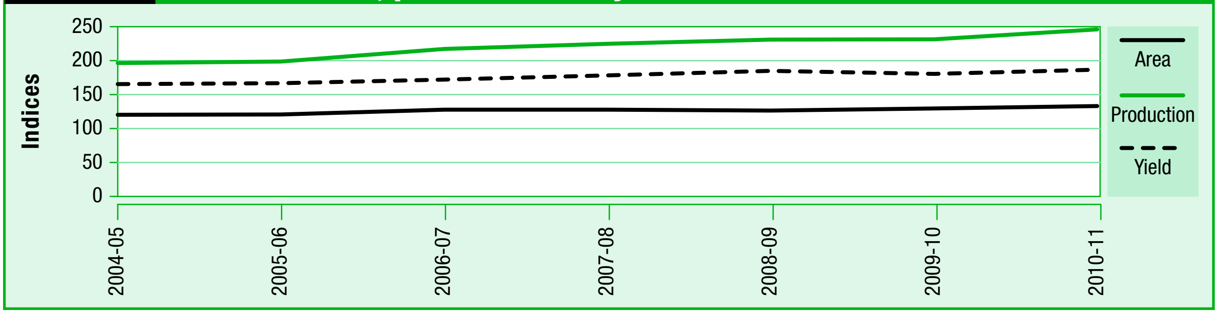
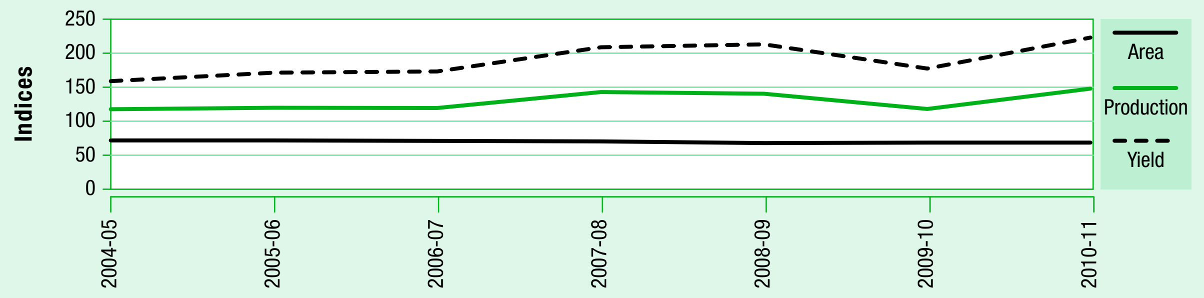


Figure 8.4 Indices of area, production and yield of coarse cereals




12, the indices of area, production and yield of pulses have grown by 1.70 per cent, 3.47 per cent, and 1.91 per cent respectively. The growth in indices of area and production during 2000-01 to 2011-12 is mainly on account of gram. A breakthrough in pulses production technology is necessary to keep pace with rising demand for this commodity (Figure 8.5).

8.10 **Sugarcane**: The compound growth rates of indices of area, production, and yield of sugarcane during 2000-01 to 2011-12 has declined compared to the 1980s. The decline in yield during this period is because of relatively higher decline in growth rate of production. A concerted effort is required to increase yield of this crop to avoid fluctuations in production and spikes in price of sugar (Figure 8.6).

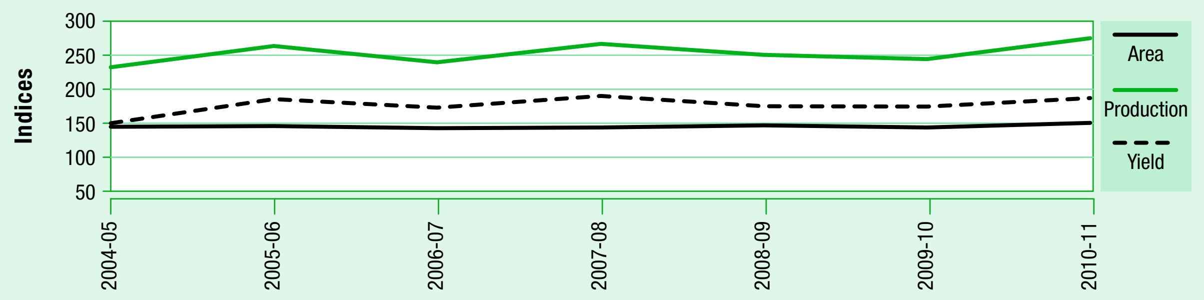
The production of sugar in the 2011-12 sugar season is estimated at about 246.65 lakh tonnes against the estimated demand of about 220 lakh tonnes.

8.11 **Oilseeds**: There has been improvement in annual growth in the indices of yield and area under oilseeds during 2000-01 to 2011-12 as compared to the 1980s. India, however, still imports about 50 per cent of its requirement of edible oil. The current level of growth rate in yield index needs to be maintained to ensure a reasonable level of self-sufficiency in this crop (Figure 8.7). The production of oilseeds during 2011-12 and net availability of edible oil from all domestic sources (primary) are estimated at 305.29 lakh tonnes and 72.69 lakh tonnes respectively.

Figure 8.5 Indices of area, production and yield of total pulses


Figure 8.6 Indices of area, production and yield of sugarcane

Figure 8.7 Indices of area, production and yield of oilseeds




### Increased requirements of food consumption

8.12 Given the growth rate of population, the rise in demand for food is a natural concomitant. Further, the rise in income levels and change in tastes and preferences of people have also contributed to the increased demand for diverse food products. The recent spurt in food prices was mainly driven by increase in prices of items like fruits and vegetables, milk, meat, poultry, and fish, which account for approximately 70 per cent of the wholesale price index (WPI) basket for primary food items. An examination of food consumption expenditure in the country during the period 1987-88 to 2009-10 clearly reveals that there has been a shift in expenditure towards milk and milk products, egg, fish, meat, and vegetables both in rural and urban areas, whereas the share of consumption of cereals in the total food basket has gone down (Table 8.5). Some of the short-term, medium-term, and long-term measures that could be undertaken to achieve higher production and productivity in the agriculture sector to ensure that the higher demand for food items is met include measures related to supply response, storage, and marketing (Box 8.1).

## Area Coverage of Foodgrains in 2011-12

8.13 There has been a decline in overall area under foodgrains during 2011-12 (2nd Advance Estimates) as compared to 2010-11. The area coverage under foodgrains during 2011-12 stood at 1254.92 lakh ha compared to 1267.65 lakh ha last year. The lower area under foodgrains has been due to a shortfall in the area under jowar in Maharashtra, Rajasthan and Gujarat; bajra in Maharashtra, Gujarat and Haryana; and in pulses in Maharashtra, Uttar Pradesh, Andhra Pradesh, and Rajasthan. However the area under coarse cereals and oilseeds has also come down as compared to the previous year. The area coverage under rice during 2011-12 is around 444.06 lakh ha which is 15.44 lakh ha more than the previous year. The area coverage under sugarcane during the current year has slightly improved to 50.81 lakh ha, higher by about 1.96 lakh hectares as compared to the previous year, and the area under cotton has increased significantly to 121.78 lakh ha as compared to 112.35 lakh ha during 2010-11.

**Table 8.5: Item-wise Share of Expenditure to Total Food Expenditure**

| | Rural | | Urban | |
|---|---|---|---|---|
| | 1987-1988 | 2009-2010 | 1987-1988 | 2009-2010 |
| Cereals | 41.1 | 29.1 | 26.6 | 22.4 |
| Pulses and products | 6.3 | 6.9 | 6.0 | 6.6 |
| Milk and products | 13.4 | 16.0 | 16.8 | 19.2 |
| Egg, fish, and meat | 5.2 | 6.5 | 6.4 | 6.6 |
| Vegetables | 8.1 | 11.6 | 9.4 | 10.6 |
| Sugar | 4.5 | 4.5 | 4.3 | 3.7 |
| Food total | 100 | 100 | 100 | 100 |

***Source*** **: Key Indicators of Household Consumer Expenditure in India 2009-10, National Sample Survey (NSS) 66th Round**

### Box 8.1 : Options for addressing supply-side constraints

- Given the compositional shift in foodbasket of a common household and its impact on consumption demand, improved supply response is critical for ensuring price stability in food items.
- Extension programmes and guidance to farmers regarding fertilizer and insecticide usage and alternate cropping pattern based on soil analysis could be undertaken and intensified.
- As a strategy, regular imports of agricultural commodities in relatively smaller quantities with an upper ceiling on total quantity could be considered. The upper ceiling can be decided annually, relatively well in advance, after assessing the likely domestic situation in terms of production and consumption requirements.
- Setting up special markets for specific crops in states/regions/areas producing those crops would facilitate supply of superior commodities to the consumers.
- Mandi governance is an area of concern. A greater number of traders must be allowed as agents in the mandis. Anyone who gets better prices and terms outside the Agricultural Produce Marketing Committee (APMC) or at its farm gate should be allowed to do so. For promoting inter-state trade, a commodity for which market fee has been paid once must not be subjected to subsequent market fee in other markets including that for transaction in other states. Only user charges linked to services provided may be levied for subsequent transactions.
- Perishables could be taken out of the ambit of the APMC Act. The recent episodes of inflation in vegetables and fruits have exposed flaws in our supply chains. The government-regulated mandis sometimes prevent retailers from integrating their enterprises with those of farmers. In view of this, perishables may have to be exempted from this regulation.
- Considering significant investment gaps in post-harvest infrastrure of agricultrual produce, organised trade in agriculture should be encouraged and the FDI in multi-brand retail once implemented could be effectively leveraged towards this end.
- Government should step up creation of modern storage faclities for food grains.

## Rubber

8.14 India is the fourth largest producer of natural rubber (NR) with a share of 8.2 per cent in world production in 2010. Despite not having geographically very favourable regions for growing NR, India continued to record the highest productivity among major NR-producing countries. The production of NR in 2011-12 is projected at 9.02 lakh tonnes, an increase of 4.6 per cent over 2010-11. India continues to be the second largest consumer of NR with 8.8 per cent share of world consumption in 2010. Consumption of NR in 2011-12 is projected at 9.77 lakh tonnes, an increase of 3.1 per cent over the previous year.

## Coffee

8.15 India is the sixth largest producer of coffee after Brazil, Vietnam, Colombia, Indonesia, and Ethiopia. With 2 per cent share in global area under coffee, India contributes about 4 per cent to world coffee production as well as international trade. Coffee is cultivated in an area about 4.0 lakh ha primarily in the southern states of Karnataka, Kerala, and Tamil Nadu. Presently consumption in the country is over 1 lakh tonnes and India produces about 3 lakh tonnes of coffee comprising both Arabica (32 per cent) and Robusta (68 per cent) coffee. The country's coffee production reached a high of 3.02 lakh tonnes during 2011-12 and is expected to touch an all-time record production of 3.22 lakh tonnes during 2011-12, an increase of 6.7 per cent over 2010-11 production.

8.16 Over the past two decades, coffee cultivation has been promoted in the tribal regions of Andhra Pradesh, Orissa, and the north-eastern states primarily with the objective of tribal development and afforestation. Indian coffee is primarily an export-oriented commodity with about 70 per cent of production being exported.

## Tea

8.17 India is the largest producer and consumer of black tea in the world. Tea is grown in 16 states in India. Assam, West Bengal, Tamil Nadu, and Kerala account for about 95 per cent of total tea production. Tea production in India during the year 2010-11 has been estimated at 0.97 million tonnes as against 0.99 million tonnes in 2009-10.

## Exports and Imports

8.18 India's trade policy on agricultural items is guided by the twin objectives of ensuring food security and building export markets for enhancing the income of farmers, depending on domestic availability. In

September 2011, government has put the exports of wheat, non-basmati rice, and cotton under open general licence.

8.19 India is among 15 leading exporters of agricultural products in the world. As per the International Trade Statistics 2011, published by the World Trade Organization (WTO), India's agricultural exports amounted to US $ 23.2 billion with a 1.7 per cent share of world trade in agriculture in 2010. On the other hand, India's agricultural imports amounted to US $ 17.5 billion with a 1.2 per cent share of world trade in agriculture in 2010.

## Agricultural Inputs

8.20 Improvement in yield, which is key to long-term growth, depends on a host of factors including technology, use of quality seeds, fertilizers, pesticides, micronutrients, and irrigation. Each of these plays a role in determining yield level and in turn augmentation in the level of production.

### Seeds

8.21 Good quality seed is one of the most important inputs for enhancing agricultural productivity and production. Efficacy of other agricultural inputs such as fertilizers, pesticides, and irrigation is largely determined by it. Seed quality is estimated to account for 20-25 per cent of productivity. It is, therefore, important that quality seeds are made available to the farmers. Since the year 2005-06, the central government has been implementing a central-sector scheme known as 'Development and Strengthening of Infrastructure Facilities for Production and Distribution of Quality Seeds' to address the gaps in infrastructure and to increase availability of quality seeds for different crops through various interventions. The objective of the scheme is to ensure production and multiplication of high-yielding certified/quality seeds of all crops in sufficient quantities and make them available to farmers at affordable prices. An amount of ₹1987.83 crore (till 15 February 2012) has been released as grants-in-aid under different components of the scheme. Although this scheme has contributed to doubling the availability of quality seeds in the last five years, it requires major changes and upgradation to meet the challenges of the rapidly evolving seed sector and ensure wider use of quality seeds. Accordingly, a National Mission on Seeds for the Twelfth Plan Period has been proposed.

8.22 The New Policy on Seed Development (NPSD) was formulated way back in 1988 with a view to providing the best planting material available abroad to Indian farmers. The policy has, over the years, facilitated import of seeds under various categories. The policy permits initial import of small quantities of seeds of cereals, oilseeds, pulses, etc. for in-house trial by the importer. Based on satisfactory results of multi-location trials, importers are permitted to import in bulk. Subsequently, NPSD 1988 was revised to allow import of seeds of wheat and paddy, coarse cereals, pulses, and oilseeds under prescribed conditions. The revisions in NPSD could usher in an enabling environment for speedy trial and evaluation of seeds, thereby facilitating timely imports.

8.23 In response to the changes that have taken place in the seed sector, the Seed Act 1966 is proposed to be replaced by a suitable legislation to (i) create an enabling climate for growth of the seed industry, (ii) enhance the seed replacement rates, (iii) boost export of seeds and encourage import of useful germplasm, and (iv) create a conducive atmosphere for the application of frontier sciences in variety development and enhanced investment for R&D. Presently, the Bill is under consideration for moving official amendments to it based on suggestions received from various quarters.

8.24 FDI policy for agriculture sector was amended to allow 100 per cent FDI under automatic route for 'development of seed'. Earlier, FDI was permitted for 'development of seed under controlled condition'.

### Mechanization and Technology

8.25 Farm mechanization has immense potential for improving farm productivity. Empirical data reaffirm that availability of farm power has a direct correlation to agricultural productivity. Appropriate crop and region-specific agricultural equipment enable efficient utilization of farm inputs making farming viable and attractive. Though the country has been witnessing considerable progress in farm mechanization, its spread across the country still remains uneven. Current farm power availability hovers around 1.7 kw/ha which is much lower than that of Korea (7+ kw/ha), Japan (14+kw/ha), and the USA (6+kw/ha). It is estimated that in order to upscale farm productivity so as to grow more food given the stagnant net sown area, farm power availability must reach at least 2.0 kw/ha by the end of Twelfth Five Year Plan. Gradual increase in farm mechanization will also help release agricultural labour for other emerging and valued sectors, thus contributing more towards GDP.

8.26 So far in India, 'tractors' have been the major symbol of agriculture mechanization. Indian agriculture is dominated by small and marginal farmers, whose smaller landholding and weaker economic status render single ownership of much high-value agricultural machinery and equipment. In this context, supporting and franchising rural entrepreneurs for establishing custom hiring or farm service centers will help extending benefits of farm mechinization to so far 'excluded farmers' category.

## Fertilizers

8.27 India is meeting 80 per cent of its urea requirement through indigenous production but is largely import dependent for meeting the requirements of potassic (K) and phosphatic (P) fertilizers (Table 8.6). Chemical fertilizers have played a significant role in the development of the agricultural sector. Consumption of chemical fertilizers has steadily increased over the years (Table 8.7).

8.28 The Nutrient Based Subsidy (NBS) Policy for fertilizers was implemented in 2010. Under the NBS Policy, a fixed subsidy is announced on per kg basis of nutrient annually. An additional subsidy is also given to micro-nutrients. With the objective of providing a variety of subsidized fertilizers to farmers depending upon soil and crop requirements, the government has included seven new grades of complex fertilizers under the NBS. Under this scheme, manufactures/marketers are allowed to fix the maximum retail price (MRP). Farmers pay only 50 per cent of the delivered cost of P and K fertilizers, the rest is borne by the Government of India in the form of subsidy.

**Table 8.6 : Production of Urea, DAP and Complex Fertilizers**

(in lakh tonnes)

| Year | 2006-07 | 2007-08 | 2008-09 | 2009-10 | 2010-11 | 2011-12* |
|---|---|---|---|---|---|---|
| Urea | 203.10 | 198.60 | 199.20 | 211.12 | 218.80 | 222.88 |
| Di-ammonium phosphate. | 48.52 | 42.12 | 29.93 | 42.46 | 35.37 | 39.41 |
| Complex fertilizers | 74.64 | 58.50 | 68.48 | 80.38 | 87.27 | 90.69 |

***Source*** **: Department of Fertilizers.**
***Estimated**

**Table 8.7 : Per Hectare Consumption of Fertilizers in Nutrient Terms**

(in lakh tonnes)

| Year | 2006-07 | 2007-08 | 2008-09 | 2009-10 | 2010-11 |
|---|---|---|---|---|---|
| Nitrogenous (N) | 137.73 | 144.19 | 150.90 | 155.80 | 165.58 |
| Phosphatic (P) | 55.43 | 55.15 | 65.06 | 72.74 | 80.50 |
| Potassic (K) | 23.35 | 26.36 | 33.13 | 36.32 | 35.14 |
| Total (N+P+K) | 216.51 | 225.70 | 249.09 | 264.86 | 281.22 |
| Per hectare consumption (kg) | 111.8 | 116.50 | 127.2 | 135.76 | 144.14 |

***Source*** **: Department of Fertilizers.**

## Rainfall and Reservoir Levels

8.29 Rainfall continues to influence crop production and productivity in a substantial way. Around 75 per cent of annual rainfall is received during the south-west monsoon season (June-September). During the south-west monsoon season 2011, the country as a whole received 1 per cent more rainfall than the long period average (LPA). Central India and north-west India experienced excess rainfall over the LPA by 10 per cent and 7 per cent respectively. The southern peninsula received normal rainfall. North-east India received 14 per cent less rainfall than the LPA. At district level, 24 per cent of districts received excess rainfall, 52 per cent normal rainfall, 23 per cent deficient rainfall, and 1 per cent scanty rainfall.

8.30 Out of 36 Subdivisions, 3 recorded deficient rainfall during the south-west Monsoon in 2011. Out of the 33 remaining subdivisions, 7 recorded excess rainfall and the remaining 26 recorded normal rainfall (Table 8.8).

8.31 The total designed storage capacity at full reservoir level (FRL) of 81 major reservoirs in the country monitored by the Central Water Commission (CWC) is 151.77 billion cubic meters (BCM). At the end of monsoon 2011, the total live storage in these reservoirs was 131.076 BCM which is more than the live storage of 115.23 BCM at the end of monsoon 2010 and 102.759 BCM which is the average of the last 10 years. Given the vagaries of the monsoon, augmenting irrigation potential is key to sustained growth in agriculture.

## Irrigation

8.32 Irrigation is one of the most important inputs required at different critical stages of plant growth of various crops for optimum production. The Government of India has taken up augmentation of irrigation potential through public funding and is assisting farmers to create potential on their own farms. Substantial irrigation potential has been created through major and medium irrigation schemes.

**Table 8.8 : Monsoon Performance : 2001 to 2011 (June – September)**

| Year | Number of meteorological subdivisions | | | Percentage of districts with normal/ excess rainfall | Percentage of long period average rainfall for the country as a whole |
|---|---|---|---|---|---|
| | Normal | Excess | Deficient/ Scanty | | |
| 2001 | 28 | 1 | 6 | 68 | 91 |
| 2002 | 14 | 1 | 21 | 37 | 81 |
| 2003 | 23 | 8 | 5 | 76 | 105 |
| 2004 | 23 | 0 | 13 | 56 | 87 |
| 2005 | 24 | 8 | 4 | 72 | 99 |
| 2006 | 21 | 6 | 9 | 60 | 100 |
| 2007 | 18 | 13 | 5 | 72 | 106 |
| 2008 | 31 | 2 | 3 | 76 | 98 |
| 2009 | 11 | 3 | 22 | 42 | 78 |
| 2010 | 17 | 14 | 5 | 70 | 102 |
| 2011 | 26 | 7 | 3 | 76 | 101 |

***Source*** **: Indian Meteorological Department.**

8.33 The central government initiated the Accelerated Irrigation Benefit Programme (AIBP) from 1996-97 for extending assistance for the completion of incomplete irrigation schemes. Under this programme, projects approved by the Planning Commission are eligible for assistance. Under the AIBP, ₹ 50,380.64 crore of central loan assistance (CLA)/grant has been released up to 30 November 2011. As on 31 March 2011, 290 projects were covered under the AIBP and 134 completed. During 2010-11, an irrigation potential of 566.24 thousand ha is reported to have been created by states, from major / medium /minor irrigation projects under the AIBP. While the higher irrigation potential would help augment production and productivity, assured remuneration from such production is vital for development of agriculture.

## Price Policy for Agricultural Produce

8.34 Government's price policy for agricultural produce seeks to ensure remunerative prices to growers for their produce with a view to encouraging higher investment and production and safeguarding the interests of consumers by making available food supplies at reasonable prices. The price policy also seeks to evolve a balanced and integrated price structure in keeping with the overall needs of the economy. To achieve this end, the government announces minimum support prices (MSPs) for major agricultural commodities each season and organizes purchase operations through the Food Corporation of India, and cooperative and other agencies designated by state governments. The

**Figure 8.8 Recent trends in MSPs of some important crops**

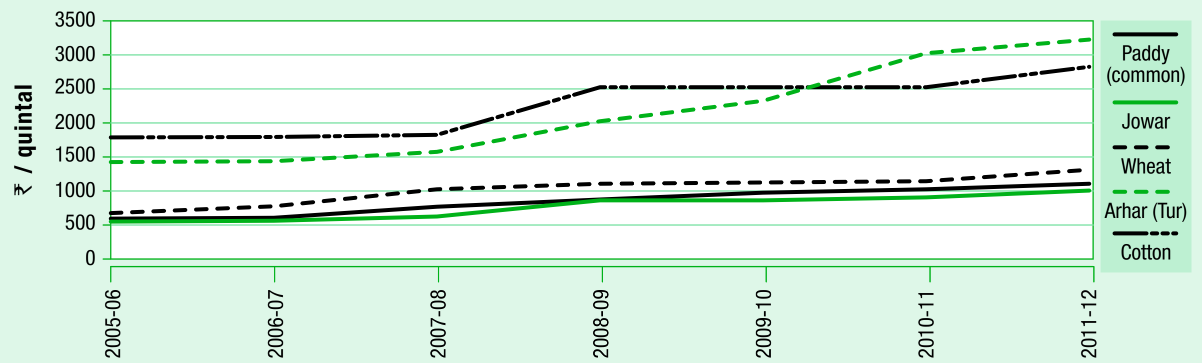


**Table 8.9 : Minimum Support Prices**

(₹ per quintal)

| | 2010-11 | 2011-12 | Difference between 2011-12 and 2010-11 Prices |
|---|---|---|---|
| **Kharif Crops** | | | |
| Paddy (common) | 1000 | 1080 | 80 |
| Paddy (Gr.A) | 1030 | 1110 | 80 |
| Jowar (hybrid) | 880 | 980 | 100 |
| Jowar (maldandi) | 900 | 1000 | 100 |
| Bajra | 880 | 980 | 100 |
| Maize | 880 | 980 | 100 |
| Ragi | 965 | 1050 | 85 |
| Arhar (tur) | 3000* | 3200* | 200 |
| Moong | 3170* | 3500* | 330 |
| Urad | 2900* | 3300* | 400 |
| Groundnut in shell | 2300 | 2700 | 400 |
| Sunflower | 2350 | 2800 | 450 |
| Soyabean (black) | 1400 | 1650 | 250 |
| Soyabean (yellow) | 1440 | 1690 | 250 |
| Sesamum | 2900 | 3400 | 500 |
| Nigerseed | 2450 | 2900 | 450 |
| Cotton (F-414/H-777/J34)[a] | 2500 | 2800 | 300 |
| **Rabi crops** | | | |
| Wheat | 1120[b] | 1285 | 165 |
| Barley | 780 | 980 | 200 |
| Gram | 2100 | 2800 | 700 |
| Masur (lentil) | 2250 | 2800 | 550 |
| Rapeseed/mustard | 1850 | 2500 | 650 |
| Safflower | 1800 | 2500 | 700 |

***Source*** **: Department of Agriculture and Cooperation.**
***Note*** **: * An additional incentive at the rate of ₹ 500 per quintal for tur, urad, and moong is given to procurement agencies during the harvest/arrival period of two months. a- Staple length (mm) of 24.5 and 25.5 and micronaire value of 4.3-5.1. b-An additional incentive bonus of ₹ 50 per quintal over the MSP.**

government decides on the MSPs for various agricultural commodities taking into account the recommendations of the Commission for Agricultural Costs and Prices (CACP), the views of state governments and central ministries as well as such other relevant factors which are considered important for fixation of support prices. In the year 2011-12, the MSPs of various agricultural crops have been increased as reflected in Table 8.9. The MSPs of some major crops exhibit a rising trend in line with costs and as incentive for higher output (Figure 8.8).

8.35 NAFED appoints state agencies to undertake Price Support Scheme (PSS) operations. The losses, if any, incurred by the central agencies on undertaking PSS operations are reimbursed up to 15 per cent by the central government. Apart from this, government provides working capital to the central agencies for undertaking PSS operations. The government also implements the Market Intervention Scheme (MIS) for horticultural and agricultural commodities, generally perishable in nature and not covered under the PSS, thus helping farmers get remunerative prices for their produce. The MIS is contingent on the specific request of a state/union territory (UT) government which is ready to bear 50 per cent loss (25 per cent in the case of north-eastern states), if any, incurred on its implementation. However, the loss is restricted up to 25 per cent of total procurement value. Profit earned, if any, in implementing the MIS is retained by the procuring agencies.

## Major Schemes/Programmes in The Agriculture Sector

8.36 Agriculture being a state subject, the primary responsibility for increasing agriculture production, enhancing productivity, and exploring the vast untapped potential of the sector rests with the state governments. However, in order to supplement the efforts of the state governments, a number of centrally sponsored and central-sector schemes are being implemented for enhancing agricultural production and productivity in the country and increasing the income of the farming community.

### National Food Security Mission (NFSM)

8.37 The NFSM, launched in 2007, is a crop development scheme of the Government of India that aims at additional production of 10, 8, and 2 million tonnes of rice, wheat, and pulses respectively by the end of 2011-12.The scheme was approved with an outlay of ₹ 4,883 crore for the period from 2007-08 to 2011-12. A sum of about ₹ 3,381 crore has been spent till 31 March 2011. The Mission interventions consist of a judicious mix of proven technological components covering seeds of improved variety, soil ameliorants, plant nutrients, farm machines/implements, and plant protection measures. In addition, a special initiative under the name of the Accelerated Pulses Production Programme was initiated in 2010 to boost the production of pulses by active promotion of technologies in 1,000 clusters of 1,000 ha each. Considerable achievements under the NFSM have been recorded during the course of implementation of the programme such as new farm practices, distribution of seeds of high yielding varieties of rice, wheat, pulses, and hybrid rice, and treating area with soil ameliorants to restore soil fertility for higher productivity. Through targeted interventions, the mission has already achieved, a year in advance, 25 millions tonnes of additional production of food grains exceeding the target of 20 million tonnes of production set for the terminal year 2011-12, of the Eleventh Year Plan.

### Macro Management of Agriculture (MMA)

8.38 The MMA Scheme was revised in 2008 to improve its efficacy in supplementing/complementing the efforts of the states towards enhancement of agricultural production and productivity. It also provides opportunity to draw upon agricultural development programmes out of ten sub-schemes relating to crop production and natural resource management, and give it the flexibility to use 20 per cent of resources for innovative components. The revised MMA scheme has formula-based allocation criteria and provides assistance in the form of grants: loan to the states/UTs on 90:10 ratio basis, except in case of the north-eastern states where the central share is 100 per cent grant. Out of the total outlay for the Eleventh Plan, i.e. ₹ 5,500 crore, funds to the tune of ₹ 3,845 crore have been utilized/released to the states/UTs during the first four years of the Plan period. An outlay of ₹ 780 crore has been approved for 2011-12, out of which an amount of ₹ 772 crore has been released to states till 21 February 2012.

### Rashtriya Krishi Vikas Yojana (RKVY)

8.39 The RKVY was launched in 2007-08 with an outlay of ₹ 25,000 crore in the Eleventh Plan for incentivizing states to enhance public investment to achieve 4 per cent growth rate in agriculture and allied sectors during the Eleventh Five Year Plan period. The states have been provided ₹ 14,598.31 crore under the RKVY during 2007-08 to 2010-11. Allocation under the RKVY for the current year is ₹ 7,810.87 crore.

8.40 The RKVY format permits taking up national priorities as sub-schemes, allowing the states flexibility in project selection and implementation. The sub-schemes include Bringing Green Revolution to Eastern Region; Integrated Development of 60,000 Pulses Villages in Rainfed Areas; Promotion of Oil Palm; Initiative on Vegetable Clusters; Nutri-cereals; National Mission for Protein Supplements; Accelerated Fodder Development Programme; Rainfed Area Development Programme; and Saffron Mission. The RKVY links 50 per cent of central assistance to those states that have stepped up percentage of State Plan expenditure on agriculture and allied sectors. States have indeed increased allocation to agriculture and allied sectors from 4.88 per cent of total State Plan expenditure in 2006-07 to 6.04 per cent of in 2010-11 (Revised Estimates—RE).

### Integrated Scheme of Oilseeds, Pulses, Oil Palm, and Maize (ISOPOM)

8.41 Oilseeds are raised mostly under rainfed conditions and are important for the livelihood of small and marginal farmers in the arid and semi-arid areas of the country. The centrally sponsored ISOPOM have been under implementation during the Eleventh Plan in 14 states for oilseeds and pulses, 15 for maize, and 9 for oil palm. The pulses component has been merged with the NFSM with effect from 1 April 2010.

## National Mission for Sustainable Agriculture (NMSA)

8.42 The NMSA aims at enhancing food security and protection of resources such as land, water, biodiversity, and genetic resources by developing strategies to make Indian agriculture more resilient to climate change. The Prime Minister's Council on Climate Change has approved the Mission in September 2010 and the Ministry of Agriculture has initiated activities under this Mission during the current financial year (Box 8.2).

## Extension Services

8.43 The Support to State Extension Programmes for Extension Reforms Scheme was launched in 2005-06, aiming at making the extension system farmer driven as well as accountable to farmers by providing for new institutional arrangements for technology dissemination. This has been done through setting up of Agricultural Technology Management Agencies (ATMA) at district level to operationalize the extension reforms. The ATMA has active participation of farmers/farmer groups, non-government organizations (NGOs) and other stakeholders operating at district level and below. Gender concerns are being mainstreamed by mandating that 30 per cent of resources on programmes and activities are utilized by women farmers and women extension functionaries. Since inception, 1.70 crore farmers of which 25 per cent are women farmers, have been benefited under various extension activities.

8.44 Certain other schemes which support agriculture sector are mass media support to agriculture focusing on Doordarshan infrastructure and All India Radio (AIR) broadcasting agriculture-related information; kisan call centres to provide agricultural information to the farming community through toll free telephone lines; agri-clinic and agri-business centres by agriculture graduates to provide extension services to farmers on payment basis through setting up of economically viable self–employment ventures, and information dissemination through agri fairs. Further, extension education institutes at Nilokher (Haryana), Rajendra Nagar, (Andhra Pradesh), Anand (Gujarat), and Jorhat (Assam) are operating at regional level to improve the skills and professional competence of extension field functionaries of agriculture and allied departments. In addition, there are model training courses on thrust areas of agriculture, horticulture, animal husbandry, and fisheries with the objective of improving the professional competence, upgrading the knowledge, and developing technical skills of subject matter specialists/extension workers of agriculture and allied departments. MANAGE, Hyderabad, an apex Institute at the national level, provides training to middle and senior level officers of agriculture and allied departments of the states/UTs.

## National Horticulture Mission (NHM)

8.45 The horticulture sector includes a wide range of crops, such as fruits, vegetables, roots and tuber crops, flowers, aromatic and medicinal plants, spices, and plantation crops, which facilitate diversification in agriculture. It has been recognized that growing horticulture crops is now an ideal option to improve

### Box 8.2 : Impacts of Climate Change on Indian Agriculture

Indian agriculture, with two-third rainfed area remains vulnerable to various vagaries of monsoon, besides facing occurrence of drought and flood in many parts of the country. Natural calamities such as drought and flood occur frequently in many parts of the country. Climate change will aggravate these risks and may considerably affect food security through direct and indirect effects on crops, soils, livestock, fisheries, and pests. Building climate resilience, therefore, is critical. Potential adaptation strategies to deal with the adverse impacts of climate change are developing cultivars tolerant to heat, moisture, and salinity stresses; modifying crop management practices; improving water management; adopting new farm practices such as resource-conserving technologies; crop diversification; improving pest management; making available timely weather-based advisories; crop insurance; and harnessing the indigenous technical knowledge of farmers.

The Indian Council of Agricultural Research has initiated a scheme on National Initiative on Climate Resilient Agriculture with an outlay of ₹ 350 crore for 2010-12. This initiative has been planned as a multi-disciplinary, multi-institutional effort covering crops, livestock, and fisheries and focusing mainly on adaptation and mitigation of climate change in agriculture. It also has a component for demonstration of climate-coping technologies on farmers' fields in 100 most vulnerable districts. State-of-the-art infrastructure is being set up at key research institutes to undertake frontier research on climate change adaptation and mitigation.

livelihood security, enhance employment generation, attain food and nutritional security, and increase income through value addition. Over the years, there have been noticeable achievements and significant improvement in the production and productivity of various horticulture crops.

8.46 The NHM scheme was launched during the Tenth Plan for holistic development of the horticulture sector, duly ensuring forward and backward linkages by adopting a cluster approach, with the active participation of all the stakeholders. At present 372 districts in 18 States and 3 UTs have been covered under the NHM. The supply of quality planting material through establishment of nurseries and tissue culture units, production and productivity improvement programmes through area expansion and rejuvenation, technology promotion, technology dissemination, human resource development, creation of infrastructure for post-harvest management and marketing in consonance with the comparative advantages of each state/region and their diverse agro-climatic conditions are the major programmes of the Mission. A major initiative has been taken during 2011-12 for enhancing the supply of good quality vegetables to metro cities under the Vegetable Initiative in Urban Clusters.

## National Bamboo Mission (NBM)

8.47 The NBM, a centrally sponsored scheme of the Ministry of Agriculture for harnessing the potential of the bamboo crop in the country, is under implementation in 27 states with a total outlay of ₹ 568.23 crore. The Mission envisages promoting holistic growth of the bamboo sector by adopting an area-based, regionally differentiated strategy to increase the area under bamboo cultivation and marketing. Under the Mission, steps have been taken to increase the availability of quality planting material by supporting the setting up of new nurseries/tissue culture units and strengthening existing ones. To address forward integration, the Mission is taking steps to strengthen marketing of bamboo products, especially those of handicraft items. During 2011-12, 9,349 ha of forest and 5,526 ha of non-forest area has so far been covered under bamboo plantation and 1,074 ha of existing bamboo plantation has been improved for higher productivity. Since the inception of the Mission, 1,89,466 ha has been covered with bamboo plantation. Besides the Mission has provided financial assistance to different institutions/ universities for twenty-three R&D projects aimed at higher productivity of bamboo. Agro-forestry trials comprising bamboo grown along with agricultural/ horticultural crops and medicinal plants under different agro-climatic conditions in various states have been initiated.

# Animal Husbandry, Dairying, and Fisheries

8.48 The Eleventh Five Year Plan envisages overall growth of 6-7 per cent per annum for the sector. In 2010-11, this sector contributed 121.84 million tonnes of milk, 63.02 billion eggs, 42.99 million kg wool, and 4.83 million tonnes of meat. The Eighteenth Livestock Census (2007) has placed total livestock population at 529.7 million and total of poultry birds at 648.8 million.

## Dairy Sector

8.49 India ranks first in the world in milk production, which went up from 17 million tonnes in 1950-51 to 121.84 million tonnes in 2010-11. The per capita availability of milk has also increased from 112 grams per day in 1968-69 to 281 grams in 2010-11. However, world average per capita availability was 284 grams per day in 2009-10 compared to 273 grams per day for India.

8.50 The Indian dairy sector acquired substantial growth momentum from the Ninth Plan onwards, achieving an annual output of 121.84 million tonnes of milk during 2010-11 (Table 8.10). This represents sustained growth in the availability of milk and milk products for the growing population of the country. Dairying has become an important secondary source of income for millions of rural families and has assumed an important role in providing employment and income-generating opportunities.

**Table 8.10 : Production and Per Capita Availability of Milk**

| Year | Per capita availability (grams/day) | Production (million tonnes) |
|---|---|---|
| 1990-91 | 176 | 53.9 |
| 2000-01 | 217 | 80.6 |
| 2005-06 | 241 | 97.1 |
| 2006-07 | 251 | 102.6 |
| 2007-08 | 260 | 107.9 |
| 2008-09 | 266 | 112.2 |
| 2009-10 | 273 | 116.4 |
| 2010-11# | 281 | 121.8 |

***Source*** **: Department of Animal Husbandry, Dairying and Fisheries.**
***Note*** **: # : Provisional**

8.51 The Ministry of Agriculture is implementing important schemes, namely the Intensive Dairy Development Programme, Strengthening Infrastructure for Quality and Clean Milk Production, and Assistance to Cooperative and Dairy Entrepreneurship Development Scheme, in the dairy sector. A major programme for genetic improvement called the National Project for Cattle and Buffalo Breeding (NPCBB) was also launched in 2000. The NPCBB envisaged genetic upgradation and development of indigenous breeds on priority basis.

8.52 A centrally sponsored scheme for livestock insurance is being implemented in all the states with the twin objectives of providing protection mechanism to farmers and cattle rearers against any eventual loss of their animals due to death and to demonstrate the benefit of the insurance of livestock and popularize it with the ultimate goal of attaining qualitative improvement in livestock and its products. The scheme benefits farmers and cattle rearers with indigenous/cross-bred milch cattle and buffaloes in 300 selected districts. The benefit of subsidy is to be restricted to two animals per beneficiary per household. During 2010-11, 8.16 lakh animals (indigenous crossbreed milch cattle and buffalo) were insured against the target of 6.55 lakh. In 2011-12, ₹ 30.99 crore had been released up to December 2011 and 29.10 lakh animals were insured from 2006-07 to 2010-11.

## Poultry

8.53 The poultry sector encompasses a range of farming systems from highly industrialized and export-oriented at one end to backyard, small and marginal model (or systems), addressing livelihood issues at the other end. The per capita availability is around 53 eggs per year in the year 2010-11. Exports of poultry products were around ₹ 372 crore in 2009-10 as per the Agricultural and Processed Food Products Export Development Authority (APEDA).

8.54 Four regional Central Poultry Development Organizations located at Chandigarh, Bhubaneswar, Mumbai, and Hessarghatta are focusing on production of stocks suitable for backyard rearing, training to the farmers to upgrade their technical skills. The Central Poultry Performance Testing Centre gives valuable information relating to different genetic stock available in the country. The “Poultry Development” scheme comprising three components, namely Assistance to State Poultry Farms, Rural Backyard Poultry Development, and Poultry Estates, is being implemented. Further, in order to encourage entrepreneurship skills of individuals, a central-sector ‘Poultry Venture Capital Fund’ Scheme is also being implemented on capital subsidy mode since 1 April 2011, covering various poultry activities.

## Livestock health

8.55 Animal wealth in India has increased manifold prompting the animal husbandry sector to adopt skilled practices. With increased trade activity and extensive cross-breeding programmes, the chances of ingress of exotic diseases into the country have increased. To ensure disease-free status and be compatible with the standards laid down by the World Animal Health Organization, many animal health schemes have been initiated. The Government of India provides financial assistance to states/UTs to control major livestock diseases and strengthen veterinary services including reporting of animal diseases through various centrally sponsored schemes. Major achievements include carrying out 81 million vaccinations and maintaining the country’s Rinderpest-free and contagious bovine pleuro-pneumonia-free status.

8.56 The Ministry of Agriculture is also implementing a World Bank- assisted project on ‘Preparedness, Control and Containment of Avian Influenza’ which envisages surveillance, capacity building in terms of training and laboratory infrastructure, and logistical support for undertaking control and containment measures at the time of outbreaks. All avian influenza outbreaks reported in the country have been effectively controlled. The last outbreak was reported in February, 2012 in Odisha where Control & Containment operations are being carried out. In the last five occurrences of avian influenza in the country, the disease has been brought under control within 10 to 15 days’ time through a robust Action Plan for Prevention, Control and Containment of the disease.

## Fisheries

8.57 The fisheries sector contributed 0.7 per cent of total GDP at factor cost and 5.0 per cent of GDP at factor cost from agriculture, forestry, and fishing in the year 2010-11 (QE). Fish production increased from 3.8 million tonnes in 1990-91 to 8.29 million tonnes in 2010-11 (Table 8.11). Fishing, aquaculture, and allied activities are reported to have provided livelihood to over 14 million people in 2010-11, apart from being a major foreign exchange earner.

**Table 8.11 : Production and Export of Fish**

| Year | Fish production (million tonnes) | | | Export of marine products | |
|---|---|---|---|---|---|
| | Marine | Inland | Total | Qty ('000 tonnes) | Value (₹ crore) |
| 1990-91 | 2.3 | 1.5 | 3.8 | 140 | 893 |
| 2000-01 | 2.8 | 2.8 | 5.6 | 503 | 6,288 |
| 2003-04 | 3.0 | 3.4 | 6.4 | 412 | 6,087 |
| 2004-05 | 2.8 | 3.5 | 6.3 | 482 | 6,460 |
| 2005-06 | 2.8 | 3.8 | 6.6 | 551 | 7,019 |
| 2006-07 | 3.0 | 3.8 | 6.8 | 612 | 8,363 |
| 2007-08 | 2.9 | 4.2 | 7.1 | 541 | 7,620 |
| 2008-09 | 3.0 | 4.6 | 7.6 | 602 | 8,608 |
| 2009-10 | 3.1 | 4.8 | 7.9 | 678 | 10,048 |
| 2010-11 | 3.2 | 5.1 | 8.3 | 813 | 12,901 |

*Source* : Department of Animal Husbandry, Dairying and Fisheries.

### Feed and fodder

8.58 Adequate availability of feed and fodder for livestock is very vital for increasing milk production and sustaining the ongoing genetic improvement programme. Green fodder shortage in the country is estimated at about 34 per cent. The Ministry of Agriculture has been implementing a modified centrally sponsored Fodder and Feed Development Scheme since 2010 to supplement the efforts of the states to improve fodder production. Under the Central Minikit Testing Programme, fodder seed minikits of high-yielding fodder varieties are distributed free of cost to farmers. During the current year (2011-12), 12.67 lakh fodder seed minikits have been allotted to states for distribution.

## Credit and Insurance

### Agricultural Credit

8.59 Agricultural credit plays an important role in improving agricultural production and productivity and mitigating distress of farmers. Government has taken several measures for improving agricultural credit flow and bringing down the rate of interest on farm loans. Important achievements/ initiatives taken by the government in recent years are the following.

(i) The flow of agricultural credit since 2003-04 has consistently exceeded the target. In the year 2010-11 the achievement was 119 per cent of target. The target of credit flow for the year 2011-12 has been fixed at ₹ 4,75,000 crore and achievement as on November 2011 is ₹ 2,94,023 crore.

(ii) Farmers have been receiving crop loans up to a principal amount of ₹ 3 lakh at 7 per cent rate of interest since 2006-07. In 2009-10, government provided an additional 1 per cent interest subvention to those farmers who repaid their short-term crop loans as per schedule. This subvention was raised to 2 per cent in 2010-11 and further to 3 per cent in 2011-12. Thus the effective rate of interest for such farmers will be 4 per cent per annum.

(iii) Initiative has been taken to provide kisan credit cards (KCC) to all eligible and willing farmers in a time-bound manner. The scheme includes reasonable components of consumption credit and investment credit within the overall credit limit to provide adequate and timely credit support to farmers for their cultivation needs. About 10.78 crore KCCs had been issued up to October 2011.

(v) The government is implementing a revival package for Short-term Rural Cooperative Credit Structure involving financial outlay of ₹ 13,596 crore. Twenty-five state governments have signed a memorandum of understanding with the Government of India and the National Bank for Agriculture and Rural Development (NABARD). This covers 96 per cent of the primary agricultural cooperative societies (PACS) and 96 per cent of the central cooperative banks in the country. As of November 2011, an amount of ₹ 9,002.98 crore had been released by NABARD as Government of

India share for recapitalization of 53,205 eligible PACS in seventeen states.

## Agricultural Insurance

8.60 There are various major crop insurance schemes under implementation in the country.

### *i) National Agricultural Insurance Scheme (NAIS)*

The NAIS is a government-sponsored central-sector crop insurance scheme being implemented in the country since 1999-2000 season with the objective of providing financial support to farmers in the event of failure of crops as a result of natural calamities, pests, and diseases. The Agriculture Insurance Company of India Ltd. is the implementing agency for the Scheme. At present, the scheme is being implemented by 25 states and two UTs. Claims to the tune of about ₹ 22142 crore have been paid against the premium income of about ₹ 6593 crore benefiting about 487 lakh farmers.

During the last 23 crop seasons, i.e. from rabi 1999-2000 to rabi 2010-11, 1,762 lakh farmers over an area of about 2,685 lakh ha have been covered, insuring a sum amounting to about ₹ 2,21,307 crore.

### *ii) Modified NAIS (MNAIS)*

With the aim of further improving crop insurance schemes, the MNAIS is under implementation on pilot basis in 50 districts in the country from rabi 2010-11 season. Some of the major improvements made in the MNAIS are actuarial premium with subsidy in premium at different rates, all claims liability to be on the insurer, unit area of insurance reduced to village panchayat level for major crops, indemnity for prevented/sowing/planting risk and for post-harvest losses due to cyclone, on account payment up to 25 per cent advance of likely claims as immediate relief, more proficient basis for calculation of threshold yield, and allowing private-sector insurers with adequate infrastructure. Only upfront premium subsidy is shared by the central and state governments on 50: 50 basis and claims are the liability of the insurance companies. The scheme has been notified by 17 states in a total of 50 districts for rabi 2011-12 season. During rabi 2010-11, about 3.58 lakh farmers over an area of about 3.23 lakh hectares have been covered, insuring a sum amounting to ₹ 69,406 lakh. The claims amounting to ₹ 15.96 crore have been provided to 46,224 farmers. 4.89 lakh farmers have been covered over an area of 7.18 lakh ha insuring a sum amounting to ₹ 1,47,074 lakh

### iii) Pilot Weather Based Crop Insurance Scheme (WBCIS)

Similarly, the WBCIS is also being implemented as a central-sector scheme from kharif 2007 season. The scheme is intended to provide insurance protection to farmers against adverse weather incidence, such as deficit and excess rainfall, high or low temperature, and humidity that are deemed to adversely impact crop production. The WBCIS is based on actuarial rates of premium but to make the scheme attractive, premium actually charged from farmers has been restricted to be on a par with the NAIS. From kharif 2007-08 to kharif 2010-11, 195.33 lakh farmers over an area of about 278 lakh ha with sum insured of about ₹ 31,953 crore have been covered under the scheme. Claims to the tune of about ₹ 991 crore have been paid against the premium of about ₹ 2868 crore. Detailed fund requirements as estimated by the implementing agency for these schemes for the year 2012-13 are to the tune of ₹ 2,200 crore.

## Agricultural Marketing

8.61 The role of the agriculture market is to deliver agricultural produce from the farmer to the consumer in the most efficient way. Agriculture markets are regulated in India through the APMC Acts. According to the provisions of the APMC Acts of the states, every APMC is authorized to collect market fees from the buyers/traders in the prescribed manner on the sale of notified agricultural produce. The relatively high incidence of commission charges on agricultural /horticultural produce renders their marketing cost high, which is an undesirable outcome. All this suggests that a single point market fee system is necessary for facilitating free movement of produce, bringing price stabilization, and reducing price differences between the producer and consumer market segments. Another point to be highlighted is that the cleaning, grading, and packaging of agricultural produce before sale by the farmers have not been popularized by these market committees on a sufficient scale.

8.62 Nevertheless, there have been some achievements in leading states like Maharashtra, Karnataka, Andhra Pradesh and Gujarat since the Model APMC Act 2003 has been implimented in those states. Some state governments have granted licences to the private sector for setting up of markets and direct purchase from the farmers in order to provide alternative marketing channels. There is considerable potential for agricultural markets to be competitive. As the APMC was created to protect the interests of farmers it will be in the fitness of things to give farmers the choice of going to the APMC or not. In the light of this, the need is to pursue further reforms in the state APMC Acts.

## Food Management

8.63 The main objectives of food management are procurement of foodgrains from farmers at remunerative prices, distribution of foodgrains to consumers, particularly the vulnerable sections of society, at affordable prices, and maintenance of food buffers for food security and price stability. The instruments at the disposal of the government are the MSP and central issue price (CIP). The nodal agency which undertakes procurement, distribution, and storage of foodgrains is the Food Corporation of India (FCI). Procurement at MSP is open-ended, while distribution is governed by the scale of allocation and its offtake by beneficiaries. The offtake of foodgrains is primarily under the targeted public distribution system (TPDS) and other welfare schemes of the Government of India.

### Procurement and Offtake of Foodgrains

8.64 During rabi marketing season (RMS) 2011-12, 28.35 million tonnes of wheat was procured against 22.52 million tonnes in 2010-11. In kharif marketing season (KMS) 2011-12, as on 1 November 2011, the total procurement of rice was 8.5 million tonnes as against 7.68 million tonnes in the corresponding period of the previous year. Procurement of coarse grains in 2010-11 was 1.28 lakh tonnes as compared to 4.07 lakh tonnes in 2009-10. Procurement of foodgrains is mainly from states like Punjab, Haryana, Uttar Pradesh, Madhya Pradesh, Andhra Pradesh, and Chhattisgarh. Increased MSP along with various other steps taken by the government has resulted in higher levels of procurement. This has paved the way for comfortable levels of food stocks to meet TPDS needs and buffer stock norms. Offtake of wheat and rice from the central pool for the TPDS and other welfare schemes has also gone up in the recent years (Table 8.12). This poses a challenge to FCI operations given the shortage of storage capacity. Initiatives taken by the government to augment storage capacity is given in Box 8.3.

### Decentralized Procurement Scheme

8.65 A number of states have opted for implementation of the Decentralized Procurement Scheme (DCP) introduced in 1997, under which foodgrains are procured and distributed by the state governments themselves. Under this scheme, the designated states, procure, store, and issue foodgrains under the TPDS and welfare schemes of the Government of India. The difference between the economic cost fixed for the state and the CIP is passed on to the state government as subsidy. The decentralized system of procurement has the objectives of covering more farmers under MSP

**Table 8.12 : Procurement and Offtake of Wheat and Rice (million tonnes)**

| | 2007-08 | 2008-09 | 2009-10 | 2010-11 | 2011-12 |
|---|---|---|---|---|---|
| **Procurement** | | | | | |
| Rice | 28.8 | 34.1 | 32.03 | 34.2 | 18.1* |
| Wheat | 11.1 | 22.7 | 25.4 | 22.5 | 28.3 |
| Total | **39.9** | **56.8** | **57.4** | **56.7** | **46.4** |
| **Offtake from the central pool** | | | | | |
| | **2007-08** | **2008-09** | **2009-10** | **2009-10** | **2010-11 (Up to Dec. 2011)** |
| Rice | 25.23 | 24.62 | 27.37 | 29.93 | 24.18 |
| Wheat | 12.20 | 14.87 | 22.34 | 23.07 | 17.80 |
| **Total** | **37.43** | **39.49** | **49.71** | **52.00** | **41.98** |

***Source*** **: Department of Food and Pubic Distribution.**

***Note*** **: Figures of procurement of wheat and rice are marketing season-wise, while the figures of offtake are financial year-wise. *- As on 10.01.2012.**

### Box 8. 3 : Procurement and Storage Capacity

As on 01.02.2012, total stock in central pool was 318.26 lakh tonnes of rice(including unmilled paddy in terms of rice) and 234.25 lakh tonnes of wheat totalling to 552.51 lakh tonnes. Highest level of stock is generally reached at the end of wheat procurement. On 01.06.2011, the central pool had 276.41 lakh tonnes of rice (including unmilled paddy in terms of rice) and 378.32 lakh tonnes of wheat. Thus, the total stock in central pool was 654.73 lakh tonnes. The FCI has a covered storage capacity of 300.83 lakh tonnes (owned and hired) as on 01.02.2012 while the State Agencies/(SWCs)have covered capacity of 153.54 lakh tonnes which is being used for storage of central pool stock of foodgrains. Thus, the total covered storage capacity for central pool stock is 454.37 lakh tonnes. Recognizing the problem of acute shortage of storage capacity, the government has already set up a High Level Committee under the chairmanship of Chairman and Managing Director, FCI, to look into storage issues. Additional storage capacity has to be created at suitable locations in order to meet the challenge of achieving the broad objectives of food security and meaningful results of various government interventions/programmes. In this regard, Government has formulated a scheme for construction of godowns under Private Entrepreneurs Guarantee (PEG) Scheme in 19 states. High Level Committee has already approved creation of about 151 lakh tonnes of storage capacity through Private Entrepreneurs and Central and State Warehousing Corporations.

operations, improving efficiency of the PDS, providing foodgrains varieties suited to local tastes, and reducing transportation costs. The DCP operations of the states have shown a healthy trend leading to increase in procurement of rice.

## Buffer Stock

8.66 The stock position of foodgrains in the central pool as on 1 February, 2012 was 55.2 million tonnes comprising 31.8 million tonnes of rice and 23.4 million tonnes of wheat, which is adequate for meeting the requirements under the TPDS and welfare schemes during the current financial year (Table 8.13).

## Economic Cost of Foodgrains to the FCI

8.67 The economic cost of foodgrains consists of three components, namely the MSP (and bonus if applicable) as the price paid to the farmers, procurement incidentals, and the cost of distribution. The economic cost for both wheat and rice witnessed significant increase during the last few years due to increase in MSPs and proportionate increase in the incidentals (Figure 8.9).

## Food Subsidy

8.68 Provision of minimum nutritional support to the poor through subsidized foodgrains and ensuring

**Table 8.13 : Stock Position of Wheat and Rice in the Central Pool vis-à-vis Minimum Buffer Norms**

(lakh tonnes)

| As on | WHEAT | | RICE | | TOTAL | |
|---|---|---|---|---|---|---|
| | Minimum Buffer Norms | Actual Stock | Minimum Buffer Norms | Actual Stock | Minimum Buffer Norms | Actual Stock |
| January 2009 # | 112 | 182.12 | 138 | 175.76 | 250 | 357.88 |
| April | 70 | 134.29 | 142 | 216.04 | 212 | 350.33 |
| July | 201 | 329.22 | 118 | 196.16 | 319 | 525.38 |
| October | 140 | 284.57 | 72 | 153.49 | 212 | 438.06 |
| January 2010 | 112 | 230.92 | 138 | 243.53 | 250 | 474.45 |
| April | 70 | 161.25 | 142 | 267.13 | 212 | 428.38 |
| July | 201 | 335.84 | 118 | 242.66 | 319 | 578.50 |
| October | 140 | 277.77 | 72 | 184.44 | 212 | 462.21 |
| January 2011 | 112 | 215.40 | 138 | 255.80 | 250 | 471.20 |
| April | 70 | 153.64 | 142 | 288.20 | 212 | 441.84 |
| July | 201 | 371.49 | 118 | 268.57 | 319 | 640.06 |
| October | 140 | 314.26 | 72 | 203.59 | 212 | 517.85 |
| January, 2012 | 112 | 256.76 | 138 | 297.18 | 250 | 553.94 |

***Source*** **: Department of Food and Public Distribution.**

***Note:*** **# Buffer norms include food security reserve of 30 lakh tonnes of wheat from 1 June 2008 and 20 lakh tonnes of rice from 1 June 2009 onwards.**

**Figure 8.9 Economic cost of rice and wheat**


Notes: Weighted average of common and grade 'A' rice taken together. For rice, from 2006-07, in the procurement incidental weightage of levy rice incidentals is also being taken.

price stability in different states are the twin objectives of the food security system. In fulfilling its obligation towards distributive justice, the government incurs food subsidy. While the economic cost of wheat and rice has continuously gone up, the issue price has been kept unchanged since 1 July 2002. The government, therefore, continues to provide large and growing amounts of subsidy on foodgrains for distribution under the TPDS, other nutrition-based welfare schemes, and open market operations. The food subsidy bill has increased substantially in the past few years putting severe strain on the public exchequer (Table 8.14 and Figure 8.10). The fiscal outgo is expected to be more once the proposed National Food Security Act is implemented (Box 8.4).

**Table 8.14 : Quantum of Food Subsidies Released by Government**

| Year | Food subsidy | Annual growth |
|---|---|---|
| | (₹ crore) | (per cent) |
| 2001-02 | 17,494.00 | 45.66 |
| 2002-03 | 24,176.45 | 38.20 |
| 2003-04 | 25,160.00 | 4.07 |
| 2004-05 | 25,746.45 | 2.33 |
| 2005-06 | 23,071.00 | -10.39 |
| 2006-07 | 23,827.59 | 3.28 |
| 2007-08 | 31,259.68 | 31.19 |
| 2008-09 | 43,668.08 | 39.69 |
| 2009-10 | 58,242.45 | 33.38 |
| 2010-11 | 62,929.56 | 8.05 |

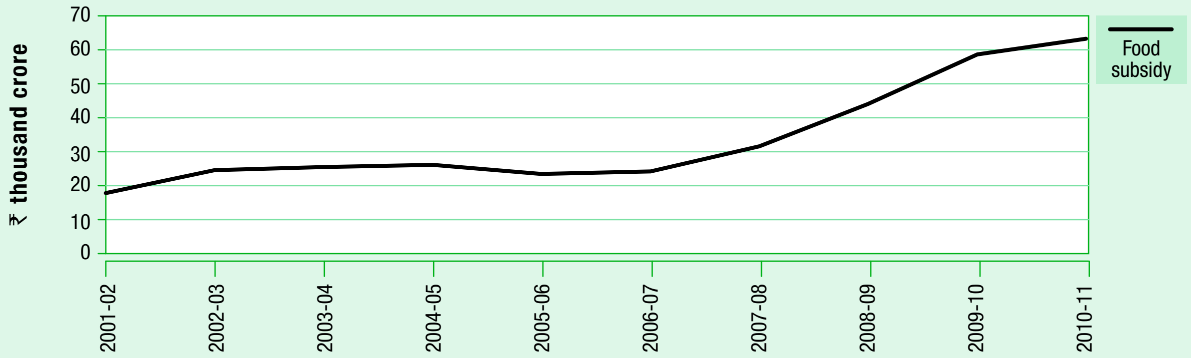
*Source* : Department of Food & Public Distribution.

## Allocation of Foodgrains under TPDS and Other Welfare Schemes

8.69 Allocations for the Antyodaya Anna Yojana (AAY) and below poverty line (BPL) families are being made at 35 kg per family per month. For above poverty line (APL) families, allocation varies from 15 kg to 35 kg in different states. During 2011-12, the following allocations have been made so far:

- Normal TPDS allocation made is 438.65 lakh tonnes covering AAY, BPL, and APL families.
- Additional allocations of 123.67 lakh tonnes of rice and wheat have also so far been made. This comprises (i) 50 lakh tonnes to BPL families made in May 2011, (ii) 50 lakh tonnes to APL families in June 2011, and (iii) 23.67 lakh tonnes to 174 poorest/backward districts (allocated as per the Supreme Court's order) (iv) 3.31 lakh tonnes for calamity relief, etc.

**Figure 8.10 Quantum of food subsidies released by government**



## BOX 8.4: National Food Security Bill

The National Food Security Bill was introduced in the Lok Sabha on 22 December 2011. As per the provisions of the Bill, it is proposed to provide 7 kg. of foodgrains per person per month belonging to priority households at prices not exceeding ₹ 3 per kg of rice, ₹ 2 per kg of wheat, and ₹ 1 per kg of coarse grains and to general households not less than 3 kg of foodgrains per person per month at prices not exceeding 50 per cent of the MSP for wheat and coarse grains and derived MSP for rice. It will benefit up to 75 per cent of rural population (with at least 46 per cent belonging to priority households) and up to 50 per cent of urban population (with at least 28 per cent belonging to priority households), besides providing nutritional support to women and children and meals to special groups such as destitute and homeless, emergency and disaster affected, and persons living in starvation. Pregnant and lactating women will also be entitled to maternity benefit of ₹ 1,000/per month for six months. In case of non-supply of foodgrains or meals, entitled persons will be provided food security allowance by the concerned state/UT governments. Provisions for reforms in the TPDS such as doorstep delivery of foodgrains , application of information and communication technology (ICT) including end to end computerization, leveraging 'aadhaar' for unique identification of beneficiaries have also been made in the Bill. Provisions have also been made for transparency and accountability including disclosure of records relating to the PDS, social audits, and setting up of vigilance committees besides an elaborate grievance redressal mechanism.

- 49.05 lakh tonnes allocated for other welfare schemes such as the Midday Meals Scheme, Wheat Based Nutrition Programme under the Integrated Child Development Services, Annapurna, etc.
- Total release of foodgrains during the current year so far has been 614.69 lakh tonnes.

### Open Market Sale Scheme (Domestic) [OMSS (D)]

8.70 In addition to maintaining buffer stocks and providing foodgrain stocks for meeting the requirements of the TPDS and other welfare schemes, the FCI on behalf of the Government of India has been undertaking sale of wheat and rice at predetermined prices in the open market from time to time to enhance market supply of foodgrains to have a moderating influence on open market prices.

## Commodity Futures Market

8.71 The commodity futures market facilitates the price discovery process and provides a platform for price risk management in commodities. Currently, 113 commodities are notified for futures trading of which 50 are actively traded in five national and 16 commodity specific exchanges. Agricultural commodities, bullion, energy, and base metal products account for a large share of the commodities traded in the commodity futures market. The total value of trade in the commodity futures market rose significantly in 2011 compared to that of the previous year due to increased awareness, the advent of new commodity exchanges, increase in global commodity prices, and improved regulation.

8.72 During the year 2011-12 (up to January 2012), in value terms bullion accounted for the maximum share of traded value among the commodity groups (57.7 per cent) followed by energy (15.9 per cent), metals (15.2 per cent), and agricultural commodities (11.2 per cent). However, in quantity terms, trade in energy accounted for 57.5 per cent followed by agricultural commodities (33.2 per cent), metals (9.3 per cent), and bullion (0.1 per cent) (Table 8.15).

8.73 To strengthen and broad base the market, the Forward Markets Commission (FMC), which is the regulator for commodity futures trading under the provisions of the Forward Contracts (Regulation) Act 1952, has taken many initiatives and conducted awareness programmes during 2011 such as a media campaign under the Jago Grahak Jago Programme about the Dos and Don'ts of trading in the commodity futures market; Police training programmes in the states of Madhya Pradesh, Chhattisgarh, Tamil Nadu, and Delhi with regard to dabba trading/ illegal trading; a massive awareness and capacity-building programme for various stakeholder groups, with primary focus on farmers. On the regulatory front, the FMC undertook measures for the development of the commodity futures market which include ensuring more effective inspection of members of the exchanges on regular basis and in a comprehensive manner covering all aspects of regulatory regime; bringing out a guidance manual for improving audit practices, prescribing penalty structure for client code modification and for executing trade; and granting exemptions for short hedge for soyabean / oil futures, issuing directives for segregation of client accounts.

**Table 8.15 Trade in Commodity Futures Market**

(Volume of trading in lakh tonnes, value ₹ in crore)

| Commodity | 2009-10 | | 2010-11 | | 2011-12 (up to Jan'12) | |
|---|---|---|---|---|---|---|
| | Volume | Value | Volume | Value | Volume | Value |
| Agricultural commodities | 3991.21(39.3) | 1217949(15.7) | 4168(32.6) | 1456390(12.2) | 3878.45(33.2) | 1695550.8 (11.2) |
| Bullion | 4.73(0.05) | 3164152(40.8) | 7.38(0.1) | 5493892(46.0) | 8.86(0.1) | 8758384.3 (57.7) |
| Metals | 982(9.7) | 1801636(23.2) | 1410(11.0) | 2687673(22.5) | 1081.10(9.3) | 2311689.0 (15.2) |
| Energy | 5163(50.9) | 1577882(20.3) | 7220.12(56.4) | 2310959(19.3) | 6714.96(57.5) | 2423261.2 (15.9) |
| Other | 2.12(0.02) | 3134(0.04) | *0 | 29.04 | *0.01 | 5.9 |
| **Total** | **10143** | **7764754** | **12805.57** | **11948942** | **11683.38** | **15188891.3** |

***Source*** **: Department of Consumer Affairs.**

***Note*** **: * volume of certified emission reduction (CER), electricity, heating oil and gasoline not included in the total volumes of other commodities.**

**Figures in bracket show the percentage share to total.**

## Outlook and Challenges

8.74 Agriculture and allied sectors have made substantial progress in terms of production and productivity since the beginning of the Planning process. The successive Five Year Plans have emphasized growth in the agriculture sector, as a result of which foodgrains production reached a record level of 244.78 million tonnes in 2010-11. However, the challenges are far from over. Agricultural growth in the current Five Year Plan is expected to be less than the target. A number of supply-side constraints exist and thereby achieving the food and nutritional security is a challenge. In order to make 4 per cent agricultural growth a reality, adequate efforts are required to focus on addressing the challenges in this sector.

8.75 The area under foodgrains has declined in the last three decades. This calls for speedy improvement in yield in order to increase production through adequate investment in research and development. In yield parameters, India is lagging behind global levels in most crops. With very little growth in area and marginal growth in yields of many crops during the last decade, increasing agricultural production remains a challenge. A holistic approach, spanning agricultural R&D, dissemination of technology, and provision of agricultural inputs such as quality seed, fertilizers, pesticides, and irrigation, would help achieve higher levels of productivity. Access of small and marginal farmers to formal sources of agricultural credit is still inadequate, though the flow of agricultural credit has increased in the recent past. Effective coordination and monitoring of ongoing agriculture and allied sectors programmes need to be ensured for optimum results.

8.76 Indian farmers are mostly small and marginal farmers with small and fragmented landholdings. The average farm size in the country has declined over the years. This poses a challenge in terms of adoption of farm mechanization as well as generating productive income from farm operation. Pooling of many landholdings may yield better economies of scale, for which land laws for leasing with sufficient safeguards in place should be considered.

8.77 Higher levels of purchasing power is supporting higher demand for protein rich food items. The country has to step up efforts for increasing production of milk and other dairy products, egg, poultry, fish, meat, etc. There have been increases in the prices of these items because supply has not kept pace with demand.

8.78 Declining per capita availability of foodgrains has been a matter of major concern. For ensuring nutritional security, it is not only important to increase per capita availability of foodgrains but also to ensure that right quantities of food items are there in the food basket of the common man. A thrust on horticulture products is required for enhancing per capita availability of food items as well as ensuring nutritional security.

8.79 Indian agriculture is still dependent on the monsoon. This adds to the risks a farmer faces. The dependency of the Indian farmer on the monsoon has to be reduced largely by increasing the irrigation facilities. Climate change and extreme weather conditions impacting agriculture; there is need to devise insurance schemes linked to indices of various vulnerability parameters. The insurance policy framework needs to be dynamic, incorporating the perspectives of the insured, insurers, and public policy so that it covers a large section of population.

8.80 Storage capacity is a major problem facing the country. Adequate storage facility would help reduce post-harvest losses. Adoption of modern farm implements and tools especially by small farmers is still low because of their lack of resources. This, in turn, hampers the development of the agriculture sector. Addressing infrastructure requirements in the agriculture sector, especially storage, communication, roads, and markets should be a priority. Public private partnership models can be of help in ensuring faster development of these requirements which are of vital importance for the growth of the agriculture sector.

8.81 Another area for improvement is the generation of real-time market intelligence and also agricultural market reforms. Enhancing the returns farmers get on their production is essential for incentivizing them to produce more. Farmers need to realize the market price for their produce. Setting up of efficient supply chains is essential not only for ensuring adequate supplies of essential items at reasonable prices but also so that producers get adequately compensated. Linking farmers to the market is, therefore, very important. The successful experience of cooperatives in the milk sector in managing the supply chain and providing remunerative prices to the producers may be emulated in the case of agricultural products.

8.82 The level of secondary food processing in India is very low compared to many western countries. With increasing income and population, demand for processed food is likely to increase. It is necessary to cater to this changing demand and at the same time enhance the income of farmers. So far the focus in food management has been on cereals, mainly rice and wheat. However, the demand for processed food is expected to increase. Investment in food processing, cold chains, handling, and packaging of processed food needs encouragement.

8.83 There has been substantial increase in the MSPs of various crops over the last few years. This is considered necessary for incentivizing farmers to increase production and productivity. At the same time, the MSP signals the floor price for the produce which, in turn, has the potential of increasing prices. Addressing the welfare of agricultural producers and consumers simultaneously poses a challenge. Further, inability of a large number of small and marginal farmers to directly access the agriculture market puts a question mark on increases in MSP actually benefiting such farmers. Record procurement of rice and wheat in the last few years has helped build up the buffer stock and strategic reserve of wheat and rice. There is, however, a huge cost involved in the process, in the form of food subsidy. The issue of efficient food stocks management and offloading of stocks in time needs urgent attention.

8.84 We need to address the challenges of the agriculture sector through comprehensive and coordinated efforts directed at improving farm production and productivity of foodgrains as well as high value crops, developing rural infrastructure, renewing thrust on the irrigation sector, strengthening marketing infrastructure, and supporting investment in R&D with due emphasis on environmental considerations. These efforts will in time rejuvenate agriculture sector and bring about inclusive growth of the economy.

# Industry

9
CHAPTER

*Industrial growth in the country has, in terms of long run trend, remained aligned with the growth rate of gross domestic product (GDP). The long-term average annual growth of industries comprising mining, manufacturing, and electricity, during the post-reform period between 1991-2 and 2011-12, averaged 6.7 per cent as against GDP growth of 6.9 per cent. Inclusion of construction in industry raises this growth to 7.0 per cent. The share of industry, including construction, in GDP remained generally stable at around 28 per cent in the post-reform period. Standard deviation of the average share was very small and the coefficient of variation under 5 per cent validates this stability. The share of manufacturing, which is the most dominant sector within industry, also remained in the 14-16 per cent range during this period. The share is modest when compared to that of China (above 40 per cent) and some of the East Asian countries (above 30 per cent).*

9.2 Employment in the industrial sector increased from 64.6 million persons in 1999-2000 to 100.7 million persons in 2009-10. The share of industry in total employment increased from 16.2 per cent in 1999-2000 to 21.9 per cent in 2009-10. However, the increase was largely on account of expansion of employment opportunities in the construction sector, from 17.5 million in 1999-2000 to 44.2 million in 2009-10.

9.3 The near stability of the share of industry in GDP and, in fact, a small decline over the last one or two years indicates that the potential of this sector has not yet been fully exploited. The open international trade environment and rapid technological change, which characterize this sector, require the sector to be innovative and competitive. The linkages of the sector with raw materials and natural resources on the one hand and, intra-sectoral inter dependence on the other hand amongst intermediates, capital goods, and consumer goods are numerous, often with conflicting interests, requiring policies to blend more judiciously.

## Industrial Performance

9.4 The index of industrial production (IIP), released each month, is the key indicator of industrial performance. The new IIP series with 2004-5 as base was released in June 2011 replacing the earlier IIP series with base 1993-4 (see Box 9.1 for details). Since the IIP is a fixed weight and fixed base series, a dated base often has limitations in reflecting the industrial scenario. The new series not only has a more recent base, it has a larger and more representative product basket and weights that appropriately reflect the relative importance of the sectors, products, and product groups.

9.5 Recent industrial growth, measured in terms of IIP, shows fluctuating trends. Growth had reached 15.5 per cent in 2007-8 and then started decelerating. Initial deceleration in industrial growth was largely on account of the global economic meltdown. There was, however, a recovery in industrial growth from 2.5 per cent in 2008-9 to 5.3 per cent in 2009-10 and 8.2 per cent in 2010-11. Fragile economic recovery

## Box 9.1 : IIP (Base 2004-5=100)

1. The Central Statistics Office (CSO) of the Ministry of Statistics and Programme Implementation (MOSPI) released the new series of the IIP with 2004-5 as its new base on 10 June 2011, replacing the IIP series with 1993-4 as base.

2. Besides a more recent year as its base, the new series has an enlarged and more representative basket to better capture the industrial structure. The weighting diagram for the new series has also been redrawn in line with the sector-wise comparative position of a number of items/products in the existing 1993-4 and the revised 2004-5 series together with their weights as follows:

**Comparative Characteristics of Existing and Proposed IIP Series**

| | Number of items | | Number of item groups | | Weights | |
|---|---|---|---|---|---|---|
| | 1993-1994 | 2004-2005 | 1993-1994 | 2004-2005 | 1993-1994 | 2004-2005 |
| Mining | 64 | 61 | 1 | 1 | 104.73 | 141.57 |
| Manufacturing | 473 | 620 | 281 | 397 | 793.58 | 755.27 |
| Electricity | 1 | 1 | 1 | 1 | 101.69 | 103.16 |
| **Total** | **538** | **682** | **283** | **399** | **1000** | **1000** |

Some of the important items newly included in the series basket are milk (skimmed/pasteurized); rice; cattle and poultry feed; woollen carpets; apparels; writing and printing paper; newspapers; propylene; purified terephthalic acid; complex grade fertilizers; paraxylene; antibiotics and its preparations; polythene bags including HDPE and LDPE bags; glass sheets; refractory bricks; marble tiles/slabs; grinding wheels; aluminium; steel structures; heat exchangers; insulated cables/wires of all kinds; colour TV sets; lens of all kinds; wooden furniture; coir mats and matting; gems and jewellery; copper and copper products; poly vinyl chloride; polypropylene (including co-polymer); and molasses. On the other hand, certain obsolete/insignificant products such as typewriters and tape recorders, have been dropped.

in the US and European countries and subdued business sentiments at home affected the growth of the industrial sector in the current year. Overall growth during April-December 2011 was 3.6 per cent compared to 8.3 per cent in the corresponding period of the previous year. Growth of IIP in terms of its

## Table 9.1 : Growth in the IIP and its major components

(per cent)

| | Financial year | | | | April- December | | | |
|---|---|---|---|---|---|---|---|---|
| | Weight | 2008-2009 | 2009-2010 | 2010-2011 | 2008 | 2009 | 2010 | 2011 |
| Overall IIP | 100.0 | 2.5 | 5.3 | 8.2 | 5.7 | 2.4 | 8.3 | 3.6 |
| **In terms of structured national industrial classification** | | | | | | | | |
| Mining | 14.16 | 2.6 | 7.9 | 5.2 | 3.2 | 7.0 | 6.9 | -2.7 |
| Manufacturing | 75.53 | 2.5 | 4.8 | 9.0 | 6.3 | 1.4 | 9.0 | 3.9 |
| Electricity | 10.32 | 2.7 | 6.1 | 5.5 | 2.7 | 5.8 | 4.6 | 9.4 |
| **In terms of use-based classification** | | | | | | | | |
| Basic goods | 45.68 | 1.7 | 4.7 | 6.0 | 2.2 | 3.9 | 5.7 | 6.1 |
| Capital goods | 8.83 | 11.3 | 1.0 | 14.8 | 22.4 | -8.2 | 18.4 | -2.9 |
| Intermediates | 15.69 | 0.0 | 6.0 | 7.4 | 1.5 | 4.1 | 8.0 | -0.8 |
| Consumer Goods | 29.81 | 0.9 | 7.7 | 8.6 | 5.0 | 4.9 | 7.4 | 5.7 |
| Durables | 8.46 | 11.1 | 17.0 | 14.2 | 16.1 | 12.6 | 13.8 | 5.3 |
| Non-durables | 21.35 | -5.0 | 1.4 | 4.3 | -1.4 | -0.4 | 2.5 | 6.1 |

***Source*** **: MOSPI.**

Figure 9.1 **Growth (per cent) in the IIP and its major components**

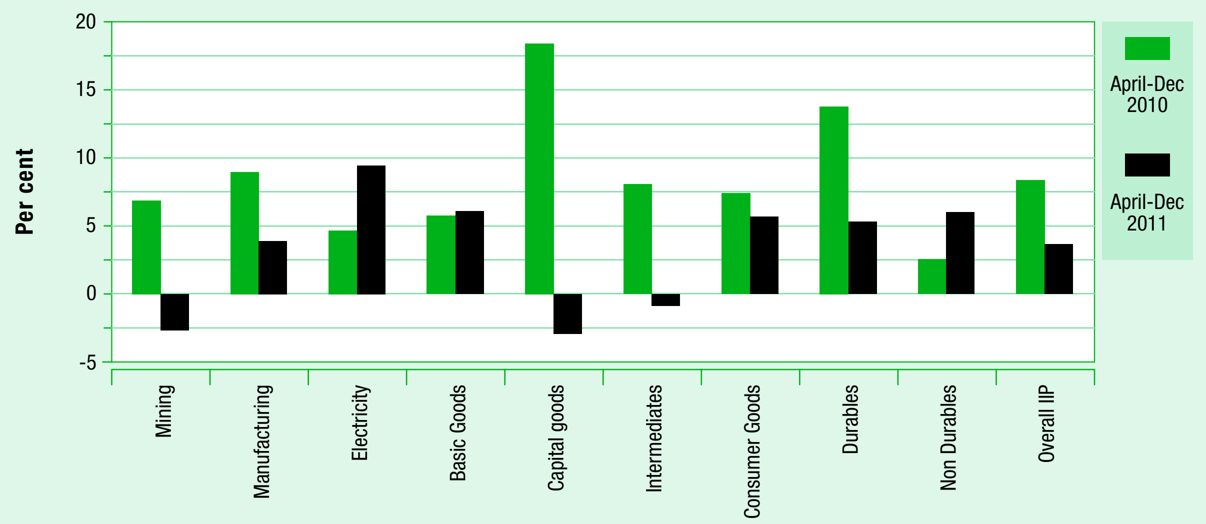



Figure 9.2 **Growth of IIP broad sectors**

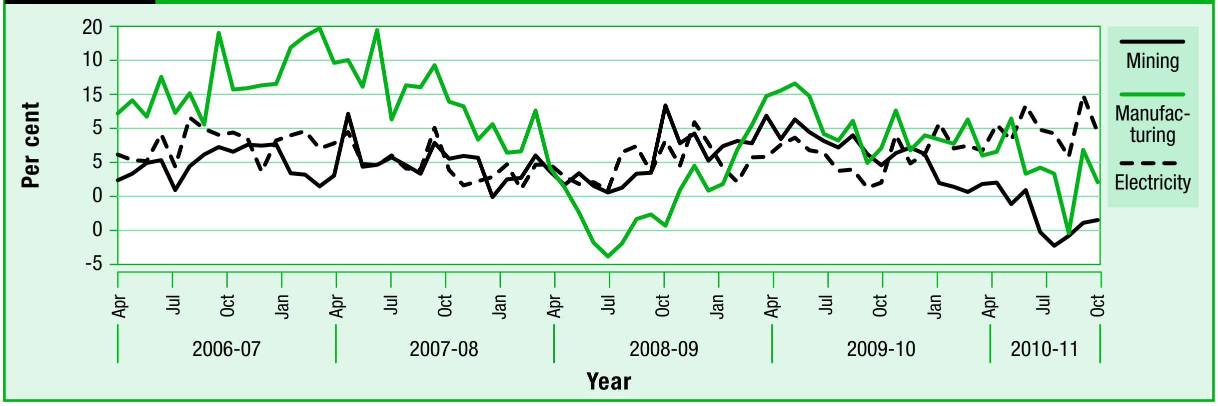
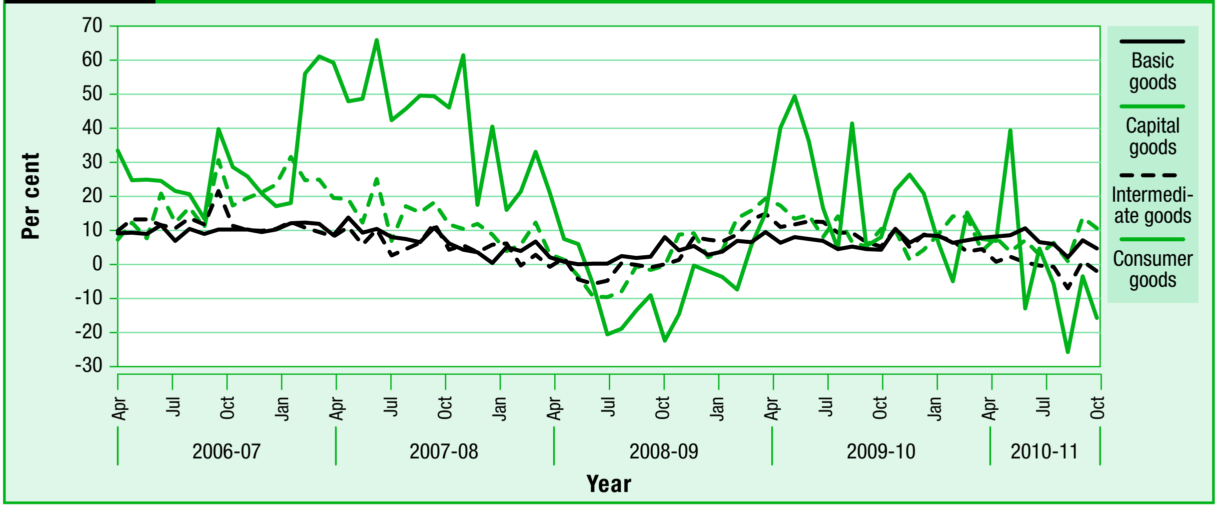



Figure 9.3 **Growth in terms of use based classification of IIP**




major components is indicated in Table 9.1 and Figure 9.1. IIP growth in terms of national industrial classification and use based classification for each month is indicated in Figure 9.2 and 9.3, respectively.

9.6 There was a contraction in production in the mining sector, particularly in the coal and natural gas segments in the current fiscal year (April-December). Contraction in output resulted in its

**Table 9.2 : Contribution to IIP Growth-April-December (per cent)**

| | Weight | 2008 | 2009 | 2010 | 2011 |
|---|---|---|---|---|---|
| Mining | 14.16 | 6.4 | 32.1 | 9.4 | -8.3 |
| Manufacturing | 75.53 | 89.4 | 46.8 | 85.6 | 85.6 |
| Electricity | 10.32 | 4.2 | 21.2 | 5.0 | 22.6 |
| **In terms of Use-based classification** | | | | | |
| Basic goods | 45.68 | 16.2 | 64.8 | 27.8 | 65.7 |
| Capital goods | 8.83 | 52.2 | -52.9 | 30.2 | -12.0 |
| Intermediates | 15.69 | 3.7 | 24.1 | 13.6 | -3.3 |
| Consumer Goods | 29.81 | 28.0 | 64.0 | 28.4 | 49.4 |
| Durables | 8.46 | 32.7 | 67.3 | 23.0 | 21.3 |
| Non Durables | 21.35 | -4.8 | -3.3 | 5.5 | 28.1 |

***Source*** **: Economic Division, Department of Economic Affairs.**

**Table 9.3 : Volatility of IIP Growth**

| | Mean growth | Standard deviation | Coefficient of variation |
|---|---|---|---|
| Overall IIP | 8.3 | 6.5 | 78.0 |
| Mining | 4.1 | 4.1 | 99.4 |
| Manufacturing | 9.3 | 8.0 | 85.6 |
| Electricity | 6.1 | 3.1 | 50.5 |
| **In terms of Use-based classification of industries** | | | |
| Basic goods | 6.1 | 3.3 | 54.2 |
| Capital goods | 18.0 | 23.2 | 128.6 |
| Intermediates | 5.6 | 5.7 | 101.4 |
| Consumer goods | 9.8 | 8.6 | 88.5 |

***Source*** **: Economic Division, Department of Economic Affairs.**

contribution to growth turning negative. The electricity sector witnessed an improvement in growth in the current year. This sector contributed 22.6 per cent to overall industrial growth, which was more than twice its weight in the IIP (Table 9.2). Growth also moderated in the manufacturing sector from 9.0 per cent in April-December 2010 to 3.9 per cent in April-December 2011.

9.7 In terms of use-based classification of the IIP, in the current year (April-December) basic goods with a growth of 6.1 per cent and consumer non-durables with a growth of 6.1 per cent had relatively better growth compared to the corresponding period of the previous year. There was moderation in growth in other segments of the IIP and negative growth was observed in the capital goods and intermediates segments. The highest contribution to growth in the current year was from the basic goods segment, which at 65.7 per cent exceeded its weight in the IIP. The contribution of consumer non-durables at 28.1 per cent also exceeded its weight in the IIP.

9.8 Volatility in growth has been seen across all the broad sectors of the IIP. IIP growth during April 2006 to December 2011 varied from - 7.2 to 20.0 per cent, with a mean growth of 8.3 per cent and standard deviation of 6.5. While different sectors had different volatility spectrums, capital goods and intermediates were the most volatile. In fact, volatility of the manufacturing sector was largely on account of extreme fluctuations in growth in the capital goods and intermediates segments. In case of capital goods, growth varied from - 26.5 per cent to 65.1 per cent, with a mean growth of 18.0 per cent and standard deviation of 23.2. (Table 9.3)

9.9 Within the manufacturing sector, the IIP separately provides growth rates for 22 sub groups, disaggregated at two-digit level of National Industrial Classification (NIC 2004) (see Table 9.4). Growth varied across the sub groups. In April-December, 2011, there were 7 manufacturing sub-groups with a 29.23 per cent weight in the IIP which recorded a growth in excess of 10 per cent, 9 sub-groups with a weight of 26.6 per cent which had positive growth below the 10 per cent level, and 6 sub groups with a weight of 19.7 per cent that had negative growth. In April-December 2010, 7 sub-groups with a weight of 16.8 per cent had growth exceeding 10 per cent, 11 sub-groups with a weight of 47.6 per cent had positive but below 10 per cent growth, and 4 sub-groups with a weight of 11.1 per cent that had negative growth. Though in the current year, sub-groups that recorded double-digit growth increased in terms of weights (relative importance of the sub-groups), a sharper moderation in other sectors resulted in a deceleration in aggregate growth.

## Corporate-sector performance

9.10 Corporate sector sales are another indicator of industrial performance. Abridged financial results of the listed manufacturing companies indicate robust sales growth (in nominal terms) during 2011-12. In the first three quarters of the current year, sales growth has varied between 20 and 25 per cent. Though sales growth has moderated from a peak of 34.9 per cent in the fourth quarter (Q4) of 2009-10, Q3 growth of 22.6 per cent in the current financial year is better than the growth of 19.0 per cent in the same period of the previous year. However, expenditure growth has outpaced revenue growth

**Table 9.4 : Rate of Growth of Manufacturing Sub-groups and Their Contribution to Growth (per cent)**

| | Rate of growth April-December | | | Contribution to growth April-December | | |
|---|---|---|---|---|---|---|
| | 2009 | 2010 | 2011 | 2009 | 2010 | 2011 |
| Food products and beverages | -6.5 | 3.6 | 17.4 | -17.9 | 2.5 | 27.0 |
| Tobacco products | -0.9 | 5.4 | 4.6 | -0.4 | 0.7 | 1.3 |
| Textiles | 6.8 | 5.9 | -2.7 | 14.5 | 3.8 | -3.9 |
| Wearing apparel | 1.6 | 4.0 | -4.8 | 1.7 | 1.2 | -3.1 |
| Luggage, footwear, and leather products | 0.6 | 6.8 | 4.9 | 0.1 | 0.3 | 0.5 |
| Wood and products of wood | -2.0 | -0.5 | 0.7 | -1.0 | -0.1 | 0.2 |
| Paper and paper products | 1.8 | 8.4 | 4.4 | 0.6 | 0.8 | 1.0 |
| Publishing, printing, & reproduction of recorded media | -9.8 | 11.2 | 20.4 | -4.5 | 1.3 | 5.5 |
| Coke, petroleum products, & nuclear fuel | -1.7 | -1.6 | 4.2 | -4.2 | -1.0 | 5.7 |
| Chemicals and chemical products | 5.3 | 0.2 | 0.2 | 17.9 | 0.2 | 0.4 |
| Rubber and plastics products | 15.0 | 14.1 | -1.7 | 12.4 | 3.7 | -1.1 |
| Other non-metallic mineral products | 6.9 | 4.5 | 4.5 | 11.5 | 2.2 | 4.9 |
| Basic metals | 1.1 | 7.6 | 10.7 | 5.8 | 11.1 | 35.5 |
| Fabricated metal products | 2.9 | 14.4 | 13.0 | 3.8 | 5.3 | 11.5 |
| Machinery and equipment n.e.c. | 5.8 | 31.3 | -2.5 | 10.7 | 17.0 | -3.7 |
| Office, accounting, & computing machinery | 3.1 | -12.3 | 6.2 | 0.4 | -0.5 | 0.4 |
| Electrical machinery & apparatus | -19.8 | 8.2 | -21.2 | -65.6 | 6.0 | -35.6 |
| Radio, TV, and communication equipment & apparatus | 6.3 | 13.7 | 7.7 | 13.5 | 8.8 | 11.9 |
| Medical, precision & optical instruments, watches and clocks | -10.6 | 5.6 | 11.2 | -1.9 | 0.3 | 1.1 |
| Motor vehicles, trailers, & semi-trailers | 19.6 | 33.5 | 11.6 | 32.0 | 18.2 | 17.8 |
| Other transport equipment | 20.8 | 25.7 | 15.3 | 14.7 | 6.1 | 9.7 |
| Furniture; other manufacturing | 2.0 | -6.4 | -1.7 | 2.6 | -2.3 | -1.2 |

***Source*** **: MOSPI.**
***Note*** **: N.e.c. = Not elsewher classified.**

leading to a lower growth in net profits which declined in the latest two quarters. Higher expenditure growth was initially led by high raw materials expenses, but interest expenses grew more sharply in Q2 and Q3 of 2011-12 (Table 9.5).

9.11 The net profit margin of manufacturing companies measured by the ratio of net profits to sales decelerated continuously from 8.1 per cent in Q2 of 2010-11 to 5.4 per cent in Q2 of 2011-12, which was the lowest in the last 12 quarters. There has been marginal improvement in net profit margin in Q3. Though Q3 data are based on a smaller sample of companies and should be interpreted cautiously, these indicate an improvement across all the major parameters of performance of listed manufacturing companies.

**Table 9.5 : Growth in Key Parameters of Listed Manufacturing Companies**

| Items | 2009-2010 | | | | 2010-2011 | | | | 2011-2012 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3* |
| No. of companies | 1885 | 1876 | 1901 | 1912 | 1900 | 1933 | 1961 | 1953 | 1935 | 1922 | 882 |
| Growth rates (in per cent) | | | | | | | | | | | |
| Sales | -2.7 | -0.4 | +28.7 | 34.9 | 28.8 | 21.2 | 19.0 | 23.3 | 24.9 | 19.7 | 22.6 |
| Raw material | -14.5 | -4.7 | 35.5 | 46.6 | 40.6 | 21.9 | 20.9 | 30.5 | 28.8 | 23.8 | 32.2 |
| Staff cost | 9.9 | 9.1 | 12.0 | 18.1 | 16.9 | 20.4 | 21.1 | 18.2 | 17.5 | 15.3 | 12.7 |
| Interest costs | 8.3 | -2.1 | -5.0 | 1.1 | 10.9 | 7.8 | 13.7 | 23.1 | 20.5 | 41.5 | 44.2 |
| Profits after tax (PAT) | 3.2 | 17.6 | 178.0 | 69.4 | 8.2 | 10.9 | 14.6 | 7.1 | 9.6 | -18.3 | -15.4 |
| PAT to sales | 9.2 | 9.0 | 8.0 | 8.6 | 8.0 | 8.1 | 7.7 | 7.4 | 6.8 | 5.4 | 6.2 |

***Source*** **: Reserve Bank of India (RBI) Studies on Corporate Performance of Private Corporate Business Sector.**

***Notes*** **: Provisional.**

## Industrial Investment

### Gross Capital Formation (GCF)

9.12 Investment and capacity additions are critical for sustained industrial growth. National accounts data clearly indicate a moderation in the growth of GCF in industry. The rate of growth of GCF in four broad sectors of industry comprising mining, manufacturing, electricity, and construction averaged 10.9 per cent during 2004-11, almost the same as the rate of growth of GCF in the economy as a whole. Unregistered manufacturing which largely covers the micro, small, and medium enterprises segment had the lowest medium-term growth of only 0.8 per cent during this period. In 2008-9, GCF had negative growth, but witnessed a sharp V-shaped recovery in 2009-10 before moderating to 7.0 per cent in 2010-11. The manufacturing GCF growth rate declined to 7.1 per cent in 2010-11 from 42 per cent in 2009-10. The share of GCF in industry as per cent to the overall GCF, after peaking to a level of 54.9 per cent in 2007-8, moderated to 48.3 per cent in 2010-11 (Table 9.6).

**Table 9.6 : GCF in Industry**

(₹ crore at 2004-05 prices)

| | 2004-05 | 2005-06 | 2006-07 | 2007-08 | 2008-09 | 2009-10 | 2010-11 | CAGR |
|---|---|---|---|---|---|---|---|---|
| Mining | 37322 | 52259 | 60456 | 68372 | 57045 | 65984 | 70389 | 11.2 |
| Manufacturing | 344517 | 404928 | 474405 | 611928 | 420506 | 598445 | 640982 | 10.9 |
| (i) Registered | 245984 | 342629 | 380403 | 521430 | 378044 | 497545 | 537676 | 13.9 |
| (ii) Unregistered | 98533 | 62298 | 94002 | 90498 | 42462 | 100900 | 103305 | 0.8 |
| Electricity | 53300 | 64673 | 76369 | 86007 | 98993 | 102278 | 103255 | 11.7 |
| Construction | 54445 | 57531 | 95799 | 115157 | 88523 | 86290 | 98426 | 10.4 |
| Total Industry | 489584 | 579391 | 707029 | 881464 | 665067 | 852999 | 913051 | 10.9 |
| Rate of Growth | | 18.3 | 22.0 | 24.7 | -24.5 | 28.3 | 7.0 | |
| Total GCF by Industry of use | 1011178 | 1183303 | 1364821 | 1606175 | 1566233 | 1720117 | 1890645 | 11.0 |
| Share of GCF in industry as % to total GCF | 48.4 | 49.0 | 51.8 | 54.9 | 42.5 | 49.6 | 48.3 | |

***Source*** **: Office of the Economic Adviser, Department of Industrial Promotion (DIPP) and CSO**

***Notes*** **: CAGR- compound annual growth rate.**

**Table 9.7 : Investment Indicated in Industrial Entrepreneur Memorandums (IEMs) Filed**

(₹ crore)

| | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 (Jan.-Dec.) |
|---|---|---|---|---|---|---|
| Food | 62845 | 10531 | 15941 | 15637 | 19663 | 30848 |
| Fermentation industries | 8008 | 5171 | 8230 | 4566 | 3139 | 6644 |
| Textiles | 26325 | 24136 | 11244 | 9200 | 26566 | 26174 |
| Wood | - | 105 | 622 | 96 | 122 | 488 |
| Paper | 8199 | 4673 | 5849 | 6037 | 6272 | 5315 |
| Leather | 148 | 266 | 106 | 106 | 161 | 474 |
| Chemicals | 45722 | 36745 | 155767 | 27676 | 56173 | 57145 |
| Rubber | 2403 | 1197 | 3048 | 2118 | 5819 | 8292 |
| Cement | 42406 | 76946 | 125954 | 53742 | 101318 | 81406 |
| Metals | 144128 | 181818 | 365031 | 254285 | 391805 | 268895 |
| Machinery | 165227 | 375543 | 556715 | 503651 | 955091 | 815030 |
| Transport | 10688 | 11321 | 24890 | 5048 | 12290 | 9695 |
| Others | 48669 | 70697 | 208230 | 96354 | 84888 | 220747 |
| Fuel | 23782 | 35100 | 42225 | 61743 | 73015 | 8575 |
| **Total** | **588550** | **834249** | **1523852** | **1040259** | **1736322** | **1539728** |

***Source*** **: Office of the Economic Advisor, DIPP.**

## Investment Intentions

9.13 While GCF indicates actualization of investment, investment intentions indicated in the industrial entrepreneur memorandums (IEMs) filed are lead indicators of likely investment flow to industry and of entrepreneurs' perception. The investment intentions also provide the sectoral preferences of investors and shifts in these preferences over time. During 2001-10, overall investment indicated in the IEMs filed increased at an average annual rate of 38.7 per cent. After witnessing a decline in 2009, investment intentions increased in 2010 indicating a revival of business sentiments and an improvement in entrepreneurs' perception. In 2011(January-December), it has maintained the momentum, though at a slower pace. Metals, machinery, cement, chemicals, and the auto sector continue to dominate as the preferred industries (Table 9.7)

## Foreign Direct Investment (FDI)

9.14 FDI, being a non-debt capital flow, is a leading source of external financing, especially for the developing economies. It not only brings in capital and technical know-how but also increases the competitiveness of the economy. Overall it supplements domestic investment, much required for sustaining the high growth rate of the country. Since 2000, significant changes have been made in the FDI policy regime by the government to ensure that India becomes an increasingly attractive and investor-friendly destination.

9.15 The current phase of FDI policy is characterized by negative listing, permitting FDI freely except in a few sectors indicated through a negative list. Under the current policy regime, there are three broad entry options for foreign direct investors. In a few sectors, FDI is not permitted (negative list); in another small category of sectors, foreign investment is permitted only till a specified level of foreign equity participation; and the third category, comprising all the other sectors, is where foreign investment up to 100 per cent of equity participation is allowed. The third category has two subsets – one consisting of sectors where automatic approval is granted for FDI (often foreign equity participation less than 100 per cent) and the other consisting of sectors where prior approval from the Foreign Investment Approval Board (FIPB) is required. FDI policy changes increasingly reflect the requirements of industry and are based on stakeholders' consultation. Upfront listing of negative sectors has helped focus on reform areas, which are reflected in buoyant FDI inflows (Table 9.8).

**Table 9.8 : Growth in FDI inflows**

(US$ billion)

| Financial Year | As per International Practices* | Growth | FDI Equity Inflows# | Growth |
|---|---|---|---|---|
| 2003-04 | 4.32 | - 14% | 2.19 | - 19% |
| 2004-05 | 6.05 | + 40% | 3.22 | + 47% |
| 2005-06 | 8.96 | + 48% | 5.54 | + 72% |
| 2006-07 | 22.83 | + 146% | 12.49 | + 125% |
| 2007-08 | 34.84 | + 53% | 24.58 | + 97% |
| 2008-09 (P) | 41.87 | + 20% | 27.33 | + 11% |
| 2009-10 (P) | 37.75 | -10% | 25.83 | -5% |
| 2010-11 (P) | 32.90 | -13% | 19.43 | -25% |
| 2011-12 (April-Dec.) | 35.35 | | 24.19 | - |
| Apr. 2000-Dec. 2011 | 240.06 | | 157.97 | |

***Source*** **: Office of the Economic Adviser, DIPP.**
***Note*** **: * As per Reserve Bank of India (RBI) estimates.**
**# As per DIPP estimates.**

9.16 Cumulative amount of FDI inflows from April 2000 to December 2011 stood at US$ 240.06 billion, out of which FDI equity inflows amounted to US$ 157.97 billion. FDI inflows declined globally in 2009 and 2010. While India was able to largely insulate itself from the decline in global inflows in 2009-10, FDI flows moderated in 2010-11. For India to maintain its momentum of GDP growth, it is vital to ensure that the robustness of its FDI inflows is also maintained. FDI inflows rose to US$ 24.19 billion during April-December 2011, an increase of 50.8 per cent compared to the corresponding period of the previous year. Box 9.2 contains some changes in FDI policy made by the government in 2011.

9.17 Services (financial and non-financial), telecom, construction, drugs & pharamaceuticals, metallurgical Industries and power were the sectors that attracted maximum FDI during the first nine months of 2011-12. Sector-wise FDI inflow into some key industrial and infrastructure sectors is given in Table 9.9.

## Industrial Credit

9.18 In the current year, the rate of growth of credit flow to industries moderated significantly. On year-on-year basis, credit growth to industry decelerated

### Box 9.2 : FDI POLICY CHANGES-2011

- 'Circular 1 of 2011', effective from 1.4.2011 contained a number of significant policy changes, including: (i) pricing of convertible instruments upfront, on the basis of a conversion formula, instead of price (ii) inclusion of fresh items for issue of shares against non-cash considerations, including import of capital goods/ machinery/ equipment and pre-operative/ pre-incorporation expenses (iii) removal of the condition of prior approval in case of existing joint ventures/technical collaborations in the 'same field" (iv) simplification and rationalization of guidelines relating to down-stream investments and (v) development and production of seeds and planting material, without the stipulation of having to do so under 'controlled conditions'.
- Effective May 20, 2011, Government allowed FDI, in Limited Liability Partnerships, subject to specified conditions.
- 'Circular 2 of 2011', effective from 1.10.2011, further simplified FDI and included: (i) exemption of construction-development activities in the education sector and in old-age homes, from the general conditionalities in the construction-development sector (ii) inclusion of 'apiculture', under controlled conditions, under the agricultural activities permitted for FDI (iii) inclusion of 'basic and applied R&D on bio-technology pharmaceutical sciences/life sciences', as an 'industrial activity', under industrial parks (iv) notification of the revised limit of 26% for foreign investment in Terrestrial Broadcasting/ FM radio (v) liberalisation of conversion of imported capital goods/machinery and pre-operative/pre-incorporation expenses to equity instruments and (vi) introduction of provisions on 'pledging of shares' and opening of non-interest bearing escrow accounts, subject to specified conditions.
- Effective November 8, 2011, (to be reviewed after six months) Government reviewed the extant policy on FDI and decided that FDI, up to 100%, would be permitted for brownfield investments (i.e. investments in existing companies), in the pharmaceuticals sector, under the Government approval route.
- Effective January 10, 2012, Government liberalised the extant policy on FDI in single brand retail trading, in which FDI, up to 51% was permitted, subject to specified conditions, by allowing FDI, up to 100%, under the Government route, subject to the additional condition that, in respect of proposals involving FDI beyond 51%, mandatory sourcing of at least 30% of the value of products sold would have to be done from Indian 'small industries/ village and cottage industries, artisans and craftsmen'.

*Source* : DIPP

**Table 9.9 : Sector-wise FDI Flows into Industry and Infrastructure**

(US $ million)

| | 1991-2000 | 2000-10 | 2010-11 | 2010-11 (Apr.-Dec.) | 2011-12 Apr.-Dec.) | Growth (%) |
|---|---|---|---|---|---|---|
| Food products | 707.4 | 1237.3 | 246.9 | 170.7 | 190.8 | 11.8 |
| Fermentation industries | 24.0 | 770.1 | 57.7 | 18.0 | 53.2 | 195.0 |
| Textiles | 241.8 | 828.6 | 129.8 | 74.8 | 94.0 | 25.6 |
| Wood products | 0.0 | 18.8 | 1.6 | 1.1 | 11.6 | 1002.9 |
| Paper | 250.5 | 716.9 | 44.0 | 30.8 | 341.7 | 1008.6 |
| Leather | 33.5 | 42.6 | 9.3 | 0.4 | 5.6 | 1360.5 |
| Chemicals | 1480.9 | 4446.1 | 734.0 | 589.6 | 4001.7 | 578.7 |
| Rubber, plastic & petroleum products | 90.3 | 2953.6 | 573.6 | 555.0 | 323.6 | -41.7 |
| Non-metallic minerals | 261.1 | 2263.6 | 657.3 | 623.3 | 207.7 | -66.7 |
| Metals and metal products | 186.2 | 3143.2 | 1098.1 | 964.4 | 1495.3 | 55.0 |
| Machinery and equipment | 2043.1 | 15670.4 | 1846.7 | 1447.6 | 3279.0 | 126.5 |
| Transport equipments | 0.0 | 4603.2 | 1286.1 | 1048.0 | 609.6 | -41.8 |
| Other manufacturing | 1761.6 | 5705.6 | 1495.3 | 1249.7 | 706.2 | -43.5 |
| Mining (including mining services) | 0.0 | 730.9 | 79.5 | 75.9 | 136.6 | 80.0 |
| Power* | 1038.9 | 5220.9 | 1464.4 | 1072.0 | 1729.4 | 61.3 |
| Telecommunication | 1089.4 | 8915.9 | 1664.5 | 1326.7 | 1988.7 | 49.9 |
| **Total** | **16699.6** | **110289.3** | **19426.9** | **16039.2** | **24187.8** | **50.8** |

***Source*** **: Office of the Economic Adviser, DIPP.**

***Note*** **: Total excludes inflows to the services sector and other non-resident Indian (NRI) schemes.**

***includes non-conventional energy.**

to 19.8 per cent in December 2011 from 31.6 per cent in December 2010 (Table 9.10). Moderation in rate of growth of credit was particularly large for the infrastructure and manufacturing sectors. This moderation in the growth of credit was also associated with a period which witnessed a decline in the ratio of profit after tax to sales for the listed manufacturing companies.

9.19 Deceleration in the growth of credit to the industrial sector by commercial banks began in January 2011 and has continued since. There has, however, been a sharp pickup in credit flow in December 2011. Build-up of credit to industries until December from end March for the manufacturing sector has recorded a higher growth in the current fiscal year compared to 2010-11 (Figure 9.4).

9.20 Credit growth to industry in December 2011 was comparatively higher in paper products, vehicles, vehicle parts and transport equipment, gems and jewellery, petroleum, coal and nuclear products,

**Figure 9.4** **Outstanding credit to industries and MOM growth**

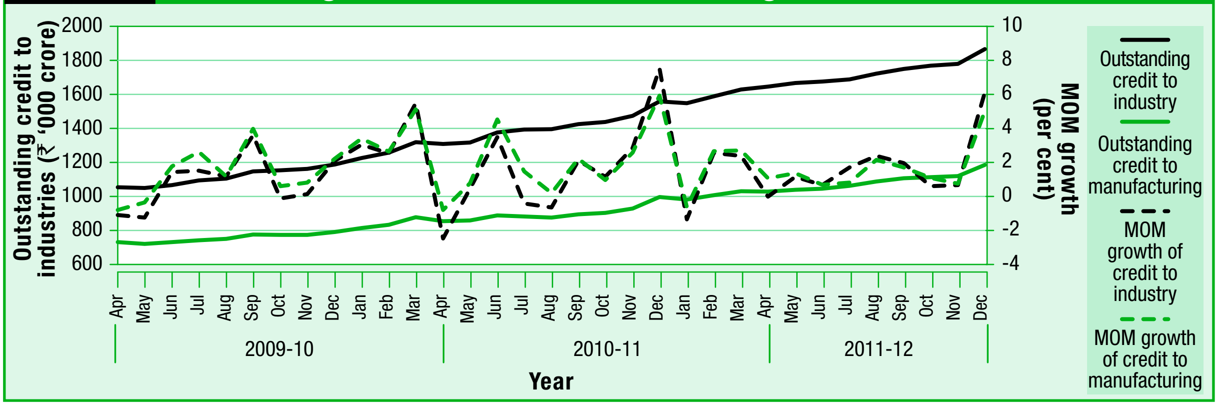


**Table 9.10 : Credit Flow to Industries**

| | Outstanding credit as on 30 Dec. 2011 | Rate of growth (per cent) | | | |
|---|---|---|---|---|---|
| | | Dec. 2010/ Dec. 2009 | Dec. 2011 Dec. 2010 | Dec. 2010 Mar. 2010 | Dec. 2011/ Mar. 2011 |
| | (₹ crore) | | | | |
| Industries | 1858500 | 31.6 | 19.8 | 18.3 | 14.7 |
| Construction | 54406 | 13.4 | 17.5 | 4.7 | 8.5 |
| Infrastructure | 596767 | 45.7 | 20.5 | 30.3 | 13.3 |
| Mining (incl. coal) | 29514 | 32.7 | 39.9 | 16.6 | 29.1 |
| Manufacturing | 1177813 | 26.4 | 19.2 | 13.7 | 15.3 |

***Source*** : RBI

beverages and tobacco. Other segments have had lower growth in gross credit deployment. The decline in gross credit deployment has been significant in some crucial sectors such as cement and cement products, chemicals and chemical products, food processing, textiles, basic metals and metal products, engineering, and leather and leather products (Figure 9.5).

9.21 In line with the deceleration in growth rate of non-food credit and the overall industry sector, on year-on-year basis, credit growth to micro and small industries decelerated to 7.2 per cent in December 2011 from 19.9 per cent in December 2010. The drop has been moderate in case of medium industries, i.e 25.5 per cent in December 2011 from 30.3 per cent in December 2010. As part of priority-sector lending on year-on-year basis, credit growth to micro and small enterprises (MSEs) decelerated to 11.1 per cent in December 2011 from 29.6 per cent in December 2010. The RBI has advised banks that the allocation of 60 per cent of MSE advances to micro enterprises is to be achieved in stages, namely 50 per cent in the year 2010-11, 55 per cent in the year 2011-12, and 60 per cent in the year 2012-13. Further, banks have been advised to achieve 10 per cent annual growth in the number of micro enterprise accounts. The share of micro enterprises in MSE advances from scheduled commercial banks has come down from 40.1 per cent at the end of March 2010 to 38.7 per cent at the end of March 2011. The growth in number of micro-enterprise accounts has also come down significantly from 65.3 per cent in 2009-10 to 6.8 per cent in 2010-11, falling short of the stipulated target of 10 per cent. Micro enterprises play a vital role in employment generation and inclusive growth and, therefore, need to be encouraged.

**Figure 9.5 Relative share of manufacturing industry groups in credit flow**

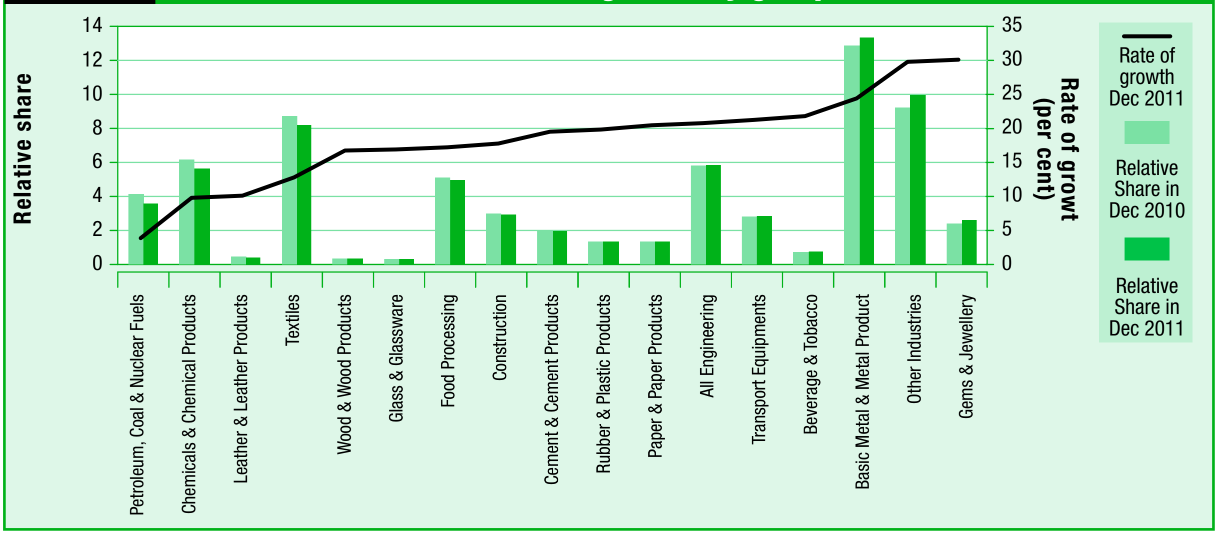


**Table 9.11 : Employment in the Industrial Sector**

| | Persons employed (million) | | | Share in employment (%) | | | Share in GDP (%) | | |
|---|---|---|---|---|---|---|---|---|---|
| | 1999-2000 | 2004-2005 | 2009-2010 | 1999-2000 | 2004-2005 | 2009-2010 | 1999-2000 | 2004-2005 | 2009-2010 |
| Mining | 2.3 | 2.6 | 2.9 | 0.6 | 0.6 | 0.6 | 3.0 | 2.9 | 2.3 |
| Manufacturing | 43.8 | 56.1 | 52.4 | 11.0 | 12.2 | 11.4 | 15.1 | 15.3 | 16.0 |
| Electricity | 1.0 | 1.2 | 1.3 | 0.3 | 0.3 | 0.3 | 2.3 | 2.1 | 2.0 |
| Construction | 17.5 | 26.1 | 44.2 | 4.4 | 5.7 | 9.6 | 6.5 | 7.7 | 7.9 |
| Industry | 64.6 | 85.9 | 100.7 | 16.2 | 18.7 | 21.9 | 26.9 | 27.9 | 28.1 |

***Source*** **: The numbers have been derived applying NSSO segment-wise workers population ratios and Labour force participation rates to the population.**

***Note*** **: Employment as per usual principal and subsidiary status (UPSS) basis.**

## Employment and Labour relations

9.22 With economic reforms it had been expected that the industrial sector would emerge as the key to additional employment opportunities for the labour force. There has been significant increase in employment opportunities in the industrial sector, though most of these additional opportunities have been created in the construction sector. In 2009-10, the construction sector employed 9.6 per cent of the workforce as against a 7.9 per cent share in GDP. There has also been an increase in employment opportunities in the mining sector. However, in the manufacturing sector, overall employment opportunities have declined in 2009-10 compared to 2004-5 (Table 9.11).

9.23 Due to the constant endeavour of industrial relations machineries of both the centre and states, the industrial relations climate has generally remained peaceful and cordial. While the number of incidences of strikes and lockouts reported during 2006 were 430, this figure stood at 135 (provisional) up to October 2011 and has exhibited a declining trend over the period. Similarly, the figures for man days lost were 20.32 million in 2006 and 4.19 million (provisional) up to October 2011 (Table 9.12). As regards spatial / industry-wise dispersions of incidences of strikes, lockouts, there are widespread variations among states / union territories (UTs). Wages and allowance, bonus, personnel, indiscipline and violence, and financial stringency have been stated to be the major reasons for these strikes and lockouts.

**Table 9.12 : Strikes and Lockouts (man-days lost )**

| Year | Strikes | Lockouts | Total Man-days lost |
|---|---|---|---|
| 2006 | 243 | 187 | 20324378 |
| 2007 | 210 | 179 | 27166752 |
| 2008(P) | 240 | 181 | 17433721 |
| 2009(P) | 205 | 187 | 13364757 |
| 2010(P) | 262 | 165 | 18025733 |
| 2011(P)(Jan.-Oct.) | 106 | 29 | 4194651 |

***Source*** **: Labour Bureau, Ministry of Labour.**
***Note*** **: P – Provisional**

## Industry - Environment Linkages

9.24 The development of a diversified industrial structure in India, based on a combination of large- and small-scale industries, and growing urban and rural population have produced pressures on the environment as reflected in the growing incidence of air, water, and land degradation. Industrial pollution is concentrated in industries like petroleum refineries, textiles, pulp and paper, industrial chemicals, iron and steel, and non-metallic mineral products. Small-scale industries, especially foundries, chemical manufacturing, and brick making, are also significant polluters. In the power sector, thermal power, which constitutes the bulk of installed capacity for electricity generation, is an important source of air pollution. Choice of policies and investment has, therefore, to be such which encourages more efficient use of resources, substitution away from scarce resources, and adoption of technologies and practices that minimize environmental impact.

## State of Industrial Pollution

9.25 Analysis of long-term trends (1995-2009) of air pollutants shows that while $SO_2$ has been under control, NOx has exceeded permissible levels in 11-23 per cent cities during last the 15 years. Discharge of untreated or partially treated industrial emissions and effluents is the main cause of industrial pollution. Industrial effluents comprising organic pollutants, chemicals, and heavy metals and run-off from land-based activities such as mining are a major source of water pollution. The major water-polluting industries include fertilizers, refineries, pulp and paper, leather, metal plating, and other chemical industries.

9.26 Continued monitoring of water quality of aquatic resources has revealed that organic pollution continues to be the predominant pollutant of aquatic resources. It has also been estimated that 75 per cent of the water pollution is on account of disposal of untreated/partially treated sewage by local bodies. It is estimated that against sewage generation of about 38,254 million litres per day (mld) from Class I cities (498) and Class II towns (410) of the country, the available treatment capacity is for 11,787 mld, indicating a wide gap between sewage generated and treatment capacity created. The problem of water quality has further been aggravated because of diminishing water flow in rivers. The Central Pollution Control Board (CPCB) is monitoring water quality of rivers at 980 locations covering 353 rivers in terms of Dissolved Oxygen (DO), Bio-chemical Oxygen Demand (BOD), and fecal coliforms. One hundred and fifty stretches on 105 rivers have been identified as polluted.

9.27 It is estimated that around 57 million tonnes per annum of municipal solid waste (MSW) is presently generated in the country. Based on its physico-chemical characteristics, the MSW generated in Indian cities is suitable for composting. However, presently the country has a rated capacity of processing around 6,000 tonnes per day of mixed waste into compost. Generation of hazardous waste is estimated at 7.66 million metric tons (MT) annually, of which landfillable waste is 3.39 million MT (44.26 per cent), incinerable 0.65 million MT (8.50 per cent), and recyclable hazardous waste 3.61 million MT (47.13 per cent). Lack of proper enforcement for disposal of hazardous waste results in abandoned hazardous waste dumps, some of which bio-accumulate through the food chain, thereby posing long-term health risks.

9.28 Further, it is estimated that approximately 15,722 tonnes of plastic waste is generated in the country per day, only 60 per cent of which is recycled due to low collection efficiency. Fly ash, phospogypsum, and iron and steel slags are the major forms of industrial solid wastes. It is estimated that around 160 million tonnes per annum of fly ash is generated, only 91.2 million tonnes per annum of which is utilized by cement plants, road embankments, fly ash bricks, and back filling of mines, etc.

## Current Programmes and Policy

9.29 The government has put into place necessary legislative and regulatory measures, both preventive and promotional, for protection, conservation, and development of the environment. Effective implementation of these measures is expected to harmonize the demands of development and environment.

9.30 Emission and effluent standards have been notified for relevant pollutants for 74 categories of processes and industries, including 17 categories of highly polluting industries, under the Environment (Protection) Act 1986. The concerned State Pollution Control Boards/ Authorities along with the CPCB have identified ‘red’ and ‘orange’ categories of industries and consents are granted on condition of complying with these standards. A total of 2,608 units have been identified under these 17 categories, out of which 1,924 have set up pollution control facilities to comply with standards, 345 are defaulting, and 339 have been closed.

9.31 A time-bound action plan has been prepared for restoration of ambient environment in respect of 17 categories of highly polluting industries. Based on a comprehensive environmental pollution index, 43 critically polluted industrial clusters in different states have been identified to improve environmental quality and prevent further increase of pollution load in these areas. To check industrial pollution, source-specific environmental standards have been notified by the government. To strengthen the compliance mechanism, the Corporate Responsibility for Environment Protection recommendations have been reviewed. In order to monitor the progress of compliance by each sector, it is purposed to constitute national task forces. Other regulatory measures undertaken by Ministry of Environment and Forests towards effective control of pollution include random inspection of industries through the Environment Surveillance Squad programme and issuing directions to defaulting units.

9.32 The government is also encouraging industries to adopt clean technologies to minimize discharge of effluents on to land or into water bodies and to achieve zero liquid discharge to tackle water pollution. For zero liquid discharge, sector-specific innovative technologies are demonstrated that include preservation of hides and skin through lyophilization; utilization of hazardous and non-hazardous incinerable waste in cement kilns; and in situ bioremediation of sewage. The stipulated guidelines prescribe best practices at various levels such as manufacturer's and consumer's levels. The discharge of industrial effluents is regulated as per Sections 25 and 26 of the Water (Prevention and Control of Pollution) Act 1974. Existing pollution abatement infrastructure in the country provides adequate treatment facilities to various streams of pollution generated by industries and domestic effluents.

## Technology and Energy efficiency in manufacturing

9.33 The Annual Survey of Industries (ASI) provides information on the organized factory sector (employing 10 or more workers if using power) in terms of a variety of parameters. Technological depth of organized manufacturing, defined in terms of increase in share of value added, indicates a worsening trend in organized manufacturing during the post-reform period. The share of inputs as per cent to output actually increased from 77.2 per cent during 1981-91 to 77.3 per cent during 1991-2001 and further to over 80 per cent in the last decade. This indicates that the growth of Indian industry in general, particularly the organized manufacturing sector, was largely driven by increase in use of inputs. There has, however, been significant improvement in use of energy. The ratio of expenditure on fuel to output declined from 8.2 per cent during 1981-91 to 7.0 per cent during 1991-2001 and further to 4.3 per cent in 2009-10. Industry is becoming increasingly conscious of energy efficiency (Table 9.13).

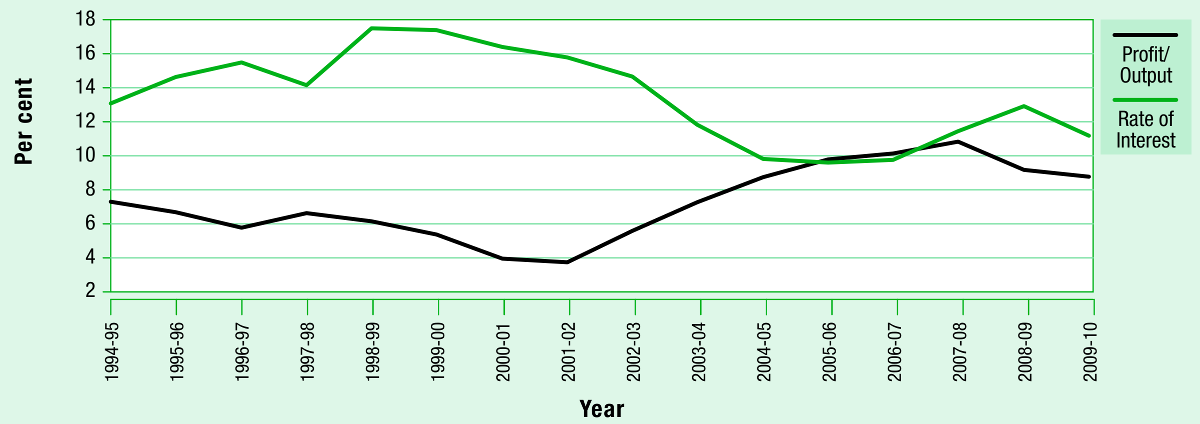
9.34 The number of persons engaged in organized manufacturing also increased from an average of 7.95 million in 1981-91 to an average of 8.98 million during 1991-2001 and further to 11.79 million in 2009-10. This is in contrast to a decline in workforce in manufacturing as a whole, covering both the organized and unorganized sectors. However, the ratio of total emoluments to output declined from 8.75 per cent during 1981-91 to 3.95 per cent in 2009-10, the most recent year for which ASI data is available. There has been an increase in profitability in organized manufacturing, with the ratio of profit to output increasing from 3.52 per cent in 1981-91 to 10.72 per cent in 2007-8. However, thereafter there has been a moderation in the ratio of profit to output to 8.67 per cent in 2009-10. Profitability of organized manufacturing seems to be considerably dependent on the rate of interest on its outstanding credit (Figure 9.6) and emoluments paid to workers. A trend of moderating interest rate from 1998-9 until 2007-8 resulted in the ratio of profit to output increasing from 6 per cent to 10.7 per cent. Hardening of interest rates in 2008-9 substantially reduced the ratio of profit to output. The decline in rate of interest, however, did not result in any improvement in profit/output ratio in 2009-10.

**Table 9.13 : Some Key Parameters of Organized Manufacturing in India**

| CHARACTERISTICS | 1981-1991 | 1991-2001 | 2001-2006 | 2006-2007 | 2007-2008 | 2008-2009 | 2009-2010 |
|---|---|---|---|---|---|---|---|
| Number of factories | 101905 | 127431 | 132419 | 144710 | 146385 | 155321 | 158877 |
| Value of output (₹ billion) | 1450 | 6469 | 13923 | 24085 | 27757 | 32728 | 37228 |
| In per cent | | | | | | | |
| Input/ output | 77.20 | 77.26 | 81.04 | 80.89 | 80.09 | 81.32 | 81.54 |
| Fuel/output | 8.21 | 7.01 | 5.76 | 4.99 | 4.67 | 4.65 | 4.34 |
| Capital invested/labour (₹ '000) | 133 | 498 | 872 | 1037 | 1225 | 1355 | 1638 |
| Emoluments/output | 8.75 | 6.18 | 4.35 | 3.68 | 3.80 | 3.96 | 3.95 |
| Profit/output | 3.52 | 5.58 | 7.44 | 10.02 | 10.72 | 9.07 | 8.67 |
| Interest Rate of Interest | 11.90 | 15.31 | 11.96 | 9.64 | 11.34 | 12.80 | 11.06 |

***Source*** **: MOSPI**

Figure 9.6 Rate of interest and ratio of profit to output of manufacturing sector




# Industrial Policy

## National Manufacturing Policy (NMP)

9.35 The report of the Prime Minister's Group, constituted to look into the measures for ensuring growth of the manufacturing sector, submitted in 2008 had recommended the putting in place a well structured manufacturing-sector policy to attain sustained 12-14 per cent growth in this sector. The government released the NMP on 4 November 2011 for bringing about a quantitative and qualitative change with the objectives to (i) increase manufacturing-sector growth to 12-14 per cent over the medium term; (ii) enable manufacturing to contribute at least 25 per cent of GDP by 2022; (iii) create 100 million additional jobs in the manufacturing sector by 2022; (iv) create appropriate skill sets among the rural migrant and urban poor for their easy absorption in manufacturing; (v) increase domestic value addition and technological depth in manufacturing; and (vi) enhance global competitiveness of Indian manufacturing.

9.36 The NMP was finalized after extensive consultations with the stakeholders and inputs from industry, state governments, and experts in the field of manufacturing, technology development, and business environment. The NMP envisages simplification of business regulations without diluting their intent. Recognizing the importance of small and medium enterprises (SMEs) in the country's economy, the policy contains dedicated interventions for SMEs in addition to other interventions for manufacturing industry generally. These interventions relate primarily to technology upgradation; adoption of environment-friendly technology; and equity investments. Skill development, to make young people employable, has been given high priority in the policy through fiscal incentives for the private sector and government schemes. National investment and manufacturing zones (NIMZs) are also provided for on lands which are degraded and uncultivable. NIMZs are envisaged as integrated industrial townships with world class physical and social infrastructure (Box 9.3). The NMP, which is the first such dedicated policy measure for the manufacturing sector in the country, is expected to change the manufacturing landscape of the Indian economy through increased capital formation; industrial infrastructure of global standards; technology upgradation; creation of innovation and vocational skill development infrastructure; and industry, worker, and environment-friendly regulations.

9.37 In order to ensure effective implementation of the NMP, manufacturing policy review mechanisms will be instituted. The NMP also provides for constitution of a high-level Manufacturing Industry Promotion Board (MIPB) to ensure coordination amongst central ministries and state governments.

## Draft National Policy on Electronics 2011 (NPE 2011)

9.38 The draft National Policy on Electronics, which was released on 3rd October 2011, provides a roadmap for the development of the sector in the country. The draft policy envisions creating a globally competitive electronics system design and manufacturing (ESDM) industry including nano-electronics to meet the country's needs and serve the international market. The salient points of the draft NPE 2011 include the following:

- **Multi-fold growth in production, investment, and employment:** For achieving a turnover of

**Box 9.3 : NIMZs**

- The NMP provides for the development of NIMZs as integrated industrial townships with state-of-the-art infrastructure and land use on the basis of zoning; clean and energy-efficient technology; necessary social infrastructure; and skill development facilities to provide a productive environment to persons transiting from the primary sector to the secondary and tertiary sectors. Key features of the proposed NIMZs are as follows:
- The state government would be responsible for selection of suitable land having an area of 5,000 ha in size
- At least 30 per cent of the total area proposed under NIMZs will be utilized for location of manufacturing units
- An special purpose vehicle (SPV) will be constituted to discharge the affairs of the NIMZ
- The state government would facilitate the provisioning of water, power connectivity, and other infrastructure and utilities linkages.
- The central government will bear the cost of master planning and will improve/provide external physical infrastructure linkages to NIMZs including rail, road (national highways), airports, and telecommunications in a time-bound manner.
- The central government will provide financial support in the form of viability gap funding (VGF) not exceeding 20 per cent of project costs.
- Soft loans from multilateral financial institutions will be explored and the developers of NIMZs will be allowed to raise external commercial borrowings (ECBs) for developing internal infrastructure of the NIMZs.

about US $ 400 billion by 2020 involving an investment of about US $ 100 billion and employment opportunities to around 28 million people in the ESDM sector, the following specific initiatives are proposed:

- Setting up of semiconductor wafer fabs for manufacture of semiconductor chips.
  - A Modified Special Incentive Package Scheme providing for the disabilities in manufacturing in the sector.
  - An Electronic Manufacturing Clusters Scheme for about 200 clusters with world class infrastructure.
  - Preferential market access for domestically manufactured electronic goods to address strategic and security concerns and consistent with international commitments.
  - Provide for 10-year stable tax regime.
- **Semiconductor chip design industry:** Building on the emerging chip design and embedded software industry to achieve global leadership and a turnover of US$ 55 billion by 2020.
- **Multi-fold growth in Export:** To increase export from US$ 5.5 billion to US$ 80 billion by 2020.
- **Human resource development:** Significantly enhancing availability of skilled manpower, in scale and scope, including in emerging technology areas, by active participation of the private sector and thrust on higher education. It includes creation of about 2,500 PhDs annually by 2020.
- **Standards:** Developing and mandating standards for electronic products.
- **Security Eco-system:** Creating a completely secure cyber eco-system in the strategic use of electronics.
- **Sourcing for strategic sectors:** Creating long-term partnerships between the ESDM industry and strategic sectors like defence, space, and atomic energy.
- **Research and Development (R&D) and Innovation:** To become a global leader in creating intellectual property in the ESDM sector by increasing fund flow for R&D seed capital and venture capital for start-ups in the ESDM and nano-electronics sectors.
- **To develop core competencies in identified sectors such as** automotive electronics, avionics, LED, industrial electronics, medical electronics, solar photovoltaic and information and broadcasting through use of ESDM.
- **National Electronic Mission (NEM):** A NEM will be set up with industry participation, as an institutional mechanism to formulate policy, implement approved policy, and promote 'Brand India' in electronics.

## Micro, Small, and Medium Enterprises (MSME) Sector

9.39 The MSME is a dynamic and vibrant sector that nurtures entrepreneurial talent besides meeting social objectives including that of providing employment to millions of people across the country. Some major initiatives that have been taken by the government in 2011-12 to revitalize the MSME sector are as follows:

(i) The government has recently approved the public procurement policy for goods produced and services rendered by MSEs by the central ministries/departments/public-sector undertakings (PSUs). The policy envisages that every central ministry/PSU shall set an annual goal for procurement from the MSE sector at the beginning of the year, with the objective of achieving an overall procurement goal of minimum 20 per cent of total annual purchases of products or services from MSEs in a period of three years. A sub-target of 4 per cent is also to be earmarked for procurement from MSEs owned by scheduled caste/scheduled tribe (SC/ST) entrepreneurs.

(ii) The Securities and Exchange Board of India (SEBI) has permitted setting up of a stock exchange / trading platform for SMEs by a recognized stock exchange having nationwide trading terminals and also issued guidelines and necessary amendments to the SEBI Regulations. The Bombay Stock Exchange (BSE) and National Stock Exchange (NSE) have been given final approval for launching SME platforms on 27 September 2011 and 14 October 2011 respectively. With the operationalization of SME exchanges / platforms, Indian SMEs would find an opportunity to raise funds from capital markets.

(iii) In line with the overall target set by the Prime Minister's National Council on Skill Development, the Ministry of MSME and the agencies under it will conduct skill development programmes for 4.78 lakh persons during 2011-12. Further, the Ministry aims to train 5.72 lakh persons in the year 2012-13 through its various programmes for development of self-employment opportunities as well as wage employment opportunities in the country.

(iv) The government has adopted the cluster approach as a key strategy for enhancing the productivity and competitiveness as well as capacity building of MSEs and their collectives in the country. During the year 2011-12 (up to 31 January 2012), 8 new clusters were taken up for diagnostic study, 5 for soft interventions, and 4 for setting up of common facility centres (CFCs). With this, a total of 477 clusters have so far been taken up for diagnostic study, soft interventions, and hard interventions. Apart from these clusters, 134 infrastructure development projects have also been undertaken.

## Cental Public-sector Enterprises (CPSEs)

9.40 Policy developments for CPSEs mainly relate to increased delegation of financial and operational powers and revival of CPSEs. With a view to delegating enhanced financial and operational powers to CPSEs, the government introduced the Navratna Scheme in July 1997. In December 2010, the Government introduced the Maharatna Scheme enhancing financial delegation to CPSEs. Coal India Limited and Neyveli Lignite Corporation Limited were conferred Maharatna and Navratna status respectively in 2011 and the number of CPSEs under these categories increased to 5 and 16 respectively. In December 2004, the government established a Board for Reconstruction of Public Sector Enterprises (BRPSE) to advise on revival / restructuring of sick and loss-making CPSEs. The BRPSE has made recommendations in respect of 62 CPSEs until 31 October 2011. The government, in turn, has approved proposals for revival of 43 CPSEs and closure of two. The total assistance approved by the government in this regard up to 31 October 2011 is ₹ 25,104 crore (₹ 3,873.86 crore as cash assistance and ₹ 21,230.67 crore as non-cash assistance). Out of the 43 CPSEs approved for revival by the government, 13 turnaround CPSEs have posted profit before tax (PBT) consecutively for three or more years.

# Industrial Growth By Sectors

## Textile-sector production

9.41 The textile sector has so far remained subdued during the current financial year. The total cloth production has declined by 4.74 per cent during April-December 2011. The decline in production has

**Table 9.14 : Production of Fabrics/Cloth (million sq. m)**

| Sector | 2007-2008 | 2008-2009 | 2009-2010 | 2010-2011(P) | April - December | |
|---|---|---|---|---|---|---|
| | | | | | 2010-2011(P) | 2011-2012(P) |
| Mill sector | 1781<br>(2.00) | 1796<br>(0.84) | 2016<br>(12.25) | 2205<br>(9.38) | 1643 | 1656<br>(0.79) |
| Handloom | 6947<br>(6.30) | 6677<br>(-3.90) | 6806<br>(1.93) | 6949<br>(2.10) | 5100 | 5178<br>(1.53) |
| Power loom | 34725<br>(5.60) | 33648<br>(-3.10) | 36997<br>(9.95) | 37929<br>(2.52) | 28566 | 27841<br>(-2.54) |
| Hosiery | 11804<br>(2.60) | 12077<br>(2.30) | 13702<br>(13.46) | 14647<br>(6.90) | 11055 | 9464<br>(-14.39) |
| Others | 768<br>(6.10) | 768<br>(0.00) | 812<br>(5.73) | 812<br>(0.00) | 599 | 599<br>(0.00) |
| Total cloth production | 56025<br>(4.94) | 54966<br>(-1.89) | 60333<br>(9.76) | 62542<br>(3.66) | 46963 | 44738<br>(-4.74) |

***Source*** **: Office of the Textile Commissioner, Mumbai.**
***Notes*** **: P - Provisional, Figures in brackets indicate percentage change.**

been due to two major segments, namely power loom (-2.54 per cent) and hosiery (-14.89 per cent). Cloth production by the mill and handloom sectors increased by 1 per cent and 2 per cent respectively during the period (Table 9.14) During April – December 2011, man-made fibre production and filament yarn production recorded a decrease of about 2 per cent and 7 per cent respectively. Production of cotton yarn decreased by 13 per cent during this period. However, blended and 100 per cent non-cotton yarn production increased by 5 per cent .

## Exports

9.42 Textiles and clothing worth US $26.82 billion were exported during 2010-11 as against US$ 22.41 billion during 2009-10, registering an increase of about 19.66 per cent. During April-November 2011, exports of textiles & clothing were of the order of US$ 19.78 billion as against US$15.86 billion during the same period of 2010, registering a considerable growth of 24.73 per cent. In respect of global exports of clothing, India ranked sixth largest exporter as per the World trade Organization (WTO) (2010 release), trailing Turkey, Bangladesh, Hong Kong, EU-27, and China. In respect of global exports of textiles, India ranked third, trailing EU-27 and China.

9.43 In view of the recessionary trend in the textiles sector, the government has been supporting the textiles sector exports through various policy initiatives to enable the sector to increase market share in the global textiles markets. Government has introduced several export promotion measures in the Union Budget 2011-12 as well as through schemes of the Foreign Trade Policy 2009-14, including incentives under the Focus Market Scheme and Focus Product Scheme; enhancing the coverage of the Market Linked Focus Product Scheme for textile products; and extension of the Market Linked Focus Product Scheme to increase India's market share in various countries.

## Chemicals, petrochemicals, and fertilizers

### *Chemicals*

9.44 Major chemicals undergo several stages of processing to be converted into downstream chemicals. These processed chemicals are used in agriculture and industry as auxiliary materials such as adhesives, unprocessed plastics, dyes, and fertilizers. Chemicals are also directly used by consumers in the form of pharmaceuticals, cosmetics, household products, paints, etc. Alkali chemicals, inorganic chemicals, and organic chemicals constitute the major segments of the chemicals industry. Production of major chemicals during April-November 2011 has been comparatively higher except for pesticides and insecticides and dyes and dyestuff. Total output for the sector is higher by 1.77 per cent (Table 9.15).

### *Petrochemicals*

9.45 Petrochemicals include synthetic fibres, polymers, elastomers, synthetic detergents, and performance plastics, apart from their intermediates such as synthetic fibre intermediates, synthetic

**Table 9.15 : Production of Major Chemicals**

(000' MT)

| Years | Alkali chemicals | Inorganic chemicals | Organic chemicals | Pesticides & insecticides | Dyes & dyestuffs | Total major chemicals |
|---|---|---|---|---|---|---|
| 2008-09 | 5427 | 513 | 1,254 | 85 | 32 | 7311 |
| 2009-10 | 5602 | 518 | 1,281 | 82 | 42 | 7525 |
| 2010-11 | 5981 | 572 | 1,342 | 85 | 47 | 8027 |
| 2010-11 (Apr-Nov) | 3876 | 365 | 867 | 56 | 32 | 5196 |
| 2011-12 (Apr-Nov) | 3944 | 374 | 892 | 49 | 28 | 5288 |

*Source* : Department of Chemicals and Petrochemicals.
*Note* : MT= metric tonne.

**Table 9.16 : Production of Major Petrochemicals**

(000' MT)

| Years | Synthetic fibers | Polymers | Elastomers | Synthetic detergent intermediates | Performance plastics | Total major Petro-chemicals |
|---|---|---|---|---|---|---|
| 2008-9 | 2343 | 5060 | 96 | 552 | 141 | 8193 |
| 2009-10 | 2601 | 4791 | 106 | 618 | 172 | 8287 |
| 2010-11 | 2791 | 5292 | 95 | 638 | 191 | 9007 |
| 2010-11(Apr.-Nov.) | 1824 | 3450 | 65 | 422 | 124 | 5915 |
| 2011-12(Apr.-Nov.) | 1780 | 3724 | 58 | 414 | 114 | 6090 |

*Source* : Department of Chemicals and Petrochemicals.

detergent intermediates, olefins, and aromatics. The main sources of feedstock and fuel for petrochemicals are natural gas and naphtha. Petrochemical products cover the entire spectrum of daily-use items ranging from clothing, housing, construction, furniture, automobiles, household items, toys, agriculture, horticulture, irrigation, and packaging to medical appliances. The production of major petrochemicals in primary form from 2008-9 onwards is given in Table 9.16. During April-November 2011-12 major petrochemicals have increased by 2.95 per cent. The production of synthetic fibers, which is the second largest segment of the petrochemicals sector, has declined during the current year.

### Fertilizers

9.46 India is meeting 80 per cent of its urea requirement through indigenous production but is largely import dependent for its requirements of phosphatic and potassic (P & K) fertilizers either as finished fertilizers or raw materials. Its entire potash requirement, about 90 per cent of phosphatic requirement, and 20 per cent urea requirement is met through imports. In addition to urea, 25 grades of P & K fertilizers namely di ammonium phosphate (DAP), muriate of potash (MOP), mono-ammonium phosphate (MAP), triple super phosphate (TSP), ammonium sulphate (AS), single super phosphate (SSP) and 18 grades of NPKS complex fertilizers are provided to farmers at subsidized prices under the Nutrient Based Subsidy (NBS) Policy. Farmers pay only 50 per cent of delivered cost of P & K fertilizers, the rest is borne by the Government of India in the form of subsidy. The Government has also included seven new grades of NPKS complex fertilizers under the NBS Policy. At present 25 grades of P & K fertilizers are under the NBS Policy.

9.47 The domestic production of urea in the year 2010-11 was 218.80 lakh MT as compared to 211.12 lakh MT in 2009-10. The production of DAP decreased sharply in 2010-11 to 35.37 lakh MT as

**Table 9.17 : Production and Imports of Fertilizers**

(lakh MT)

| Year | Production | | | Imports | | |
|---|---|---|---|---|---|---|
| | 2009-2010 | 2010-2011 | 2011-2012* | 2009-2010 | 2010-2011 | 2011-2012* |
| Urea | 211.12 | 218.80 | 222.88 | 52.09 | 66.09 | 56.43 |
| DAP | 42.46 | 35.37 | 39.41 | 58.89 | 74.09 | 53.00 |
| Complex fertilizers | 80.38 | 87.27 | 90.69 | - | - | - |
| MOP | Nil | Nil | Nil | 52.86 | 63.57 | 24.91 |

Source : Department of Chemicals and Petrochemicals.
*Note* : * Estimated.

compared to 42.46 lakh MT in 2009-10. The estimated production of urea is projected at 222.88 lakh MT and that of DAP and complexes at 39.41 lakh MT and 90.69 lakh MT respectively in 2011-12. Availability of raw materials/intermediates has been a major bottleneck towards increase in production. The Department of Fertilizers has arranged timely imports of urea and other fertilizes to ensure timely availability of fertilizers in required quantity. The production and imports of urea, DAP, and complex fertilizers during 2009-10 to 2011-12 is given in Table 9.17.

## Food Processing

9.48 Food processing is one of the most heterogeneous sectors of manufacturing covering marine products, dairy products, grain, meat products, fruits and vegetables, sugar, edible oils and beverages. This sector has, however, been one of the fastest-growing segments in manufacturing in the current year contributing 27 per cent to average industrial growth, more than three times its weight in the IIP. Growth rates of some of the important products in this group are indicated in table 9.18.

9.49 A vibrant agrarian and rural economy requires establishing forward linkages in the form of the food-processing industries. Such linkages improve the income levels of the producers and help reduce wastages, which are crucial for food and livelihood security. A recent study by the Central Institute for Post Harvest Engineering Technology (CIPHET) in 2010 has assessed that the post harvest losses of agricultural products amount to around ₹ 44,000 crore annually. The Ministry of Food Processing Industries formulates appropriate policies and implements targeted schemes to reduce wastage and increase

**Table 9.18 : Rate of Growth of Output of Key Processed Food Products**

(Per cent)

| | 2006-2007 | 2007-2008 | 2008-2009 | 2009-2010 | 2010-2011 | 2011-2012 (Apr.-Dec.) |
|---|---|---|---|---|---|---|
| Sugar | 30.8 | 15.2 | -33.9 | -6.0 | 30.2 | 38.3 |
| Fruit pulp | -22.4 | 87.0 | -2.0 | 5.0 | 35.1 | 30.4 |
| Fruit juices | 26.6 | 20.9 | 41.0 | 46.6 | 16.8 | 26.0 |
| Cashew kernels | 64.8 | 8.4 | -4.2 | -0.9 | -7.9 | 22.2 |
| Instant food mixes | 24.3 | 30.8 | 19.4 | 20.8 | 10.6 | 17.9 |
| Mineral water | 21.0 | 29.4 | 6.9 | 28.3 | 19.9 | 15.4 |
| Chocolate | 28.4 | 8.9 | 24.2 | 11.3 | 13.7 | 13.3 |
| Malted foods | 6.1 | 8.5 | -36.8 | -8.8 | 8.4 | 6.4 |
| Butter | -6.2 | 4.8 | 3.4 | -22.7 | -4.7 | 0.1 |
| Biscuits | 14.1 | -0.9 | 29.2 | 10.4 | -1.4 | -1.6 |
| Frozen meat | -39.6 | -12.9 | 76.8 | 27.4 | -21.8 | -1.7 |

*Source* : MOSPI

### Box 9.4 : Major Schemes Implemented by the Ministry of Food Processing Industries

**I. Infrastructure development**

**Mega food parks (MFPs)**

- Ten MFPs were approved in the first phase
- Five MFPs were approved in the second phase
- Proposals have been invited for additional 15 MFPs
- Each of these MFPs is likely to consist of 30-40 food-producing units in the cluster.

**Cold chain, value addition and preservation infrastructure**

- Eight of the 10 projects approved in the first phase in 2008-9 have started commercial production.
- Thirty-nine projects approved in the second phase in 2011-12.
- Likely to reduce wastage especially among perishable food products.

**Modernization and setting up of abattoirs**

- Ten projects assisted so far with a grant assistance of ₹ 35.74 as on 31.01.2012.
- Two projects completed so far as on 31.01.2012.
- Focuses on hygienic and more humane slaughtering of animals.

**II. Technology upgradation, establishment/ modernization of FPIs**

- 852 units have been assisted with a grant of ₹ 135.87 crore during 2011-12 (April-January).

**III. Quality assurance, codexsStandards, R&D, and promotional activities in 2011-12**

- Five projects for setting up / upgradation of food-testing labs approved.
- Two proposal for implementation of HACCP/ISO certification of units approved.
- Eight Proposals for R&D approved.

**IV. Human resources development during 2011-12**

- One proposal for creation of infrastructure facilities,
- Twenty-five proposals for setting up of Food Processing Training Centres (FPTCs)
- One hundred and thirty-two Entrepreneurship Development Programmes have been held

**V. Strengthening of institutions as Centres of Excellence The following institutions have been strengthened**

- Indian Institute of Crop Processing Technology, Thanjavur
- National Institute of Food Technology and Entrepreneurship Management, Kundli, Haryana
- Indian Grape Processing Board
- National Meat and Poultry Processing Board

value addition in the food chain. By catalysing investment in this sector, the Ministry has helped create employment opportunities and upgraded human capital formation in the rural sector. Consumers are also benefitted by getting a wider and healthier choice of food products at affordable prices.

## Steel

9.50 India ranked as the fourth largest producer of crude steel in the world during January-November 2011 after China, Japan, and the USA. After a sharp increase in world consumption of finished steel in 2010 (15 per cent), the consumption is estimated to slow down to 6.5 per cent for 2011 and 5.4 per cent in 2012 as per World Steel Association estimates. The country has also been the largest sponge iron producer in the world since 2002. Domestic crude steel production grew at a compounded annual growth rate (CAGR) of 8.4 per cent during 2006-7 to 2010-11 (Table 9.19). The increase in production is driven by 8.8 per cent growth in crude steel capacity mainly in the private-sector plants and high utilization rates during this period.

9.51 The Indian steel industry has diversified its product mix to include sophisticated value-added steel used in the automotive sector, heavy machinery, and physical infrastructure. Despite the softening of

**Table : 9.19 Production, Consumption, Import, and Export of Total Finished Steel and Pig Iron**

(million tonnes)

| | Item | 2006-2007- | 2007-2008- | 2008-2009- | 2009-2010- | 2010-2011 | Change over 2009-2010* |
|---|---|---|---|---|---|---|---|
| Production for sale | TFS | 52.53 | 56.07 | 57.16 | 60.62 | 66.01 | 8.98 |
| | PI | 4.93 | 5.28 | 6.21 | 5.88 | 5.54 | - 5.78 |
| Import | TFS | 4.93 | 7.03 | 5.84 | 7.38 | 6.79 | -7.99 |
| | PI | 0.03 | 0.11 | 0.08 | 0.11 | 0.09 | -18.00 |
| Export | TFS | 5.24 | 5.08 | 4.44 | 3.25 | 3.46 | 6.45 |
| | PI | 0.71 | 0.56 | 0.35 | 0.36 | 0.36 | 0 |
| Real consumption** | TFS | 46.78 | 52.12 | 52.35 | 59.34 | 65.61 | 10.6 |
| | PI | 4.33 | 4.62 | 5.87 | 5.53 | 5.15 | -6.87 |

***Source*** **: Joint Plant Committee, Ministry of Steel.**

***Notes*** **: TFS = total finished steel (both alloy and non-alloy);**

**PI = pig iron; * Provisional; **Adjusted for stock variation and double counting.**

industrial demand as reflected in a 4.4 per cent growth in real consumption of total finished steel during April–December, 2011 over the same period of last year, the overall April-December 2011 performance of the Indian steel industry is optimistic. In 2011, it was faced with stiff challenges posed by rising inflationary pressures at home and deteriorating global growth conditions. The multiple hikes in interest rates by the central bank also impacted the industry's growth directly and indirectly through their effect on the growth of key user industries. Raw material security (e.g. getting iron ore mining lease), infrastructure (affecting logistics and transport), quality of coking coal, and uncertainties in land acquisition have emerged as bottlenecks to setting up new steel plants.

## Heavy industries

9.52 The Department of Heavy Industry monitors the performance of the automotive sector, heavy electrical engineering, heavy engineering equipments and machine tools industry. As per the Society of Indian Automobile Manufacturers (SIAM) actual production of passenger vehicles was 2.9 per cent higher during April-November 2011 as compared to the same period in the previous year. Likewise production of commercial vehicles was higher by 25.9 per cent. Overall automotive-sector output increased by 15.5 per cent during April-November 2011. While domestic sales of passenger vehicles contracted by 0.5 per cent, commercial vehicles sales increased by a robust 20.0 per cent. Exports of all categories of vehicles covering passenger vehicles, commercial vehicles, and others increased by 21 per cent, 26 per cent, and 33 per cent respectively during April-November 2011.

9.53 The heavy electrical engineering industry is an important manufacturing sector, catering to the needs of the power sector and other industrial sectors. Major equipment like boilers, turbo generators, turbines, transformers, condensers, switch gears and relays, and related accessories is manufactured by this sector. The performance of this industry is closely linked to the power generation capacity addition programme of the country. Manufacturers of heavy electrical equipment have absorbed sub-critical technology up to a unit capacity of 600 MW and are gearing up to adopt super-critical technology for unit size of 660/800MW and above for thermal sets.

## Electronics hardware

9.54 Indian electronics hardware production increased from ₹ 1,10,720 crore in 2009-10 to ₹ 1,21,760 crore in 2010-11 (estimated), registering a growth of 10 per cent. During the year 2010-11 exports of electronics hardware are estimated to have registered a growth of 56 per cent in rupee terms (62.42 per cent in US dollars) over the preceding year. In value terms, exports of electronics hardware are estimated to be ₹ 40,400 crore (US$ 8.9 billion)

Table 9.20 : Performance of CPSEs during 2010-11

(₹ crore)

| Sl. No. | Particulars | 2010-11 | 2009-10 | % change over previous year |
|---|---|---|---|---|
| 1. | Investment | 666848 | 580784 | 14.82 |
| 2. | Capital employed | 950449 | 909285 | 4.53 |
| 3. | Total turnover | 1473319 | 1244805 | 18.36 |
| 4. | Profit of profit-making CPSEs | 113770 | 108434 | 4.92 |
| 5. | Loss of loss-making CPSEs | 21693 | 16231 | 33.65 |
| 6. | Net worth | 723128 | 659437 | 9.66 |
| 7. | Dividend declared | 35681 | 33223 | 7.40 |
| 8. | Corporate tax | 43369 | 38133 | 13.73 |
| 9. | Interest paid | 38998 | 36060 | 8.15 |
| 10. | Contribution to central exchequer | 156124 | 139918 | 11.58 |
| 11. | Foreign exchange earnings | 97004 | 84224 | 15.17 |
| 12. | Foreign exchange outgo | 522577 | 424207 | 23.19 |

***Source*** **: Department of Public Enterprises.**

during of the year 2010-11, up from the ₹ 25,900 crore (US$ 5.5 billion) estimated in 2009-10. Electronics hardware production is expected to be US$ 33 billion in 2011-12. It is projected that electronics hardware exports will cross US$ 10 billion in 2011-12 as against US$ 8.86 billion in 2010-11, an expected growth of about 12.8 per cent.

## CPSEs

9.55 There were altogether 248 CPSEs under the administrative control of various ministries/ departments as on 31 March 2011. Out of these, 220 were in operation and 28 were under construction. The share of cumulative investment (paid-up capital plus long-term loans) in all the CPSEs stood at ₹ 6,66,848 crore as on 31 March 2011,showing an increase of 14.8 per cent over 2009-10. The share of manufacturing in gross block, during 2010-11, was 27.8 per cent. The share of mining, electricity, and services in total investment, in terms of gross block, was 23.0 per cent, 25.2 per cent, and 23.2 per cent respectively. The net profit of (158) profit- making CPSEs stood at ₹ 1,13,770 crore in 2010-11. The net loss of (62) loss-making enterprises, on the other hand, stood at ₹ 21,693 crore during the same period (Table 9.20). The year also witnessed severe financial 'under-recoveries' by public-sector oil marketing companies (OMCs) as they had to keep the prices of petroleum products low in the domestic market despite high input prices of crude oil. Foreign exchange earnings of the CPSEs amounted to ₹ 97,004 crore during 2010-11, which was less than the total foreign exchange outgo of ₹ 5,22,577 crore.

# Challenges And Outlook

9.56 Industrial-sector growth during the current financial year is expected to be between 4 and 5 per cent. At this rate, the annual growth would be less than the annual growth rates achieved in the recent past and far below the potential growth rate. The challenge in the short term would, therefore, be to shore up business sentiment, spur investment in productive activities, and identify bottlenecks that can be removed in a reasonably short period of time. The government has already made some quick moves to clear bottlenecks in some critical sectors such as coal and power and is also pushing forward project implementation in some key infrastructure sectors. With the easing of headline inflation, moderation in commodities prices in the international market, and revival of manufacturing performance in recent months in the major economies, India's industrial sector is expected to rebound during the next financial year.

9.57 In the medium to long term several challenges remain. In its approach paper to the Twelfth Five Year Plan, the Planning Commission has projected growth rates of 9.8 per cent and 11.5 per cent in the manufacturing sector required to achieve 9 per cent and 9.5 per cent economic growth respectively. The NMP, as discussed in earlier sections, has envisaged even higher growth of 14 per cent per annum so as to take the share of manufacturing in GDP to 25 per cent and increase the absorption of labour in this sector from around 50 million as of today to more than 150 million by 2022.

9.58 For the NMP to successfully meet the objective of 25 per cent share for the manufacturing sector in GDP certain specific measures are required, some of which form part of India's overall development priorities and strategies. There are several policy measures, briefly discussed here, that would have to be pursued simultaneously.

- First, there is need to resolve the issue of availability of land for industrial and infrastructure use. NIMZs are a key tool for facilitating the growth of manufacturing sector, which cannot take off in the absence of a well-thought-out and standardized approach to land acquisition. Allocation of agricultural land for manufacturing is crucially linked with the issue of agricultural productivity and food security. The situation could turn into a win-win one for both manufacturing and agriculture if agriculture productivity increases to levels where both less land and labour were required in this sector for food security.
- Second, both forward and backward linkages of the manufacturing sector will need to be strengthened for making progress on the objectives laid out in the NMP. The growth of the services sector (as distinct from the real sectors) depends considerably on the growth of manufacturing. Likewise, the growth of the services sector with quality benchmarking could contribute to productivity improvements in the manufacturing sector. Banking, insurance, trade, transport, communication, and skill development are some of the sectors where growth will be driven by a competitive and vibrant manufacturing sector. Unlike this strong forward linkage with the services sector, the backward linkage is of the weak nature with the agriculture sector due to the inadequate pace of development of agro-based industries. And as a result, the employment-generation potential of the manufacturing sector has not been fully harnessed in India.
- Third, within manufacturing, there is a need to shift structurally in favour of high value-addition industries. Specific policy thrust is required in high-precision machinery, pharmaceuticals, biotechnology, shipbuilding, defence production, and the aero-space industry, which are some of the areas that provide scope for diversification. Considerable and growing domestic demand in many of these sectors has to be leveraged for locating production facilities in the country by bringing in suitable foreign collaborators. It can provide depth to Indian manufacturing while increasing value addition from this sector. Acquiring depth in manufacturing is important not only for improving the competitiveness of manufacturing but for diversifying the industrial base.
- Fourth, investment requirements in India will continue to exceed the availability of resources from domestic savings. The investment-savings gap during 2005-11 was 1.7 per cent of GDP. The best way of covering this gap is through FDI. Though our FDI policy regime is now more open and transparent and has an institutional review mechanism, there are several sectoral issues that need to be addressed and continuously fine tuned.
- Fifth, with the implementation of the direct tax code (DTC), it would become difficult to incentivize industry through tax exemptions. In exports, the duty entitlement pass book (DEPB) scheme will get phased out. The new incentive mechanism will need to rely on providing non-tradable infrastructure services at global prices and in keeping with global standards. These would be more supply-centric and would considerably reduce the relative cost disadvantages of the domestic manufacturing sector, thereby giving a fillip to its growth.
- Sixth, the new manufacturing sector will need to be environment-friendly. Environment issues encompass exploration, excavation, and use of resources and their pricing. The resource needs of manufacturing would require a certain balancing, consistent with sustainable

protection of the environment. A more transparent policy framework for pricing and allocation of natural resources would be a natural starting point in this regard.

9.59 Lack of consolidated information and absence of a unified online service delivery platform in the current system of approvals for starting a business has made this process laborious, time-consuming, and expensive. In order to enable businesses and investors to save time and costs and in order to improve the business environment, an online single window has been conceptualized in the form of the eBiz Mission Mode Project under the National e-Governance Plan. The core value of this transformational project lies in a radical shift in the governments' service delivery approach from being department-centric to customer-centric. eBiz can not only create a 24x7 facility for information and services, but may also offer joined-up services where a single application submitted by a customer, for a number of permissions, clearances, approvals, and registrations, will be routed automatically across multiple governmental agencies in a logical manner. An inbuilt payment gateway may also add value by allowing all payments to be collected at one point and then apportioned appropriately. There is need to scale up and accelerate implementation of this initiative.

9.60 Industrial establishments have a variety of statutory obligations to discharge. The Employees Provident Fund Act; Employees State Insurance Act; Payment of Gratuity Act; Personal Injuries (Compensation Insurance) Act; Workmen's Compensation Act; etc. are some of the major laws that require not only the regular payouts by industrial units but also involve filing of periodic returns and maintenance of registers and records. This not only adds to the transaction cost of industry, it in many ways puts off a potential investor. It might be worthwhile considering an alternate mechanism, which could address the issues of SMEs' limited manpower and resources. The costly way of compliances, which is often unsatisfactory for the bigger players, for meeting statutory obligations in a more efficient and economical manner and serving the interests of both the employers and employees.

# Services Sector

10

CHAPTER

*The services sector has been a major and vital force steadily driving growth in the Indian economy for more than a decade. The economy has successfully navigated the turbulent years of the recent global economic crisis because of the vitality of this sector in the domestic economy and its prominent role in India's external economic interactions.*

10.2 The services sector covers a wide range of activities from the most sophisticated information technology (IT) to simple services provided by the unorganized sector, such as the services of the barber and plumber. National Accounts classification of the services sector incorporates trade, hotels, and restaurants; transport, storage, and communication; financing, insurance, real estate, and business services; and community, social, and personal services. In World Trade Organization (WTO) and Reserve Bank of India (RBI) classifications, construction is also included.

## Services Sector: International Comparison

10.3 Conventional wisdom suggests that during the early development phase of any country, expansion of output in manufactured goods precedes growth in the services sector. As a country progresses further manufacturing often takes a back seat, giving way to the services sector in terms of both output and employment, and manufacturing firms themselves become increasingly service-centric in order to remain competitive. Some have argued that the decline in manufacturing and corresponding shift to services is unsupportable in the long run as services depend critically on manufacturing for their demand. Although this argument may be applicable for certain services such as retailing and transportation, it does not entirely hold for many other services. IT in particular has been a major force behind recent expansion in manufacturing rather than the other way round. While internationally, the conventional wisdom of development holds good, in the case of the Indian economy, it seems to have been turned upside down, with the services sector taking a substantial lead over manufacturing. In India's case, there are positive spillovers from services growth to manufacturing, through income, demand, technology, and organizational learning.

### Services GDP: International Comparison

10.4 In 2010, the share of services in the US$63 trillion world gross domestic product (GDP) was nearly 68 per cent, as in 2001. India's performance in terms of this indicator is not only above that of other emerging developing economies, but also very close to that of the top developed countries. Among the top 12 countries with highest overall GDP in 2010, India ranks 8 and 11 in overall GDP and services GDP respectively. While countries like the UK, USA, and France have the highest share of services in GDP at above 78 per cent, India's share of 57 per cent is much above that of China at 41.8 per cent. In 2010 compared to 2001, India is the topmost country in terms of increase in its services share in GDP (7 percentage points) followed by Spain and Canada (5.3 percentage points each), the UK (4.5 percentage points), and Italy (3.2 percentage points). In terms of compound annual growth rate (CAGR) for the period 2001-10, China at 11.3 per cent and India at 9.4 per cent show very high services sector growth. Russia at 5.5 per cent and Brazil at 4.0 per cent are a distant third and fourth respectively. While India's growth rate of the services sector at 10.1 per cent in 2009 was higher than that of China at 9.6 per cent, in 2010 it has decelerated to 7.7 per cent while China's has remained constant (Table 10.1). All this highlights the prominence of the services sector for India. Despite the higher share of services in India's GDP and China's dominance in manufacturing over services, the hard fact, however, is that in terms of absolute value of services GDP and also in terms of growth of services, China is still ahead of India in 2010.

## International Trade in Services

10.5 Global trade in services has more or less mirrored the trend in merchandise trade, and, by corollary, international demand. World exports of services have shown consistent rise in the 2000s decade with a healthy average annual growth of around 9.5 per cent, except in 2001 and 2009—periods of global slowdown and economic crisis. After having increased by 13 per cent in 2008 (as per WTO data), world exports of services fell sharply with negative growth of 12 per cent in 2009, only to bounce back in 2010 with 9 per cent growth. In 2010 the value of services exports was US$3,695 billion, slightly below the 2008 pre-crisis peak of US$ 3,842 billion. While world trade in services is dominated by the developed countries, emerging economies like China and India are now playing an increasing role. India is the most dynamic exporter of services and ranked seventh in the world in both exports and imports of services in 2010 (see Chapter 7 for details).

## Foreign Direct Investment (FDI) in the Services Sector

10.6 The global economic and financial crisis had a dampening effect on overall FDI flows. FDI in services, which accounted for the bulk of the decline in FDI flows due to the crisis, continued on its downward path in 2010. FDI in all main service industries (business services, finance, transport and communications, and utilities) fell, although at different rates. Overall, FDI projects in the services

**Table 10.1 : Performance in Services : International comparision**

| | Country | Rank | | Overall GDP (US$ billion) | | Share of Services (% of GDP) | | | Services Growth Rate (%) | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Overall GDP | Services GDP | At Current Prices 2010 | At Constant Prices 2010 | 2001 | 2009 | 2010 | 2001 | 2009 | 2010 | CAGR 2001-10 |
| 1 | US | 1 | 1 | 14447.1 | 13017.0 | 77.0 | 79.0 | 78.2 | 2.9 | -1.4 | 1.2 | 1.8 |
| 2 | Japan | 2 | 2 | 5458.9 | 4578.5 | 69.8 | 71.7 | 70.0 | 2.0 | -4.8 | 2.9 | 0.6 |
| 3 | China | 3 | 3 | 5739.4 | 3883.5 | 39.8 | 42.1 | 41.8 | 10.3 | 9.6 | 9.6 | 11.3 |
| 4 | Germany | 4 | 4 | 3280.3 | 2945.8 | 69.7 | 73.7 | 72.5 | 2.1 | -1.6 | 2.3 | 1.4 |
| 5 | France | 6 | 5 | 2559.8 | 2208.6 | 76.5 | 78.9 | 78.1 | 1.7 | -1.1 | 0.2 | 1.4 |
| 6 | UK | 5 | 6 | 2253.6 | 2330.0 | 73.9 | 78.8 | 78.4 | 3.5 | -3.2 | 1.1 | 2.0 |
| 7 | Italy | 7 | 7 | 2051.3 | 1744.0 | 70.1 | 73.6 | 73.3 | 2.3 | -2.9 | 1.2 | 0.6 |
| 8 | Brazil | 11 | 8 | 2089.0 | 1092.6 | 65.3 | 67.6 | 66.8 | 1.8 | 3.0 | 4.8 | 4.0 |
| 9 | Spain | 10 | 10 | 1407.3 | 1180.7 | 65.7 | 70.5 | 71.0 | 3.4 | -1.0 | 0.7 | 2.7 |
| 10 | Canada | 9 | 9 | 1577.0 | 1203.9 | 64.9 | 70.7 | 70.2 | 3.6 | 0.1 | 2.5 | 2.8 |
| 11 | India | 8 | 11 | 1722.3 | 1251.6 | 50.0 | 56.5 | 57.0 | 7.5 | 10.1 | 7.7 | 9.4 |
| 12 | Russia | 12 | 12 | 1479.8 | 905.2 | 63.3 | 62.0 | 61.5 | 3.2 | -5.6 | 2.9 | 5.5 |
| | **World** | | | **63064.0** | **51040.5** | **68.1** | **68.7** | **67.8** | **2.9** | **-0.9** | **2.5** | **2.6** |

***Source*** **: Computed from UN National Accounts Statistics accessed on 8 February 2012.**

***Note*** **: Rank is based on current prices.**
**Share is based on constant prices (US$).**
**Growth rates are based on constant prices (US$).**
**CAGR is estimated for 2001-2010.**
**Construction sector is excluded in services GDP.**

sector declined from US$ 392 billion in 2009 to US$ 338 billion in 2010, resulting in its share in sectoral FDI declining from 33 per cent to 30 per cent in this period. Business services declined by 8 per cent compared to pre-crisis levels as multinational companies, who are outsourcing a growing share of their business support functions to external providers, downsized their operations due to economic slowdown. Transportation and telecommunication services also suffered equally in 2010 as the industry's restructuring was more or less complete after the round of large mergers and acquisition deals before the crisis, particularly in developed countries. FDI in the financial industry experienced the sharpest decline and is expected to remain sluggish in the medium term. Over the past decade, its expansion was instrumental in integrating emerging economies into the global financial system, bringing substantial benefits to host countries' financial systems in terms of efficiency and stability. Utilities were also strongly affected by the crisis as some investors were forced to reduce investment or even divest due to lower demand and accumulated losses.

## India's Services Sector

10.7 Different indicators like share in national and states' GDP, FDI, employment, and exports indicate the importance of the services sector for the Indian economy.

### Services GDP

10.8 The share of services in India's GDP at factor cost (at current prices) increased from 33.5 per cent in 1950-1 to 55.1 per cent in 2010-11 and to 56.3 per cent in 2011-12 as per Advance Estimates (AE). If construction is also included, the service sector's share increases to 63.3 per cent in 2010-11 and 64.4 per cent in 2011-12. With a 16.9 per cent share, trade, hotels, and restaurants as a group is the largest contributor to GDP among the various services' sub-sectors, followed by financing, insurance, real estate, and business services with a 16.4 per cent share. Community, social, and personal services with a share of 14.3 per cent is in third place. Construction, a borderline service inclusion, is at fourth place with an 8.2 per cent share (Table 10.2).

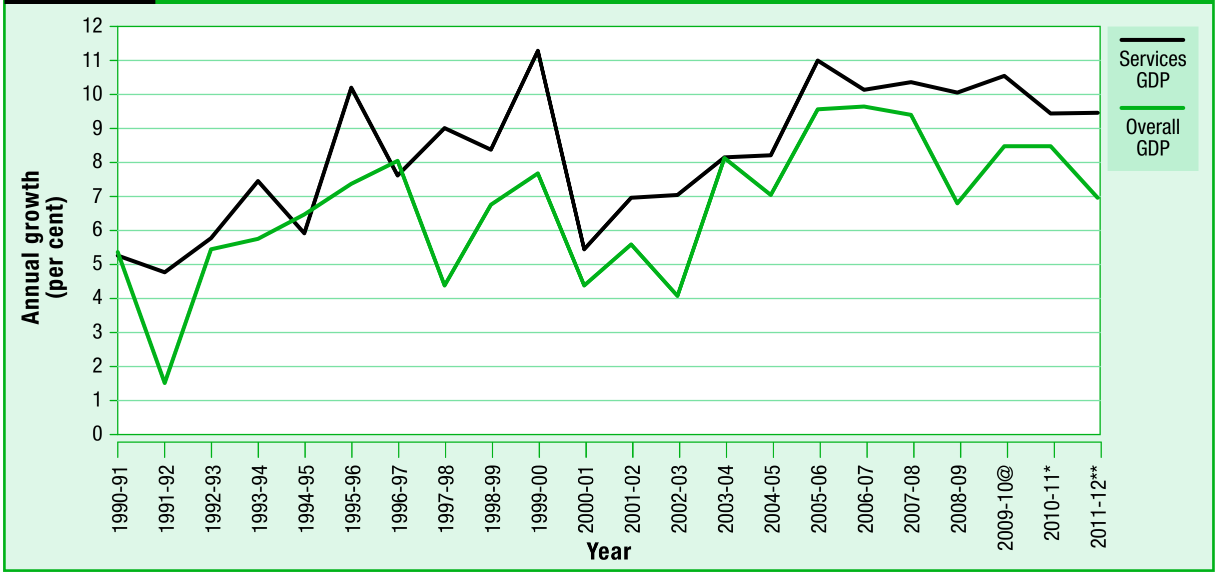
**Table 10.2 : Share of different services categories in GDP at factor cost (current prices)**

(per cent)

| | 2006-07 | 2007-08 | 2008-09 | 2009-10@ | 2010-11* | 2011-12** |
|---|---|---|---|---|---|---|
| **Trade, hotels, & restaurants** | **17.1** | **17.1** | **16.9** | **16.6** | **16.9** | **25.2 #** |
| Trade | 15.4 | 15.4 | 15.3 | 15.1 | 15.4 | |
| Hotels & restaurants | 1.7 | 1.7 | 1.5 | 1.4 | 1.5 | |
| **Transport, storage, & communication** | **8.2** | **8.0** | **7.8** | **7.8** | **7.7** | |
| Railways | 0.9 | 1.0 | 0.9 | 1.0 | 0.8 | |
| Transport by other means | 5.7 | 5.6 | 5.5 | 5.3 | 5.4 | |
| Storage | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | |
| Communication | 1.5 | 1.4 | 1.4 | 1.5 | 1.4 | |
| **Financing, insurance, real estate, & business services** | **14.8** | **15.1** | **15.9** | **15.8** | **16.4** | **16.9** |
| Banking & insurance | 5.5 | 5.5 | 5.6 | 5.4 | 5.8 | |
| Real estate, ownership of dwellings, & business services | 9.3 | 9.6 | 10.3 | 10.4 | 10.6 | |
| **Community, social, & personal services** | **12.8** | **12.5** | **13.3** | **14.5** | **14.3** | **14.2** |
| Public administration & defence | 5.2 | 5.1 | 5.8 | 6.7 | 6.3 | |
| Other services | 7.6 | 7.4 | 7.5 | 7.9 | 7.9 | |
| **Construction** | **8.2** | **8.5** | **8.5** | **8.2** | **8.2** | **8.1** |
| **Total services (excluding construction)** | **52.9** | **52.7** | **53.9** | **54.7** | **55.1** | **56.3** |
| **Total services (including construction)** | **61.0** | **61.2** | **62.4** | **63.0** | **63.3** | **64.4** |

***Source*** **: Computed from Central Statistical Office (CSO) data.**
***Notes*** **: @ Provisional Estimates (PE) * Quick Estimates (QE) ** Advance Estimates (AE)**
**# Includes the share of both Trade, Hotels, & Restaurants and Transport, Storage & Communication for 2011-12 .**

**Figure 10.1** **Growth rate of GDP and services sector GDP**




***Source***: **Based on CSO data.**
***Notes*** **: @ PE, * QE, **AE**

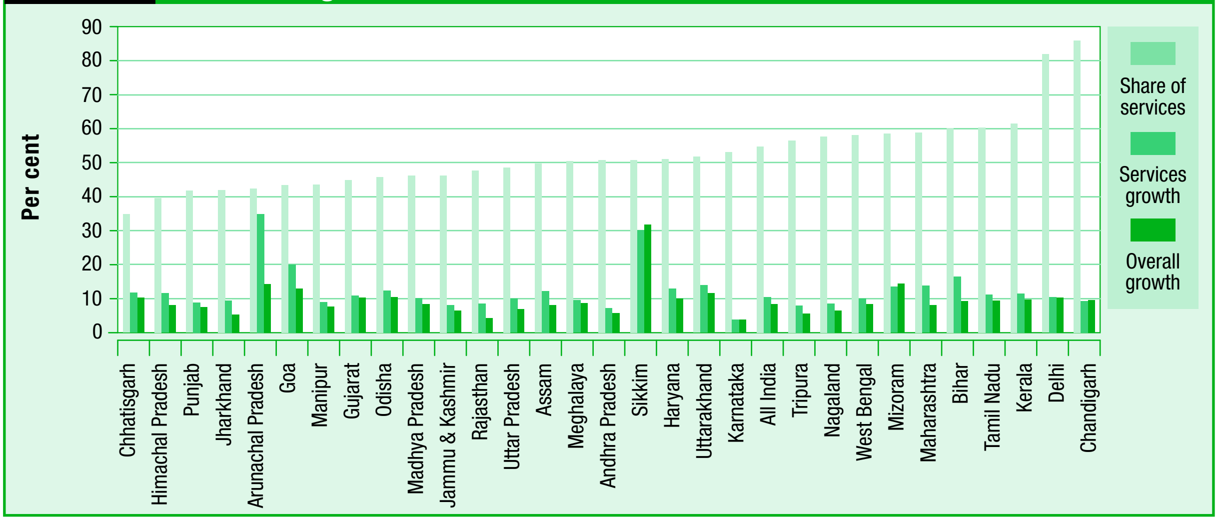
10.9 The service sector growth rate at constant prices has always been above overall GDP growth rate since 1996-7 except for 2003-4 when the two converged. Thus for the last 15 years, this sector with growth much above overall GDP growth of the economy has been pushing up the growth of the economy with a great amount of stability (Figure 10.1).

10.10 The CAGR of the services sector at 10.2 per cent for the period 2004-5 to 2010-11 has been higher than the 8.6 per cent CAGR of GDP during the same period, clearly indicating that the services sector has outgrown both the industry and agriculture sectors. In the years 2009-10 and 2010 11, the services sector has grown at 10.5 per cent and 9.3 per cent respectively. In 2011-12, the growth rate of services is 9.4 per cent (AE).

## State-wise Comparison of Services

10.11 A comparison of the share of services in the gross state domestic product (GSDP) of different states and union territories (UTs) in 2009-10 shows that the services sector is the dominant sector in most states of India (Figure 10.2). States and UTs such as Tripura, Nagaland, West Bengal, Mizoram,

**Figure 10.2** **Share and growth of services sector in 2009-10**




***Source*** **: CSO.**
***Notes*** **: Data in the case of Nagaland are for 2008-09.**
**Shares at current prices, growth rate at constant (2004-5) prices.**

Maharashtra, Bihar, Tamil Nadu, Kerala, Delhi, and Chandigarh have higher than all-India shares. Chandigarh with an 86 per cent share and Delhi with 81.8 per cent top the list. Other than Chhattisgarh (34.8 per cent) and Himachal Pradesh (39.6 per cent), services in all other states individually hold a share of more than 40 per cent in the GSDP. Thus the services revolution in India seems to be becoming more broad-based, with even the hitherto backward states piggy-backing on the good performance of this sector to go up the escalator of progress.

10.12 The highest growth rates of the services sector are in the north-eastern states of Arunachal Pradesh (34.9 per cent) and Sikkim (30.1 per cent). Among the other states, Goa with 20.1 per cent and Bihar with 16.6 per cent growth top the list. This is over and above their very high growth rates in 2008-9. Other states with higher than national average growth in the sector are Kerala, Tamil Nadu, Maharashtra, and Mizoram.

## FDI in the Services Sector

10.13 FDI plays a major role in the dynamic growth of the services sector though the ambiguity in classifying various activities under the services sector poses difficulty in the measurement of FDI inflows into this sector. The combined FDI share of financial and non-financial services, computer hardware and software, telecommunications, and housing and real estate can be taken as a rough estimate of FDI share of services, though it could include some non-service elements. This share is 41.9 per cent of the cumulative FDI equity inflows during the period April 2000-December 2011. With the inclusion of the construction sector (6.5 per cent), the share of services in FDI inflows increases to 48.4 per cent. If the shares of some other services or service-related sectors like hotels and tourism (2.02 per cent), trading (1.94 per cent), information and broadcasting (1.60 per cent), consultancy services (1.21 per cent), ports (1.04 per cent), agriculture services (0.91 per cent), hospital and diagnostic centres (0.72 per cent), education (0.30 per cent), air transport including air freight (0.27 per cent), and retail trading (0.03 per cent) are included then the total share of cumulative FDI inflows to the services sector would be 58.4 per cent. Following the general trend in FDI inflows, FDI inflows to the services sector (top five sectors including construction) have also slowed down in 2009-10 and 2010-11, with negative growths of -7.5 per cent and -42.5 per cent respectively in rupee terms. In 2011-12 (April-December), again following the trend of overall FDI inflows, which increased by 50.8 per cent to reach US$ 24.19 billion, FDI inflows to the top five service sectors (including construction) also increased by 36.8 per cent to US$ 9.3 billion Services (financial and non-financial), telecommunications, and construction, are the leading sectors in FDI inflows to the services sector in 2011-12 (April-December). The inflows to the other two service sectors are comparatively low (Table 10.3).

**Table 10.3 : Services Attracting Highest FDI Equity Inflows**

₹ crore

| Ranks | Sector | 2009-10 | 2010-11 | 2011-12 (Apr.-Dec.) | Comulative inflows (Apr. 2000-Dec. 2011) | Percentage to total (in US $ terms) |
|---|---|---|---|---|---|---|
| 1 | **Services sector** (financial & non-financial) | 19945 **(4176)** | 15053 **(3296)** | 21431 **(4575)** | 142539 **(31710)** | 20.1 |
| 2 | **Telecommunications** (radio paging, cellular mobile, basic telephone services) | 12270 **(2539)** | 7542 **(1665)** | 8969 **(1989)** | 57035 **(12544)** | 7.9 |
| 3 | **Computer software & hardware** | 4127 **(872)** | 3551 **(780)** | 2626 **(564)** | 48940 **(10973)** | 6.9 |
| 4 | **Housing & real estate** | 14027 **( 2935)** | 5600 **(1227)** | 2544 **(551)** | 48819 **(10933)** | 6.9 |
| 5 | **Construction activities** (including roads & highways) | 13469 **(2852)** | 4979 **(1103)** | 7635 **(1602)** | 46216 **( 10239)** | 6.5 |

***Source*** **: Based on Department of Industrial Policy & Promotion data.**
***Note*** **: Figures in parentheses are US$ million.**

10.14 The five service sectors are also the sectors attracting the highest cumulative FDI inflows to the economy with financial and non-financial services topping the list at US$ 31.7 billion during the period April 2000-December 2011. This is followed by other service sectors – telecommunication, computer software & hardware and housing & real estate. The top five source countries for FDI inflows into India in the financial and non-financial services sector (for which break-up data are available) during April 2000 to December 2011 are Mauritius, which alone accounts for 39.7 per cent of FDI inflows in the service sector, followed by Singapore (15.4 per cent), the UK (8.6 per cent), USA (7.1 per cent) and Japan (4.5 per cent). This is more or less similar to the general sourcing pattern of total FDI with the top five countries remaining the same in the same order of ranking. The shares of the financial and non-financial services sector in total FDI inflows from these sourcing countries are – Mauritius 20.1 per cent, Singapore 30.6 per cent, UK 29.5 per cent, USA 21.9 per cent and Japan 11.9 per cent.

## India's Services Trade

10.15 As per balance of payments (BoP) data of the RBI, India's services exports grew at a CAGR of 20.6 per cent during the period 2004-5 to 2010-11, compared to the 19.7 per cent CAGR of merchandise exports in the same period. Within the services sector, CAGRs of financial services (52.8 per cent) and business services (29.2 per cent) were higher, while that of software at 21 per cent was low. In terms of size, software is a major services export category, accounting for 41.7 per cent of total services exports in 2010-11. The CAGR for import of services was 20.2 per cent compared to the CAGR of merchandise imports at 21.4 per cent. Among services imports, nonsoftware services (22.6 per cent) and transportation (20.5 per cent) had high CAGRs. The overall openness of the economy reflected by total trade including services as a percentage of GDP showed a higher degree of openness at 50.3 per cent in 2010-11 compared to 25.4 per cent in 1997-8. Openness indicator based only on merchandise trade is at 37.5 per cent in 2010-11 compared to 21.2 per cent in 1997-8 (also see Chapter 7).

## Services employment in India

10.16 While agriculture continues to be the primary employment-providing sector, the services sector (including construction) is in second place. As per the National Sample Survey Organization's (NSSO) report on Employment and Unemployment Situation in India 2009-10, on the basis of usually working persons in the principal status and subsidiary status, for every 1000 people employed in rural and urban India, 679 and 75 people are employed in the agriculture sector, 241 and 683 in services sector (including construction), and 80 and 242 in the industrial sector, respectively.

10.17 State-wise, there are wide differences in the share in employment of different sectors in rural India. While some north-eastern states like Sikkim, Tripura, and Manipur have a high share of employment in the services sector, city states like Chandigarh and Delhi also have very high shares of 826 and 879 out of 1000 employed people. Among the major states, Kerala has a high share of employment in the services sector at 511 persons per 1000. Construction; trade, hotels, and restaurants; and public administration, education, and community services are the three major employment-providing services sectors in different states. In urban India the shares of employment in services is very high in most of the states (Table 10.4).

## India's Services Data

10.18 In last year's Economic Survey, the weaknesses related to availability and quality of services data were highlighted. To reiterate, these are difficulties in compilation of an index of services sector production, non-representation of many service sectors in the calculation of the wholesale price index, limited availability of published data on pricing of services, and limited data on trade in services. Even where data are available, they suffer from deficiencies related to definition, method of collection, suitability for pricing, and construction of indices. The recent efforts in streamlining data in the services sector (Box 10.1), though welcome, need to be accelerated in a coordinated manner with the help of experts in the field.

## Performance of Services Sub-sectors

10.19 India's services sector excluding construction and including construction grew by 9.3 and 9.2 per cent respectively in 2010-11 and by 9.4 and 8.8 per cent respectively in 2011-12, as per the CSO's AE. This is nearly 2 percentage points higher than the overall growth rate in 2011-12. Broad category-wise, the 'trade, hotels & restaurants, transport, storage and communications' category had the highest growth at 11.2 per cent, followed by

**Table 10.4 : State-wise Employment in Different Sectors in Rural and Urban India in 2009-10**

(per 1000 employed people)

| State/UT | Agriculture and allied | | Industry | | Services with construction | | Services without construction | |
|---|---|---|---|---|---|---|---|---|
| | Rural | Urban | Rural | Urban | Rural | Urban | Rural | Urban |
| Andhra Pradesh | 687 | 53 | 97 | 241 | 217 | 705 | 150 | 583 |
| Arunachal Pradesh | 757 | 140 | 32 | 41 | 213 | 817 | 158 | 722 |
| Assam | 725 | 27 | 38 | 137 | 257 | 833 | 222 | 757 |
| Bihar | 669 | 146 | 53 | 121 | 279 | 732 | 174 | 609 |
| Chhattisgarh | 849 | 53 | 39 | 282 | 112 | 666 | 83 | 553 |
| Delhi | 0 | 1 | 120 | 285 | 879 | 712 | 542 | 682 |
| Goa | 239 | 14 | 365 | 289 | 397 | 696 | 353 | 552 |
| Gujarat | 783 | 53 | 62 | 306 | 156 | 641 | 112 | 576 |
| Haryana | 598 | 53 | 98 | 319 | 304 | 627 | 195 | 511 |
| Himachal Pradesh | 629 | 85 | 53 | 149 | 320 | 767 | 167 | 676 |
| Jammu &Kashmir | 597 | 110 | 84 | 227 | 316 | 662 | 218 | 552 |
| Jharkhand | 548 | 52 | 92 | 160 | 361 | 787 | 145 | 602 |
| Karnataka | 757 | 94 | 67 | 221 | 176 | 686 | 132 | 558 |
| Kerala | 357 | 110 | 132 | 178 | 511 | 711 | 357 | 570 |
| Madhya Pradesh | 824 | 98 | 48 | 203 | 128 | 700 | 62 | 569 |
| Maharashtra | 794 | 47 | 52 | 236 | 154 | 716 | 116 | 638 |
| Manipur | 534 | 205 | 90 | 118 | 377 | 677 | 240 | 604 |
| Meghalaya | 707 | 58 | 56 | 65 | 236 | 877 | 178 | 780 |
| Mizoram | 806 | 360 | 14 | 53 | 180 | 587 | 128 | 499 |
| Nagaland | 741 | 219 | 17 | 35 | 241 | 745 | 200 | 684 |
| Odisha | 676 | 103 | 84 | 215 | 240 | 683 | 144 | 549 |
| Punjab | 618 | 83 | 81 | 249 | 298 | 669 | 168 | 552 |
| Rajasthan | 633 | 70 | 54 | 186 | 312 | 743 | 110 | 595 |
| Sikkim | 539 | 0 | 48 | 99 | 414 | 901 | 282 | 874 |
| Tamil Nadu | 637 | 136 | 117 | 276 | 246 | 586 | 146 | 482 |
| Tripura | 306 | 21 | 63 | 89 | 633 | 891 | 244 | 716 |
| Uttarakhand | 695 | 54 | 41 | 199 | 263 | 747 | 131 | 629 |
| Uttar Pradesh | 669 | 91 | 76 | 257 | 257 | 653 | 134 | 551 |
| West Bengal | 563 | 36 | 173 | 279 | 265 | 683 | 206 | 621 |
| A & N Islands | 430 | 30 | 91 | 98 | 477 | 873 | 330 | 766 |
| Chandigarh | 31 | 22 | 145 | 122 | 826 | 856 | 629 | 778 |
| Dadra & Nagar Haveli | 591 | 38 | 160 | 632 | 251 | 332 | 155 | 315 |
| Daman & Diu | 548 | 394 | 340 | 177 | 110 | 430 | 106 | 398 |
| Lakshadweep | 452 | 277 | 57 | 164 | 491 | 558 | 361 | 483 |
| Pondicherry | 461 | 29 | 144 | 201 | 396 | 770 | 238 | 647 |
| **All India** | **679** | **75** | **80** | **242** | **241** | **683** | **147** | **582** |

***Source*** **: Compiled from NSSO report No 537 : Employment and Unemployment Situation in India 2009-10.**
***Note*****: In Industry, 'Construction' is not included.**

'financing, insurance, real estate, and business services' at 9.1 per cent in 2011-12. 'Trade' and 'Real estate, ownership of dwellings, and business services' are two major sub-sectors with shares of 15.4 per cent and 10.6 per cent of GDP respectively in 2010-11. The shares of the two sectors have been more or less stable over the years. In 2010-11, the growth of the former has been good at 9.1 per cent and the latter moderate at 6.9 per cent. Communications followed by banking and insurance are the fastest growing sub-sectors over the years with 27.2 per cent and 14.5 per cent growth respectively in 2010-11 (Table 10.5). Among 'other services' which have a share of around 8 per cent in India's GDP, education, medical and health, and personal services are the major items. Interestingly some items have high growth rates with small shares which are rising. These include coaching centres

## Box 10.1 : An update of Recent Efforts at Collection of Service Data in India

**Index of services production (ISP)**: The CSO, Ministry of Statistics and Programme Implementation (MOSPI) with the guidance of a Technical Advisory Committee (TAC) has developed a methodology for compilation of the ISP. The TAC advised compilation of the ISP for different sub-sectors of the economy in a phased manner, with priority given to some sub-sectors like railways, air transport, postal services, banking, telecommunication, etc. that are more organized in terms of availability of data. The ISP is a volume index at constant prices. More precisely, it is defined as the ratio of the volume of output produced by the services industries in a given time period to the volume produced by the same industries in the specified base period. In the absence of regular surveys, the ISP is likely to serve as a short-term measure of assessing the growth of the services sector. Experimental monthly/quarterly/annual ISP for the sub-sectors of railways and air transport with base year 2004-5, covering the period from 2005-6 till 2010-11, have been finalized and uploaded on the website of the Ministry. The annual average values of the indices for rail transport show a rising trend over the years with the growth rate in 2010-11 at 6.4 per cent. The annual average values of the air transport indices also show a rising trend over the years with the growth rate at 18.2 per cent in 2010-11.

**Services price index (SPI)**: Ten sectors have been identified in the initial phase for development of an experimental SPI and methodologies for developing the SPI have been finalized for seven sectors. Concept papers on banking services, rail transport, postal services, and telecommunications have been prepared and uploaded on the official website for comments. The experimental indices for railways and banking sectors are under progress in consultation with the Railway Board and RBI respectively.

**Trade in services data:** In the current system, the data on international trade in services are not available country-wise, at disaggregated level and as per W-120 classification needed for the General Agreement on Trade in Services (GATS) negotiations. The RBI has stated releasing data on trade in services with a lag of 45 days from April 2011. While the RBI has been providing data on services at a more disaggregated level in recent years, it has also started releasing disaggregated quarterly data on trade in services beginning the first quarter of 2010-11. Data availability in trade of some major services is as follows. Data related to transportation services are derived from authorized dealers (AD) reporting under the Foreign Exchange Transaction through Electronic Reporting System (FETERS) purpose code. Currently, freight and passengers are not segregated but are clubbed together and shown according to the modes of transport in BoP statistics. Data related to travel are also derived in the same way with data on the receipts side being deficient while on the payments side they are adequate. The travel receipts for BoP are based on the Ministry of Tourism's data on tourist arrivals. In India's BoP, the telecommunication, computer, and information services category is presented separately under the heads communication, software, and news agency. Data on credits and debits under each category are also captured through FETERS. With regard to computer services, data are presented as software services and credit data are sourced from NASSCOM due to deficiencies in FETERS data. Data on the debit side of software services are from FETERS. The Survey on 'Foreign Collaboration in India conducted and published by the RBI contains foreign affiliated statistics (FATS). FATS measure turnover, export and import of goods and services, value added, and employment of resident (inward) and non-resident (outward) affiliates of multinational enterprises. At present, under the guidance of an Expert Group on Strengthening of Institutional Mechanism for Regular Collection and Compilation of Data on International Trade in Services set up by MOSPI, two pilot surveys in international trade in services have been initiated—one for the health sector and another for education. The Expert Group will submit its final report after completion of these pilot surveys.

with above 18 per cent growth in the last five years and share in 'other services' rising from 4.9 per cent in 2005-6 to 8.4 per cent in 2010-11; recreation and entertainment services with a steady 9 per cent growth in the last five years and share in 'other services' increasing from 5.4 per cent in 2005-6 to 6.1 per cent in 2010-11; and custom tailoring with a steady 13 per cent growth in the last five years and share in 'others services' increasing from 3 per cent in 2005-6 to 4.1 per cent in 2010-11.

10.20 The performance of the different services based on the different indicators shows that sectors like telecom, tourism, and railways have done well in 2011-12 (Table 10.6). The performance and outlook for the services sector based on limited firm-level data, though sketchy and based on estimates and forecasts, show a mixed picture for this and the coming year (Box 10.2).

## Performance of Some Major Services

### Trade

10.21 Trade is an important activity providing interface between the producer and consumer. The value of trade (inclusive of wholesale and retail in the organized and unorganized sectors) in India's GDP at constant prices has grown from ₹ 433,967 crore in 2004-5 to ₹ 742,621 crore in 2010-11, at a CAGR

**Table 10.5 : Annual Growth in India's Services GDP at Factor Cost (in constant prices)**

(per cent)

| | 2005-06 | 2006-07 | 2007-08 | 2008-09 | 2009-10@ | 2010-11* | 2011-12** |
|---|---|---|---|---|---|---|---|
| **Trade, hotels, & restaurants** | **12.2** | **11.1** | **10.1** | **5.7** | **7.8** | **9.0** | **11.2#** |
| Trade | 11.6 | 10.8 | 9.8 | 6.7 | 8.3 | 9.1 | |
| Hotels & restaurants | 17.4 | 14.4 | 13.0 | -3.3 | 2.8 | 7.7 | |
| **Transport, storage, & communication** | **11.8** | **12.6** | **12.5** | **10.8** | **14.8** | **14.7** | |
| Railways | 7.5 | 11.1 | 9.8 | 7.7 | 9.4 | 6.8 | |
| Transport by other means | 9.3 | 9.0 | 8.7 | 5.3 | 7.2 | 8.4 | |
| Storage | 4.7 | 10.9 | 3.4 | 14.1 | 8.7 | 7.9 | |
| Communication | 23.5 | 24.3 | 24.1 | 25.1 | 31.7 | 27.2 | |
| **Financing, insurance, real estate, & business services** | **12.6** | **14.0** | **12.0** | **12.0** | **9.4** | **10.4** | **9.1** |
| Banking & insurance | 15.8 | 20.6 | 16.7 | 14.0 | 11.3 | 14.5 | |
| Real estate, ownership of dwellings, & business services | 10.6 | 9.5 | 8.4 | 10.4 | 7.8 | 6.9 | |
| **Community, social, & personal services** | **7.1** | **2.8** | **6.9** | **12.5** | **12.0** | **4.5** | **5.9** |
| Public administration & defence | 4.3 | 1.9 | 7.6 | 19.8 | 18.2 | 1.3 | |
| Other services | 9.1 | 3.5 | 6.3 | 7.4 | 7.2 | 7.3 | |
| **Construction** | **12.8** | **10.3** | **10.8** | **5.3** | **7.0** | **8.0** | **4.8** |
| **Total services (excluding construction)** | **10.9** | **10.1** | **10.3** | **10.0** | **10.5** | **9.3** | **9.4** |
| **Total services (including construction)** | **11.1** | **10.1** | **10.3** | **9.4** | **10.0** | **9.2** | **8.8** |
| **Total GDP** | **9.5** | **9.6** | **9.3** | **6.7** | **8.4** | **8.4** | **6.9** |

***Source*** **: Computed from CSO data.**

***Notes*** **: @ PE   * QE   ** AE**

**# Includes the share of both trade, hotels, & restaurants and transport, storage, & communication for 2011-12.**

of 9.4 per cent. As per the CSO's QE, the growth rate in 2010-11 was 9.1 per cent. The share of trade in GDP has been slightly above 15 per cent in the last six years (15.4 per cent in 2010-11). With a high GDP growth in the last five years, and high growth in consuming population, the retail business is of late being hailed as one of the sunrise sectors in the economy. A. T. Kearney, an international management consultancy firm, has identified India as one of the topmost retail destinations. Since 2006, India has been allowing FDI in single brand retail to the extent of 51 per cent. In January 2012, the government removed restrictions on FDI in the single-brand retail sector, allowing 100 per cent FDI.

10.22 Allowing FDI in multi-brand retail is one of the major issues in this sector. This could begin in a phased manner in the metros, with the cap at a lower level coupled with incentivizing the existing 'mom and pop' stores (kirana shops) to modernize and compete effectively with the retail shops, foreign or domestic. While agricultural marketing could improve immensely with the growth of modern retail trade, the revenue to the government could also increase, as at present the retail sector is largely unorganized and has low tax compliance. The Inter-Ministerial Group (IMG) on Inflation of the Government of India has also recommended leveraging FDI in multi-brand retail as one of the means for addressing issues relating to high rates of food inflation and low prices realized by Indian farmers, developing a 'farm-to-fork' retail supply system, and addressing the investment gaps in post harvest infrastructure for agricultural produce.

## Tourism, including hotels and restaurants

10.23 Tourism is not only a growth engine but also an export growth engine and employment generator. The sector has capacity to create large-scale employment both direct and indirect, for diverse sections in society, from the most specialized to unskilled workforce. It provides 6-7 per cent of the world's total jobs directly and millions more indirectly

## Box 10.2 : Performance of Services Firms: A Sectoral Analysis

The Centre for Monitoring Indian Economy's (CMIE) analysis of the sector-wise performance of services activities based on firm-level data is given here. The data for 2011-12 and 2012-13 are based on estimates and forecasts.

**Transport logistics:** The sales of the transport logistics services industry are estimated to have grown by a healthy 17.5 per cent during 2010-11. This growth is likely to have been achieved by a combination of higher cargo volumes and better realizations. In 2011-12 as a whole, the sales of this sector are expected to grow by 9.6 per cent and profit after tax (PAT) at 17.8 per cent. In 2012-13 sales are expected to grow at 9.9 per cent and PAT 11.1 per cent.

**Shipping:** The shipping sector's sales had fallen by 4.8 per cent in 2010-11. In the year 2011-12 as a whole, the shipping sector is likely to grow at a modest 2.9 per cent. Exchange rate fluctuations and port and offshore operations are expected to contribute substantially and provide a support level for the sector's total sales during the year. However, the industry's PAT is likely to decline by a phenomenal 75.7 per cent, mainly due to a sharp surge in interest expenses in the light of a weaker Indian rupee. During 2012-13, sales are expected to grow by 5.7 per cent and PAT by 49.2 per cent.

**Aviation:** During 2010-11, sales had grown by 24.2 per cent. In the year 2011-12 as a whole, the aviation sector's sales are expected to grow by 10.5 per cent, driven by higher passenger volumes. However, a weaker rupee is likely to result in a rise in operating expenses. Fuel expenses are expected to rise by 40.2 per cent. Wages and other operating expenses are expected to rise by 14-15 per cent each. During 2012-13 sales are expected to grow by 13.5 per cent.

**Retail sector:** Retail trading companies have witnessed a decline in sales growth in 2010-11 by 12 per cent and so far in 2011-12 by 9.4 per cent. A sharp rise in prices of branded apparels, due to the imposition of 10.3 per cent excise duty as well as a rise in prices of yarn and fabrics, led to lower consumer spending and this has hit the sales volumes of garment retailing companies. However, during 2012-13 sales are expected to grow by 15.7 per cent. PAT during 2011-12 is expected to show an impressive growth of 53.1 per cent and during 2012-13 is expected to grow by 34.4 per cent.

**Health Services:** During 2010-11, sales of the industry had grown by 25.4 per cent. During 2011-12 and 2012-13, sales are expected to grow by a healthy 18.6 per cent and 20.5 per cent respectively on the back of higher occupancy levels in hospitals and revenues per occupied bed. However, major cost components like salaries and wages and other operating expenses are expected to grow at a faster rate of 21.7 per cent and 21.1 per cent respectively. The PAT of the sector is expected to fall by 24 per cent in 2011-12 and grow by17 per cent in 2012-13.

**Hotel:** The hotel industry had reported sales growth of 14.3 per cent during 2010-11 and is expected to maintain this level in 2011-12 and 2012-13. PAT is expected to grow at 36.2 per cent in 2011-12 and 26.4 per cent by 2012-13. The growth in tourist inflows in 2012-13 and 2013-14 is likely to be driven by tourists from regions other than North America and Western Europe. This includes Asian regions like South Asia, East Asia, and South East Asia. The shares of tourists from these countries have been rising in recent years, as per the data released by the Ministry of Tourism, and are expected to rise in the coming years as well.

**Telecom:** After rising to 10.5 per cent during 2010-11, sales growth of the telecom industry is expected to be 8.7 per cent in 2011-12 and 10.6 per cent in 2012-13. PAT during 2011-12 is expected to fall by 84.7 per cent, mainly on account of the sharp rise in the industry's interest outgo and higher depreciation charges due to the heavy borrowings for acquiring 3G licences and rolling out 3G services.

**Software**: During 2010-11, sales had increased by 17.1 per cent and PAT by 15 per cent. For the year ending March 2012, the industry's sales are expected to grow by 20.5 per cent and further to increase by 18.5 per cent during 2012-13. Growth in sales will be mainly driven by an increase in volumes of IT companies. PAT is expected to grow by 13.1 per cent in 2011-12 and 14.2 per cent in 2012-13. In spite of a healthy growth in sales, the industry's margins are expected to remain under pressure due to higher wage bill and increased tax provisioning.

**Construction and allied activities:** After a 14.2 per cent growth in 2010-11, the industry's sales are expected to grow by 16.1 per cent during 2011-12. However, the same cannot be said about the industry's profit performance. PAT had declined by 9.1 per cent during 2010-11 and is expected to decline by 10.4 per cent during 2011-12. This will be on account of rising construction costs and higher interest outgo. Prices of key inputs like steel and cement are expected to rise by 7.2 per cent and 5.5 per cent respectively during the year. Interest expenses are also likely to rise by a sharp 46.7 per cent in 2011-12 due to rise in interest rates and higher borrowings. During 2012-13, sales and PAT are expected to grow by 18.6 per cent and 17.4 per cent respectively.

*Source* : **Compiled by EXIM Bank of India based on CMIE Industry Analysis.**

through the multiplier effect as per the UN's World Tourism Organization. Since tourism does not fall under a single heading in India's National Accounts Statistics, its contribution has to be estimated. Its contribution to GDP and employment in 2007-8 was 5.92 and 9.24 per cent respectively as per Tourist Satellite Account Data.

10.24 In India, the tourism sector has witnessed significant growth in recent years. During the period 2006 to 2011, the CAGRs of foreign tourist arrivals (FTA) and foreign exchange earnings (FEE) from tourism (in rupee terms) were 7.2 per cent and 14.7 per cent respectively. FTAs in India during 2010 were 5.78 million compared to 5.17 million during 2009,

**Table 10.6 : Performance of India's Services Sector: Some Indicators**

| Sector | Indicators | Unit | Period | | | |
|---|---|---|---|---|---|---|
| | | | 2008-09 | 2009-10 | 2010-11 | 2011-12 |
| Aviation | Airline passengers (domestic and international) | Million | 49.5 (a) | 54.5 (a) | 64.5 (a) | 59.3 (a) |
| Telecom | Telecom connections (wireline and wireless) | lakh | 4297.25 | 6212.8 | 8463.2 | 9265.3 (b) |
| Tourism | Foreign tourist arrivals | Million | 5.28 (a) | 5.17 (a) | 5.78 (a) | 6.29 (a) |
| | Foreign exchange earnings from tourist arrivals | US $ million | 11832 | 11394(e) | 14193 (e) | 16564 (e) |
| Shipping | Gross tonnage of Indian shipping | Million GT | 9.28 | 9.69 | 10.45 | 11.06(d) |
| | No. of ships | Numbers | 925 | 1003 | 1071 | 1122(d) |
| Ports | Port traffic | Million tonnes | 530.53 | 561.09 | 570.03 | 488.8 (c) |
| Railways | Freight traffic by railways | Million tonnes | 833.31 | 887.99 | 832.75 | 704.81 (b) |
| | Net tonne kilometres of railways | Million | 538226 | 584760 | 444515 | 466968 (b) |
| Storage | Storage capacity | Lakh MT | 105.25 | 105.98 | 102.47 | 99.81(b) |
| | No. of warehouses | Numbers | 499 | 487 | 479 | 469 (b) |

***Sources*** **: Directorate General of Civil Aviation, Telecom Regulatory Authority of India, Ministry of Tourism, Ministry of Shipping, Ministry of Railways and Central Warehousing Corporation (compiled by EXIM Bank of India).**

***Notes*** **: GT is gross tonnage.**
**(a) calendar years, for example 2007-8 for 2007. (b) April - December. (c) April – January.**
**(d) As on 1 January, 2012. (e) Advance estimates by the Ministry of Tourism**

posting a growth of 11.8 per cent, much higher than the growth of 6.5 per cent for the world in 2010. FEEs from tourism in rupee terms during 2010 were ₹ 64,889 crore compared to ₹ 54,960 crore during 2009 with a growth rate of 18.1 per cent. Despite the slowdown and recessionary trends in the economies of Europe and America, FTAs during 2011 were 6.29 million with a growth of 8.9 per cent over 2010 and FEEs in 2011 were ₹ 77,591 crore with a growth of 19.6 per cent. In the case of outbound tourism, the number of Indian nationals' departures from India during 2010 was 12.99 million with a growth of 17.4 per cent for the year. Domestic tourism has also emerged as an important contributor to the sector providing much needed resilience. Domestic tourist visits during 2010 are estimated at 740.2 million, with a growth of 10.7 per cent.

10.25 Hotels and restaurants is an important component of the tourism sector. As on 31 December 2011, there were 2,895 classified hotels having a capacity of 1,29,606 rooms in the country. Availability of good quality and affordable hotel rooms plays an important role in boosting the growth of tourism in the country. The share of the hotel and restaurant sector in overall economy increased from 1.46 per cent in 2004-5 to 1.53 per cent in 2008-9 and then decreased to 1.46 per cent in 2010–11. However, if the contribution of this sector only in the service sector is considered, its share decreased from 2.75 per cent in 2004-5 to 2.64 per cent in 2010–11 as other service sectors grew faster than this sector. Its CAGR was 8.44 per cent during 2004–5 to 2009–10 and the growth rate in 2010–11 was 7.7 per cent. Health tourism, the new entrant in the sector, is a niche area where India has good potential (Box 10.3).

10.26 As is natural, with the growth of this sector, components like air travel and hotel stay have been included under service tax. The Economic Survey 2010-11 has listed the major policy decisions taken in recent years. However, a lot more needs to be done to make India a major tourist destination. Some of the problem areas in this sector include the following. States impose luxury tax ranging from 5 per cent to 12.5 per cent. In some cases, the luxury tax is applicable on printed room rates whereas actual hotel rates offered to guests are much lower. With a view to rationalizing luxury tax on hotels, the Government of India has requested the states to work towards rationality and uniformity of taxes so as to make their destinations more competitive. They have been also requested to exempt room tariff below ₹ 2,500 from luxury tax and charge luxury tax at a uniform rate of 4 per cent on actual tariff. Construction of hotels is primarily a private-sector activity which is capital intensive and has a long gestation period. A major constraint being faced by the hotel industry in addition to the high cost and limited availability of land is the procurement of multiple clearances / approvals required from central

**Box 10.3 : Wellness Tourism in the World: Advantage India**

Several studies have estimated the global market for medical tourism ranging from US$ 100 billion to US$ 150 billion. The Asian medical tourism market is being bolstered by initiatives taken by the national governments, as also rising quality standards. According to a study by the Organization for Economic Cooperation and Development (OECD), Thailand, India, Singapore, Malaysia, Hungary, Poland, and Malta are promoting their comparative advantage as medical tourist destinations. Singapore Medicine has been established under government-industry partnership to promote Singapore as a destination for advanced medical care. Malaysia has established the Malaysia Healthcare Travel Council to develop and promote the health-care and travel industry. Philippines has launched the Philippines Medical Tourism Programme and included medical tourism in the Investment Policies Plan. Thailand has been leveraging elements such as spas and alternative therapies in its promotional strategies for several decades, coupled more recently with state-of-the-art hospitals and skilled professionals.

Several features like cost-effective health-care solutions, availability of skilled health-care professionals, reputation for treatment in advanced health-care segments, increasing popularity of India's traditional wellness systems, and strengths in IT have positioned India as an ideal health-care destination. India, while strengthening its capabilities in modern health-care systems is also leveraging its inherent strengths in traditional health-care systems such as ayurveda, siddha, yoga, naturopathy, and faith healing/spiritualism. It also holds an edge over competitor countries with its mastery over techniques of concentration and mind control and its natural resources and cultural diversity.

*Source* : **Compiled by EXIM Bank of India.**

and state government agencies for hotel projects. Varying from state to state, in some cases as many as 65 clearances/approvals are required for hotel projects. A Hospitality Development and Promotion Board has been set up at central level. The main function of the Board will be to monitor and facilitate clearances / approvals for hotel projects both at central and state government levels. The Board will be a single window for receiving applications for various clearances, approving / clearing hotel projects in a time-bound manner, and reviewing hotel project policies to encourage the growth of hotel / hospitality infrastructure in the country. State governments have also been requested to set up similar boards under the Chairmanship of their Chief Secretaries. So far Mizoram, Manipur, and Maharashtra have set such boards. Other measures in this sector could include rationalizing the fees for entry to monuments and using the fees for their maintenance; focusing on safety of tourists; and promoting wellness tourism.

## Some Transport Related Services

### *Shipping*

10.27 Shipping is an important indicator of both commodity and services trade of any country. It plays an important role in the Indian economy with around 95 per cent of the country's trade by volume and 68 per cent in terms of value being transported by sea. As on 1 January 2012, India had a fleet strength of 1,122 ships with Gross Tonnage (GT) of 11.06 million, the public-sector Shipping Corporation of India having the largest share of 36.17 per cent. Of this, 372 ships with10.01 million GT cater to India's overseas trade and the rest to coastal trade. The gross foreign exchange earnings/savings of Indian ships in 2010-11 were ₹ 10,666.45 crore. Leaving aside the flag of convenience countries, the country with the highest dead weight tonnage (DWT) is Hong Kong. Though India has one of the largest merchant shipping fleets among developing countries, it is ranked eighteenth in the world in terms of DWT with a share of only 1.09 per cent as on 1 January 2011. In comparison, China is ranked ninth with a share of 3.78 per cent (Table 10.7). Indian vessels are also relatively older than the international average. As on December 2011,

**Table 10.7 : Share of Merchant Fleets by Flags of Registration as on 1 January 2011**

| Rank | Flag of Registration | DWT (In '000) | Share (%) |
|---|---|---|---|
| 1 | Panama | 306032 | 21.93 |
| 2 | Liberia | 166246 | 11.91 |
| 3 | Marshall Islands | 98757 | 7.08 |
| 4 | Hong Kong | 91733 | 6.57 |
| 5 | Greece | 71420 | 5.12 |
| 6 | Bahamas | 67465 | 4.83 |
| 7 | Singapore | 67287 | 4.82 |
| 8 | Malta | 61294 | 4.39 |
| 9 | China | 52741 | 3.78 |
| 10 | Cyprus | 32321 | 2.32 |
| 11 | Japan | 22201 | 1.59 |
| 12 | Republic of Korea | 20155 | 1.44 |
| 13 | Italy | 19440 | 1.39 |
| 14 | Isle of Man | 19422 | 1.39 |
| 15 | Norway | 18065 | 1.29 |
| 16 | Germany | 17566 | 1.26 |
| 17 | UK | 16999 | 1.22 |
| 18 | India | 15278 | 1.09 |

***Source*** **: Based on United Nations Conference on Trade and Development (UNCTAD), Review of Maritime Transport, 2011.**

44 per cent of the fleet was over 20 years of age and 12 per cent in the age group of 16-20 years.

10.28 According to preliminary estimates by UNCTAD, at 8.94 million Twentyfoot Equivalent Units of Container (TEUs) in 2010, India was ranked eighth among developing countries in terms of container ship operation with a world share of 0.32 per cent. UNCTAD further classifies India (ranked 17th) as one of the top 20 economies for shipbuilding based on deliveries in the year 2010 (37 vessels of 136,000 DWT), though its share is only 0.11 per cent in the world. India is also one of the major nations undertaking ship-breaking service. In 2010, with a world share of 32.43 per cent, it topped the list of ship-scrapping nations, scrapping 451 ships with 9.28 million DWT. India is also one of the major countries supplying seafarers. At third rank and with a 7.5 per cent share in 2010, it supplied 46,497 officers to the global shipping industry. However, India is ranked 22nd in 2011 according to the UNCTAD liner shipping index, down from 21st position in 2004.

10.29 The global shipping industry has been experiencing turbulent waters in the year 2011 due to the economic slowdown. Indian shipping companies faced problems of restricted cash inflows in 2011-12 due to very low charter hire and freight rates in all segments of shipping. These difficult economic conditions have been prevailing since 2008 with small windows of relief in 2011-12. Most Indian shipping companies that have been able to better manage their businesses have been those with a diversified presence across shipping segments or businesses. While the bulkers and tankers segments have seen a downturn, the off-shore segment with jack ups and sub-sea vessels has ensured cash visibility for companies.

10.30 Further, the incidence of piracy has been of great concern to the government. The government has deployed naval vessels for assistance to merchant vessels in the piracy-affected areas. As on 17th February 2012, 27 Indian seafarers are in the custody of somalian pirates. The government has been raising the issue of piracy and the need for more concerted international action at the meetings of the United Nations and the International Maritime Organization (IMO).

10.31 In order to provide the shipping industry a partial level playing field and make it competitive at international level, the government implemented certain policies in 2011 like giving a minimum depreciation of 3.34 per cent (assuming life of 30 years) to drilling rigs; granting exemption on 29 July 2011 to ships falling under Chapter 8901 from additional customs duty and excise duty provided a general license under section 406 of the Merchant Shipping Act 1958 is granted by the Director General shipping; and exemption from import duty for spares and capital goods required by ship owners in Budget 2011-12.

10.32 While India's overseas seaborne trade has been growing substantially over the years, from 224.62 million tonnes in 1999-2000 to 570 million tonnes in 2010-11, there has been sharp decline in the share of Indian ships in the carriage of India's overseas trade. From about 40 per cent in the late 1980s, this share has declined to 9 per cent in 2010-11 with an 18 per cent share in India's oil imports in 2009-10. Given the relatively low participation of Indian ships in India's trade and given the fact that Indian ships are ageing, with the average age of the Indian fleet increasing from 15 years in 1999 to 18.37 years in 2012, there is urgent need to increase the shipping fleet so that it is at least enough to meet India's trade volumes. Higher asset size of Indian shipping will not only lead to higher growth of the economy but also higher employment and high foreign exchange earnings/savings. The estimated freight bill of India in 2011-12, based on 7.5 per cent of the value of seaborne trade, total US$ 57 billion and estimates show that a 5 per cent increase in tonnage could lead to a US$ 6.3 billion saving/earning of foreign exchange. Strengthening the Indian fleets with adequate and cheap finance is important given the fact that ship prices which had peaked in the middle of 2007-8 are nearer to the lows seen in December 2009. Rationalizing the multiple levies in the shipping sector could also help.

### *Port Services*

10.33 Ports are the vital link in the trade between nations. Continuous modernization of ports and upgradation of port infrastructure are important to increase the productivity and efficiency of ports. The total capacity of Indian ports has reached approximately 1,160 million tonnes as on 1 January 2012. During 2009-10 and 2010-11, traffic at major ports attained a growth of 5.67 per cent and 1.59 per cent respectively over the previous year. The American Association of Port Authorities, ranks Shanghai at the top with regard to total cargo volume handled in 2009 relegating Singapore from its first position of 2008 to second position. Madras Port and the Jawaharlal Nehru Port Trust (JNPT) are

**Table 10.8 : Some Performance Indicators for Major Ports in India**

| Year | Average Turnaround Time (days) | Average pre-Berthing Time (in hours) | Average Output per Ship Berth day (in tonnes) |
|---|---|---|---|
| 2004-05 | 3.41 | 6.03 | 9371 |
| 2005-06 | 3.63 | 8.77 | 9543 |
| 2006-07 | 3.81 | 10.05 | 10010 |
| 2007-08 | 3.98 | 11.40 | 9440 |
| 2008-09 | 4.20 | 9.55 | 9669 |
| 2009-10 | 4.42 | 11.67 | 9215 |
| 2010-11 | 4.64 | 12.00 | 12429 |
| 2011-12 (Apr.-Dec.) | 4.66 | 12.12 | 10752 |

***Source*** **: Update on Indian Port Sector (September 2011), Ministry of Shipping, Government of India.**

ranked 55th and 56th in 2009 in terms of total cargo volume, up from 70th and 71st positions in 2008. As per the Shipping Statistics December 2011 of the Institute of Shipping Economics and Logistics, (Germany), Shanghai is at the top in terms of container traffic in 2010 followed by Singapore while the JNPT is ranked 25th. The average turnaround time at major Indian ports worsened to 4.66 days during April-December 2011, from 3.41 days in 2004-05, and was relatively higher in some ports like Paradip, Kolkata, Vizag, Tuticorin, Murmugoa, Mumbai, and Kandla. The average output per ship-berth-day was 10752 tonnes for all major ports, with 25782 tonnes per ship-berth-day for the JNPT, and 2765 tonnes for Kolkata port. With the average turnaround time in India already relatively high by international standards, the turnaround time of Singapore port being less than a day, what is cause for worry is the further rise in average turnaround time and average pre-berthing time though average output per ship-berth-day has increased in 2010-11 and April-September 2011 (Table 10.8).

10.34 Union Budget 2011-12 has increased the allocation of funds for infrastructure and enhanced the limit of tax free bonds for the ports sector up to ₹ 50 billion. The government is also making all round efforts to increase port capacity in the country through the development of additional berths at the major ports, mechanization, deepening of channels and harbours to receive bigger vessels, improved rail and road connectivity and by facilitating similar development at the non-major ports promoted by state governments. The biggest public-private partnership (PPP) project in the ports sector has been awarded recently in the JNPT, Mumbai; the biggest dredging project is also being taken up there. More trans-shipment of Indian EXIM containers is expected to take place at Indian ports, especially at the new International Container Transhipment Terminal at Cochin. Establishing one additional major port in each of the maritime states that is interested in providing support for such development is under consideration and a technical committee is evaluating proposals for new major ports received from the states of Andhra Pradesh, Gujarat, Karnataka, and Kerala. The government has successfully implemented the Port Community System as part of a paperless regime for transaction of business at ports.

10.35 However, there is need to further strengthen this major artery of Indian trade. Better infrastructure is needed particularly for handling crude oil. Other issues include upgrading the facilities at existing ports with regard to cargo handling, stevedoring, pilotage services, bunker services, and warehousing facilities; increasing the drafts to facilitate trans-shipment of Indian cargo which otherwise takes place outside the country; and rationalizing the different port charges to make them comparable with best practice levels.

## Storage Services

10.36 Warehousing services are an integral part of both inbound and outbound logistics, as goods produced have to be stored in different geographical locations before shipping/dispatch as per demand/order flows. In India, the most important component of warehousing is agricultural storage for agri-produce, foodgrains, fertilizers, manure, etc. Other components include industrial warehousing for industrial goods, import cargo, and excisable cargo; inland container depots (ICDs)/container freight stations (CFSs) for facilitating import/export trade; and special warehouses for cold and temperature-controlled storage. The warehousing sector also provides many ancillary services. The Central Warehousing Corporation (CWC) along with 17 State Warehousing Corporations (SWCs) provides scientific storage facilities for agricultural produce and implements and other notified commodities. Its commercial outreach coupled with social objectives has resulted in the CWC operating a large warehousing network across the country. As on 31 December 2011, it was operating 469 warehouses, with total storage capacity of 99.81 lakh MT and average utilization of 89 per cent. The number of warehouses are lower than the 479 as on 31 March, 2011 due to de-hiring of capacity. The CWC made an entry into operation of public-bonded warehouses in the late 1970s, when the Central Board of Excise and Customs identified it as a custodian for dutiable goods. The CWC has also diversified its business into CFSs/ICDs and also started container rail transportation from Loni (UP) to the JNPT. In 2010-11, it added capacity of 1.45 lakh MT with total capital outlay of ₹ 65 crore. At state level, 17 SWCs were operating a network of 1,624 warehouses with aggregate storage capacity of 230.10 lakh MT as on 1 December 2011.

10.37 Major policy initiatives taken recently by the government include construction of godowns under the seven-year/10-year guarantee scheme of the Government of India; permission of up to 100 per cent FDI in the construction of warehousing infrastructure; construction of warehouses under the Grameen Bhandaran Yojana of the National Bank for Agriculture and Rural Development (NABARD) and the Rastriya Krishi Vikas Yojana; making the warehouse receipt fully negotiable; and construction of godowns under its Private Entrepreneurs Godown (PEG) scheme. The CWC has constructed godowns with 1.45 lakh MT capacity during the year 2010-11 and plans to construct additional capacity of 2.09 lakh MT during 2011-12. There is, however, need to further increase high quality storage capacity and the number of trained samplers/graders.

## Communication Services

### *Telecom and Related Services*

10.38 Indian telecom has proved to be an international success story with the sector witnessing commendable growth over the past few years. The Indian telecom network is ranked as the second largest in the world, next only to China. The total number of telephones has increased from 206.83 million on 31 March 2007 to 926.53 million as on 31 December 2011. The growth in wireless connections has been phenomenal, reaching 893.84 million connections at the end of December 2011, taking their share to over 96 per cent of total telephones in the country. Tele-density, which is an important indicator of telecom penetration, has increased from 18.31 per cent in March 2007 to 76.86 per cent in December 2011. While urban tele-density as of December 2011 has reached a high level of 167.85 per cent, at 37.48 per cent rural tele-density is low, signifying the potential for further growth in rural areas. The liberal policy regime facilitated the growth of the sector and lowered the costs for consumers, though the recent court cases related to the telecom sector have dampened the mood. The sentiments in this sector could be lifted by further reforms which could include rationalization of the multiple levies and taxes and using mobile services in the delivery of different social welfare schemes which can increase its rural penetration. The draft National Telecom Policy 2011 has similar objectives.

10.39 Since the announcement of the Broadband Policy in 2004, several measures have been taken to promote broadband penetration in the country. As a result, there are 13.30 million broadband subscribers as on 31 December 2011 and 19.69 million internet subscribers at the end of March 2011. However, broadband has lagged behind the growth of telephones in India. Special efforts are being made to increase the penetration of broadband, especially in rural and remote areas. The upcoming decade is likely to usher in an information era through Mobile Value Added Services (MVAS) and Broadband for All. The successfully concluded auction of the Broadband Wireless Access (BWA) / 3G spectrum and National Optical Fiber Network will enhance wireless broadband penetration and help connect the remotest locations across India (For further details, see Chapter 11).

### *Posts*

10.40 India Post has the largest postal network in the world with 154,866 post offices across the length and breadth of the country as of 31 March 2011. On an average, each post office serves 7,814 persons with coverage of approximately 21.23 sq. km. As many as 139,040 post offices are in rural areas, while 15,826 are in urban areas. In addition to its own network, the Department of Posts also serves through 1155 franchisee outlets in areas where it is not possible to open post offices.

10.41 Government has launched Project Arrow in 2008 to transform the existing India Post infrastructure across the country by upgrading key postal operations such as mail delivery, remittance, and banking services. India Post is emerging as a one-stop shop for retail products and offers a single window facility for banking, money remittances, and other financial products. In addition, India Post has been given the responsibility of disbursing wages to beneficiaries of the Mahatama Gandhi National Rural Employment Guarantee Act (MGNREGA) through 96,895 post offices. The postal network is also being used by other government departments/agencies to collect data like the rural consumer price index. The postal sector needs to keep pace with changing times as many of its services have become redundant with growth in technology and takeover by other players. Quick decisions and actions to stay abreast of the times including switching over to new activities and downsizing could release a lot of resources from this sector for use elsewhere.

## Real Estate Services

10.42 Housing is a basic need and provides economic and social security to the people. It is also an 'asset' that can have significant leveraging effect to support and supplement other means of income generation and poverty alleviation. It is an important employment-intensive sector. A host of vocations and professions like construction workers, builders, developers, engineers, valuers, property consultants, interior decorators, consultants, and plumbers derive their livelihood from housing either directly or indirectly. Estimates show that for every rupee that is invested in housing and construction, ₹ 0.78 gets added to GDP. Housing ranks fourth in terms of the multiplier effect on the economy and third amongst 14 major industries in terms of total linkage effect. The real estate industry has significant linkages (both direct and indirect) with nearly 300 sectors like cement, steel, paints, and building hardware which not only contribute to capital formation and generation of employment and income opportunities, but also catalyse and stimulate economic growth. Therefore, investment in housing and real estate activities can be considered a barometer of growth of the entire economy.

10.43 The GDP share of the real estate sector (including ownership of dwellings) along with business services was 10.6 per cent in 2010-11. After growing at 10.4 per cent in 2008-9, the rate of growth of this sector has decelerated to 7.8 per cent in 2009-10 and further to 6.9 per cent in 2010-11. Currently, about 5 per cent of India's GDP is contributed by the housing sector. With institutional credit for housing investment growing at a CAGR of about 18 to 20 per cent per annum in the next three-five years, the housing sector's contribution to GDP is likely to increase to 6 per cent. While India is among the top countries in terms of housing and work space needs, it ranks 181st in construction permission processes according to the World Bank's Doing Business 2012 report. There are 34 procedures and the average time taken is 227 days. Some of the issues related to this sector include the hardening of interest rates and possible defaults; challenges associated with land acquisitions; high stamp duty; formalities and costs related to registration and mutation, some of which are unnecessary and superfluous; the Urban Land Ceiling Regulations Act (ULCRA) and existing lower floor area ratio in cities; and absence of a single window clearance system with standardization of bye-laws and processes. Recently, some of the urban local bodies (ULBs)/development authorities, like the Municipal Corporations of Delhi and Indore have introduced online sanction for building plans and for issuing completion certificates, which is likely to reduce the approval time. Similar measures by other development authorities are needed.

## Some Business Services

### *IT and ITeS*

10.44 The IT and IT enabled services (ITeS) sector are giving India the image of a young and resilient global knowledge power. The IT-ITeS industry has four major sub-components: IT services, business process outsourcing (BPO), engineering services and research and development (R&D), and software products. As per the estimates of NASSCOM, India's IT and BPO sector (excluding hardware) revenues were US$ 87.6 billion in 2011-12, generating direct employment for nearly 2.8 million persons and indirect employment of around 8.9 million. As a proportion of national GDP, IT and ITeS sector revenues have grown from 1.2 per cent in 1997-8 to an estimated 7.5 per cent in 2011-12.

10.45 Software exports in 2011-12 are estimated at US$69 billion compared to US$59 billion in 2010-11. While exports continue to dominate the IT-ITeS industry and constitute about 78.4 per cent of total industry revenue, the CAGR of the domestic sector has also been high at 12.8 per cent compared to the 14.2 per cent for exports during the Eleventh Five Year Plan period. The growth rate of the domestic sector in 2010-11 was 20.6 per cent as compared to 18.8 per cent for the export sector; in 2011-12 it was 9.7 per cent for domestic sector and 16.4 per cent for export sector. In 2012-13, as per NASSCOM estimates, export revenues are expected to grow by 11-14 per cent and domestic revenues by 13-16 per cent. These estimates are a pointer to the possibilities of making further forays into the untapped domestic sector for IT and ITeS (Table 10.9).

10.46 Consistent demand from the US, which increased its share in total exports of India's IT and ITeS services from 61.5 per cent to 62 per cent, characterized 2011-12. Emerging markets of Asia

**Table 10.9 Overall Growth Performance of the IT-ITeS Sector**

| Year | Value (US$ billion) | | | | | Growth rate (%) | CAGR (%) 11th Five Year Plan |
|---|---|---|---|---|---|---|---|
| | 2007-08 | 2008-09 | 2009-10 | 2010-11 (E) | 2011-12 (P) | 2011-12 | |
| Total IT BPO Services Revenue | 52.1 | 59.9 | 64.0 | 76.3 | 87.6 | 14.8 | 13.9 |
| Exports | 40.4 | 47.1 | 49.7 | 59.0 | 68.7 | 16.4 | 14.2 |
| Domestic | 11.7 | 12.8 | 14.3 | 17.3 | 19.0 | 9.7 | 12.8 |

***Source*** **: NASSCOM.**
***Notes*** **: P = Provisional; E = Estimated.**

Pacific and the rest of the world also contributed to overall growth. While the industry's vertical market mix is well balanced across several mature and emerging sectors, there was broad-based demand not only across traditional segments such as banking, financial services, and insurance (BFSI), but also new emerging verticals of retail, health care, media, and utilities. Sub-sector-wise in 2011-12, as per the provisional estimates of NASSCOM, in the export sector, IT services were the major component with a 58 per cent share and CAGR of 15.7 per cent for the Eleventh Plan period; followed by BPO with a 23.1 per cent share and 12.5 per cent CAGR; and software products / engineering with a 18.9 per cent share and 11.8 per cent CAGR. Indian IT service offerings have evolved from application development and maintenance to emerge as full service players providing testing and infrastructure services, consulting, and system integration. The year also witnessed the next phase of BPO-sector evolution, characterized by greater breadth and depth of services, process re-engineering across the value chain, increased delivery of analytics and knowledge-based services through platforms, strong domestic market focus, and Small and Medium-sized Business (SMB) centric delivery models. In the engineering design and products development segments, there was increasing use of electronics, adoption of fuel efficiency norms, convergence of local markets, and use of localized products. Increasing confidence between customers and service providers successfully executing a variety of activities across low-medium-high complexity projects has led to increasingly larger sizes of projects being sourced from India. In the domestic sector, the major component is IT services with 64.2 per cent share, followed by software products/ engineering with 19.6 per cent share and BPO with 16.2 per cent share. The CAGRs of these sectors were 11.5 per cent, 13.6 per cent, and 18.1 per cent respectively. Strong economic growth, rapid advancement in technology infrastructure, increasingly competitive Indian organizations, enhanced focus by the government and emergence of business models that help provide IT to new customer segments are the key drivers for increased technology adoption in India. The IT and ITeS sector is also a generator of skilled employment with direct employment expected to reach 2.8 million in 2011-12 compared to 2.5 million in 2010-11.

10.47 Some of the challenges faced by the IT and ITeS sector include increasing competition from other countries with incentivized low costs, rising costs in India with wage-push inflation, increasing costs of relevant talent and skilled personnel, infrastructure constraints with over 90 per cent of total revenue generated from seven Tier-1 locations, risks like currency fluctuations and security, both physical and data related, and rising protectionist sentiments in key markets. Government has taken various initiatives to promote the growth of the IT-ITeS industry and has been a key catalyst for increased IT adoption--through sectors reforms that encourage IT acceptance, National e-Governance Plan (NeGP), and the Unique Identification Development Authority of India (UIDAI) programme that creates large-scale IT infrastructure and promotes corporate participation. The Draft National Policy on Information Technology 2011 focuses on deployment of information communication technology (ICT) in all sectors of the economy and providing IT solutions to the world. The Policy emphasizes adoption of technology-enabled approaches to overcome developmental challenges in education, health, skill development, financial inclusion, employment generation, and governance so as to enhance efficiency across the board in the economy. It seeks to bring ICT within the reach of the whole of India while at the same time harnessing the immense human resource potential in the country to enable it to emerge as the global hub and destination for IT-ITeS Services by 2020. The NeGP was approved by the Government of India in May 2006 to make all government services accessible to the common man in his locality, through common service delivery outlets at affordable costs. The NeGP comprises mission mode projects (MMPs) and core e-infrastructure. Significant progress has been made in laying down core e-infrastructure and in most of the MMPs. More than 97,000 common service centres (CSCs) have been established across the country as web-enabled service access points for making public services available to citizens on anytime, anywhere basis. Initiatives under the NeGP also include online services related to income tax, Ministry of Corporate Affairs (MCA) 21, passports, and central excise. The government has also initiated new e-Governance projects for education, health, public distribution system and postal services. This will ensure the common man access to quality education, cost efficient and quality health care and postal services at affordable costs. The number of public services available to citizens in electronic mode will be expanded through the Electronic Delivery of Services (EDS) Bill, approved by the union cabinet on 20 December 2011. In order to leverage the rapid growth in penetration of mobile technology and connectivity and also to ensure accessibility to all services to the common man, public services under all e-Governance projects will be delivered through mobile devices like mobile phones and Aakash tablets. Further, basic banking services, i.e. cash withdrawal, cash deposit, balance inquiry, and transfer of money from one account to another, will be extended to every panchayat through the CSCs and money transfer facility to every village by December 2013, leveraging ICT and mobile technology. This will help make financial inclusion a reality with the help of IT.

### *Accounting and Auditing Services*

10.48 As per the WTO data, in the US$ 28.5 billion other business services exports by India in 2009, the share of legal, accounting, management, and public relations services was 16.2 per cent and in the US$ 21.03 billion imports, their share was 26.2 per cent. Indian accounting firms are increasingly getting integrated and are providing associated services such as management consultancy, corporate finance, and advisory services in addition to their core business of accounting, auditing, and tax services. The accounting profession is structured in India as partnership with few partners or proprietorship concerns and mainly comprises small and medium enterprises (SMEs). The existing regulations require firms practising chartered accountancy to be registered with the Institute of Chartered Accountants of India (ICAI).

10.49 Out of 48,000 chartered accountancy firms in India, there are only 2,043 that have five or more partners. The remaining are practising as proprietary firms or in their individual names. The chartered accountancy profession in India has globally benchmarked its qualification and training standards and has entered into qualification-recognition arrangements with accounting bodies in the UK, Australia, Canada, and Ireland. The export potential of India in accounting services could be tapped by such mutual recognition of qualifications. Tie-ups to overcome the weakness of small size of domestic accountancy firms could also help India's accountancy sector grow manifold.

### *R&D Services*

10.50 According to *Battelle R&D magazine*, gross expenditure on R&D (GERD) by India for 2012 was projected to be US$ 41 billion in purchasing power parity terms, which works out to 0.8 per cent of GDP. This is low both in absolute terms and as a proportion of GDP compared to other countries. This is partly because the size of the R&D base and absorption capacity are not commensurate with requirements (Table 10.10).

10.51 As per estimates in 2010-11, the sectors which attracted largest R&D expenditures were pharmaceuticals, electrical and non-electrical

**Table 10.10 : Global R&D Spending Forecast**

| Region/ Country | 2012 | |
|---|---|---|
| | GERD in PPP terms (US$ Billion) | R&D as per cent of GDP |
| USA | 436.0 | 2.3 |
| Asia | 514.4 | 1.9 |
| *Japan* | *157.6* | *3.5* |
| *China* | *198.9* | *1.6* |
| *India* | *41.3* | *0.8* |
| Europe | 338.1 | 2.0 |
| **World** | **1402.6** | **2.0** |

***Source*** **: Battelle R&D magazine, December 2011.**

machinery, transport equipment, electronics, and plastics. R&D intensity for the pharmaceuticals sector was much higher than that for other sectors. Although there have been substantial increases in growth rates of patents filed in India during the last decade, the share of patents filed for work in India through indigenous research is less than 20 per cent of the total. Policy readjustments to increase the number of full time equivalents (FTE) of R&D personnel are a key requirement for growth in R&D intensity. The FTE of R&D manpower is estimated at 14.23 lakh for China and 2.29 lakh for South Korea, as compared to 1.54 lakh for India. Expansion of FTEs to at least 2.50 lakh by the end of the Twelfth Plan could enable the country to reach the top six ranks in the global R&D landscape.

10.52 Though developed nations remain the leaders in innovation, there has been an increasing shift in R&D activities from developed to developing nations. Developing Asian nations, particularly China and India, are driving the growth of global R&D. Factors such as low cost, access to new markets, availability of knowledge-oriented manpower, favourable regulatory environment, and fiscal benefits play a major role in driving R&D investments towards these countries. MNCs from developed nations look to expanding their R&D activities in these countries through collaborative projects in areas such as electronics and telecommunications, software development, hardware and product design, and drug development. A White Paper on R&D prepared by consultancy firm Deloitte in July 2011 estimates that more than 300 MNCs have set up R&D centres in India. Service providers have outsourced R&D valued at about US$ 3.5 billion, and MNC subsidiaries have offshored R&D valued at about US$ 6.5 billion to India in 2009. As per the Global Competitiveness Report 2011-12 of the World Economic Forum, among BRICS nations India is ranked below China and Brazil in terms of capacity for innovation but above China in terms of the quality of scientific and research institutions and availability of scientists and engineers. But India lags China in terms of company spending in R&D, university–industry collaboration on R&D, and utility patents granted per million population (Table 10.11). This is because the share of the private sector in R&D is still low at 0.25 per cent of GDP compared to 1.2 to 2 per cent in many developed and emerging economies. For GERD to increase significantly, private-sector investment in R&D must be stepped up significantly over the Twelfth Plan period. Budget 2011-12 enhanced the weighted deduction on payments made to National laboratories/universities and institutes of technology for scientific research from 175 per cent to 200 per cent.

### *Legal Services*

10.53 India has an estimated 600,000 legal practitioners and is next only to the USA in terms of numbers. The service providers are individual lawyers and small or family-based firms. In India, the practice of law is governed by the Advocates Act of 1961. Under this Act, foreign law firms are not allowed to engage in practice of law in India. Many foreign legal firms have set up liaison offices (currently permitted

**Table 10.11 : R&D Indicators of India and other Select Countries**

| Country | Capacity for innovation | | Quality of scientific research institutions | | Company spending on R&D | | University – Industry collaboration on R&D | | Availability of scientists and engineers | | Utility patents granted/ million population | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Score | Rank | Score | Rank | Score | Rank | Score | Rank | Score | Rank | Value | Rank |
| India | 3.6 | 35 | 4.5 | 34 | 3.7 | 33 | 3.8 | 50 | 4.9 | 21 | 0.9 | 59 |
| China | 4.2 | 23 | 4.3 | 38 | 4.2 | 23 | 4.5 | 29 | 4.6 | 33 | 2.0 | 46 |
| South Africa | 3.5 | 46 | 4.7 | 30 | 3.6 | 36 | 4.6 | 26 | 3.4 | 111 | 2.3 | 42 |
| Brazil | 3.8 | 31 | 4.1 | 42 | 3.8 | 30 | 4.2 | 38 | 3.8 | 91 | 0.9 | 60 |
| Russia | 3.5 | 38 | 3.8 | 60 | 3.1 | 61 | 3.5 | 75 | 4.0 | 72 | 1.9 | 47 |
| South Korea | 4.3 | 20 | 4.8 | 25 | 4.8 | 11 | 4.7 | 25 | 4.9 | 23 | 240.6 | 5 |
| USA | 5.2 | 7 | 5.8 | 7 | 5.3 | 6 | 5.7 | 3 | 5.5 | 4 | 339.4 | 3 |
| UK | 4.8 | 13 | 6.1 | 3 | 4.7 | 12 | 5.8 | 2 | 5.1 | 14 | 69.5 | 20 |

***Source*** **: Global Competitiveness Report 2011-12, World Economic Forum**

under the law), while a few have established referral relationships with Indian firms.

10.54 India is ranked 51, with a score of 4.3, in terms of judicial independence by the Global Competitiveness Report 2011-12. As regards efficiency of the legal framework in settling disputes, India is ranked 64, with a score of 3.7. India is ranked at $51^{st}$ position when it comes to the efficiency of the legal framework in challenging regulations, with a score of 3.9. This shows that India needs to improve its ranking through legal and judicial reforms and speed up disposal of cases.

10.55 Global recession has been putting pressure on companies to reduce costs and they are trying out various methods of outsourcing their non-core functions to low cost destinations. Outsourcing of legal services to low cost destinations like India is one such measure being taken by legal firms in developed countries, especially the USA and UK. The legal systems in India, the USA, and UK are rooted in British common law, thus making Indian lawyers competent, without much additional training, to undertake standard legal work such as vetting of contracts, patent registrations, or reviewing of documents. Besides offshoring legal work to India saves about 80 per cent of the cost that may be incurred in a developed country like the USA. Some of the recent measures taken by the government are the following. Legal education is being imparted by 913 colleges (a large number privately administrated) and 14 National Law Schools / Universities established under state acts. The major challenges in the field of legal education are curriculum, skills, attitudes and ethics required of legally trained persons, and dearth of quality law teachers. The National Knowledge Commission recommended establishing a separate body to regulate legal education and setting up Centres for Advanced Legal Studies and Research. The proposal for instituting an independent body, the National Council of Legal Education and Research, is under process. The proposal for setting up four Regional Centres for Advanced Legal Studies and Research to promote advanced research on various aspects of law and academic excellence through continuing legal education is also under process. The National Litigation Policy was launched on 23 June 2010 to achieve the goal of the National Legal Mission to reduce average pendency time—from 15 to three years—and delays in courts. The state governments have also been urged to take appropriate steps to frame a State Litigation Policy. The National Legal Services Authority (NALSA) has been constituted under the Legal Services Authorities Act 1987 to monitor and evaluate implementation of legal aid programmes and lay down policies and principles for making legal services available under the Act. In every state, a State Legal Services Authority, and in every High Court, a High Court Legal Services Committee, have been constituted. District Legal Services Authorities and Taluk Legal Services Committees have been constituted in 596 Districts and 2,037 taluks in order to give effect to the policies and directions of NALSA, provide free legal services to the people, and conduct lok adalats in the states. From 1 April 2011 to 30 September 2011 more than 6,95,000 persons have availed of legal aid services in the country. More than 25,000 of the beneficiaries were scheduled castes, about 11,500 scheduled tribes, 24,600 women, and 1,628 children. During this period 53,508 lok adalats were organized. These lok adalats settled more than 13,75,000 cases. In about 39,900 motor vehicle claim cases, compensation to the tune of ₹ 420.12 crore has been awarded. There is need to quickly implement proposals related to commercial disputes and amendments in the Arbitration and Conciliation Act 1996 to make India a favourable destination for international arbitration. Union Budget 2011-12 has expanded the scope of legal services for service tax to include services provided by business entities to individuals as well as representational and arbitration services by individuals to business entities. However, no tax is levied on services provided by individuals to other individuals.

### *Consultancy Services*

10.56 Consultancy services are emerging as one of the main business areas in India. The volume of revenue in the Indian consulting industry on conservative basis has been estimated at around US$ 8.24 billion in 2010-11. Presently, it contributes to about 0.47 per cent of the GDP. The growth rates of the industry over the last few years have been extremely promising and revenue is projected to increase to US$ 9.89 billion by 2012 at a growth rate of 20 per cent. Consulting service providers in India may be classified into five categories: individual consultants, consulting firms, R&D organizations, academic institutes, and professional bodies. The client sectors to which consulting services are provided at present include agriculture and rural development, banking and financial services, construction, education, energy, environment, governance and public administration, health and demography, infrastructure, information technology, law and regulation, life sciences, manufacturing, management, science and technology, telecommunications, tourism, transport, urban development, and water management.

10.57 The consultancy services market can be broadly categorized into engineering and management consultancy. The Indian management consultancy market is still in its nascent stage, with high growth and large entry of players. The revenue size of the Indian management consultancy market on conservative basis was estimated at around US$ 2.5 billion to US$ 3 billion in 2010-11. Although it is still relatively small in revenue size as compared to the global management consultancy market, the Indian management consultancy industry has witnessed high growth partly due to the low base from which it picked up. As per the estimates available for 2006-7, it comprised around 2,500 individuals and 22,300 firms. The Indian engineering consultancy market which is a more developed market as compared to the management consultancy market is experiencing a boom, with many large-scale development projects driving its growth. The revenue size of the Indian engineering consultancy market on conservative basis was estimated to be around US$ 5.5 billion to US$ 6 billion in 2010-11. Although it is still relatively small as compared to the global engineering consultancy market, the Indian engineering consultancy industry has shown steady growth over the last few years. As per estimates available for 2006-7, it comprised around 7,000 individuals and 25,600 firms. India's emergence as one of the fastest growing consultancy markets in the world has been facilitated by the liberalization of FDI policy, entry of many new players, high growth in most key sectors, and India being a low cost sourcing destination.

10.58 Though the growth of the Indian consulting industry has been robust in the last few years, there is need to address certain issues to position it on the world map as well as to increase its global market share. These include availability of experienced consulting professionals, improvement in quality, proper training and development, international experience for Indian consultants on consulting assignments, and market intelligence on consulting opportunities abroad. The government has taken certain initiatives to address these issues. These include the Marketing Development Assistance and Market Access Initiative Schemes by the Department of Commerce, Guidelines for Selection of Consultants by Ministry of Finance, and certain export-promotion initiatives taken by the Federation of Indian Export Organizations.

## Construction Services

10.59 The construction industry in India is an important indicator of growth and development as it creates investment opportunities and increases production capacity across various related sectors. With a share of around 8.2 per cent, the construction industry has contributed an estimated ₹ 670,778 crore (at current prices) to national GDP at factor cost in 2011-12. While its growth rate (at constant prices) in 2010-11 was 8.0 per cent, in 2011-12 it decelerated to 4.8 per cent due to both external and domestic factors like the imminent recession in Europe, hardening of interest rates in India, and challenges associated with land acquisition in some places. The sector is labour intensive and, including indirect jobs, provides employment to around 33 million people. It is estimated that about 70 per cent of these are employed in the infrastructure segment and the remaining 30 per cent in the real estate segment. According to industry estimates, the industry is expected to generate additional employment of 47 million, with the total number of persons employed in the sector reaching 83 million persons by 2022. The sector is critical for enhancing the productive capacity of the overall economy as on average it accounts for more than half the investment required for setting up critical infrastructure like power projects, ports, railways, roads, and bridges.

10.60 Since the sector was given industry status in 2000, there have been more initiatives by the government to undertake projects on PPP basis. These initiatives have resulted in more private ownership of build-operate-transfer (BOT), build-operate-own-transfer (BOOT), and build-operate-lease-transfer (BOLT) projects. FDI up to 100 per cent under the automatic route is allowed in townships, housing, built-up infrastructure, and construction of development projects (which include housing, commercial premises, educational institutions, and recreational facilities). The construction sector is not handled by a single nodal government department. By their very nature, infrastructure construction projects are supervised by respective ministries at union and state levels while the real estate sector comes under not only the Ministry of Urban Development but also by urban development departments at state level and municipal authorities further down. The Planning Commission has taken initiatives in creating model engineering-procurement-construction (EPC) and PPP contract documents. The Draft Public Procurement Bill 2011 is in the public domain for comments and discussion. The Bill aims at creating uniformity and introducing transparency in the bidding process. Union Budget 2011-12, allocated 23.3 per cent more funding to this sector. Meanwhile, authorities involved in infrastructure development have been allowed to issue tax-free bonds and restrictions on foreign institutions and investors wishing to purchase infrastructure-related bonds have been relaxed. To augment flow of funds into this sector, the government has also increased the FII limit for investment in corporate long-term infra bonds, created Infrastructure Debt Funds (IDFs), and introduced a take-out financing and credit enhancement scheme by the India Infrastructure Finance Company Limited (IIFCL). Recently the Government of India has decided to fast track clearances for eight mega infrastructure projects, including some in the crucial power sector, to arrest slowdown in growth and uplift business sentiment.

10.61 The construction sector is fragmented, with a handful of major companies involved in construction activities across all segments; medium-sized companies specializing in niche activities; and small and medium contractors who actually work on subcontract basis and carry out the work in the field. The sector has major linkages with the building materials industry since they account for sizeable share of construction costs (approximately 40 per cent to 50 per cent). With plans to enhance infrastructure investment to US $ 1 trillion in the Twelfth Plan, the construction sector is all set to become one of the growth engines of the Indian economy in the foreseeable future. Government's initiative to develop mass rapid transport systems (MRTS) in cities with 20 lakh population will also boost the demand for construction activities. The potential of the construction sector is very high in urban infrastructure, particularly MRTS and water management. Starting of new projects like dedicated freight corridors in railways and construction of airports in Tier II and Tier III cities, clearing pending projects in ports, and development of real estate in urban infrastructure will also generate sizeable opportunities for the construction sector. Some other issues in this sector that need to be resolved include the need for setting up consortiums to bid effectively for international projects, credit- related issues, and the issue of precondition in most of the overseas tenders floated by clients wherein equipment to be supplied by the contracting company has necessarily to be sourced from an approved list of suppliers from developed countries.

## Some Social Services

### *Sports*

10.62 Apart from being a means of entertainment, physical fitness, and development of human personality, sports have also played an important role in national identity, community bonding and international bonding. Sports being highly competitive, the use of modern infrastructure and equipment and advanced scientific support has changed the scenario at international level. In view of this, the Government of India has taken several initiatives to help sportspersons with scientific and equipment support as well as providing them training and exposure in international competitions. The first National Sports Policy was unveiled in 1984 with the objective of developing an organized and systematic framework for the development and promotion of sports in the country. In 2001 another version of the Sports Policy, with the twin planks of 'broad-basing' of sports and 'achieving excellence' at national and international levels was introduced.

10.63 Though sports is a state subject under the Seventh Schedule of the Constitution of India, the central government supplements the efforts of states in the task of promotion and development of sports. Several schemes have been announced by the Government of India aiming at promotion of drug-free sports, sports infrastructure development separately for urban and rural India, promotion of excellence in sports, incentives to sportspersons, assistance to sports-support institutions, and promotion of sports among persons with disabilities. Indian athletes put up a commendable and impressive performance at the Commonwealth Games 2010 and Asian Games 2010. With a view to preparing athletes and teams for the London Olympics 2012, the government has launched Operation Excellence for London Olympics 2012 (OPEX 2012). OPEX 2012 identifies core areas for providing comprehensive and intensive training, both within the country and abroad, as well as competition exposure in international sports events. Funds for preparation of athletes for the London Olympics are being provided at Commonwealth Games 2010 scales, with up-scaling in certain areas such as lodging, nutrition, scientific support, and daily allowance. The budget for OPEX London 2012 is at ₹ 258.39 crore. There is need to step up allocation for youth affairs and sports as at present it is less than 0.50 per cent of state Plan and between 0.16 and 0.72 per cent of central Plan allocations.

### *Cultural services*

10.64 This section includes ‘recreation and entertrainment’ and ‘radio and TV broadcasting’ (National Accounts classification) besides other related cultural services. Cultural activities are becoming increasingly important in the modern post-industrial knowledge-based economy. World over, they have been recognized as an important component of growth and job creation as well as a vehicle of cultural identity. Cultural life has become an economically viable private and public service activity as well as social integrator. There is growing positive correlation between culture and employment. A large number of people are getting viable employment by engaging in cultural activities as writers, publishers, librarians, photographers, sculptors, painters, musicians, singers, choreographers, dancers, and actors. Cultural activities also support other economic activities, cultural tourism being one such example. A major chunk of tourism in India, national and international, can be classified as cultural tourism because it is geared to monuments, museums, archaeological sites, and cultural heritage including traditional fairs and festivals.

10.65 To meet the objective of preserving and promoting all forms of art and culture, a variety of activities are being undertaken by the Government of India, ranging from protecting and encouraging cultural endeavours at grassroots level to promoting cultural exchanges internationally; from programmess to preserve India’s ancient heritage to encouraging an array of contemporary creative arts. A network of 41 organizations is functioning under the Ministry of Culture, for protection, development, and promotion of tangible heritage, intangible heritage, and knowledge heritage. There are also a large number of schemes and programmes to extend financial support to individuals, group of individuals, and cultural organizations engaged in performing, visual, and literary arts. A total allocation of ₹ 3,555 crore was made to this sector in the Eleventh Plan period.

10.66 Creative industry includes cultural heritage; printed matter and literature; music and performing arts; visual arts; audio-visual media including cinema, television, radio and photography, and socio-cultural activities; museum and archives. Trade in creative industry can be broadly classified into goods and services. According to UNCTAD (UNCTADSTAT on Creative Economy – web-based browser), world exports of creative industry goods in 2010 are estimated at US $ 383 billion, growing at a CAGR of 8.6 per cent since 2002. India is ranked eighth largest exporter of creative goods, with a 3.6 per cent share of world creative goods exports. In absolute terms, India exported US$ 13.8 billion worth of creative goods in 2010, with a CAGR of 17.7 per cent, much higher than the world average. UNCTAD estimated world exports of creative services in 2010 at US$ 176 billion, growing at a CAGR of 15.4 per cent. India is ranked 13th with a 2.3 per cent share in world exports of creative services. India exported US$ 4 billion worth of creative services in 2010, at a CAGR of 26 per cent.

10.67 According to a report by Ernst & Young, the Indian media and entertainment industry is valued at US$ 16.3 billion in 2010 and is projected to grow at a CAGR of 12 per cent in the next four years (2011-14) to reach a value of US$ 26 billion. The Indian media and entertainment services industry comprises visual entertainment services (broadcasting and cable television, films) printing (newspapers, books, periodicals), and audio entertainment services (radio, music). In addition, internet services also deliver such content through networks. The rapid convergence of networks, devices, and content is expected to dramatically alter the dynamics of the Indian media and entertainment industry. India is estimated to have more than 700 television channels and 100 million pay-TV households. The television distribution sub-segment is dominated by highly fragmented analog cable which includes about 60,000 local cable operators and 100 multi-system operators. The Cable Television Networks (Regulation) Amendment Act 2011 has put in place a legal framework to facilitate digitalization. Four metros will go digital in cable television by 30 June 2012, with the rest of the country following suit by 31 December 2014. The digitalization will redefine broadcasting and bring benefits to all stakeholders. For the regulation of content in case of general entertainment channels, a self-regulating mechanism has been put in place by the broadcasters in consultation with the Government of India and a Broadcast Content Complaints Council has been made operational from 1 July 2011. There are 245 private FM radio stations, along with the government-controlled All India Radio, operating in 237 radio stations. FM Radio was opened to private sector in

1999, with the announcement of FM Phase-I policy. Phase-II was announced in 2005. So far 86 cities of India are covered under private FM stations. In the third phase, the Government has taken a decision to e-auction 839 FM channels spread over 245 cities across the country. This would usher in a new era of infotainment for people besides introducing new vistas of opportunities for employment and income for the people. In the music sub-segment, film music accounts for two-third of sales across India. The large mobile subscription base of India is also contributing to the growth opportunities of the music and radio sub-segment.

10.68 With the production of over 1,000 films a year, in over 20 languages, the Indian film industry is the largest in the world. The film industry is also contributing to outsourcing of services such as animation, visual effects, conversion of 3D, and post-production services, to the ICT sector, thus contributing to its growth. The Indian film industry is also generating additional revenue through collaboration with the ICT sector, such as DVDs, music CDs, mobile downloads, and online gaming. High rates of entertainment tax and lack of uniformity in tax structure across states are major factors inhibiting growth of the film industry. Adoption of the goods and services tax (GST), subsuming service tax and entertainment tax, could promote growth of the film industry. Piracy is another challenge for the Indian film sector. To make it relevant to present day requirements and to check piracy, the Ministry of Information and Broadcasting is in the process of amending the Cinematograph Act 1952. India has also signed co-production agreements with six countries with a view to pooling their creative, artistic, technical, financial, and marketing resources for co-production of films and television programmes. During 2011-12, the Ministry has accorded 20 foreign production houses shooting permission. Given the potential of this sunrise sector in India's growth and trade in services, efforts are needed to relocate the business of the Indian film Industry from foreign countries to India by addressing issues like tax credit which can increase activities in India and also generate employment.

10.69 In the publishing sub-segment, India has about 77,384 newspapers/magazines (registered) in circulation in 23 scheduled languages (including English) and several other non scheduled languages. The low readership penetration (around 30 per cent) as compared to a literacy level of over 75 per cent underscores the potential for growth. About 42 per cent of advertising money spent in the country is through the print media. The penetration of internet services is also contributing to online news consumption in India. In the print media sector, foreign investment up to 100 per cent is allowed in the non-news, i.e. the specialty/ technical / scientific sector of the print media, whereas up to 26 per cent is allowed in the Indian entities publishing newspapers and periodicals dealing with news and current affairs. Foreign investment up to 100 per cent is allowed in case of foreign publishing houses bringing out facsimile editions of their own newspapers through wholly owned subsidiary.

## Challenges And Outlook

### Outlook

10.70 India's services sector has been resilient even during the tumultuous years of the global economic crisis maintaining a steady growth of around 10 per cent. This happened even when overall GDP growth dipped sharply to 6.7 per cent in 2008-9. A dissection of the growth rates of different services shows that this resilience was, to some degree, due to the government's policies of higher social expenditure and commitments for pay arrears under the new revised scale for government employees resulting in very high growth rates of 12.5 per cent and 12.0 per cent in community, social, and personal services in 2008-9 and 2009-10. Public administration and defence grew at a spectacular 19.8 per cent and 18.2 per cent in these two years compared to 1.9 per cent and 7.6 per cent in 2006-7 and 2007-8 respectively. The impact of the global crisis was, however, evident in the trade, hotels, and restaurants and construction categories and with lagged effect in real estate / ownership of dwellings and business services in 2008-9 and 2009-10; and to some extent in banking and insurance in 2009-10.

10.71 Moving forward in 2011-12, though there is slight moderation in services growth to 9.4 per cent (as also in 2010-11), there is no cause for worry, as it is due to the steep fall in growth of public administration and defence services reflecting fiscal consolidation of the government. In fact growth in 'trade, hotels & restaurants, transport, storage and communication' is more robust at 11.2 per cent and retail-sector growth is expected to be more robust in 2012-13. With hardening of interest rates, the real worry would be with the real estate/ ownership of dwellings and business services segment, the growth of which has started decelerating and construction services with growth falling by nearly half. The outlook of the services sector in the domestic economy is linked to the prospects of the sector externally. While software service exports have continued to be steady, the unfolding events in the euro area could lead to some sluggishness in this sector. The fair-weather business services exports which have already shown signs of deceleration may not get better. Among the other two major services, transportation has already been affected with the Baltic Dry Index at an all-time low, although this may be a passing phenomenon. While travel and tourism could also be affected when the pockets of euro zone tourists are affected, it could also lead to a shift in tourist inflow pattern with increased inflow of holiday backpackers searching for cheaper destinations like India. Rise in tourists from South Asia, East Asia, and South East Asia could further help this sector. While the net effect of the trade sector on GDP has always been negative for India, it could go down further if less cushion is provided by net services trade to GDP. However, the domestic economy is more dominant in the case of services and any changes in government spending in community, social, and personal services within the fiscal space available or newly created fiscal space could strengthen the growth prospects of the services sector with ripple effects in related sectors.

## Challenges

10.72 This dominant sector in terms of both shares and growth is a growth engine not only for the national economy but also for many states. It is second only to agriculture in terms of employment both in the national economy and in the majority of states. Unlike the unskilled or semi-skilled nature of jobs in the agriculture sector, this sector provides myriad job opportunities ranging from highly skilled to unskilled in a variety of activities, Hence, services along with a revival in manufacturing activity, can be major drivers of overall employment. Unlike the merchandise sector, the services sector is a net foreign exchange earner with exports of some services growing exponentially. It is also the major FDI-attracting sector with the five services topping the list of sectors attracting FDI to the country. Thus India's services sector is like an uncharted sea with plenty of opportunities and also new challenges.

10.73 The first challenge is to not only maintain the present growth tempo in the service sector but also to accelerate it. This task, though difficult, is not impossible as we have tapped only some service sectors like software and telecom that too only partially. In fact, every important service sector is a storehouse of opportunity. Even in software and telecom, there is a lot of untapped potential in the domestic economy. The software-telecom combination can be a high growth propelling force for many more years to come with positive spillovers to other sectors and can give a cutting edge in these sectors while facing international competition. This combination along with retail trade can change the very face of the rural economy. The tourism sector which is an industry in itself is another mine of opportunity for India. While there has been a lot of hype about the potential of this sector, efforts are needed to make it a reality. Shipping is another major service which can step up growth by tapping the opportunities provided by India's own merchandise trade. At present Indian ships cater to only 9 per cent of India's overseas trade which is abysmally low by any standards. Huge investment and modernization are needed in this sector to capture at least a substantial portion of India's present, if not potential, trade. Port services where countries like Sri Lanka plan on the basis of future cargo from other countries like India is another area needing urgent attention. Business services which consists of many dynamic services is a sunrise sector. Financial services, health care, and education are other niche areas with both external potential and internal opportunities which can be tailor-made to serve the objective of more inclusive development (also see chapter 13).

10.74 The second challenge is to make some of the fair-weather services like business and financial services more stable and less vulnerable to external shocks. While these sectors cannot be fully insulated from external shocks in this highly globalized world, efforts are needed to make them at least as stable as software and telecom services. This can be done by both piggybacking on the progress of the software and telecom sectors and also making inroads in the domestic economy where opportunities are aplenty. This brings us to the third challenge of domestic regulations in most of these sectors. While in the WTO, India has been at the forefront of negotiations for removal of such regulations in other countries, we also have to take a lead in making regulatory improvements domestically as such regulations could come in the way of further growth of the services sector. Addressing data problems in the services sector is another area where there is need for early consolidation of isolated efforts. Addressing the challenges of the diverse sub-sectors of the services sector by better and coordinated strategies can lead to exponential gains for the economy.

# Energy, Infrastructure and Communications

11

CHAPTER

*The Eleventh Five Year Plan emphasized the need for removing infrastructure bottlenecks for sustained growth. It, therefore, proposed an investment of US $500 billion in infrastructure sectors through a mix of public and private sectors to reduce deficits in identified infrastructure sectors. As a percentage of the gross domestic product (GDP), investment in infrastructure was expected to increase to around 9 per cent. For the first time the contribution of the private sector in total investment in infrastructure was targeted to exceed 30 per cent. Total investment in infrastructure during the Eleventh Plan is estimated to increase to more than 8 per cent of GDP in the terminal year of the Plan --higher by 2.47 percentage points as compared to the Tenth Plan. The private sector is expected to be contributing nearly 36 per cent of this investment.*

11.2 An analysis of the creation of infrastructure in physical terms indicates that while the achievements in some sectors have been remarkable during the Eleventh Plan as compared to the previous FiveYear Plans, there have been slippages in some sectors. The success in garnering private-sector investment in infrastructure through the public-private partnership (PPP) route during the Plan has laid solid foundation for a substantial step up in private-sector funding in coming years. PPPs are expected to augment resource availability as well as improve the efficiency of infrastructure service delivery. During the Plan, administrative ministries and other government agencies have adopted the standardized model concession agreements and bid documents to streamline and accelerate the decision making in a fair, transparent, and competitive manner. Several state governments and local bodies have also rolled out PPP projects.

11.3 The Planning Commission, in its aproach paper has projected an investment of over ₹ 45 lakh crore (for about US $1 trilion) during the Twelfth Plan (2012-17). It is projected that at least 50 per cent of this investment will come from the private sector as against the 36 per cent anticipated in the Eleventh Plan and public sector investment will need to increase to over ₹ 22.5 lakh crore as against an expenditure of ₹ 13.1 lakh crore during the Eleventh Plan. Financing infrastructure will, therefore, be a big challenge in the coming years and will require some innovative ideas and new models of financing.

## Overview of Performance

11.4 Performance of broad sectors and sub-sectors in key infrastructure areas in the current year presents a mixed picture. There was an improvement in growth in power, petroleum refinery, cement, railway freight traffic, passengers handled at domestic terminals, and upgradation of highways by the National Highways Authority of India (NHAI). Coal, natural gas, fertilizers, handling of export cargo at airports, and the number of cell phone connections showed negative growth. Steel sector witnessed moderation in growth. Growth for core industries and infrastructure services during April-December 2011-12 is given in Table 11.1.

11.5 The performance in core and infrastructure sectors is still to a large extent dependent on public sector projects. Ministry of Statistics and

**Table 11.1 : Growth in core industries and infrastructure services (in per cent)**

| Sl. No. | Sector | 2007-08 | 2008-09 | 2009-10 | 2010-11 | 2011-12 (April-Dec.) |
|---|---|---|---|---|---|---|
| 1 | **Power** | **6.3** | **2.5** | **6.8** | **5.7** | **9.3** |
| 2 | **Coal** | **6.0** | **8.2** | **8.0** | **0.0** | **-2.7** |
| 3 | **Finished steel** | **6.8** | **13.2** | **3.2** | **9.6** | **5.7** |
| 4 | **Fertilizers** | **-8.6** | **-2.6** | **13.2** | **1.0** | **-0.5** |
| 5 | **Cement** | **7.8** | **7.6** | **10.1** | **4.3** | **5.1** |
| 6 | **Petroleum:** | | | | | |
| | a) Crude oil | 0.4 | -1.8 | 0.5 | 11.9 | 1.9 |
| | b) Refinery | 6.5 | 3.0 | -0.4 | 3.0 | 4.1 |
| | c) Natural gas | 2.1 | 1.4 | 44.8 | 9.9 | -8.8 |
| 7 | **Railway revenue-earning freight traffic** | **9.0** | **4.9** | **6.6** | **3.8** | **4.7** |
| 8 | **Cargo handled at major ports** | **12.0** | **2.2** | **5.7** | **1.6** | **0.4** |
| 9 | **Civil aviation:** | | | | | |
| | a) Export cargo handled | 7.5 | 3.4 | 10.4 | 13.4 | -1.1 |
| | b) Import cargo handled | 19.7 | -5.7 | 7.9 | 20.6 | 1.4 |
| | c) Passengers handled at international terminals | 11.9 | 3.8 | 5.7 | 11.5 | 7.2 |
| | d) Passengers handled at domestic terminals | 20.6 | -12.1 | 14.5 | 16.1 | 17.5 |
| 10 | **Telecommunications: Cell phone connections** | **38.3** | **80.9** | **47.3** | **18.0** | **-51.0** |
| 11 | **Roads: Upgradation of highways*** | | | | | |
| | i) NHAI | 164.6 | 30.9 | 21.4 | -33.3 | 8.9 |
| | ii) NH(O) & BRDB | 12.5 | 17.3 | 4.0 | -6.8 | -36.5 |

***Source*** **: Ministry of Statistics and Programme Implementation (MOSPI).**
*** Includes Widening to four lanes & two lanes and Strengthening of existing weak pavement only.**
**# provisional**
***Notes*** **: NH(O) stands for National Highways Organization and BRDB for the Border Roads Development Board(BRDB).**

Programme Implementation (MOSPI) has been monitoring the progress of all central-sector projects costing ₹ 150 crore and above. The flash report for the month of October 2011 tracks the progress of 583 projects in different sectors. Out of these 583 projects, only seven are ahead of schedule, 166 are on schedule, 235 are delayed and remaining 175 projects have been sanctioned without specifying any commissioning schedule. The original cost of the 583 projects when sanctioned was ₹ 7,12,812 crore but this was subsequently revised to ₹ 8,21,665 crore, implying a cost overrun of 15.3 per cent. The expenditure incurred on these projects till October 2011 was ₹ 3,44,361 crore, which is 41.9 per cent of the revised cost.

11.6 Maximum number of projects delayed relate to road transport and highways (90), followed by power (45), petroleum (29), railways (26), and coal (17). In the railways sector, out of the total of 132 projects costing more than ₹ 150 crore, in 101 the anticipated cost is 181 per cent higher than the original estimated cost. Likewise cost overruns of 17 projects in the petroleum sector are expected to be 32 per cent. 12 projects in coal and 13 projects in road transport are expected to have cost overruns of 29 per cent and 61 per cent respectively. The delay in railways ranges from 2 to 213 months and in road transport and highways from 4 to 106 months. Analysis based on the flash report highlights sub-optimal project implementation across all the major sectors. While some of the project delays are due to exogenous factors beyond the control of the implementing agencies, in the majority of cases the delays are mainly due to a dismal record of project implementation starting from project identification and designing to undue delays in procurement (both tendering and contracting) and ineffective project monitoring. Such delays increase project risks and costs and could be minimized.

## Power

### Generation

11.7 Electricity generation by power utilities during 2011-12 was targeted to increase by 5.4 per cent to reach 855 billion units. Growth in power generation during April-December 2011 was 9.2 per cent as compared to 4.6 per cent during April-December 2010. Nuclear, hydro, and thermal generation registered a growth of 33.2 per cent, 19.2 per cent, and 6.7 per cent respectively (Table 11.2). In the first nine months 76 per cent of the generation target has been achieved.

11.8 In the thermal category, growth in generation from coal, lignite, and gas-based stations in the current fiscal (April-December) was of the order of 9.2 per cent, 3.8 per cent, and - 4.0 per cent respectively. The overall plant load factor (PLF), a measure of efficiency of thermal power stations, at 72.1 per cent during April-December 2011 was marginally lower than the PLF of 72.9 per cent achieved during April-December 2010. PLF in the current year, however, exceeded the target of 68.2 per cent for the first three quarters (Table 11.3 and Figure 11.1).

11.9 The sector-wise and region-wise break-up of the PLF from 2008-9 to 2011-12 (April to December 2011) shows wide variation across regions and sectors (Table 11.4). In the current year, while the PLF of the central-sector utilities moderated, private-

**Table 11.3 : Thermal power generation during April-December 2011**

| Components | Generation (Billion KWh) | Growth (%) | PLF (in per cent) Apr.-Dec. 2010 | Apr.-Dec. 2011 |
|---|---|---|---|---|
| Coal | 423.554 | 9.17 | 73.24 | 72.32 |
| Lignite | 19.567 | 3.82 | 70.82 | 68.55 |
| Gas turbine | 72.198 | - 4.0 | 66.03 | 61.91 |
| Diesel | 1.797 | -13.07 | - | - |
| Thermal total | 517.1 | 166.65 | 72.88 | 72.10 |

*Source* : Ministry of Power.

**Table 11.2 : Power Generation by Utilities (Billion KWh)**

| Category | 2009-10 | 2009-10 | April-December 2010-11 | April-December 2011-12 | Growth (per cent) |
|---|---|---|---|---|---|
| Power generation | 771.551 | 811.143 | 598.244 | 653.446 | 9.23 |
| Hydroelectric # | 106.680 | 114.257 | 90.169 | 107.513 | 19.23 |
| Thermal | 640.876 | 665.008 | 484.860 | 517.116 | 6.65 |
| Nuclear | 18.636 | 26.266 | 17.854 | 23.790 | 33.24 |
| Bhutan import | 5.358 | 5.610 | 5.360 | 5.028 | -6.19 |

*Source* : Ministry of Power;

Note: # Excludes generation from hydro stations up to 25 Mega Watt (MW).

Figure 11.1 Trend of the national average of PLF of thermal plants

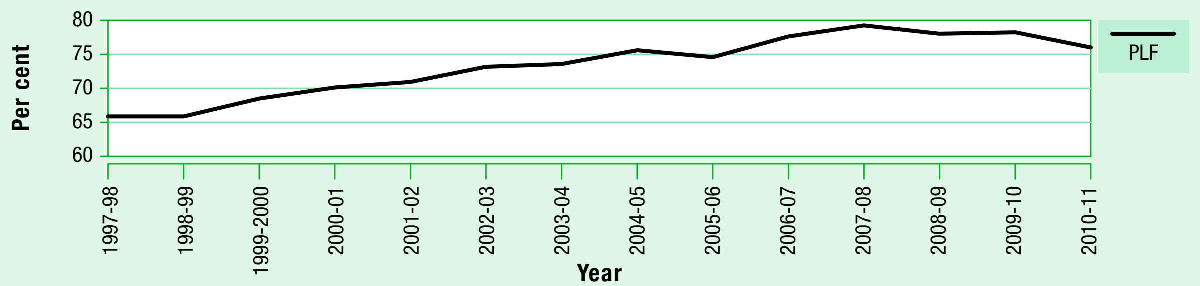


**Table 11.4 : PLF of Thermal Power Stations**

(per cent)

| Category | 2008-09 | 2009-10 | 2010-11 (Apr.-Dec.) | 2011-12 (Apr.-Dec.) |
|---|---|---|---|---|
| i) State sector | 71.20 | 71.13 | 66.72 | 66.11 |
| ii) Central sector | 84.30 | 85.64 | 85.12 | 80.15 |
| iii) Private sector (Utilities) | 91.04 | 82.41 | 76.70 | 78.09 |
| **REGIONS** | | | | |
| i) Northern region | 81.79 | 82.99 | 78.68 | 76.98 |
| ii) Western region | 79.45 | 79.20 | 75.26 | 70.80 |
| iii) Southern region | 83.30 | 84.39 | 80.43 | 80.25 |
| iv) Eastern region | 64.66 | 64.71 | 66.58 | 62.10 |
| v) North-eastern region | 47.62 | 49.97 | - | - |
| **All India** | **77.27** | **77.53** | **75.08** | **72.10** |

*Source* : Ministry of Power.

sector utilities witnessed an improvement. The PLF of utilities in the state sector remained lower than that of private- and central-sector utilities. In terms of regional spread, moderation in PLF in the current year was across all the regions. Utilities in the eastern and north-eastern region continued to have a lower PLF.

## Power deficit

11.10 The deficit in power supply in terms of peak availability and total energy availability declined during the Eleventh Five Year Plan. While the energy deficit decreased from 9.6 per cent in the terminal year of the Tenth Plan (2006-7) to 7.9 per cent during April-December 2011, peak deficit declined from 13.8 per cent in 2006-7 to 10.6 per cent during the current financial year (up to December 2011).

## Capacity addition

11.11 The Eleventh Five Year Plan initially envisaged a capacity addition of 78,700 MW, of which 19.9 per cent was hydro, 75.8 per cent thermal, and the rest nuclear. At the time of the Mid Term Appraisal (MTA) of the Eleventh Plan, the target was revised to 62,374 MW with thermal, hydro, and nuclear segments contributing 50,757 MW, 8,237 MW and 3,380 MW respectively. A capacity addition of 46,669.7 MW has so far been achieved until 15 January 2012. Projects with a capacity of 7,645 MW are under construction for commissioning during the remaining period. Capacity addition during the Eleventh Plan is, therefore, expected to be about 50,000 to 52,000 MW.

11.12 In the thermal sector, capacity addition continued to keep its momentum throughout the Plan period, except in the second year. During 2007-8, the first year of the Eleventh Five Year Plan, 9,263 MW thermal capacity was added. In 2008-9, as against a target of 7,530 MW, a capacity of only 3,454 MW could be added. Capacity addition during 2009-10 and 2010-11 was 9,585 MW and 12,160 MW respectively. In the current fiscal year, i.e. 2011-12, capacity addition of 17,601 MW has been planned and until 15 January 2012, 12,207.7 MW has already been added. This is the highest capacity addition ever achieved in a single year. The fuel-wise and sector-wise break up of capacity addition, targets, and achievements is given in Table 11.5:

## Ultra Mega Power Projects (UMPPs) Initiative

11.13 The Ministry of Power launched an initiative for development of coal-based super critical UMPPs, each of about 4000 MW capacity, under Case II bidding route. Four UMPPs at Sasan in Madhya Pradesh, Mundra in Gujarat, Krishnapatnam in Andhra Pradesh, and Tilaiya in Jharkhand have already been transferred to the identified developers and are at different stages of implementation. One unit of 800 MW of the Mundra UMPP is expected to be commissioned in the Eleventh Plan. The

**Table 11.5 : Capacity Addition (Target and Achievement) during April 2011 – 15 January 2012**

(MW)

| Sector | Thermal | | Hydro | | Nuclear | | Total | | Per cent |
|---|---|---|---|---|---|---|---|---|---|
| | Target | Actual | Target | Actual | Target | Actual | Target | Actual | to target |
| Central | 3070.0 | 2820.0 | 655.0 | 0.0 | 2000.0 | 0.0 | 5725.0 | 2820.0 | 49.3 |
| State | 4101.0 | 1537.2 | 165.0 | 81.0 | 0.0 | 0.0 | 4266.0 | 1618.2 | 37.9 |
| Private | 6440.0 | 6669.5 | 1170.0 | 1100.0 | 0.0 | 0.0 | 7610.0 | 7769.5 | 102.1 |
| **Total** | **13611.0** | **11026.7** | **1990.0** | **1181.0** | **2000.0** | **0.0** | **17601.0** | **12207.7** | **69.4** |

*Source* : Ministry of Power.

remaining units of Mundra and other awarded UMPPs, except for the last unit of Tilaiya UMPP, are expected to be commissioned in the Twelfth Plan.

## Development of hydro-power

11.14 As per a reassessment study carried out by the Central Electricity Authority (CEA), the identified hydroelectric potential of the country (having installed capacity above 25 MW) is 1,45,320 MW. As of now, 434 projects/schemes as detailed in Table 11.6 are at different stages of operation/ approval/investigation.

11.15 During the Eleventh Five Year Plan, initially hydro capacity addition of 15,627 MW was planned which at the time of MTA of the plan was revised to 8,237 MW. Of this, 5,302 MW has been added till 31 December 2011. The main reasons for slow development of hydro-power include difficult and inaccessible potential sites, difficulties in land acquisition, rehabilitation, environmental and forest-related issues, inter-state issues, geological surprises, and contractual issues. A multi-pronged strategy has been adopted to harness the hydro-potential resources in the country. Some of the policy measures and initiatives taken by the government are finalization of an investor-friendly New Hydro Policy 2008, a liberal National Rehabilitation and Resettlement Policy, and a 50,000 MW Hydroelectric Initiative and Mega Power Project Policy. All the provisions of Hydro Policy 2008 including merchant sale up to a maximum of 40 per cent of the saleable energy is now applicable to all developers, i.e. private as well as public. Further cost plus tariff regime has been extended for public- as well as private-sector hydro-power projects up to December 2015.

**Table 11.6 : Exploitation of Hydroelectric Potential**

| | No of projects/ schemes | Capacity (MW) |
|---|---|---|
| Under operation | 177 | 38748 |
| Under construction | 50 | 15065 |
| Approved by CEA | 57 | 29443 |
| DPR under examination | 48 | 15009 |
| Survey & investigation | 102 | 30193 |
| **Total** | **434** | **128458** |

***Source*** **: Ministry of Power**
***Notes*** **: DPR stands for detailed project report.**

## Transmission, Trading, Access, and Exchange

### *National Grid*

11.16 An integrated power transmission grid helps to even out supply-demand mismatches. The existing inter-regional transmission capacity of 23,800 MW connects the northern, western, eastern, and north-eastern regions in a synchronous mode operating at the same frequency and the southern region asynchronously operating in the same mode. This has enabled inter-regional energy exchanges of about 39,275 million units (MUs) during April-November 2011, thus contributing to better utilization of generation capacity and an improved power supply position. Proposals are under way for synchronous integration of the southern region with other regions.

### *Open access*

11.17 Competition in the electricity sector has been augmented by having an open access system allowing a buyer to choose his supplier and a seller to choose his buyer. Open access at inter-state transmission level is now fully functional. The facilitative framework created by the Central Electricity Regulatory Commission (CERC) in this regard has provided the desired regulatory certainty for developers in terms of market access, and also payment security against default. The CERC has issued the Central Electricity Regulatory Commission (Open Access in Inter-state Transmission) Regulations 2008 for short-term open access in inter-state transmission. During 2010-11, 19,883 inter-state short term open access transactions (including bilateral and collective) were approved for 55,232 MUs. During the year 2011-12 (up to 11 December, 2011) transaction of 52,290 MUs energy has been approved through 17,340 inter-state short-term bilateral and collective open access transactions. The Commission has also notified the Central Electricity Regulatory Commission (Grant of Connectivity, Long-term Access and Medium-term Open Access in Inter-state Transmission and Related Matters) Regulations 2009 for connectivity, long-term access, and medium-term open access. These regulations provide a facilitative framework for development of a transmission network based on connectivity and long-term access sought by long-term access customers.

11.18 The Central Transmission Utility (CTU), which is responsible for granting connectivity, medium-term open access, and long-term access, has received 141 applications for connectivity involving generation capacity of 1,52,850 MW, out of which 58 applications have been approved for the connectivity of 55,940 MW. The CTU has approved 23 applications for 1,095 MW for medium-term open access against the total of 27 applications for 3,160 MW. The CTU has also approved 138 applications for 83,900 MW for long-term access against the total of 185 applications received for 1,59,600 MW.

### *Trading of Electricity*

11.19 Trading in power is enabled through electricity traders and power exchanges. Power trading helps generation resource optimization by facilitating trade and flow of power across the country with varied geography, climatic conditions, and natural resource endowments. It has helped in sale of surplus power available with distributing utilities and captive power plants on one hand and purchase of power by deficit utilities to meet sudden surges in demand. Short-term markets also provide generators with an alternative to sell power other than through long-term power purchase agreements (PPAs). The CERC grants inter-state trading licences. It has so far granted 55, of which 43 are in existence as on 31 December 2011. There is a cap on trading margins which can be charged by traders. For short-term contracts, with power price less than ₹ 3/ kWh, the trading margin is ₹ 0.04 per unit and for power price above ₹ 3 /kWh, the margin is capped at ₹ 0.07 per unit.

## Aggregate Technical and Commercial (AT&C) losses and Restructured APDRP

11.20 The focus of the Restructured Accelerated Power Development Reforms Programme (R-APDRP) is on actual, demonstrable performance in terms of reduction in AT&C loss. Projects under the scheme are taken up in two parts in urban areas-towns and cities with population of more than 30,000 (10,000 in case of special category states). Part A of the scheme includes projects for establishment of baseline data and information technology (IT) applications for energy accounting/auditing and IT-based consumer service centers. Part B of the scheme includes regular distribution strengthening projects. These include renovation, modernization, and strengthening of 11 kV-level substations, transformers/transformer centres, re-conductoring of lines at 11kV level and below, load bifurcation, load balancing, and high voltage distribution systems (HVDS) and installation of capacitor banks and mobile service centres, etc. In exceptional cases, where the sub-transmission system is weak, strengthening at 33 kV or 66 kV levels may also be considered. So far (as on 01-01-2012) under Part A (IT), projects worth ` 5,196.50 crore covering all the eligible towns (1,402) in 29 states/union territories (UTs), under Part A (SCADA) projects worth ` 1,385.87 crore covering all the eligible towns (60) in 13 states and under Part B, 1,039 projects worth ` 23,658.18 crore in 19 states have been sanctioned.

## National Electricity Fund

11.21 The Cabinet Committee on Economic Affairs (CCEA) approved the National Electricity Fund (Interest Subsidy Scheme) to provide interest subsidy aggregating to ` 8,466 crore on loan disbursement amounting to ` 25,000 crore to the state power utilities - both in the public and private sectors--to improve the distribution network. The preconditions for eligibility to avail of interest subsidy are linked to the reforms in the power sector and the amount of interest subsidy is linked to the progress achieved in reforms.

## Rural Electrification

11.22 Under the Rajiv Gandhi Gramin Vidyutikaran Yojana (RGGVY), 1,00,917 villages have been electrified and free electricity connections released to 179.41 lakh below poverty line (BPL) households up to 31 December 2011. Under the Tenth Five Year Plan, 235 projects covering 68,763 villages and 83.10 lakh BPL connections were sanctioned at a cost of ` 9,733.35 crore. During the Eleventh Plan period, as on 31 December 2011, 343 projects have been sanctioned for implementation at a cost of ` 16,784.06 crore for electrification of 49,912 villages and release of connections to 164.31 lakh BPL households. Till 31 December 2011, 341 projects out of the 343 sanctioned under the Eleventh Plan have been awarded and franchisees are in place in 1, 45,950 villages in 17 states.

# Petroleum

## Oil and Gas Production

11.23 During the current financial year (2011-12), production of crude oil is estimated at 38.19 million metric tonnes (MMT), which is about 1.33 per cent higher than the 37.70 MMT produced during 2010-11. Domestic crude oil production during April-December 2011-12 was 28.70 MMT showing a growth of 1.9 per cent over the same period of the previous year. Crude oil production by Rajasthan

Cairn Energy India Pvt. Ltd. had started with effect from 29 August 2009. The crude oil production from Rajasthan block during April-December 2011 was 4.80 MMT against total production of 5.148 MMT during 2010-11.

11.24 Natural Gas production during April-December 2011-12 was 36.19 billion cubic metre (BCM) as compared to 39.68 BCM during the same period of the previous year. The projected production for natural gas, including coal bed methane (CBM) for 2011-12 is 51.67 (BCM), which is 1.05 per cent lower than the actual production of 52.22 BCM in 2010-11. The current gas production during April-December 2011-12 from KG-D6 field is about 12.36 BCM against the actual production of 15.82 BCM during the same period in 2010-11. The gas production has reportedly decreased due to drop in pressure in the wells and increased water ingress leading to lower output of gas per well.

## Exploration of Domestic Oil and Gas

11.25 The New Exploration Licensing Policy (NELP) was adopted in 1999. Under NELP 103 oil and gas discoveries have been made by private/ joint venture (JV) companies in 34 blocks and more than 600 MMT of oil equivalent hydrocarbon reserves have been added. As on 1 April 2011, investment made by Indian and foreign companies was of the order of US $15.88 billion, out of which, US $8.51 billion was on hydrocarbon exploration and US $7.37 billion on development of discoveries. At present, after conclusion of eight rounds of NELP, 235 production-sharing contracts have been signed. With a view to further accelerating the pace of exploration, in the ninth round of NELP (NELP-IX), 34 exploration blocks were offered. These 34 exploration blocks include 8 deepwater blocks, 7 shallow water blocks, 11 on-land blocks, and 8 Type-S on-land blocks. On-land blocks are spread over six states, namely Assam (2), Gujarat (11), Madhya Pradesh (2), Rajasthan (2), Tripura (1) and Uttar Pradesh (1). Bids for 33 blocks are under evaluation and blocks are likely to be awarded during 2011-12.

## Domestic Exploration of Other Gaseous Fuel

### *CBM*

11.26 India has the fourth largest proven coal reserves in the world and holds significant prospects for exploration and exploitation of CBM. Under the CBM policy, 33 exploration blocks have been awarded in the states of Andhra Pradesh, Assam, Chhattisgarh, Gujarat, Jharkhand, Madhya Pradesh, Maharashtra, Orissa, Rajasthan, Tamil Nadu, and West Bengal. Out of the total available coal-bearing area of 26,000 sq. km for CBM exploration in the country, exploration has been initiated in about 17,000 sq. km. The prognosticated CBM resources in the country are about 92 trillion cubic feet (TCF), out of which only 8.92 TCF has so far been established. Commercial production of CBM in India has now become a reality with current CBM gas production of about 0.23 million metric standard cubic metre per day (MMSCMD). The CBM gas produced in the country is being utilized by the nearby industries in and around Raniganj block in West Bengal. Efforts are also being made in Sohagpur block in Madhya Pradesh, Raniganj (south) in West Bengal, and Jharia in Jharkhand for commencement of commercial production at the earliest.

### *Shale Gas*

11.27 Shale gas can emerge as an important new source of energy in the country. India has several shale formations which seem to hold shale gas. These formations are spread over several sedimentary basins such as Cambay, Gondwana, Krishna-Godawari, and Cauvery. The Directorate General of Hydrocarbons (DGH) has initiated steps to identify prospective areas for shale gas exploration. A multi-organizational team (MOT) of DGH, Oil and Natural Gas Corporation (ONGC), Oil India Limited (OIL), and Gas Authority of India Limited (GAIL) has been formed by the government for analysing the existing data set and suggesting the methodology for shale gas development in India. Further, the Ministry of Petroleum and Natural Gas has signed a memorandum of understanding (MoU) with the USA on 6 October 2010 for assessment of shale gas resources in India, imparting training to Indian geo-scientists and engineers, and providing assistance in formulation of regulatory frameworks.

## Equity Oil and Gas from abroad

11.28 In view of an unfavourable demand-supply balance of hydrocarbons in India, acquiring equity oil and gas assets overseas is one of the important components of enhancing energy security. The government is encouraging national oil companies to aggressively pursue equity oil and gas opportunities overseas. Total availability of oil and gas through these overseas contracts is eqvivalent to around 10.5 per cent of domestic production. The acquisition of overseas oil and gas has been primarily spearheaded by ONGC Videsh Limited (OVL), the wholly owned subsidiary of the ONGC. Apart from OVL (40 Projects in 15 Countries), the other oil public-sector units (PSUs), namely Indian Oil Corporation Limited (IOCL) (9 Projects in 6 Countries), Oil India Limited (OIL) (12 Projects in 8 Countries), Bharat Petroleum Corporation Limited (BPCL) (12 Projects in 7 Countries), GAIL India Limited (4 Projects in 2 Countries), and Hindustan Petroleum Corporation Limited (HPCL) (2 Projects in 2 Countries), have acquired overseas exploration acreages. Among other government companies, the Gujarat State Petroleum Corporation (GSPC), a Government of Gujarat enterprise, has also acquired overseas hydrocarbon-bearing assets.

11.29 The total investment by oil PSUs (OVL, OIL, GAIL, IOCL, BPCL & HPCL) overseas is more than ₹ 64,832 crore, which includes two pipeline projects in Sudan and Myanmar. OVL's total oil and gas production from its overseas assets in Sudan, Vietnam, Venezuela, Russia, Syria, Colombia, and Brazil during 2010-11was about 9.45 million metric tonnes of oil equivalent (MMTOE) . In 2011, the consortium of OVL (OVL-25per cent) and KazMunaiGas (KMG- 75per cent) has acquired stake in Satpayev block, Kazakhstan. The production from the OVL assets abroad in Sudan, Sudan south, Vietnam, Venezuela, Russia, Syria, Colombia, and Brazil was about 6.76 MMTOE during April-December 2011 as against 7.06 MMTOE in the corresponding period of the previous year. The reason for the shortfall is mainly geopolitical upheavals in Sudan and Syria.

## Import of Liquefied Natural Gas (LNG)

11.30 To cater to the country's growing gas demand, Petronet LNG Limited (PLL) is constantly engaged with various LNG producers/suppliers as well as upcoming conventional and non-conventional LNG projects especially in Western Australia. During 2010-11, PLL imported 8.64 million metric tonnes (MMT) of LNG at its Dahej Terminal. Total LNG imports during April-December 2011 were to the tune of 8.17 MMT against the total import of 8.95 MMT during 2010-11.

11.31 In 2011, PLL has also entered into an MoU with Gazprom Marketing and Trading Singapore Pte. Ltd. (affiliate of OAO Gazprom, Russia) for sourcing up to 2.5 million metric tonnes per annum (MMTPA) of LNG on long-term basis and pursuing discussions on a sale and purchase agreement. Possibilities are also being explored for availability of any diversion of gas available in the US market on account of shale gas finds. PLL is developing another greenfield project of 5.0 MMTPA capacity at Kochi in the State of Kerala. The construction is going on full swing and the terminal is scheduled to be commissioned by the last quarter of 2012. PLL is planning to expand its Dahej terminal capacity from 10 MMTPA to 15 MMTPA. In addition to this, it is exploring the possibility of setting up an LNG terminal on the east coast of India and has shortlisted certain ports. A preliminary market demand assessment study has been carried out and preparation of a Detailed Feasibility Report has been initiated.

## Refining Capacity

11.32 The total refining capacity in the country as on 1 January 2012 is 193.39 MMTPA, of which 116.89 MMT is in the public sector, 6.00 MMT in joint ventures, and the balance 70.50 MMTPA in the private sector. Out of the 21 refineries operating in the country, 17 are in public sector, 3 in private sector, and 1 is a joint venture of BPCL and Oman Oil Company. The refinery capacity is further expected to increase to 214.07 MMTPA by the end of 2011-12. Refinery production (crude throughput) during 2010-11 had reached 206.15 MMT (including Jamnagar Refinery under a special economic zone [SEZ] by Reliance Industry Ltd.), showing an increase of 6.9 per cent compared to 192.77 MMT in 2009-10. During the current financial year (April-December 2011-12), refinery production was 158.26 MMT. The country is not only self-sufficient in refining capacity for its domestic consumption but also substantially exports petroleum products. During 2010-11, the country exported 59.13 MMT of petroleum products worth ₹ 1,96,112 crore.

## Pipeline Network and City Gas Distribution (CGD) Network

11.33 There has been substantial increase in the pipelines network in the country with 31 product pipelines of a length of 11,274 km and capacity of 69.19 MMT at present. The additional network of pipelines in crude, LPG, and gas distribution is shown in Table 11.7.

11.34 With increased availability of gas in the country, the network of city gas distribution (CGD) has been enlarged to cover various cities supplying gas for domestic consumers, public transport, and

**Table 11.7 : Pipeline Networks**

| Pipelines | Area (km) | Capacity |
|---|---|---|
| 16 crude pipelines | 8558 | 106.45 MMT |
| LPG pipelines | 2313 | 3.94 MMT |
| Gas pipelines | 13508 | 334 MMSCMD |
| Gas pipelines—capacity addition | 9300 | 264 MMSCMD |
| Gas pipelines Authorized by Petroleum and Natural Gas Regulatory Board | 4300 | 184 MMSCMD |

***Source*** **: Ministry of Petroleum and Natural Gas.**

commercial/ industrial entities. At present, there are a total of 588 CNG stations spread across the country. The current consumption of gas in the CGD network, operating in 43 geographic areas (GAs), is around 14 MMSCMD of which 6.63 MMSCMD is from regasified liquefied natural gas (RLNG). In Vision 2015, it is envisaged to provide piped natural gas (PNG) to more than 200 cities across the country. The Petroleum and Natural Gas Regulatory Board (PNGRB) has recently invited bids for authorization of CGD in these cities. The PNGRB has envisaged a roll-out plan of CGD network development through competitive bidding in more than 300 possible GAs on the basis of expressions of interest (EOI) submitted to the Board and on suo moto basis. During the Twelfth and Thirteenth Plans, the PNGRB has targeted a roll-out of CGD projects in 121 and 150 cities respectively.

### Rajiv Gandhi Gramin LPG Vitaran Yojana (RGGLVY)

11.35 Vision 2015 adopted for the LPG sector inter alia focuses on raising the population coverage of LPG in rural areas and areas where LPG coverage is low. The RGGLVY for small size LPG distribution agencies has been launched on 16 October 2009. Under this scheme 5.5 crore new LPG connections are to be released to cover 75 per cent population as LPG users by 2015. Public-sector oil marketing companies (OMCs) are assessing/ identifying locations in a phased manner under the RGGLVY. Advertisements inviting applications for distributorships under the scheme have been released by OMCs in 26 states. Letters of intent (LOI) has been issued for 1,377 locations out of which 782 distributors have already been commissioned. Selection for the rest of the locations is in progress.

### Free LPG Connections to BPL Rural Households

11.36 A proposal for release of one-time grant of ₹ 1400 to each BPL household for a new LPG connection up to a limit of 35 lakh families per year has been formulated by the Ministry of Petroleum and Natural Gas. One-half of this expenditure is to be borne out of gross budgetary support (GBS) and the remaining 50 per cent is to be borne partly from the corporate social responsibility (CSR) funds of the six major oil companies, i.e. ONGC, IOCL, BPCL, HPCL, OIL, and GAIL, and partly by the three oil marketing companies IOCL, BPCL, and HPCL in the ratio of LPG connections released to BPL families by each company. During 2011-12, a total of 8 lakh connections will be released. The financial implication for these 8 lakh connections is estimated at ₹ 112 crore.

## Coal

11.37 More than 90 per cent of the coal production in India is of non-coking coal. The production of raw coal during April-November 2011 was 307 million tonnes (MT), as against 320 MT in the same period of the previous year. Coking coal production during this period was 28.3 MT against a production of 28.7 MT during the same period last year. Both coking and non-coking coal registered a negative growth in production in the current year compared to a growth of 8.0 per cent in 2009-10. The lower growth in production during the current year and last year is primarily due to environmental restrictions, application of the comprehensive environmental pollution index (CEPI), non-availability of forestry clearance against some of the projects, poor law and order situation in some states and excessive rainfall in the coal-mining areas. Lower domestic production increased dependency on imports and in 2010-11, 68.9 MT of coal was imported.

11.38 The government had earlier approved formation of a special purpose vehicle (SPV), namely International Coal Ventures Limited (ICVL), with the participation of PSUs for acquisition of coal resources abroad. ICVL is also actively pursuing acquisition of coal assets in Australia and Indonesia. Proposals received from several countries are being reviewed and due diligence is being practised. ICVL is also participating in the bidding process for acquisition of equity in some undeveloped coal assets. However, no acquisition has so far been made. For increasing the output of washed coking and non-coking coal, Coal India Limited (CIL) has envisaged setting up of 20 new coal washeries for an ultimate raw coal throughput capacity of 111.10 MT per annum with an estimated capital investment of about Rs. 2,500 crore. These include seven coking coal washeries and 13 non-coking coal washeries.

11.39 Coal is largely sold through a notified price. An e-auction scheme has, however, been launched. Under e-auction, during 2010-11, CIL and Singareni Collieries Company Limited (SCCL) sold 45.6 MT and 2.6 MT of coal respectively. During April-December 2011, CIL offered 39.0 MT and sold 33.5 MT of coal through e-auction. The average price was 74 per cent above the notified price. Similarly during April-December 2011, SCCL offered and sold 4.1 MT of coal through e-auction, with average sale price being 113 per cent more than the notified price during the same period.

### Allocation of coal blocks

11.40 So far 218 coal blocks with geological reserves of about 50,000 MT have been allocated to eligible public and private companies under the Coal Mines (Nationalization) Act 1973. Out of these, 25 coal blocks were de-allocated. Of the de-allocated blocks, two were re-allocated to eligible companies under the said Act. Thus there are 195 net allocated blocks with geological reserves of about 44,230 MT. Sector-wise, the power sector has been allocated 81 coal blocks, iron and steel 63 blocks, commercial mining 40 blocks, and cement 6 blocks.

## Railways

11.41 The Ministry of Railways Vision 2020 document envisages the railway sector's share in the GDP to increase from the existing level of 1 per cent to about 3 per cent and its revenues to grow by 10 per cent annually over the next ten years. Some of the major goals set for 2020 in the document include (a) laying of 25,000 km of new lines; (b) quadrupling of the 6,000 km network with segregation of passenger and freight lines; (c) electrification of 14,000 km; (d) completion of gauge conversion; (e) upgradation of speed to 160-200 kmph for passenger trains; and (f) construction of 2,000 km of high-speed rail lines.

### Freight Performance of the Indian Railways

11.42 Freight loading on Indian Railways during April-November 2011 was 618.0 MT as compared to 593.4 MT in April-November 2010, an increase of 4.14 per cent (Table 11.8). This was short of the proportionate target of 644.6 MT by 26.6 MT. The low growth was primarily on account of relatively slow growth in core sectors of the economy. This was further compounded by negative growth in iron ore after the imposition of a ban on export of iron ore in Karnataka and the procedural problems in obtaining clearance from state governments.

### Rationalization of Railway Freight and Passenger Fare

11.43 There was no structural change in passenger fares and freight tariff during 2011-12. However, the rates of busy season charges and development surcharge were marginally enhanced with effect from 15 October 2011. While the busy season charge in the case of coal and coke was revised from 5 per cent to 10 per cent, in the case of other commodities it was increased from 7 per cent to 10 per cent. The rate of levy of development surcharge was revised from 2 per cent to 5 per cent in the case of all traffic.

### Rail Safety

11.44 Safety is the prime concern of Indian Railways and all possible steps are undertaken on a continual basis to prevent accidents and enhance safety. As a result, the number of consequential train accidents including cases of trespassing at unmanned level crossings came down from 415 in 2001-2 to 141 in 2010-11. A High Level Safety Review Committee was constituted on 16 September 2011 under the chairmanship of Dr Anil Kakodkar, former Chairman, Atomic Energy Commission and Secretary, Department of Atomic Energy, to look into all technical and technology-related aspects in connection with safe running of train services in the country.

11.45 In order to increase efficiency and enhance safety in train operations, electrical/electronic interlocking along with the multi-aspect colour light signalling system in replacement of the outdated mechanical/ multi cabin system was provided at 154 stations during April-November, 2011. To improve reliability and visibility of signals, outdated filament-type signals were replaced with durable light emitting diode (LED) signals at 245 stations during April-November, 2011. In addition 329 stations were provided with data loggers during this period. Automatic clearance of block sections was also provided at 275 sections through axle counters during April-November, 2011. These initiatives are

**Table 11.8 : Performance of Indian Railways.**

| | | | (April – November) | | | |
|---|---|---|---|---|---|---|
| | | | | | Change (per cent) | |
| Particulars | 2009-10* | 2010-11* | 2010-11* | 2011-12*(prov.) | 2010-11 | 2011-12 |
| 1. Total revenue earning freight traffic (MT) | 887.8 | 921.7 | 593.4 | 618.0 | 3.8 | 4.1 |
| i) Coal | 396.2 | 420.4 | 270.4 | 288.5 | 6.1 | 6.7 |
| ii) Raw materials for steel plants (except iron ore) | 11.6 | 13.3 | 8.3 | 9.4 | 14.7 | 12.4 |
| iii) Pig iron & finished steel | | | | | | |
| i) from steel plants | 24.2 | 24.1 | 16.0 | 17.0 | -0.5 | 6.4 |
| ii) from other points | 7.7 | 8.8 | 4.6 | 4.8 | 14.1 | 4.6 |
| iii) Total | 31.9 | 32.8 | 20.6 | 21.8 | 3.0 | 6.0 |
| iv) Iron ore | | | | | | |
| i) for export | 43.6 | 25.7 | 17.2 | 8.8 | -41.2 | -48.9 |
| ii) for steel plants | 44.3 | 44.7 | 28.7 | 34.0 | 0.8 | 18.2 |
| iii) for other domestic users | 44.8 | 48.1 | 30.6 | 27.0 | 7.4 | -11.7 |
| iv) Total | 132.7 | 118.5 | 76.5 | 69.8 | -10.8 | -8.9 |
| v) Cement | 93.2 | 99.1 | 63.1 | 68.4 | 6.4 | 8.4 |
| vi) Foodgrains | 38.7 | 43.5 | 26.2 | 28.8 | 12.3 | 9.7 |
| vii) Fertilizers | 43.7 | 48.2 | 33.2 | 33.1 | 10.4 | -0.3 |
| viii) POL | 38.9 | 39.3 | 26.4 | 27.2 | 1.1 | 2.9 |
| ix) Container service | | | | | | |
| i) Domestic containers | 9.6 | 11.0 | 6.7 | 5.9 | 14.3 | -11.1 |
| ii) EXIM containers | 25.3 | 26.6 | 17.7 | 18.8 | 5.0 | 6.4 |
| iii) Total | 35.0 | 37.6 | 24.4 | 24.8 | 7.6 | 1.6 |
| x) Balance (other goods) | 66.1 | 69.2 | 44.4 | 46.4 | 4.6 | 4.6 |
| 2. Net tonne km (billion) | 600.6 | 625.7 | 393.1 | 410.4 | 4.2 | 4.4 |
| 3. Net tonne km/wagon/day (BG )@ | 9022.0 | 9247.0 | 8844.0 | 9081.0 | 2.5 | 2.7 |
| 4. Passenger traffic org. (million) | 7245.8e | 7651.1e | 5243.9$ | 5518.6$ | 5.6 | 5.2 |
| 5. Passenger km (billion) | 903.5 | 978.5 | 668.0 | 711.0 | 8.3 | 6.4 |

***Source*** **: Ministry of Railways.**

**Notes :** **POL stands for petroleum, oil and lubricants; EXIM is export-import;**
***- Excluding Konkan Railway loading; e - Excluding Metro Kolkata;**
**@- Calculated in terms of 8 wheelers;**
**$- Including Metro Kolkata, BG- Broad Gauge**

expected to reduce dependence on the human element and enhance safety. Six anti-collision devices (ACD) works have been sanctioned on Eastern, East Central, East Coast, South Eastern, Southern, and South Central Railways covering 6,750 route km.

## Upgradation of passenger amenities

11.46 In order to upgrade passenger amenities, 845 stations have so far been selected for development as Adarsh stations. Till December 2011 450 Adarsh stations had been completed with basic facilities such as drinking water, adequate toilets, catering services, waiting rooms and dormitories especially for lady passengers. The computerized passenger reservation system (PRS) of Indian Railways is the largest passenger reservation network in the world, available at 2,829 locations. On an average 4.44 crore passengers per month are booked through PRS network with an average earning of ₹ 1,823.75 crore per month. Indian Railways has tied up with India Post for providing the PRS facility through post offices and it is currently functional at 149 such post offices.

11.47 The Computerized unreserved ticketing system (UTS) is available at 5,121 locations with over 9,000 counters provided until end November 2011. Automatic ticket vending machines have also been installed at 630 locations. The freight operations information system (FOIS) implemented at 263 locations, covers all major yards/lobbies and control offices at divisions and zones. Further, as a major passenger-friendly move, Indian Railways opened the first phase of the real train information system (RTIS) in October 2011 to public for accurate train tracking, thus heralding a new era of application of advanced communication and information technologies in various Railway-related activities.

## Development of Multifunctional Complex (MFC)

11.48 A new concept of development of MFCs with budget hotels was introduced in the Rail Budget 2009-10, so that important facilities may be available to rail users in a separate complex in the vicinity of the circulating area on station premises. A total of 198 stations have been identified since 2009-10 (67 in 2009-10, 93 in 2010-11, and 38 in 2011-12) for development of MFCs. The task of development has been assigned to zonal Railways and various executing agencies under the Ministry of Railways. So far 22 MFCs have been completed. The process of leasing/ licensing of these MFCs is presently under way.

## Modernization of Indian Railways

11.49 In a major move to give further impetus to Railways' modernization plans, an Expert Group has been constituted under the Chairmanship of Shri Sam Pitroda to recommend ways and means of meeting the challenges of economic growth, the aspirations of the common man, the needs of changing technology, and the expanding market, while at the same time ensuring adequate focus on addressing the social and strategic requirements of the country consistent with Indian Railways' national aspirations. The terms of reference of the Group involve outlining strategies for modernization of Railways with focus on track, signalling, rolling stock, stations and terminals upgradation; using ICT for improving efficiency and safety; augmenting existing capacities of Railways through indigenous development; reviewing projects; and addressing PPP issues. The Expert Group is expected to submit its report by 31 March 2012.

## Dedicated Freight Corridor (DFC) Project

11.50 The DFC Project envisaging a Western DFC (1,499 km) from Mumbai to Rewari/Dadri to cater largely to the container transport requirement and an Eastern DFC (1,839 km) from Dankuni to Ludhiana, largely to serve coal and steel traffic is being implemented by the Dedicated Freight Corridor Corporation of India Ltd. (DFCCIL), a PSU under the Ministry of Railways. The project is being implemented through a mix of bilateral/ multilateral debt, budgetary support, and PPP, with a debt equity ratio of 2:1. Major portions of Western Corridor are being funded with Japanese assistance and Eastern Corridor with World Bank assistance. Construction work has commenced in both the corridors. The corridors are targeted for completion in the terminal year of the Twelfth Plan. With the commissioning of the Eastern and Western DFCs, capacity on existing Eastern and Western Indian Railways routes would be released for smoother flow of passenger traffic.

11.51 It is planned to upgrade the speed of passenger trains to 160-200 kmph on these existing routes. A pre-feasibility study for upgradation of speed of passenger trains to 160-200 kmph on the existing Delhi-Mumbai route is being undertaken by the Government of Japan in 2011-12. The Government of Japan will undertake the feasibility study of this route in 2012-13. Further, preliminary engineering-cum-traffic survey work has been awarded for the four future DFCs, namely North-South Corridor (Delhi-Chennai), East-West Corridor (Kolkata-Mumbai), East Coast Corridor (Kharagpur-Vijayawada), and Southern Corridor (Chennai-Goa).

## Railway Electrification

11.52 The target for electrification during the Eleventh Five Year Plan was revised in the Mid Term Review from 3,500 to 4,500 route kilometres (RKM). In the first four years of the Plan, 3,391 RKM has been electrified with an expenditure of ₹ 2,621 crore. During 2011-12, a target of 1,110 RKM with an outlay of ₹ 978 crore has been kept. During April-November 2011, 288 RKM has been electrified. To optimize the operational expenditure by obtaining electricity at economical tariffs, Indian Railways plans to set up its own captive thermal power plants. Railways, in partnership with the National Thermal Power Corporation (NTPC), is setting up 1000 MW and 1320 MW thermal power plants at Nabinagar in Bihar and at Adra in Purulia district of West Bengal respecively. Another captive power plant of 700 MW capacity at Thakurli, Maharashtra, has also been planned.

### Policy Initiatives for attracting private capital

11.53 In order to attract private capital for accelerated construction of fixed rail infrastructure, the Ministry of Railways has formulated PPP investment models for its existing shelf of projects and new projects. The Ministry is in the process of finalizing a comprehensive draft policy containing six models for specific categories of projects. Once finalized, the policy would replace the existing Railways Infrastructure for Industry Initiative (R3i) and Railways Policy for Connectivity to Coal and Iron Ore Mines (R2CI) policies for private investments in rail connectivity projects.

## Roads

### National Highways Development Project (NHDP)

11.54 About 22 per cent of the total length of National Highways (NHs) is single lane/ intermediate lane, about 53 per cent is two lane standard, and the balance 25 per cent is four lane standard or more. In 2011-12, the achievement under various phases of the NHDP up to December, 2011 has been about 1,250 km and projects have been awarded for a total length of about 4,374.9 km. The status of the NHDP as on December 2011 is given in Table 11.9.

#### *Financing of the NHDP*

11.55 A part of the fuel cess imposed on petrol and diesel is allocated to the NHAI for funding the implementation of the NHDP. The NHAI leverages the cess flow to borrow additional funds from the debt market. Till date, such borrowings have been limited to funds raised through 54 EC (capital gains tax exemption) bonds and the short-term overdraft facility. Government has also taken loans for financing projects under the NHDP from the World bank (US$ 1,965 million), Asian Development Bank (US$ ,1605 million) and Japan Bank for International Cooperation (32,060 million yen) which are passed

**Table 11.9 : NHDP Projects as on December 2011**

| Sl. No. | NHDP components | Total Length km) | Completed 4/6 Lane (km) | Under implementation | | Balance for Award of Civil Work (km) |
|---|---|---|---|---|---|---|
| | | | | Length (km) | No. of Contracts | |
| 1 | GQ | 5846 | 5831 | 15 | 8 | - |
| 2 | NS-EW | 7142 | 5914 | 803 | 76 | 420 |
| 3 | Port connectivity | 380 | 341 | 39 | 4 | - |
| 4 | Other NHs | 1390 | 946 | 424 | 5 | 20 |
| 5 | SARDP-NE | 388 | 5 | 107 | 2 | 276 |
| 6 | NHDP Phase III | 12,109 | 3024 | 6514 | 90 | 2572 |
| 7 | NHDP Phase IV | 20,000 | - | 2549 | 18 | 17,451 |
| 8 | NHDP Phase V | 6500 | 709 | 2768 | 22 | 3023 |
| 9 | NHDP Phase VI | 1000 | - | - | - | 1000 |
| 10 | NHDP Phase VII | 700 | 7 | 41 | 2 | 659 |
| | **Total** | **55,455** | **16777** | **13265** | **227** | **25,421** |

***Source*** **: Ministry of Road Transport and Highways (MoRT&H).**

**Notes: GQ—Golden Quadrilateral connecting Delhi, Mumbai, Chennai, and Kolkata; NS-EW—North-South and East-West corridor; SARDP-NE—Special Accelerated Road Development Programme in the North-Eastern Region.**

**Table 11.10 : Financial Structure of the NHAI**

(₹ crore)

| Year | Cess Fund | External Assistance Grant | External Assistance Loan | Borrowings 54-EC Bonds | Budgetary Support |
|---|---|---|---|---|---|
| 2005-6 | 3269.70 | 2350.00 | 600.00 | 1289.00 | 802.00 |
| 2006-7 | 6407.45 | 1582.50 | 395.50 | 1500.00 | 570.67 |
| 2007-8 | 6541.06 | 1776.00 | 444.00 | 305.18 | 559.00 |
| 2008-09 | 6972.47 | 1515.00 | 378.80 | 1630.74 | 159.00 |
| 2009-10 | 7404.70 | 272.00 | 68.00 | 1153.63 | 200.00 |
| 2010-11 | 8440.94 | 320.00 | 80.00 | 2138.10 | 843.00 |
| 2011-12* | 6187.00 | - | - | 1531.35 | 570.01 |

*Source*: MoRTH. Note: * up to December 2011.

on to the NHAI partly in the form of grants and partly as loan. The NHAI has also availed a direct loan of US$ 149.78 million from the ADB for the Manor Expressway Project (Table 11.10).

## Special Accelerated Road Development Programme for North-East region (SARDP-NE)

11.56 The SARDP-NE aims at improving road connectivity to state capitals, district headquarters, and remote places of the north-east region. It envisages two /four laning of about 4,798 km of NHs and two laning/ improvement of about 5,343 km of state roads. This will ensure connectivity of 88 district headquarters in the north-eastern states through two-lane NHs / two-lane state roads. The programme has been divided into Phase A and Phase B and the Arunachal Pradesh package of Roads & Highways.

11.57 With the approval of the Cabinet Committee on Infrastructure (CCI) on 8 April 2010 for transfer/ addition of 1,503 km roads to Phase A of the SARDP-NE, Phase A now consists of improvement of 4,099 km of roads consisting of 2,041 km of NHs and 2,058 km of state roads at an estimated cost of ₹ 21,769 crore. Out of the 4,099 km, the Border Roads Organisation (BRO) and state PWDs have been assigned the development of 3,213 km. The remaining length of 886 km will be built by the NHAI, Ministry / Arunachal Pradesh PWD, and BRO after investment approval is received from the CCI. Out of the 3,213 km, projects covering a length of 2,271 km have been approved till December 2011. All these works are in different stages of progress. Phase B has now been modified to cover two laning of 1,285 km of NHs. Further approval for preparation of detailed project reports (DPR) for two laning / improvement of 2,438 km of state roads has also been given. Till December 2011, a DPR was prepared for 450 km road length.

11.58 The Arunachal Package covering 2,319 km stretch of road was approved by the government as part of the SARDP-NE on 9 January 2009. Of this, 776 km has been approved for execution on build operate transfer (BOT) (annuity) basis and the remaining for tendering on engineering procurement construction (EPC) basis. Three projects under BOT (annuity) for 369 km length have been awarded and the award for the remaining two projects covering 407 km is under process. For other stretches to be taken up on EPC basis, estimates have been sanctioned / DPR is under process.

## Initiatives for development of the entire NH network to minimum acceptable two-lane standards

11.59 The Eleventh Plan had envisaged accelerated efforts to bring the NH network up to a minimum two-lane standard by the end of the Twelfth Plan and for removing existing deficiencies. The MoRTH has proposed a World Bank loan and budgetary allocations to reach this goal by December 2014. Consultants have been engaged for preparation of a DPR for about 3,800 km road length proposed to be developed under World Bank assistance. The MoRTH has also initiated action for improvement of the remaining 2,500 km of single- intermediate-lane NHs through budgetary resources. In order to make a visible impact, the work would be taken up for upgradation on a corridor concept. These corridors would include strengthening (in adjoining reaches) in addition to widening to two-lane/two-lane with paved shoulder standards in order to have better facility over long continuous stretches.

11.60 In general, the larger stretches costing more than ₹ 150 crore have been taken up with loan assistance from the World Bank under the National Highways Interconnectivity Improvement Programme (NHIIP). The smaller stretches costing less than ₹ 150 crore have been taken up through budgetary support. In this category, a 2,200 km length (50 projects) with an estimated cost of ₹ 6,000 crore has been taken up. DPRs are prepared by state PWDs and the estimates are directly submitted by them to the MoRTH for sanction. 34 projects with a length of 1,564 km costing ₹ 4,196.14 crore has been sanctioned under the NH(O). Projects with a length of 1,516 km amounting to ₹ 4,071.64 crore have already been awarded. The remaining projects are at tender stage.

## Development of roads in Left Wing Extremism (LWE)-affected areas

11.61 The government on 26 February 2009 approved the Road Requirement Plan (RRP) for development of 1,126 km NHs and 4,351 km state roads (total 5,477 km) to two-lane at a cost of ₹ 7,300 crore in 34 LWE-affected districts in the states of Andhra Pradesh, Bihar, Chhattisgarh, Jharkhand, Madhya Pradesh, Maharashtra, Odisha, and Uttar Pradesh. The MoRT&H has been entrusted with the responsibility of developing roads in LWE-affected areas of the country. Implementation of the programme has been taken up through respective state public works departments (PWDs). As of now detailed estimates for 5,339 km length have been sanctioned at an estimated cost of ₹ 7,273 crore, out of which works on 4,288 km length costing ₹ 5,390 crore have been awarded. Development in 848 km length has been completed up to December 2011 and cumulative expenditure incurred so far is ₹ 1,363 crore.

11.62 For strengthening, RRP II consisting of 370 works covering a length of 8,014 km costing ₹ 10,700 crore has also been finalized by the Ministry of Home Affairs. The process for approval of RRP II has been initiated by this Ministry. On 4 November 2010, government approved 600 km of state roads in Odisha out of the 1,632 km long LWE-affected Vijayawada-Ranchi route, at a cost of ₹ 1200 crore. This road is not covered under any central or state scheme. The total length has been divided into seven packages based on the location of stretches, status of land acquisition, and preparation of the DPRs. So far detailed estimates for 451 km length have been sanctioned at an estimated cost of ₹ 828 crore, out of which, works on 199 km length costing ₹ 337 crore have been awarded. Cumulative expenditure incurred up to December 2011 is ₹ 42 crore.

## Prime Minister's Reconstruction Plan (PMRP) for Jammu and Kashmir

11.63 The Prime Minister announced a Reconstruction Plan (PMRP) for Jammu and Kashmir during his visit to the state on 17 and 18 November 2004. The Plan incorporates a total seven works amounting to approximately ₹ 3300 crore, namely construction of Mughal Road, widening of Domel-Katra road (NH1C), double laning of Batote-Kishtwar-Sinthanpass-Anantnag Road (NH1B), upgrading of Srinagar-Uri Road (NH1A), construction of Khanabal-Pahalgam Road, construction of Narbal-Tangmarg Road and double laning of Srinagar-Kargil-Leh Road (NH1D). Till now, an expenditure of around ₹ 2,300 crore has been incurred on the PMRP. Further, ₹ 243 crore has been allocated for Jammu and Kashmir for the works being executed on national highways through the BRO. For the works on the state and other district roads (ODR) under Central Road Fund (CRF) and Inter State Connectivity /Economic importance (ISC/EI) ₹ 121 crore has been allocated.

## Construction of rural roads under the Pradhan Mantri Gram Sadak Yojna (PMGSY)

11.64 The PMGSY was launched to provide single all-weather road connectivity to eligible unconnected habitations having population of 500 persons and above in plain areas and 250 persons and above in hill states, tribal (Schedule V) areas, desert (as identified in the Desert Development Programme) areas, and LWE-affected districts as identified by the Ministry of Home Affairs. Under the programme, up to January 2012, about 4.41 lakh km roads to benefit 1,14,433 habitations have been cleared with an estimated cost of ₹ 1, 26,937 crore . A sum of ₹ 96,952 crore has been released to the states/ union territories (UTs) and about ₹ 88,931 crore has been spent. So far 3,41,257 km road length has been completed and new connectivity has been provided to over 82,019 habitations. Work on a road length of about 98,399 km is on full swing.

11.65 Rural roads has also been identified as one of the six components of Bharat Nirman which has the goal of providing all-weather road connectivity to all villages with a population of 1,000 (500 in the case of hilly or tribal areas). Bharat Nirman proposes to provide new connectivity to a total of 54,648 habitations, involving construction of 1, 46,184 km of rural roads. In addition to new connectivity, Bharat Nirman envisages upgradation/renewal of 1, 94,130 km of existing rural roads. Under the rural roads component of Bharat Nirman, 42,531 habitations have been provided all-weather road connectivity up to January 2012 and projects for connecting 15,856 habitations are at different stages. During 2011-12 (Apr.-Jan.), over 15,566 km all-weather road has been completed under the programme. This has provided connectivity to 2,579 habitations at an expenditure of ₹ 8,380 crore.

## Civil Aviation

### Air passenger and cargo traffic

11.66 Air traffic in India continues to register significantly higher rates of growth averaging 18.5 per cent in the last seven years. Domestic passenger traffic handled at Indian airports reached 108.1 million during January-November 2011 from a level of 90.5 million in the corresponding period in the previous year registering a growth of 19.4 per cent. International passenger traffic and cargo handled at Indian airports grew by 7.7 per cent during January-November 2011 and was placed at 33.6 million passengers and 1.4 MMT of cargo. Domestic cargo throughput during January-November 2011 stood at 0.75 MMT, the same level as in the previous year.

### Airport Infrastructure

11.67 In 2011, airport infrastructure development continued at a significant pace. Upgradation of Kolkata and Chennai airports, including construction of new terminals, is at an advanced stage of completion. In another 18 non-metro airports, various upgradation works like expansion of terminal buildings, aprons, taxiways, and aerobridges have been taken up. For improving air navigation services, the Airport Authority of India (AAI) installed the new ATS automation system at Chennai. The Government approved a one-time grant-in-aid of ₹ 378.0 crore to the AAI for the Final Operation Phase of GPS Aided GEO Augmented Navigation (GAGAN) project. At IGI Airport, Delhi, upgradation of the existing cargo terminal and construction of a Greenfield cargo terminal have been undertaken. At Mumbai Airport, apart from the airport development project under way, upgradation of runway 09/27 was completed. In order to meet the requirements of increasing traffic, work relating to expansion of the terminal building and apron was undertaken at Bangalore International airport. Government also gave 'in-principle' approval for setting up of a greenfield airport at Karaikal in Puducherry and Shirdi in Maharashtra.

### New Initiatives

11.68 In order to address issues concerning viability of the civil aviation sector, particularly the airline industry, a Working Group was constituted on 12 December 2011 under the chairmanship of the Secretary civil aviation. This Group has recommended that state governments rationalize the value added tax (VAT) on aviation turbine fuel (ATF), foreign airlines be permitted to invest in domestic airlines undertakings, and direct import of ATF by airlines for their own consumption be allowed. The Working Group also decided that airlines should be asked to prepare their turnaround plans, which would be examined by the concerned departments of the government separately for each airline. Another recommendation was that fare structure should be reviewed by airlines so as to cover the cost of their operations. The Working Group also decided that an economic regulatory framework may be formulated with regard to excessive/predatory pricing by 31 May 2012.

## Telecommunications

11.69 The Indian telecom sector has witnessed tremendous growth over the past decade. Today, the Indian telecom network is the second largest in the world after China. A liberal policy regime and involvement of the private sector have played an important role in transforming this sector. The total number of telephones has increased from 429.73 million on 31st March 2009 to 926.55 million on 31st December 2011(Table 11.11).

11.70 The growth of wireless connections has been phenomenal, reaching 893.86 million connections at the end of December 2011. As a result, the share of wireless telephones has increased from 80.3 per cent in March 2007 to 96.4 per cent in December 2011. However, the growth of wire line connections has been decreasing every year. Improved affordability of wireless phones has made the universal access objective more feasible. The liberalization efforts of the government are evident in the growing share of the private sector in total telephone connections. As against a meagre 5 per cent in 1999, the share of private operators has increased to 86 per cent in December 2011. A competitive stimulus provided by a liberal policy

**Table 11. 11 : Telephone connections**

**(in millions)**

| | March 2009 | March 2010 | March 2011 | Dec. 2011 |
|---|---|---|---|---|
| Wireline | 37.96 | 39.96 | 34.73 | 32.69 |
| Wireless | 391.76 | 584.32 | 811.60 | 893.86 |
| Gross total | 429.73 | 621.28 | 846.33 | 926.55 |
| Annual growth (%) | 43.0 | 44.6 | 36.2 | 9.48 |

***Source*: Department of Telecommunications.**

regime has increased telecom penetration together with a substantial reduction in tariffs.

11.71 Teledensity is an important indicator of telecom penetration in the country. Teledensity has increased from 18.2 per cent in March 2007 to 76.86 per cent in December 2011. Teledensity varies across circles and there is significant urban-rural divide. While urban teledensity reached 167.4 per cent at the end of December 2011, rural teledensity was only 37.5 per cent. At circle levels also, while some circles such as Delhi (235.6 per cent), Mumbai (188.95 per cent), Kolkata (168.45 per cent), Chennai (170.18 per cent), and Himachal Pradesh (118.63 per cent) have high teledensity, in some circles such as Bihar (47.17 per cent) and Assam (45.85 per cent), it is very low. Steps have been undertaken to improve teledensity, particularly in rural areas.

11.72 Recognizing the potential of broadband services in growth of GDP and in creation of an enabling environment for promoting a knowledge-based society, government had announced a broadband policy in 2004. Several measures have since been taken to promote broadband usage in the country. As a result, there were 13.30 million broadband subscribers as on 31 December 2011 and 20.99 million internet subscribers at the end of March 2011. However, broadband has lagged behind the growth of telephones in India. Special efforts are being made to increase its penetration, especially in rural and remote areas.

11.73 The Universal Service Obligation Fund (USOF) was established with the fundamental objective of providing people in rural and remote areas access to 'basic' telephony services at affordable prices. Subsequently its scope was widened to provide subsidy support for enabling access to all types of telephony services including mobile services and broadband connectivity and for creation of infrastructure like optical fibre cables (OFC) in rural and remote areas. Various schemes under implementation for taking communication facilities to rural and remote areas with the support of the USO fund are as follows:

- In all 5,79,889 villages, i.e. about 97.69 per cent of the Census 2001 inhabited revenue villages, have been covered with village public telephone (VPT) facility as on 31st December 2011. VPT facility is likely to be provided in the remaining inhabited revenue villages by August 2012.
- Setting up and managing of 7,353 infrastructure towers in 500 districts spread over 27 states for provision of mobile services in specified rural and remote areas is being done. Till December 2011, 7,296 of them (99 per cent) had been set up.
- In order to provide broadband connectivity to rural areas, the USOF signed an agreement with Bharat Sanchar Nigam Limited (BSNL) on 20 January 2009 to provide 8,88,832 wire-line broadband connections to individual users and government institutions and set up 28,672 kiosks over a period of five years. As on 31st December 2011, 3,38,617 broadband connections and 6426 kiosks had been provided under this scheme in rural and remote areas.
- Another scheme has been launched under the USOF to provide sufficient back-haul capacity to integrate voice and data traffic from the access network in rural areas to their core network by strengthening the OFC network. This scheme considers OFC network augmentation between the block headquarters and District headquarters to begin with. The USOF, through this scheme, shall provide subsidy support for augmentation, creation, and management of intra-district OFC network on the condition that it will be shared with other telecom operators at the rates prescribed in the agreement. Assam has been taken up first for implementation.
- Recognizing the vital role that information communication technology (ICT) can play in the empowerment of rural women, a scheme called Sanchar Shakti has been launched in March 2011 for pilot projects aimed at facilitating access of self-help groups (SHGs) to ICT-enabled services. Financial support from the USO Fund is to be provided towards value added services (VAS) subscriptions for SHGs in accordance with the provisions of underlying subsidy agreements. At present memorandums of understanding (MoUs) have been signed for proof of concept (PoC) for nine mobile VAS projects in the states of Tamil Nadu, Kerala, Maharashtra, Uttar Pradesh, Uttarakhand, Andhra Pradesh, Rajasthan, and the Union Territory of Puducherry.

## Other Major Initiatives

11.74 Government has approved a project for a national optical fibre network in October 2011 for providing broadband connectivity to all 2.5 lakh gram panchayats at a cost of ₹ 20,000 crore. The network will provide connectivity to various public institutions like gram panchayats, primary health centres (PHCs), and schools in rural areas. It will also result in investment from the private sector both for providing different services and for manufacturing of broadband-related telecom equipment. The project will be funded by the USOF. The third-generation (3G) and broadband wireless access (BWA) auctions that took place last year are expected to act as catalysts for enabling internet access to even the remotest parts of India and further boost the use of mobile broadband and mobile data as well as applications. The upcoming decade will usher in an information era through mobile value added services (MVAS) and 'broadband for all'.

### Manufacturing of Telecom Equipment

11.75 The government is supporting the domestic equipment manufacturing industry and growth of indigenous technology. In partnership with industry, it is building a conducive ecosystem to boost the equipment-manufacturing sector that can compete with the best in the world. With the above initiatives India is expected to be a manufacturing hub for telecom equipment. To promote indigenous research and development (R&D) and manufacturing to become self-reliant in the telecom/ICT equipment manufacturing sector, various strategies have been proposed in the Draft National Telecom Policy (see Box 11.1). In order to ensure focused indigenous development in the telecom sector, efforts would be concentrated in a definite policy direction by creating a suitable roadmap for aligning technology, demand, standards, and regulations after considered evaluation of candidate technologies and emerging trends. It is proposed to set up a fund for promoting indigenous R&D, intellectual property rights (IPR) creation, manufacturing and deployment of state-of-the-art telecom products. Emphasis will be given to creation of Indian IPRs which go into international standards as well as to product manufacturing in implementation of major programmes and projects as a vehicle for developing Brand India.

## PORTS

### Cargo Traffic at Indian Ports

11.76 During April-September 2011, major and non-major ports in India handled a total cargo throughput of 446.1 MT reflecting an increase of 4.6 per cent over the same period last year. The rate of growth of cargo handled at 12 major ports improved from

### Box 11.1 : Draft National Telecom Policy (NTP)

The Government is in the process of finalizing the new National Telecom Policy. Draft of the policy was circulated in 2011 for consultation with various stake holders. Views/Comments from these stake holders have been received and the same are under consideration. NTP is likely to be in place by June 2012. The Draft NTP proposes to provide a stable, rational, and objective policy regime over the next decade or so and contains the following salient features:

- To make available secure, reliable and affordable voice telephony and high speed broadband services to every citizen in India with special focus on rural and remote areas.
- To improve the broadband experience by enhancing the speed of delivery.
- To make India a global hub of manufacturing for all electronic products including telecom equipment with substantial value addition with in the country and safeguard security concerns of the nation.
- For simplification and rationalisation of licensing regime, transparent system for allocation of spectrum and enable efficient usage of spectrum.
- For discovery of price of spectrum through market related processes.
- To achieve One Nation- Full Mobile Number Portability.
- To enable free roaming throughout the country.
- To harness full potential of mobile phones for enabling provision of citizen centric services related to education, health, employment, agriculture, entertainment, banking & insurance services, skil upgradation, vocational training etc.
- To encourage indigenous manufacture of cost effective mobile devices.
- The faster roll out of high speed and reliable broadband in rural and urban areas will enable decentralised governance, participative democracy and delivery of basic services such as health and education to every citizen of the country. The thrust on manufacturing will promote entrepreneurship, create more job opportunities, reduce imports and improve security. Efficient usage of scarce resources like spectrum will result in better quality of service to the customers at affordable cost.
- The new policy regime will be beneficial to end consumers/citizens, Telecom Service Providers, Value Added Service Providers, Government and Manufacturers.

1.2 per cent in April-September 2010 to 3.1 per cent in April-September 2011. There was, however, a deceleration in growth of cargo handled at non-major ports, from 22.2 per cent in April-September 2010 to 7.2 per cent in April-September 2011. Out of 12 major ports, growth in cargo throughput at Ennore port was the highest at 39.5 per cent, followed by Tuticorin (13.7 per cent) and Visakhapatnam (10.9 per cent). Other major ports that clocked positive growth in the 5-10 per cent range were Cochin, Paradip, and New Mangalore. In contrast, three major ports, Chennai (-8.2 per cent) on the East coast and Mormugao (-7.8 per cent) and Mumbai (-2.6 per cent) on the West Coast showed contraction in cargo throughput.

## Commodity-wise Cargo Traffic at Major Ports

11.77 Energy imports consisting of POL and coal constituted 47 per cent of the total cargo traffic at major ports during the first half of 2011-12. In terms of commodity-wise traffic at 12 major ports, growth in cargo at major ports during the first half of 2011-12 was driven by increase in four broad categories, namely 18.5 per cent in thermal coal, 11.4 per cent in fertilizer raw material, 8.4 per cent in containers, and 7.3 per cent in other cargo. Iron ore and finished fertilizers witnessed a contraction by 4.4 MT and 2.9 MT respectively. During April-September 2011, total Container traffic at major ports increased both in terms of tonnage and twenty foot equivalent units [TEUs] by 8.4 per cent and 5.2 per cent respectively. Jawahar Lal Nehru Port (JNPT) continued to be the leading container-handling port in the country with a share of about 48 per cent in terms of tonnage and more than 55 per cent in terms of TEUs in the total container traffic at major ports

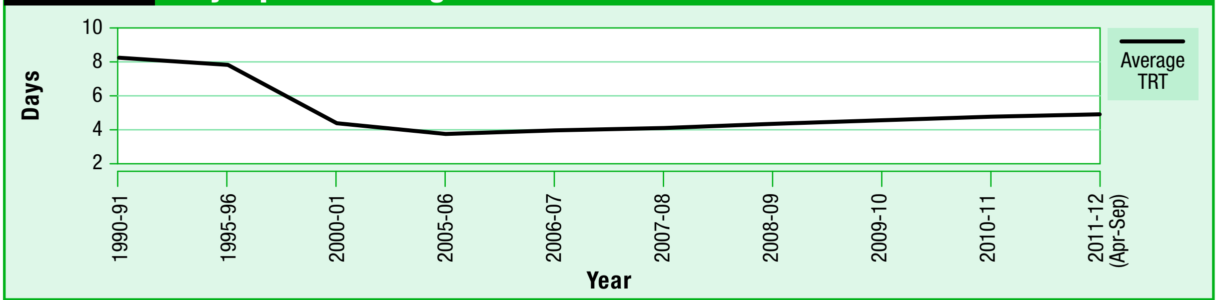
## Cargo Traffic at Non - major Ports

11.78 During the first four years (2007-11) of the Eleventh Five Year Plan, traffic at non-major ports increased at an annual average rate of close to 14.5 per cent. The growth, however, moderated to 7.2 per cent in the first half of 2011-12 but it remained significantly above the growth of major ports. Non-major ports handled more than 37 per cent of total maritime freight traffic of the country during April-September 2011. The growth in cargo handled at non-major ports has been facilitated by sustained growth in non-major ports located in Maharashtra and Gujarat aided by substantial increase in the cargo traffic of coal, building material, and fertilizers. The growing importance of non-major ports in handling cargo traffic has helped alleviate the congestion at major ports. Gujarat accounted for more than three-fourths of the total traffic handled by non-major ports followed by Andhra Pradesh (13 per cent), Maharashtra (5 per cent), and Goa (3 per cent). Four maritime states, namely Gujarat, Maharashtra, Goa, and Andhra Pradesh together accounted for close to 97 per cent of the total cargo traffic handled by the non-major ports in the current year.

## Port Efficiency

11.79 Efficiency at ports has an important bearing on the transaction cost of shipping lines. Major ports have improved their efficiency of operations, particularly in terms of turnaround time (TRT). TRT is the total time spent by a ship at the port from its entry until its departure. Average TRT for all major ports improved from 8.10 days in 1990-1 to 4.63 days in 2009-10. During 2010-11, the TRT ranged between 2.20 days at Cochin port to 7.73 at Paradip. Amongst the 12 major ports, improvement in TRT during 2010-11 in comparison to 2009-10 was discernible in the cases of Kolkata Dock System and Haldia Dock Complex at Kolkata port, Paradip, and New Mangalore. Improvement in average TRT at major ports for select years since 1990-1 to 2010-11 is presented in the Figure 11.2 .

**Figure 11.2 Major ports: Average TRT**



### Eleventh Five Year Plan target

11.80 The Eleventh Five Year Plan envisaged an increase in capacity of major port to 1,016.55 MT by the end of 2011-12 from the pre-Plan base level of 504.75 MT. Average annual growth in capacity addition was envisaged at 15 per cent. Actual capacity addition in first three years of the Plan, however, was moderate and showed a growth of 7.3 per cent per annum. Cargo-handling capacity at major ports at the end of March 2011, therefore, increased to 670.1 MT.

### Maritime Agenda 2010-2020

11.81 In the Maritime Agenda 2010-20, a target of 3,130 MT port capacity has been set for the year 2020. More than 50 per cent of this capacity is to be created in the non-major ports as the traffic handled by these ports is expected to increase to 1,280 MT. The objective of the Maritime Agenda is not only creating more capacity but setting up ports on a par with the best international ports in terms of performance. This enlarged scale of operation is expected to reduce transaction costs considerably and make Indian ports globally competitive. The total proposed investment in major and non-major ports by 2020 is expected to be around ₹ 2,96,000 crore (including 72 ongoing projects worth around ₹ 18,000 crore). Most of this investment has to come from the private sector including foreign direct investment (FDI). FDI up to 100 per cent under the automatic route is permitted for construction and maintenance of ports. Private-sector participation will not only increase investment in the ports infrastructure, it is expected to improve operations of the ports through the induction of the latest technology and better management practices. Public funds will be mainly deployed for common use infrastructure facilities like deepening of port channels, rail and road connectivity from ports to hinterland, etc.

### Private-sector Participation

11.82 Maritime Agenda 2010-20 has estimated that investment required in new projects of major ports will be Rs1,09,449.4 crore, of which Rs72,878.2 crore is expected to come from private-sector participation and the balance ₹ 36,571.2 crore to be funded through internal and extra budgetary resources (IEBR) and government budgetary support. States have also identified projects for development of non-major ports at an estimated cost of ₹ 1,67,930.8 crore for creation of additional capacity of 1293.6 MT. The private sector is envisaged to fund most of the projects through PPP or on BOT or build operate own transfer (BOOT) basis. It is envisaged that private sector will meet 96.1 per cent of the cost of development amounting to ₹ 1,61,332.9 crore. The remaining requirement of funds is to be contributed through gross budgetary support and IEBR.

## Urban Infrastructure

### Urban Infrastructure and Governance

11.83 The Jawaharlal Nehru National Urban Renewal Mission (JNNURM) has been launched by the Ministry of Urban Development for a seven-year period (i.e. up to March 2012) to encourage cities to initiate steps to bring about improvements in a phased manner in existing civic service levels. The components under the sub-mission Urban Infrastructure and Governance (UIG) include urban renewal, water supply (including desalination plants), sanitation, sewerage and solid waste management, urban transport, development of heritage areas, and preservation of water bodies. Revised allocation for the UIG for the mission period is ₹ 31,500 crore. An amount of ₹ 6,423 crore (Budget Estimates--BE) has been provided for the year 2011-12. The JNNURM has also emphasized the implementation of the following three mandatory pro-poor key reforms to enhance the capacity of urban local bodies (ULBs):

- Internal earmarking within local body budgets for basic services to the urban poor
- Earmarking of at least 20-25 per cent of developed land in all housing projects (both public and private agencies) for the economically weaker sections (EWS)/ low income groups (LIG) category
- Implementation of a seven-point charter: Provision of seven basic entitlements/services

11.84 All the selected 65 cities under the UIG component of the JNNURM have prepared comprehensive city development plans (CDPs), charting out their long-term vision and goals in urban governance and development. These plans also include investment plans, with a focus on provision of city-wide urban infrastructure services such as water supply, sanitation, drainage, and provision of basic services to the urban poor. During the Mission period, highest priority has been accorded to sectors that directly benefit the common man and the urban poor, namely water supply, sanitation, and storm water drainage. As on February 2012, more than 98 per cent of seven-years additional central assistance (ACA) allocation of ₹ 31,500 crore has been committed.

11.85 A total of 548 projects (as on 28th February 2012) has been sanctioned at an approved cost totalling ₹ 66,520.88 crore for the listed 65 mission cities across 31 states/ UTs. The ACA committed for these projects including assistance for the buses sanctioned under the second stimulus package is ₹ 30,612.10 crore. As on 28th February 2012, an amount of ₹ 17,410.88 crore has been released as ACA to various states and UTs for the projects, financing of buses, community participation funds, reimbursement of cost of CDP and DPR preparation, and e-Governance projects approved under the JNNURM. During April, 2011-February 2012, 16 projects have been approved with a project cost of ₹ 1,313.06 crore. The ACA admissible for these projects is ₹ 594.87 crore. Further, during the same period an amount of ₹ 2,969.56 crore has been released as ACA for the projects sanctioned under the JNNURM.

11.86 The JNNURM has put the reform process of ULBs on fast track. Twenty-three reforms included in the Mission envisage institutional, financial, and structural changes in the governance structure of the local bodies (LBs) to make them efficient, accountable, and transparent. The memorandum of agreement (MOA) in respect of the reforms agenda to be undertaken by states and cities has been negotiated and signed with 65 Mission cities. Further, states and ULBs have started adhering to the timelines committed for implementation of the reforms as per the MOA. As against the Sixth-year commitments, about 79 per cent of the state-level reforms and 95 per cent of the optional reforms committed have been completed. In ULB-level reforms, achievement is 67 per cent despite the complexities involved in reforms relating to property tax and user charges for basic services. Acknowledging this challenge, the government is providing support for implementing e-governance in municipalities through a separate scheme.

11.87 The JNNURM has undertaken an exercise for assessment of finances and credit-worthiness of the Mission ULBs through a process of credit rating. This is intended to trigger the process of leveraging debt for JNNURM projects and provide a platform for the ULBs and financial institutions to engage on issues related to project financing. Presently 65 ULBs in the Mission cities have been assigned final ratings that have been made public. As a follow up, surveillance rating has been initiated to affirm the rating and assess improvements undertaken. So far, 60 ULBs have undergone surveillance rating.

## Urban Infrastructure Development Scheme for Small and Medium Towns (UIDSSMT)

11.88 The UIDSSMT is a sub-component of the JNNURM for development of infrastructure facilities in all towns and cities other than the 65 Mission cities covered under UIG Sub-mission of the JNNURM. For obtaining assistance under the UIDSSMT, states and ULBs need to sign MOAs committing to implementation of the reforms. Revised allocation for the JNNURM (UIDSSMT) is ₹ 11,400 crore (compared to ₹ 6,400 crore in February 2009). From its inception in December 2005 till December 2011, as many as 788 projects across 661 towns and cities at a cost of Rs13,567.55 crore have been sanctioned under the UIDSSMT. Committed ACA for the approved projects is Rs10,946.72 crore, against which ₹ 7808.13 crore has been released till 31 December 2011.

## Other Urban Infrastructure Schemes and initiatives in Urban Governance

11.89 Under the pilot scheme Urban Infrastructure Development in Satellite Towns around Seven Mega-Cities, a total of eleven projects worth ₹ 422.45 crore were sanctioned for Pilkhuwa, Vasai-Vihar, Vikarabad, Sonepat, and Sanand up to December 2011. These projects will contribute towards amelioration of basic services in these towns. Further, for the north-eastern region, the North Eastern Region Urban Development Program was launched in November, 2009 with Asian Development Bank (ADB) assistance. The project aims to assist the states of Tripura, Mizoram, Sikkim, Meghalaya, and Nagaland to address challenges of urban development in their capital cities.

## Urban Transport

11.90 Urban Transport is one of the key elements of urban infrastructure. As compared to private modes of transport, public transport is energy efficient and less polluting. The public transport system helps improve urban-rural linkages and access of rural /semi-urban population in the periphery to city centres for the purposes of work without proliferation of slums within and around cities. A National Urban Transport Policy (NUTP) was laid down in 2006, with the objectives of ensuring accessible, safe, affordable, quick, comfortable, reliable, and sustainable mobility for all.

11.91 In order to provide better transport, proposals for bus rapid transit system (BRTS) were approved for Ahmedabad, Bhopal, Indore, Jaipur, Pune-Pimpri-Chinchwad, Rajkot, Surat, Vijayawada, Vishakhapatnam, and Kolkata cities under the JNNURM, covering a total length of 467.44 km at a total estimated cost of ₹ 5,211.60 crore. Admissible central financial assistance is around ₹ 2,373.26 crore. Purchase of 15,260 buses at a total cost of ₹ 4,723.97 crore has been approved under the scheme, out of which ACA admissible is ₹ 2,088.80 crore. Till December 2011, more than 12,309 modern intelligent transport system (ITS)-enabled, low-floor and semi-low-floor buses have been delivered to states/cities.

## Metro Rail Projects

11.92 In order to give proper legal cover to metro projects, the Metro Railways Amendment Act 2009 was brought into effect in September 2009, providing an umbrella 'statutory' safety cover for metro rail work in all the metro cities of India. The Act has been extended to the National Capital Region, Bengaluru, Mumbai, Chennai, Hyderabad, and Jaipur metropolitan areas.

11.93 The government had approved the implementation of the Bangalore Metro Rail Project of 42.3 km length by Bangalore Metro Rail Corporation Ltd. (BMRCL). The project commenced on 20 January 2007 and is targeted for completion by 31March 2013. Government had earlier approved the implementation of the east-west metro corridor of 14.67 km length in Kolkata by Kolkata Metro Rail Corporation Ltd (KMRCL). The project is targeted for completion by 31January 2015. The Chennai Metro Rail Project of 46.5 km length by Chennai Metro Rail Ltd. (CMRL) has also been approved. The project is targeted for completion by 31 March 2015. Recently Phase III of Delhi Metro for 103.5 km at a total cost of ₹ 35,242 crore has also been approved and is targeted for completion by 2016. The metro extension to Faridabad has also been sanctioned and is targeted for completion by March 2014. In addition, metro rail projects have been taken up on PPP basis in Mumbai for Versova-Andheri-Ghatkopar (11.07 km) and Charkop to Mankhurd via Bandra (31.87 km) and in Hyderabad (71.16 km) with viability gap funding (VGF) from the Government of India.

# Financing Infrastructure

## Debt financing

11.94 Net bank credit to infrastructure had a healthy growth of 48.4 per cent per annum during 2006- 11, increasing from ₹ 30,286 crore during 2006-7 to ₹ 146,767 crore during 2010-11. Credit growth turned negative in the current year and at ₹ 70,155 crore, net credit to the infrastructure sector during April-December 2011 was nearly 61 per cent of the credit to this sector advanced during April-December 2010 (Table 11.12). A significant reduction in credit flow was observed for the power and telecom sectors.

11.95 The total FDI inflows into major infrastructure sectors during April-December 2011, however registered a growth of 23.6 per cent as compared to the FDI inflows during April-December 2010. Power (43.6 per cent), non-conventional energy (338 per cent) and telecommunications (49.9 per cent) were the preferred sectors for foreign investors. Other sectors, however, failed to share the buoyancy in FDI inflows (Table 11.13).

# Challenges And Outlook

11.96 The key to global competitiveness of the Indian economy lies in building world class infrastructure and service delivery at competitive rates. The realization of investment targets for infrastructure during the Eleventh Plan gives hope that the financing of an even more ambitious Twelfth Plan target may be possible. Private-sector

**Table 11.12 : Increment Flow of Bank Credit to Infrastructure**

(₹ crore)

| Period | Infrastructure | Power | Telecom | Roads | Other Infrastructure |
|---|---|---|---|---|---|
| **2006-7** | 30286 | 12994 | 1164 | 5352 | 10776 |
| **2007-8** | 62220 | 21947 | 18663 | 9429 | 12179 |
| **2008-9** | 64636 | 29372 | 12044 | 12584 | 10658 |
| **2009-10** | 109916 | 63394 | 9036 | 26509 | 10956 |
| **2010-11** | 146767 | 81355 | 41106 | 19000 | 5307 |
| **2010 (Apr.-Dec.)** | 115291 | 66500 | 35200 | 11430 | 2153 |
| **2011 (Apr.-Dec.)** | 70155 | 46241 | 9460 | 16513 | 16860 |

***Source*** **: Reserve Bank of India (RBI).**

**Table 11.13 : FDI flows to infrastructure (US$ million)**

| Sector | 2008-09 | 2009-10 | 2010-11 | April-Dec.-2010 | April-Dec.-2011 |
|---|---|---|---|---|---|
| Power | 984.8 | 1,437.3 | 1271.77 | 1007.60 | 1447.39 |
| Non-conventional energy | 85.3 | 497.9 | 214.40 | 64.38 | 281.97 |
| Petroleum & natural gas | 412.3 | 272.1 | 556.43 | 541.69 | 196.07 |
| Telecommunications | 2558.4 | 2554.0 | 1664.50 | 1326.65 | 1988.72 |
| Air transport * | 35.2 | 22.6 | 136.00 | 132.60 | 27.50 |
| Sea transport | 50.2 | 284.9 | 300.51 | 298.63 | 100.17 |
| Ports | 493.2 | 65.4 | 10.92 | 10.92 | 0.00 |
| Railway-related components | 18.0 | 34.2 | 70.66 | 47.91 | 35.25 |
| **Total (of above)** | **4637.4** | **5168.4** | **4225.19** | **3297.86** | **4077.07** |

***Source*** **: Department of Industrial Policy and Promotion.**

**Notes: * Air transport including air freight. Variation in data is due to reclassification of some sectors.**

participation in financing of infrastructure has also generated optimism that public funding need not necessarily be the exclusive route for infrastructure investment. A conducive environment for private-sector participation with a transparent and credible regulatory mechanism, therefore, could reduce the pressure on public-sector funding. Sectoral analysis of private-sector participation in infrastructure during the Eleventh Plan also indicates that sectors such as irrigation, railways, water supply and sanitation, ports, and power distribution have not generated the desired enthusiasm and attracted the desired level of private investment. It is, therefore, imperative to identify hurdles and weaknesses in regulatory, financing, and incentive structure (both taxation and debt) and project implementation-related issues that may be inhibiting private investment into these sectors.

11.97 There is a limited scope for large increase in domestic savings rate. There is also a mismatch between the long term fund requirements of the infrastructure sector and the bulk of savings and their intermediation with a shorter maturity span. As a result, there is a need for introducing more innovative schemes to attract large-scale investment into infrastructure. In view of the massive requirement of funds, all efforts need to be made to attract big ticket long-term investors such as strategic investors, private equity funds, pension funds, and sovereign funds. Strengthening domestic financial institutions and development of a long-term bonds market may be critical. Government has already enhanced the limit for foreign institutional investors (FIIs) to invest in corporate bonds issued by companies in the infrastructure sector, notified guidelines for infrastructure debt funds, and allowed tax benefits for investment in long-term infrastructure bonds. Besides financing, the infrastructure sector has also suffered due to a time lag in physical capacity creation and time over-runs. These not only delay availability, but through cost overruns raise pricing and affordability issues. Infrastructure costs, as these are often non-tradeables may also affect the competitiveness of economy in long run. A harmonised list of main sectors and sub-sectors of infrastructure approved by government to serve as a guide for all agencies responsible for supporting infrastructure is a welcome move.

11.98 Energy sector: One of the foremost challenges in the coming years is to meet the energy requirement. The Twelfth Plan projections made by the Planning Commission indicate that for a GDP growth rate of 9 per cent per year, energy supply has to grow at around 6.5 per cent per year. The ability to meet the energy requirement would depend upon our ability to expand domestic production in the critical sub-sectors such as petroleum, natural gas, and coal, and meeting the balance requirement through imports. Energy requirements and import dependency in critical components are expected to be as given in Table 11.14.

11.99 Reforms are necessary in the energy-pricing policy. While the overall energy prices, as reflected by the wholesale price index (2004-5=100), seem to have increased faster than the prices for all commodities, relative prices within the energy components indicate a varying trend. Prices, particularly of electricity and petroleum products,

**Table 11.14 : Projected Primary Commercial Energy Requirement (MToE)**

| | 2010-11* | 2016-17@ |
|---|---|---|
| Oil | 164.32 | 204.80 |
| of which imports | 125.5 (76.4%) | 164.8 (80.5%) |
| Natural Gas & LNG | 57.99 | 87.22 |
| Of which imports | 10.99 (19%) | 24.8 (28.4%) |
| Coal | 272.86 | 406.78 |
| Of which imports | 54 (19.8%) | 90 (22.1%) |
| Lignite | 9.52 | 14.00 |
| Hydro | 10.31 | 14.85 |
| Nuclear | 6.86 | 9.14 |
| Renewables | 0.95 | 1.29 |
| **Total Energy** | **522.81** | **738.07** |
| **Total Imports** | **190.97 (36.53%)** | **280.12 (37.95%)** |

*Source* : Approach to the Twelfth Five Year Plan, Planning Commission.

Notes: * Provisional data;

@ On the assumption that annual demand /growth would be 6.5 per cent up to 2016-17.The figures include use of oil and gas feed stock for fertilizer and other non-energy use. MToE is million tonnes of oil equivalent.

under the administered price mechanism have recorded much lower relative growth as can be seen from Table 11.15.

11.100 Power generation: The demand for grid power is estimated to grow by 6 per cent per annum by the end of the Twelfth Plan. Capacity addition in the power sector would be about 50,000 to 52,000 MW during the Eleventh Plan. In order to achieve the projected capacity addition of 1,03,300 MW and build commensurate transmission and distribution capacity, investment to the tune of ₹ 11,18,375 crore would be needed. Apart from the financing issue, the power sector would be constrained by shortage of fuel and environmental issues. Mismatch in coal supply and shortage of gas for the power sector have been impacting the output presently. Delay in forest and environmental clearance in particular for hydro- based power projects has delayed capacity addition. There are financial health and viability issues across the entire spectrum of power sector--generation, transmission, and distribution. Viability of the players in power sector would require either the adjustments of the user charges in line with the cost of providing access to these services or an adjustment in the subsidy levels.

11.101 Coal Sector: Coal is a primary energy input for thermal power generation, steel, and cement sectors. The gap between demand for coal and

**Table 11.15 : Wholesale Price Index for Fuel Group of Commodities (2004-05=100)**

| | 2005-06 | 2006-07 | 2007-08 | 2008-09 | 2009-10 | 2010-11 | 2011-12# Apr.-Dec.(P) |
|---|---|---|---|---|---|---|---|
| | **Financial-year averages** | | | | | | |
| Allcommodities | 104.5 | 111.4 | 116.6 | 126.0 | 130.8 | 143.3 | 154.9 |
| Crude petroleum | 109.8 | 127.0 | 136.6 | 149.7 | 181.4 | 202.8 | 284.3 |
| Coal | 117.6 | 117.7 | 121.7 | 151.3 | 156.5 | 165.3 | 184.6 |
| Electricity | 102.6 | 105.3 | 106.2 | 106.4 | 107.4 | 113.2 | 114.4 |
| Administered petroleum products* | 115.2 | 123.5 | 119.7 | 128.9 | 125.1 | 144.8 | 161.1 |
| Other petroleum products | 122.7 | 142.2 | 151.2 | 191.2 | 176.3 | 205.5 | 258.1 |
| Overall fuel index | 113.4 | 121.3 | 121.9 | 135.8 | 134.9 | 151.4 | 173.0 |
| Relative index | | | | | | | |
| Crude | 96.7 | 104.6 | 112.0 | 109.8 | 134.3 | 133.9 | 164.3 |
| Coal | 103.9 | 97.1 | 99.8 | 111.8 | 116.0 | 109.2 | 106.8 |
| Administered petroleum products | 101.6 | 101.8 | 98.2 | 95.0 | 92.7 | 95.6 | 93.1 |
| Other petroleum products | 108.1 | 117.2 | 124.0 | 139.5 | 130.4 | 135.6 | 149.1 |
| Electricity | 90.6 | 86.9 | 87.2 | 78.6 | 79.7 | 74.8 | 66.1 |
| Overall Fuel | 108.5 | 108.9 | 104.5 | 107.7 | 103.1 | 105.6 | 111.7 |

*Source* : Economic Divsion, Department of Economic Affairs based on WPI data.
* Covers LPG, Kerosene, Diesel and Petrol. # Data for 2011-12 are provisional.

domestic availability is widening at a faster pace. The production projections for the coal sector during the Eleventh Plan had to be revised downward due to delays in obtaining forest and environment clearances, land acquisition and related resettlement and rehabilitation issues, and law and order problems. Such revisions affect the long-term supply arrangements. Coal India Limited (CIL) dominates the domestic coal scenario. Its near monopolistic position has often resulted in supply bottlenecks, delays in development of new coal fields and, inadequate emphasis on cost reductions at operational levels. Coal pricing is also a crucial issue. CIL being the dominant producer of coal in the country has to adopt pricing policy which is transparent, credible, and based on global norms. There is perhaps need to introduce competition in this sector.

11.102 Railways sector: Capacity addition in the railways sector remains the key challenge for coming years. The sector has huge opportunity to grow and the rail share in cargo and passenger services can increase significantly. Its current share of freight traffic in India is only about 36 per cent as compared to about 50 per cent in the US and China. Due to capacity constraints, Indian Railways is unable to offer value-added services. There is need for a paradigm shift in building rail infrastructure and running rail services. The Vision 2020 document of the Ministry of Railways projects investment need of ₹ 7,20,000 crore for the sector. During the Twelfth Plan the railways' focus would be on construction of six dedicated freight corridors, segregation of freight and passenger lines, providing improved connectivity to industry clusters and ports, etc. Railways has been generating about 35 per cent of resources internally, about 27 per cent is raised through EBR, and the remaining 37 per cent is provided through budgetary support. Given the limitation of internal and budgetary sources, bulk investment has to be done by the private sector through PPP. Railways has initiated PPP projects during the Eleventh Plan in some areas such as port connectivity projects, container operations, wagon investment schemes, and private freight terminals but the scope of PPP needs to be widened further. In order to promote PPP in the rail sector, there is need to set up special units to handle and monitor PPP projects and give special thrust on capacity building.

11.103 Road transport: The targets for the road transport sector during the Twelfth Plan are indeed massive. There is need to upgrade the National Highways to two lane, build expressways in high and dense traffic segments, and urgently improve the riding quality of the road network in general. As against the estimated public and private-sector investment of about ₹ 1,52,201 crore during the Eleventh Plan, the total investment requirement during the Twelfth Plan in the central sector for roads would be about ₹ 6,11,344 crore. The share of the private sector is projected to be about 38 per cent. The sector is yet to achieve the target of 20 km roads a day due to delays in land acquisition and environmental and forest clearances, poor performance of contractors, shortage of qualified highway engineers and skilled/semi-skilled labour, delays in release of loan instalment to contractors by banks, and local law and order problems. Several initiatives have been taken for resolving these issues and it is expected that during the Twelfth Plan road construction work will pick up.

11.104 Ports sector: Presently 12 Major ports are handling about 64 per cent of the seaborne traffic. Though the share of non-major ports has increased from 7 per cent in 1990-1 to about 36 per cent in 2010-11, the congestion at major ports is costing in terms of time and money. Cargo handling is projected to increase significantly at all ports during the Twelfth Plan. The challenge for the sector is to build vibrant, efficient, and safe ports and shipping services and a strong base for the shipbuilding industry. Capacity augmentation and efficiency improvement would require increased investment from the private sector, particularly for mechanization of cargo handling, improvements of drafts at the ports, strengthening port connectivity by building road and rail links, and technology upgradation and automation. Investment required for ports sector development during the 12th Plan would be about ₹ 1,55,455 crore. Capacity expansion of ports in the Twelfth Plan is proposed largely through private-sector investment and internal accruals. It would indeed be a challenge to garner about 80 per cent (₹1,23,982 crore) of the required investment through PPP. The government proposes to develop two new major ports, one each on east and west coasts and build facilities for full mechanization of cargo handling and movement and plans to develop of two hub ports each on the west and east coasts--Mumbai (JNPT), Kochi, Chennai, and Visakhapatnam. The proposed policy measure also targets corporatization, formulation of a new land policy for major ports, and establishing of a port regulator for all ports for setting, monitoring, and regulating service levels and technical and performance standards.

11.105 Urban infrastructure: Urban population is projected to increase to 598 million in the year 2031 and the share of urban population is projected to increase from 31.2 per cent in 2011 to about 40 per cent in 2030. Continued demographic shift from rural to urban areas and rapid urbanization are posing a huge challenge in terms of creation and maintenance of minimum level of infrastructure and services. There is need to upgrade urban infrastructure such as water supply, sewerage, solid waste management, urban roads, storm water drains, urban transport, traffic support infrastructure, and street lighting. At present only about 74 per cent of urban population is supplied piped water, less than two-thirds of urban population in Class I and Class II towns is connected to the sewer system, scientific treatment and disposal of solid waste is practically non-existent, and public transport accounts for only 22 per cent of urban transport in the country. Urban India is deficient in service delivery and the quality of service leaves much to be desired. ULBs are under financial stress and also suffer on account of poor governance. In order to achieve the services norms for eight infrastructure sectors adopted by the Ministry of Urban Development, investment from the base year (2011-12) of about ₹ 51,000 core would need to be stepped up at the rate of 15 per cent per annum during the Twelfth Plan tapering off to 12 per cent per annum during Thirteenth Plan and 8 per cent per annum thereafter. The ULBs need to be able to mobilize internal resources, apart from the devolution from states' revenue share and central and state funds made available for various schemes. The ULBs also need to take recourse to new forms of financing through PPP.

11.106 Civil Aviation sector: As per the findings of the study on Socio-Economic Impact of Civil Aviation in India commissioned by the International Air Transport Association (IATA), the contribution of the civil aviation sector to India's GDP is estimated to be 0.5 per cent. This sector generates 1.48 million jobs (including indirect jobs). High growth rates for the past few years in the aviation sector, particularly in the passenger segment, are not getting reflected in the financial health of the carriers in India. To manage the next growth phase safely and efficiently, significant and continuous investment will be required. One of the major challenges of the air traffic industry in India is the high and growing debt burden of the carriers. The airline industry in India suffers from huge debt burden - close to US $ 20 billion (estimated for 2011-12). Half of this debt is aircraft related and the rest is for working capital loans/ payments to airport operators and fuel companies. FDI policy currently does not permit foreign airlines investment that denies them access to potential sources of capital and expertise. Air carriers so far have also been affected by the high ATF prices because of high incidence of taxes. The recent decision to allow them import of ATF will hopefully improve their operational economics, but in the long run airlines will need to improve their internal accruals, access to domestic and international capital, and their overall operations to remain vibrant and viable.

# Sustainable Development and Climate Change

12

CHAPTER

*This new chapter in the Economic Survey reflects the growing challenges of sustainable development and climate change. Pressures on land, air, water, forests and loss of plant and animal habitat are growing. At the same time, a warming planet is already causing adverse effects, such as more frequent extreme weather events. The science and evidence of climate change are compelling. Both India and the world are reviewing the challenges ahead. The Earth Summit in Rio in June 2012 will take stock of sustainable development priorities globally. The Durban meeting in December 2011 has set some directions for appropriate responses to climate change. And closer to home, the Twelfth Five Year Plan, commencing in April 2012, is setting out India's priorities for a sustainable and inclusive, lower-carbon development path.*

12.2 India's journey on the path of sustainable development has so far been marked both by reasons for celebration and introspection. The right place to begin the story would be the 1980s and early 1990s, which mark the beginning of economic reforms, catalyst for India's phenomenally faster growth rates since, and coinciding with a time when countries around the world acknowledged and started addressing the increasing environmental concerns, such as at the Earth Summit in Rio in 1992. India's faster gross domestic product (GDP) growth over the last two decades has been unprecedented; but at the same time India's rankings in terms of the human development index (HDI) as well as indices measuring environmental sustainability are yet to fully reflect this growth(Box 12.1). However, it would be a mistake to downplay the enormous progress made, as India has followed a much more conscious path of sustainable development with impressive results on the ground.

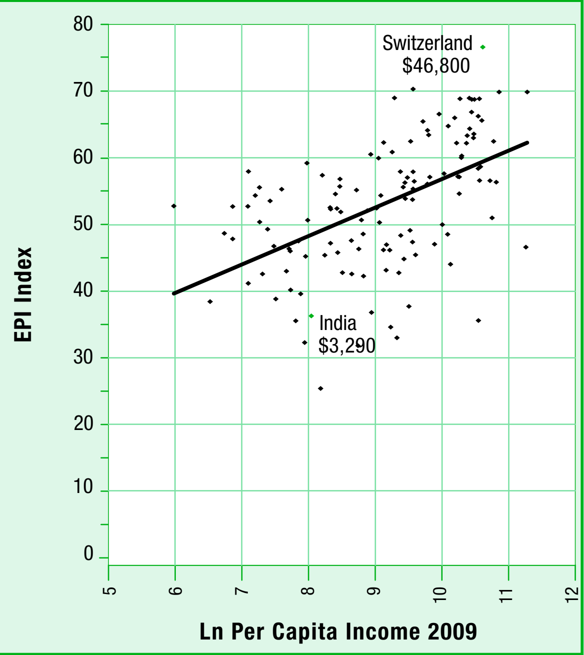
12.3 The key environmental challenges have become sharper in the past two decades. The 2009 State of the Environment Report by the Ministry of Envionment and Forests (MOEF) clubs the issues under five key challenges faced by India, which are climate change, food security, water security, energy security, and managing urbanization. Climate change is impacting the natural ecosystems and is expected to have substantial adverse effects in India, mainly on agriculture on which around 58 per cent of the population depends for livelihood, water storage in the Himalayan glaciers which are the source of major rivers and groundwater recharge, sea-level rise, and threats to a long coastline and habitations. Climate change will also cause increased frequency of extreme events such as storms, floods, and droughts. These in turn will impact India's food & water security problems. India also faces the critical challenge of meeting its rapidly growing energy demands. It currently depends on around 80 per cent imports for its crude oil requirements. A large section of the rural population is still not connected to the grid or efficient modern cooking fuel sources, and India's per capita energy consumption of 439 kg of oil equivalent is far below the world average of 1688 kg (Planning Commission report in 2006). The energy poverty of the household sector is indicated not only by the low penetration of electricity into the sector, but also by its primary dependence on

## Box 12.1 : Measuring India's Environmental Performance

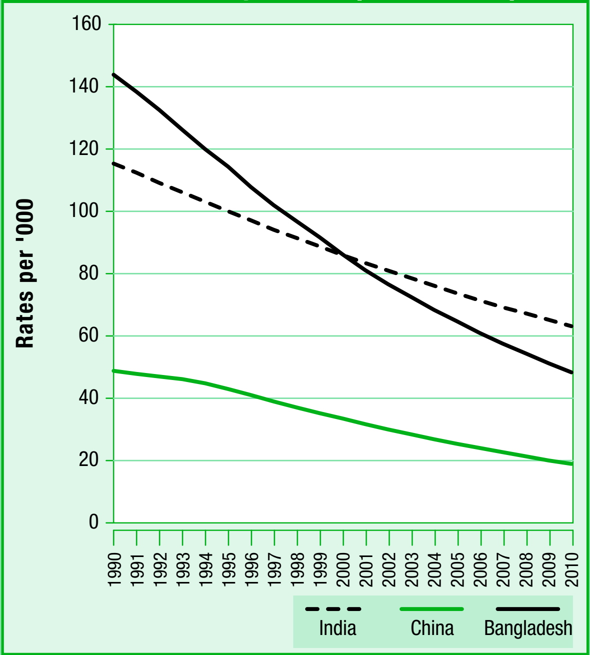
In a recent ranking of environmental performance (EPI 2012), India was placed 122 out of 132 countries. Its performance was better on protecting its forests (rank 21) and fisheries (39), and on climate change (55). Poorer ratings were given to air quality (132), agriculture (126), and water resources (122). Like all such rating exercises, this one too has significant data and methodological problems. In agriculture, India's performance on two sub-components—banned pesticides and protection—has been wrongly evaluated. India has banned or restricted a dozen organic pesticides and its protection to agriculture is negative. The environmental health indicator, with the largest weight, uses child mortality rates between ages 1 and 5; this exaggerates differences. A broader life expectancy at birth index would be less biased. Three other adjustments—more appropriate country normalizations for biodiversity, energy, and water—should be made. The cumulative impact might improve India's overall ranking closer to the middle of all countries. The other methodological issue is how to separate environmental performance from incomes. While 'distance-to-targets' methodology helps, this does not fully correct the problem: richer countries still tend to perform better (because they can afford to) and economic development is still a critical driver of sustainability.

The EPI exercise is nevertheless useful in flagging some areas of concern. We should do better on public health and environmentally preventable child mortality, as has Bangladesh (Sen and Dreze 2011). Another is an alarming increase in air-borne respirable small particulate matter (PM) of less than 2.5 microns. Delhi has seen recent PM 2.5 levels that surpass Beijing's. Increased private diesel transport, power plant emissions, burning of agricultural residues, and sub-Himalayan winter inversion are the culprits. A MOEF study has identified a menu of options, none of them easy: tougher regulations (e.g. ban on burning residues, power plants), prices (diesel and private transport), and investments in public transport, to address these problems.

### Per capita income and the EPI index




### Under-5 Mortality Rates (1990-2010)

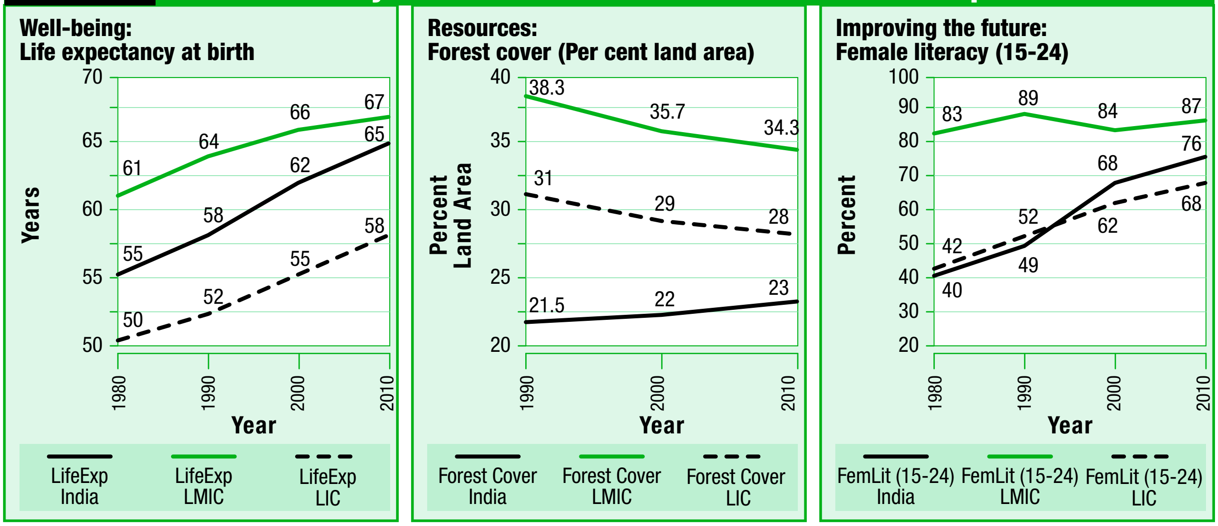



*Source* : Staff estimates and data from EPI 2012 and World Development Indicators.

*References* : (1) EPI 2012. Environmental Performance Index and Pilot Trend Environmental Performance Index (www.epi.yale.edu) (2) IPEP, 2006.Country Situation on Persistent Organic Pollutants (POPs) in India. (3) Yogesh Bandhu, 2010. Agricultural Market Prices and Subsidies Implication for Indian Agriculture, Giri Institute of Development Studies, Lucknow; (4) Will Martin and Kym Anderson, October 2010, Trade Distortions and Food Price Surges, World Bank and University of Adelaide (5) WHO, 2003. Making a Difference: Indicators to Improve Children's Environmental Health, 2003. (6) Amartya Sen and Jean Dreze, 2011. Putting Growth in its Place. Outlook, November 14. (7) Christoph Bohringer and Patrick Jochem, 2005.Measuring the Immeasurable: A Survey of Sustainability Indices, Centre for European Economic Research, Mannheim; (8) S. Mukherjee and D. Chakraborty, 2009. Do Non-Economic Factors Influence Environmental Performance of a Country? Recent Empirical Evidence, mimeo.

traditional inefficient fuel for cooking and lighting. As per the National Sample Survey Organization (NSSO) survey 2004-05, around 45 per cent of rural households depend on inferior fuels like kerosene or candle light for lighting and 84 per cent have to rely primarily on biomass comprising fuel wood, dung cake and agro-waste for cooking fuel. Finally, urbanization is proceeding very rapidly, creating new issues of affordable housing, access to safe water and sanitation, solid waste disposal, transport, and air quality. Prices, incentives, regulations and taxes could be designed to help respond to these areas.

**Figure 12.1 Three summary outcome indicators of sustainable development**




***Note*** **: LMIC- Lower and middle income countries; LIC- Low income countries**

12.4 At the same time, there is a strong sense of progress made at community level, where it matters. India has made remarkable gains so far in sustainable development, as measured, for example, in three summary 'outcome' indicators. One is life expectancy, where India has achieved a decade's gain, which is a broad indicator of economic well-being with social justice. There has also been a rise in forest cover despite the pressures on land use, which is a measure of environmental sustainability. Satellite data confirms that not only has India been able to control deforestation, but its forest cover has also been increasing between the 1990s and 2010. India is one of the few developing countries where forest cover has increased over the last 20 years and continues to increase, although a slight dip is reported in the latest data for 2011. A third summary indicator is gains in literacy among younger women, an indicator of future generations' well-being (Figure 12.1). On all three counts, India has outpaced the 'deltas' on global averages, although it could have done even better. Apart from this, the success of its services sector has driven growth. The economy transitioned from being mainly dependent on agriculture and manufacturing to a services-oriented one over the 1990s. The share of this sector in India's GDP grew from approximately 38 per cent in 1980-81 to 57.7 per cent in 2010-11.

12.5 Along the way, valuable experience has been gained with many different approaches. These have cemented the institutional foundations for the future. Sustainable development in terms of environmental concerns has been a recurring theme in Indian policy and planning. A dedicated and independent Ministry of Environment and Forests has been functioning with increasing responsibilities since 1985. The Constitution itself and recourse to many specific laws, multiple actors, markets, and numerous government programmes and policies have also helped. The Constitution of India and relevant amendments that have been incorporated over the years, reinforce the policy and legal basis of sustainable development in India. The pillars of sustainable development are embedded in the fundamental rights guaranteed by the Constitution, which lay down the framework for social justice in India. Article 21 conferring the Right to Life has been assigned the broadest interpretations by the judiciary to encompass the right to a clean environment, right to livelihood, right to live with dignity, and a number of other associated rights. The National Environment Policy 2006 has attempted to mainstream environmental concerns in all developmental activities. The Government of India, through its various policies, has been factoring ecological concerns into the development process so that economic development can be achieved without permanently damaging the environment. The challenges ahead are, nevertheless, large. Meeting rising energy needs in an energy-poor country with still limited access is a huge challenge, along with accelerated urbanization and manufacturing to create more jobs.

12.6 The Ministry of Statistics and Programme Implementation has also initiated the process in 2010 of putting in place a green national accounting system, to more appropriately take into account the environmental costs of development and reflect the depletion of natural resources in generating national income. Comprehensive environmental statistics are being published since 1997 by the Central Statistics Office (CSO). It is expected that the depletion of stocks of natural resources will be worked into the standard national accounts to estimate a green GDP at the level of states and the country as a whole in about five years. Pilot projects have already been initiated at the level of states and a high-level advisory group has been formed. The information will further integrate sustainable development into the development process. It is important to note here that the distribution of gains and losses is also important. To the extent that depletion of natural resources is transformed simultaneously into improved human capital endowments and capabilities, especially for the poorest communities who depend on natural eco-systems the most. More careful measurements of inclusion and sustainability considered together will enhance development choices and decisions. Green development has to take into account the need to accommodate faster rates of traditional growth that are more inclusive—such as modern energy needs of poorer households. For example, converting (depleting) abundant 'dirty' coal into clean electricity will represent a valid choice, provided the distribution of such benefits is more skewed towards the energy needs of poorer, unconnected households, and not if it is to meet subsidized energy needs of richer households, whether in urban or rural areas. Analogous arguments apply globally.

12.7 India will therefore need to find (save) and devote (spend) even more resources for meeting economic well-being needs with greater environmental sustainability. Broad-based economic and social development is ultimately the answer. Economic pricing of energy and other resources will be a key to switching to a more sustainable development path (Box 12.2). New technologies will be crucial, mostly in the private sector. But social justice will also require stepped-up public spending in many areas. Managing energy needs for a rapidly growing economy will be at the heart of the response and India's voluntary endeavours towards climate change.

12.8 India has pledged to reducing the energy-intensity of its growth path. To deal with it, fair burden sharing globally, measured in terms of per capita emissions standards, and global financing are a must—so that already developed countries do not use up all the carbon space at the cost of the developing world. The recent Durban Decisions have included steps towards post 2020 arrangements to reduce greenhouse gas (GHG) emissions without sacrificing the needs of developing countries and for the setting up of a global Green Climate Fund (GCF) that promises stepped-up global financing. The proof of developed country commitments on financial support will be in their rapid implementation of the GCF.

## Climate Change

12.9 Climate change is a global environmental problem which has been receiving intense political attention both at domestic and international levels. The United Nations Framework Convention on Climate Change (UNFCCC) defines 'climate change' as a change of climate which is attributed directly or indirectly to human activity that alters the composition of the global atmosphere and which is in addition to natural climate variability observed over comparable time periods. The major characteristics

### Box 12.2 : Are Diesel Prices too Low in India?

Diesel is a key energy price. Diesel price adjustments have lagged international prices in recent years, and budgetary subsidies have ballooned. At the same time, such low prices and subsidies are providing incentives for misuse, shifts to diesel use such as luxury sports utility vehicles (SUVs), escalating imports in an energy-insecure country, and increased pollution loads. Diesel is a heavy contributor to particulates and black soot and to asthma, cancer, and heart disease. On the other hand, political economy arguments are that diesel is a widely used fuel for public transport, budgetary subsidies are offset by central and state value-added tax (VAT), excise and sales taxes, and finally diesel prices in India are high relative to incomes. Is there merit in these arguments? One way of testing for this formally is to compare diesel prices in India with those prevailing in other countries, adjusted for PPP incomes, as well as relative energy abundance. Other things being equal, countries that export oil (such as the Middle Eastern ones) or are relatively diversified, energy- abundant countries (such as Canada and the United States) can afford to keep domestic prices lower than energy-insecure countries (such as India). The evidence shows that just such a predicted relationship indeed holds. But even accounting for this, diesel prices were already 20 per cent below predicted levels for India in 2010; the divergence has since doubled as global oil prices have surged 45 per cent (from US$ 80/barrel Brent prices in 2010 to US$ 120 currently), while domestic price adjustments have not followed. Diesel prices need a large adjustment now (as China, for example, has recently undertaken), given subsidies, pollution and public health costs. Charging high road and vehicle taxes is another option (that Singapore uses).

of climate change include rise in average global temperature, ice cap melting, changes in precipitation, and increase in ocean temperature leading to sea level rise. The efforts needed to address the climate change problem include mitigation of GHG emissions on one hand, and building of adaptive capacities on the other in developing countries to cope with the adverse impacts of climate change on various sectors of the society and economy enabled and supported by technology and finance.

## Science And Economics of Climate Change

### Science of Climate Change

12.10 The atmosphere carries out the critical function of maintaining life-sustaining conditions on earth. The sun radiates solar energy on earth and a large part of this energy, about one-third is radiated back into space, the balance being absorbed by the surface and atmosphere. GHGs like carbon dioxide ($CO_2$) and water vapour re-emit some of this heat to the earth's surface. If they did not perform this useful function, most of the heat energy would escape, leaving the earth cold and unable to support life. In this manner the atmosphere creates a natural greenhouse effect which helps sustain life on earth. However, ever since the Industrial Revolution began about 150 years ago, man-made activities have added significant quantities of GHGs to the atmosphere.

12.11 Climate change is primarily caused by the building up of GHGs in the atmosphere. GHGs which are responsible for global warming are both short and long lived, with their residence time in the atmosphere varying from few hours, weeks, months, years to several hundred years. Warming potential of any GHG is reckoned with $CO_2$ as the standard and for methane ($CH_4$) it is roughly twenty one times and several thousand times for fluorocarbons. According to the Intergovernmental Panel on Climate Change (IPCC), the global atmospheric concentrations of $CO_2$, $CH_4$, and nitrous oxide ($N_2O$) have increased markedly as a result of human activities since 1750 and now far exceed pre-industrial levels. The global increases in $CO_2$ concentration are primarily due to fossil fuel use and land use changes, while those of methane and nitrous oxide are primarily due to agriculture. According to the Fourth Assessment Report of the IPCC (IPCC AR4 2007), atmospheric concentrations of $CO_2$ increased from a pre-industrial value of 278 parts per million (ppm) to 379 ppm in 2005, and the average global temperature rose by 0.74°C. Projections indicate that global warming will continue and accelerate.

#### Box 12.3 : Key Findings of IPCC AR4 2007

- Warming of the earth's climate system is unequivocal.
- $CO_2$ atmospheric concentration--280 ppm in 1750 rose to 379 ppm in 2005.
- Direct observations of changes in temperature, sea level, and snow cover in the northern hemisphere during 1961–90 indicate increased temperatures, rise in the mean sea levels, and decreasing snow cover.
- Global average sea levels rose by 1.8 mm/year over 1961–2003.
- Eleven of the twelve years—1995-2006—rank among the twelve warmest years since 1850.
- Both the hemispheres have observed a decline in the mass of mountain glaciers and snow cover. Precipitation has been found to be more variable, with increased frequency of heat waves, droughts, heavy precipitation events, and floods.
- Projected changes in the climate indicate an increase in global temperatures in the range of 1.8°C to 4.0°C over the twenty-first century and sea level rise is projected to be between 0.18 m and 0.59 m by 2100.

12.12 IPCC AR4 has more firmly established the scientific basis of climate change and raised concerns related to climate impacts. Key findings of IPCC AR4 are given in Box 12. 3. IPCC AR5 is well under way now and will contain more comprehensive and consistent peer reviewed scientific information. The IPCC has, also, come out with various special reports. In 2011, it has completed its special report on Managing the Risks of Extreme Events and Disasters to Advance Climate Change Adaptation, in which there were several important findings.

12.13 With climate change, the type, frequency, and intensity of extreme events, floods, and droughts are expected to increase. Thus climate change represents additional stress on ecological and socio-economic systems that are already facing tremendous pressure due to rapid economic development. Hence, addressing climate change is a major challenge in terms of policies and resources needed to address it at domestic and international levels.

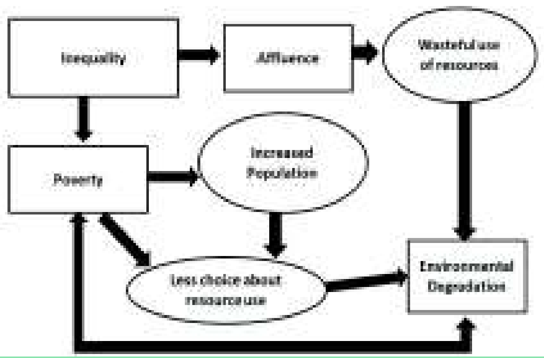
## Economics that Follows the Science

12.14 There is now overwhelming scientific evidence and growing quantitative assessment of risks to establish that human activities are changing the composition of the atmosphere and its properties. This realization brings to the fore ways and means of addressing the challenge and associated resources, which in turn brings us to economics. Science suggests that the impacts of climate change are serious and broad ranging, with economics implying that they interact with other market failures and economic dynamics, giving rise to complex policy issues. To put it briefly, climate change is a global externality associated with the emission of GHGs, which has long, persistent and, beyond a level, irreversible effects. These emissions impose a cost on both the present and future generations, which are not fully recouped from the emitters of these emissions. Hence, there is need for policy intervention as markets alone fail to account for these failures.

### Box 12. 4: Inter- and Intra-generational Equity

Equity has two dimensions – inter-generational and intra-generational. In the specific context of climate change, inter-generational refers to the spatial distribution of global GHG emissions budgets, GHG emissions rights, implicit costs and benefits, and impacts of climate change inflicted by each generation on its successors, across generations. Intra-generational equity relates to the allocation of utilization of resources among members of the present generation.

**The Vicious Circle of Environmental Degradation with Poverty and Affluence**




*Source:* University of Wollongong- New South Wales, Australia

Quite often, in climate change debates the emphasis is on inter-generational equity. However, we cannot overlook intra-generational equity. The stake of developing countries in growth and poverty eradication cannot be questioned. Developed countries, being responsible for causing climate change, owing to their historical as well as current emissions should take actions as committed, to stabilize and reduce their emissions of GHGs and also provide financial and technological support to enable developing countries in addressing the challenge of climate change. The social discount rate is crucial for a cost-benefit analysis reflecting society's relative valuation on today's well-being versus well-being in the future.

12.15 This forms the starting point for the international climate change negotiating regime, suggesting a need for globally coordinated policy action as the incremental impact of a ton of GHG on climate change is independent of where in the world it is emitted, and because the nature of GHG emissions is such that it affects the environment with a lag. This characteristic shapes some important features of climate change policy framework, namely historical responsibilities and inter- and intra-generational equity (Box 12.4). The requisite policy hence should balance the distribution of outcomes within and across generations. Every effort for conservation must be carried out early to protect our future generations by providing them with a better quality of life including productive resources for the future. Along with this we also have to safeguard our reasonable interests and concerns as environmental issues cannot be delinked from our efforts to provide the present generation with the basic necessities and a better quality of life. Also, there has to be a cooperative endeavour to protect the climate and environment along with development imperatives. Put together, combating climate change ultimately boils down to a complex economic policy issue with very difficult choices involving rates of economic growth, volumes of emission, probable increase in temperature, and adverse impacts and costs of addressing climate change.

## Integrating the Science and Economics

12.16 It follows from the earlier discussion that there are difficult technical and conceptual policy questions to be tackled. The most important is to choose a stabilization level of GHG emissions and time-frame for emission peaking, keeping in mind the principle of equity (in access to global atmospheric resources) and common but differentiated responsibilities (CBDR). Article 2 of the UNFCCC calls for stabilization of atmospheric GHG concentrations at levels and within a time frame that would prevent dangerous interference with the climate system. The understanding on dangerous interference with the climate change system ultimately is social, political, economic, and technical in nature. Table 12.1 shows the results of modelling for different levels of global mean temperature increase above pre-industrial levels at

**Table 12.1 : Different Levels of Global Mean Temperature Increase above Pre-industrial Levels**

| Category | Additional radiative forcing ($W/m^2$) | $CO_2$ concen-tration (ppm) | $CO_2$ eq. concen-tration (ppm) | Global mean temperature increase above pre-indus-trial at equilibrium, using 'best estimate' climate sensitivity (°C) | Peaking year for $CO_2$ emission | Change in global $CO_2$ emission in 2050 (% of 2000 emissions) | No of assessed scenarios |
|---|---|---|---|---|---|---|---|
| I | 2.5-3.0 | 350-400 | 445-490 | 2.0-2.4 | 2000-2015 | -85 to -50 | 6 |
| II | 3.0-3.5 | 400-440 | 490-535 | 2.4-2.8 | 2000-2020 | -60 to -30 | 18 |
| III | 3.5-4.0 | 440-485 | 535-590 | 2.8-3.2 | 2010-2030 | -30 to +5 | 21 |
| IV | 4.0-5.0 | 485-570 | 590-710 | 3.2-4.0 | 2020-2060 | +10 to +60 | 118 |
| V | 5.0-6.0 | 570-660 | 710-855 | 4.0-4.9 | 2050-2080 | +25 to +85 | 9 |
| VI | 6.0-7.5 | 660-790 | 855-1130 | 4.9-6.1 | 2060-2090 | +90 to +140 | 5 |
| | | | | | | | (Total =177) |

***Source*** **: Contribution of Working Group III to IPCC AR4.**

equilibrium and their corresponding peaking year for $CO_2$ emissions and concentration range to stabilize at these levels.

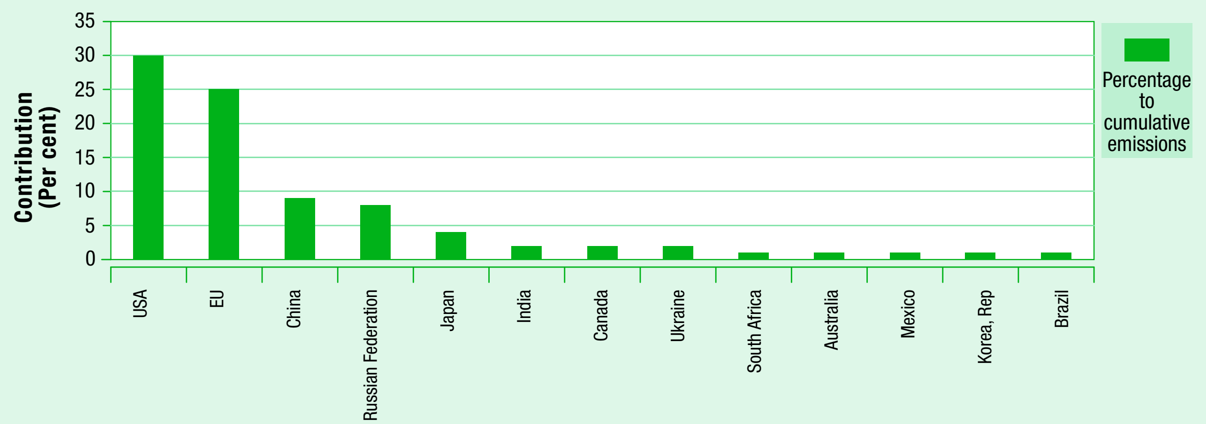
## GHG Emission Trends Globally

12.17 GHG emissions have risen sharply since 1945. As per a working paper published by the World Resources Institute (World Greenhouse Gas Emissions in 2005, WRI), total GHGs were estimated at 44,153 million metric tons $CO_2$ equivalents in 2005. This is the most recent year for which comprehensive emissions data are available for every major gas and sector across countries. Total global GHG emissions grew by 12.7 per cent

**Box 12. 5 : World GHG Emissions and Historical Responsibilities**

The largest share of historical and current global emissions of GHGs has originated in developed countries. While the worldwide emissions of GHGs have increased since 1945, with the largest increases taking place in $CO_2$ emissions, scientists attribute the global problem of climate change not to the current GHG emissions but to the stock of historical GHG emissions. Most of the countries, particularly the industrialized countries, having large current emissions are also the largest historic emitters and the principal contributors to climate change. Industrialized countries with the largest total emissions also rank among those with the highest per capita emissions.

**Percentage contribution to cumulative emissions 1900-2005**




*Source* : Earth Trends (http://earthtrends.wri.org) Searchable Database Results Provided by the World Resources Institute (http://www.wri.org) between 2000 and 2005, an annual average of 2.4 per cent. $CO_2$ was the predominant gas (with long life exceeding 100-150 years), accounting for 77 per cent of world GHG emissions in 2005 followed by methane (15 per cent) and nitrous oxide (7 per cent). In 2005, North America accounted for 18 per cent of world GHG emissions, China 16 per cent, and the EU 12 per cent. India's share stood at 4 per cent. Equally important are the figures for the cumulative emissions which are responsible for the current rise in global temperature (Box 12.5).

12.18 The World Bank database has $CO_2$ emissions data estimate up to the year 2008. As $CO_2$ is the most predominant GHG, an analysis of $CO_2$ emissions across countries in absolute and per capita terms in 2008 compared to 1992 is worthwhile. The absolute emission level of United States in 1992 was the highest at 4876 million metric tons of $CO_2$. China with 2695 million metric tons of $CO_2$ stood at the second place and was followed by Russia, Japan, Germany and India. Whereas in 2008 China had the highest absolute emission at 7031 million metric tons of $CO_2$ and United States stood second at 5461 million metric tons of $CO_2$. India's absolute emission levels were at 1742 million metric tons of $CO_2$ which was closely followed by Russia, Japan, Germany and Canada.

12.19 Per capita emissions, which are more important, reflect a different picture. Both in 1992 and 2008, Qatar had the highest per capita $CO_2$ emissions at 54.89 and 49.05 $CO_2$ tons. In 2008, Qatar was followed by countries like Trinidad and Tobago (37.39 $CO_2$ tons), Kuwait (30.11 $CO_2$ tons), Brunei Darussalam (27.53 $CO_2$ tons), and United Arab Emirates (24.98 $CO_2$ tons). Whereas, countries like China (5.30 $CO_2$ tons) and India (1.52 $CO_2$ tons) ranked among the middle and bottom with 68 and 122 ranks, respectively. Some of the developed countries like Australia (rank 9), United States (rank 10), Canada (rank 13) and Germany (rank 31) had one of the highest per capita $CO_2$ emission levels which is also reflected in their absolute emissions. (Figure 12.2)

## International Framework

12.20 The issue of climate change is now firmly on national and international agendas, subject to scrutiny by public and media, and is even shaping the strategies of a number of businesses. Internationally the UNFCCC (Convention) was set up in 1992 and entered into force in 1994. This was a crucial step towards putting in place the institutions and processes for the world's governments to take coordinated and effective action. As on date, 195 countries are Parties to the Convention. The ultimate objective of the Convention is to stabilize the concentrations of GHGs in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system. Although global in scope, it differentiated the commitments/ responsibilities of Parties on the basis of their respective capabilities, economic structures, resource capacities and on the basis of the principle of 'equity' which is at the core of the climate change debate. Hence, any discussion on stabilization of the concentrations of GHGs in the atmosphere should be preceded by a paradigm for equitable access to global atmospheric resources that determines the development space of nations. The Convention lays down legally binding commitments for the developed countries, taking into account their

**Figure 12.2** $CO_2$ emissions of some major countries (for 1992 and 2008)

historical responsibilities. These commitments are to be implemented in the form of reduction of GHG emissions by the developed countries with reference to 1990 levels and provision of support to developing countries in terms of finance and technology so as to enable them to take voluntary mitigation and adaption measures. The Convention recognizes that economic and social development and poverty eradication are the 'first and overriding priorities' of the developing countries.

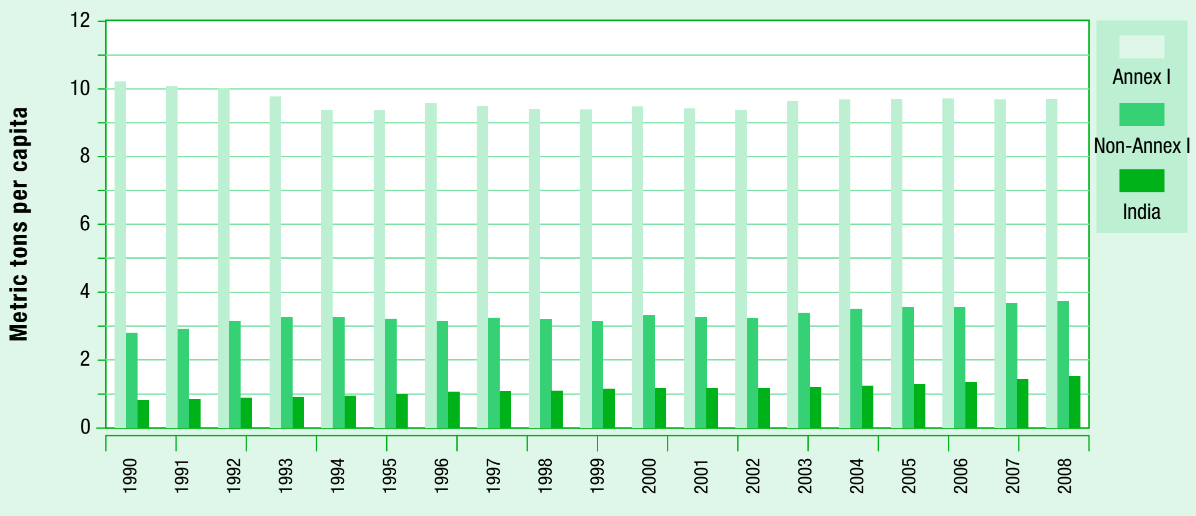
12.21 The Convention laid the groundwork for concerted international action, which in 1997 led to the adoption of the Kyoto Protocol containing a legally binding quantitative time-bound target for developed countries. The Kyoto Protocol set a target for developed countries (individually or jointly) to reduce overall emissions by an average of 5 per cent below 1990 levels in the first commitment period (2008-2012). Recognizing that relying on domestic measures alone to meet the target could be onerous, the Kyoto Protocol offers considerable flexibility through three mechanisms: Clean Development Mechanism (CDM), Joint Implementation (JI), and Emissions Trading (ET). Through the CDM, industrialized countries can finance mitigation projects in developing countries contributing to their sustainable development. Credits received from such projects can be used to meet commitments under the Kyoto Protocol. Through JI, industrialized countries acquire emissions credit by financially supporting projects in other industrialized countries. ET allows countries that expect their emissions to be above target to buy unused quotas from other countries. All major countries except the United States (US) have ratified the Kyoto Protocol.

## Emission Analysis of Annex I Countries, Non-Annex I Countries, and India

12.22 The UNFCCC differentiates countries into Annex I and Non-Annex I. Though it does not explicitly identify developed countries as Annex I and developing as Non-Annex I, broadly in the climate change literature Annex I Parties means industrialized countries that have committed themselves to reducing GHG emissions. Non-Annex I Parties are developing countries as well as Least Developing Countries (LDCs) which do not have any obligation to reduce emissions. Under the Kyoto Protocol, 37 countries committed themselves to a reduction in GHG emissions, namely carbon dioxide ($CO_2$), methane ($CH_4$), nitrous oxide ($N_2O$), sulphur hexafluoride ($SF_6$), hydrofluorocarbons (HFCs), and perfluorocarbons (PFCs). At the negotiations, all Annex I Parties (including the United States) collectively agreed to reduce their greenhouse gas emissions by 5.2 per cent on average for the period 2008-2012. This reduction is relative to their annual emissions compared to 1990 levels. Since the US has not ratified the protocol, the collective emissions reduction of Annex I Kyoto countries falls from 5.2 per cent to 4.2 per cent below the base year.

12.23 Figure 12.3 shows a comparison of average $CO_2$ emission levels (in per capita terms) between Annex I, Non-Annex I, and India. For the years 1990-2008 we can see that collectively Annex I Parties had the highest average level of emissions at 10.2 $CO_2$ metric tons per capita in 1990, reaching at 9.7 $CO_2$ metric tons per capita in 2008. For Non- Annex I Parties the average emission levels were around 2.8 $CO_2$ metric tons per capita in 1990, which increased to increasing to 3.7 $CO_2$ metric tons per

Figure 12.3 Comparison of $CO_2$ emission levels for Annex I, Non-Annex I and India



capita in 2008. For India, the emission levels per capita have been one of the lowest ranging from 0.81 $CO_2$ metric tons per capita in 1990 to 1.52 $CO_2$ metric tons per capita in 2008.

## Kyoto Targets and Demonstrable Progress by Annex I Countries

12.24 The first commitment period of the Kyoto Protocol is coming to an end in 2012. It is a good time to take stock of the progress of the Annex I countries in reaching their targets. Each Annex I Party has a specific emissions target, relative to its emissions of GHGs in its base year 1990 (inscribed in Annex B to the Kyoto Protocol). The Annex B emissions target and the Party's emissions of GHGs in the base year determine the Party's initial assigned amount for the Kyoto Protocol's five-year first commitment period (2008–2012). The quantity

**Table 12.2 : Quantified Emission Limitation or Reduction Targets of Major Kyoto Parties (excluding EITs) and their Demonstrable Progress**

| S. No. | Party | 1990 GHG emission (in Gg) excluding emissions/removals from land use, land-use change, and forestry | Quantified emission limitation or reduction commitment (percentage of base year or period) | 2009 GHG emission levels in Gg $CO_2$ equivalent | Change from 1990 to 2009 (%) | Deviation from the Kyoto Target as in 2009 (%) |
|---|---|---|---|---|---|---|
| 1. | Australia | 418470 | +8 | 545858 | 30.4 | 22.4 |
| 2. | Austria | 78171 | -8 | 80059 | 2.4 | 10.4 |
| 3. | Belgium | 143344 | -8 | 122440 | -13.2 | -5.2 |
| 4. | Canada | 591262 | -6 | 691834 | 17.0 | 23.0 |
| 5. | Denmark | 69391 | -8 | 62323 | -10.2 | -2.2 |
| 7. | Finland | 70369 | -8 | 66344 | -5.7 | 2.3 |
| 8. | France | 565987 | -8 | 522403 | -7.7 | 0.3 |
| 9. | Germany | 1247901 | -8 | 919698 | -26.3 | -18.3 |
| 10. | Greece | 104565 | -8 | 122724 | 17.4 | 25.4 |
| 11. | Iceland | 3441 | +10 | 4649 | 35.1 | 25.1 |
| 12. | Ireland | 54820 | -8 | 62395 | 13.8 | 21.8 |
| 13. | Italy | 519157 | -8 | 491120 | -5.4 | 2.6 |
| 14. | Japan | 1266553 | -6 | 1209213 | -4.5 | 1.5 |
| 15. | Leichenstein | 230 | -8 | 247 | 7.8 | 15.8 |
| 16. | Luxembourg | 12827 | -8 | 11684 | -8.9 | -0.9 |
| 17. | Monaco | 108 | -8 | 91 | -15.7 | -7.7 |
| 18. | Netherlands | 211852 | -8 | 198872 | -6.1 | 1.9 |
| 19. | New Zealand | 59112 | 0 | 70564 | 19.4 | 19.4 |
| 20. | Norway | 49767 | +1 | 51292 | 3.1 | 2.1 |
| 21. | Portugal | 59424 | -8 | 74660 | 25.6 | 33.6 |
| 22. | Spain | 283168 | -8 | 367548 | 29.8 | 37.8 |
| 23. | Sweden | 72536 | -8 | 60069 | -17.2 | -9.2 |
| 24. | Switzerland | 53122 | -8 | 51949 | -2.2 | 5.8 |
| 25. | United Kingdom of Great Britain and Northern Ireland | 779387 | -8 | 570066 | -26.9 | -18.9 |
| 26. | United States of America* | 6166812 | -7 | 6608227 | 7.2 | 14.2 |

***Source*** **: UNFCCC.**

***Notes*** **: *Country which has declared its intention not to ratify the Kyoto Protocol; Gg is gigagrams, EITs is Economies in Transition.**

of the initial assigned amount is denominated in individual units, called Assigned Amount Units (AAUs), each of which represents an allowance to emit one metric ton of $CO_2$ equivalent (t $CO_2$ eq.). Table12.2 shows the quantified emission limitation or reduction targets as contained in Annex B to the Kyoto Protocol along with the demonstrable progress showed by the Annex I countries (excluding Economies in Transition).

12.25 If the emission data of 2009 is any indication, it can be seen that except a few, many Parties may miss even the modest Kyoto target for the first commitment period. The emissions of many Parties have actually gone up compared to 1990 levels, which is a very bad news for the global climate. For example Canada, which has a target reduction of 6 per cent, has actually increased emissions by 17 per cent in 2009, which means a deviation of 23 per cent from the Kyoto Target. Hence, in spite of the commitment by the developed world to reduce emissions so that developing countries get their fair share of carbon space to grow, it has actually increased its emissions during the period 1990-2009. Developing countries (Eg. Brazil, China, India & Mexico) that have undertaken efforts for reasons other than climate change have reduced their emissions growth over the past three decades by approxmately 500 million tons $CO_2$ per year, that is more than the reductions required from Annex I countries by the Kyoto Protocol. (Contribution of working Group III to IPCC AR4).

## A Look at Small Island Developing Nations (SIDS), Least Developed Countries (LDCs), India, and Others

12.26 From the view of climate change negotiations at the UNFCCC and also in other international forums, countries often unite themselves into groups or regional bodies to represent their mutual interests and to establish common negotiating positions. With differing interests and issues faced by different countries, these groups often play a catalytic role in the dynamics of the negotiations. Hence certain Non-Annex I countries form coalitions and line behind some positions which may be unacceptable to other developing country groups. The Durban negotiations also demonstrated these dynamics and pressures. SIDS and LDCs are two country groups that are very proactive in the climate change negotiations

**Table 12.3 : Comparisons of SIDS, LDCs and Other Countries of the World (for the year 2007)[1]**

| Country name/Regions/ Groups | GDP per capita, PPP (current international $) | $CO_2$ emissions (metric tons per capita) | GDP per unit of energy use (constant 2005 PPP $ per kg of oil equivalent) | Electric power consumption (kWh per capita) |
|---|---|---|---|---|
| East Asia & Pacific | 8116 | 4.85 | 4.74 | 2642 |
| Europe & Central Asia | 23069 | 7.89 | 6.26 | 5558 |
| European Union | 30710 | 8.01 | 8.02 | 6391 |
| High income: non OECD | 32610 | 14.31 | 5.55 | 8450 |
| Middle East & North Africa | 9621 | 5.42 | 4.59 | 2292 |
| North America | 45608 | 18.31 | 5.50 | 13955 |
| OECD members | 32998 | 10.73 | 6.72 | 8397 |
| South Asia | 2618 | 1.21 | 5.10 | 507 |
| Sub-Saharan Africa | 2054 | 0.85 | 3.21 | 553 |
| India | 2854 | 1.43 | 5.06 | 563 |
| Least developed countries | 1271 | 0.24 | 3.91 | 149 |
| SIDS avg | 10307 | 3.95 | 10.99 | N.A |
| World | 10276 | 4.74 | 5.42 | 2851 |

***Source*** **: World Bank Data (data.worldbank.org/indicator).**

since they are considered most susceptible to climate change threats. SIDS consists of small islands and low lying coastal countries that share similar sustainable development challenges related to climate change. The majority of SIDS countries are also members of the Association of Small Island States (AOSIS) and 12 are listed as LDCs as well. The 50 countries defined as LDCs by the United Nations (UN) regularly work together in the UN system. They have become increasingly active in the climate change process, usually working together to defend their particular interests. Often in the negotiations, India's position on its vulnerability has not received due attention and coverage. India is highly vulnerable to adverse impacts of climate change with its long coast-line, large number of islands, dependence on primary sectors for livelihood, etc. Since India along with SIDS and LDCs is vulnerable to climate change impacts and is likely to suffer from it, so it would be a good idea to see how these countries have fared against other regions of the world, on the basis of the indicators such as GDP, $CO_2$ emissions, and energy consumption (Table12.3).

12.27 When we compare the per capita GDP of India and SIDS against that of the world, collectively SIDS members have a better showing with their GDP being closer to the world average. India's per capita GDP, on the other hand, is very low. Figures 12.4 and 12.5 clearly show that India and the LDCs have had lower per capita GDP as well as smaller per capita emissions than SIDS.

**Figure 12.4** **$CO_2$ Emissions for SIDS, LDCs, India and world**[1]

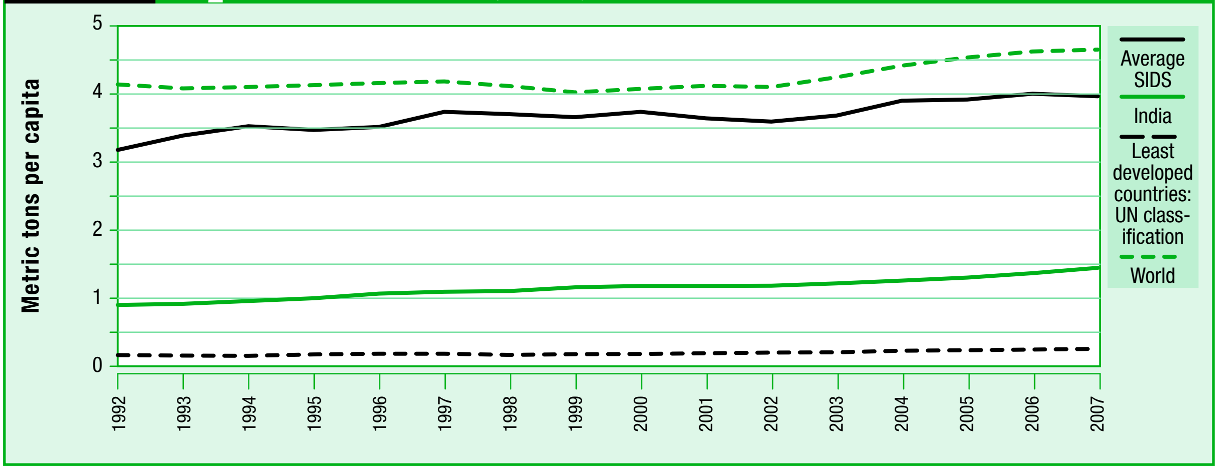
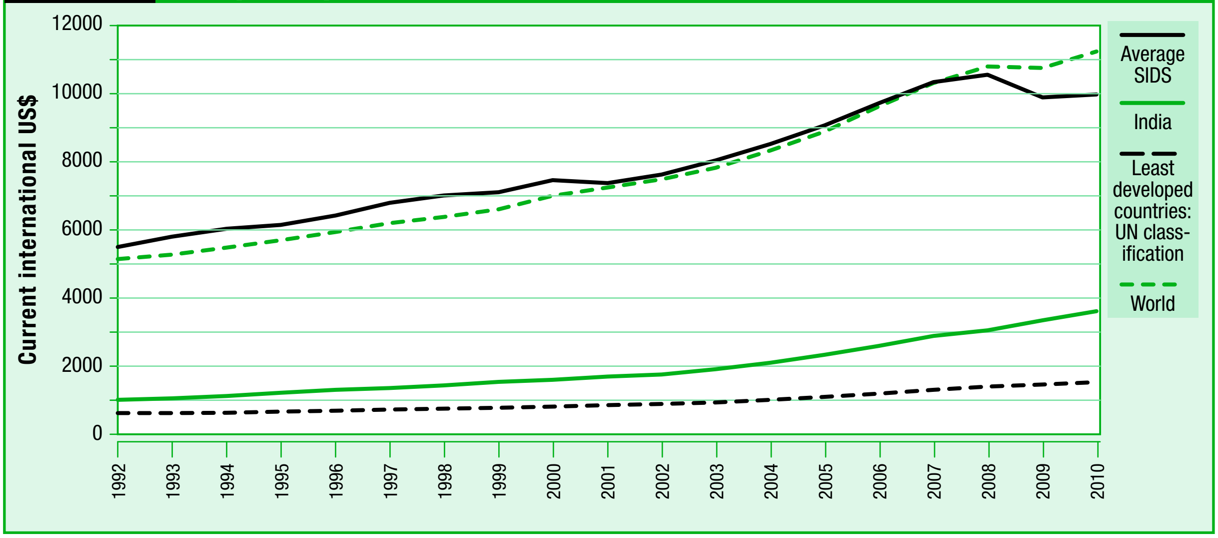



**Figure 12.5** **GDP per capita for SIDS, LDCs, India and world in PPP terms**[1]




***Source*** **: World Bank data (data.worldbank.org/indicator).**

[1]Average SIDS in the case of per capita $CO_2$ emissions and per capita GDP represent data of 33 SIDS states out of the total of 52 and in the case of GDP per unit of energy use the average represents 31 SIDS states due to the limited data available.

## Current State of Negotiations

12.28 The Conference of Parties (COP), which is the supreme body of the Convention, meets annually and reviews the implementation of the Convention. During the COP 13 held at Bali, Indonesia, in December 2007, a comprehensive process called the Bali Action Plan (BAP) to enable full, effective, and sustained implementation of the Convention through Long Term Cooperative Action, now, up to, and beyond 2012 was launched. The negotiations held at Cancún in December 2010 did result in a set of decisions that covered various areas of action: mitigation, adaptation, technology, and finance as outlined in the BAP. However, the Cancún agreements were widely perceived as a modest step forward and a reaffirmation of faith in the multilateral process.

12.29 The recently held Durban Climate Change Conference from 28 November to 10 December 2011 (COP 17) marks an important step forward in the climate change negotiations (Box 12.6). The Durban outcomes made significant contribution towards fulfilment of the Bali Road Map as they established the second commitment period of the Kyoto Protocol and operationalized some of the key Cancún agreements related to Green Climate Fund (GCF), Technology Mechanism (TM), and Adaptation Framework. The Durban outcomes also opened a window for discussions on the post 2020 arrangements for the global climate change regime for which a Durban Platform has been launched. Though India and other developing countries came under tremendous pressure at Durban, India took lead in ensuring that the new arrangements are firmly anchored in the Convention and are based on the principles of 'common but differentiated responsibilities' and 'equity'. The faith that the Parties had reaffirmed in a consensus-based multilateral regime for climate change deliberations in Cancún was reinforced in Durban. Unlike the Cancún agreements, which were adopted despite explicit rejection by Bolivia, the Durban outcomes were adopted unanimously. Durban has re-established the primacy of the UNFCCC negotiations as the multilateral forum for reaching decisions on climate change-related issues.

### Box 12.6 : Key Durban Outcomes

- The most significant achievement of the Durban Conference was to establish a second commitment period of the Kyoto Protocol, which will begin on January 1, 2013 and end either on December 2017 or December 2020. The quantified emission limitation and reduction objectives (QELROs) for developed country Kyoto Protocol Parties will be determined during 2012.
- Durban also made significant progress in operationalization of Cancún agreements related to GCF and the Adaptation Framework. It was decided to confer legal personality and legal capacity to GCF and that the Fund will function under the guidance of COP. It was also decided to expeditiously operationalize the Fund for which Global Environment Facility (GEF) and the UNFCCC Secretariat have been asked to set up an interim Secretariat to support the GCF Board
- Significant progress was made towards operationalization of the Technology Mechanism and its components viz. Climate Technology Centre and Network (CTCN) and Technology Executive Committee (TEC), established at Cancun.
- The transparency arrangements agreed in Cancún were elaborated in Durban and the reporting guidelines for developed countries viz. Biennial Reports (BRs) and the developing countries viz. Biennial Update Reports (BURs) were adopted. It was ensured that the reporting and Measurable, Reportable and Verifiable (MRV) obligations for the developing countries are not more onerous than the developed country parties.
- A significant outcome in Durban was to launch a Durban Platform to discuss the post 2020 arrangements for global climate change regime. It was decided that the post 2020 arrangements would be finalized by 2015 and implemented from 2020. India played a crucial role in ensuring that the new arrangements are not limited to either a Protocol or a legal instrument but also include an option of 'an agreed outcome with a legal force under the Convention'. Thus it was ensured that the outcome of negotiations to finalize the post 2020 arrangements is firmly rooted in the Convention and all its established principles including CBDR and Equity apply. A web-based registry was also agreed upon to be set up under the management of the UNFCCC Secretariat to serve as a platform for the developing countries to upload their Nationally Appropriate Mitigation Actions (NAMAs) for seeking international support or recognition of achievement of voluntary mitigation goals.
- Progress was made in Durban on issues relating to Reducing Emissions from Deforestation and Degradation and Sustainable Management of Forests (REDD+) with an agreement on guidance on systems for providing information about how safeguards are being addressed and respected and there was also agreement on modalities for forest reference emission levels and forest reference levels.

### Critical Issues in the Negotiations

12.30 While the climate change conferences in Cancún and Durban have attempted to address in some measure some of the issues relating to the Bali Road Map, several critical issues have remained unresolved. The issues relating to equity, trade and technology–related intellectual property rights (IPRs) are significant in this context and their early resolution is important for the sustenance of an effective and cooperative climate change regime. In the wake of launch of a new process under Durban Platform, it is even more important that the unresolved issues are addressed upfront in the negotiations for enhancing global actions against climate change.

12.31 The principles of equity and CBDR are fundamental to any regime for addressing climate change. Considering the fact that it was agreed in Cancún to ensure "equitable access to sustainable development" while working towards a global goal of climate stabilization, the principle of equity needs to be properly articulated in the negotiations so as to fully protect the interests of developing countries. The post 2020 arrangements to be evolved under the Durban Platform have to be anchored in the principles of equity and CBDR.

12.32 The UNFCCC provides that the countries should promote open and supportive international trading regime while taking actions to address climate change and should not take any arbitrary actions. This issue is gaining importance in view of the current global tendencies to erect protectionists' barriers and use measures aimed at advancing and protecting trade interests in the name of climate change. Proposed sectoral measures like inclusion of civil aviation emissions in its emission trading scheme by European Union (EU) imposed unilaterally fall in such category. The multilateral framework for addressing climate change does not allow such unilateral and sectoral actions at the global level unless the principle of CBDR is squarely met. In the ensuing negotiations, it is important to ensure that trade issues are not mixed with environmental issues and to prohibit unilateral measures to address climate change taken in disregard of the principles of the UNFCCC.

12.33 BAP recognizes that development and transfer of climate friendly technologies is critical to enhancing developing country actions. Hence, BAP urges countries to take urgent actions to "accelerate deployment, diffusion and transfer of affordable environmental technologies". While a Technology Mechanism and Networks of Climate Technology Centers have been set up under the Cancun decisions, the critical issues relating to transfer of technologies and their IPRs have not yet been addressed. The institutional interventions agreed so far will at best help build capacity for deployment of existing technologies. They will not help in making technologies available on an affordable basis and facilitating their faster uptake. In the absence of a facilitative IPRs regime for such technologies, the objective of advancing nationally appropriate mitigation and adaptation actions at the scale and speed warranted by the Convention will not be achievable. The negotiations in future have to address this issue effectively and evolve an appropriate model for facilitating the development and access to such technologies.

## India And Climate Change

### India and GHGs

12.34 Although India ranks among top five countries in terms of GHG emissions, its per capita emissions are much lower than those of the developed countries even if historical emissions are excluded. Its high level of emissions is due to its large population, geographical size, and economy. The most recent data available for India come from the assessment carried out by the Indian Network for Climate Change Assessment (INCCA) in May 2010. The key results of the assessment are that total net GHG emissions from India in 2007 were 1727.71 million tons of $CO_2$ equivalent (eq.), of which $CO_2$ emissions were 1221.76 million tons, $CH_4$-20.56 million tons, and $N_2O$-0.24 million tons. In 1994, the total net GHG emissions for India were 1228.54 million tons of $CO_2$ eq. This represents a compounded annual growth rate (CAGR) of 2.9 per cent during the period 1994 to 2007 (Table 12.4). GHG emissions from the energy, industry, agriculture, and waste sectors in 2007 constituted 58 per cent, 22 per cent, 17 per cent, and 3 per cent of net $CO_2$ eq. emissions respectively. India's per capita $CO_2$ eq. emissions including land use, land use change, and forestry (LULUCF) were 1.5 tons per capita in 2007.

### Climate Change Threats and Vulnerabilities for India

12.35 Climate change has enormous implications for the natural resources and livelihoods of the

**Table 12.4 : A Comparison of GHG Emissions by Sector between 1994 and 2007**

(in million tons of $CO_2$ equivalent)

| | 1994 | 2007 | CAGR (per cent) |
|---|---|---|---|
| Electricity | 355.03 (28.4) | 719.30 (37.8) | 5.6 |
| Transport | 80.28 (6.4) | 142.04 (7.5) | 4.5 |
| Residential | 78.89 (6.3) | 137.84 (7.2) | 4.4 |
| Other Energy | 78.93 (6.3) | 100.87 (5.3) | 1.9 |
| Cement | 60.87 (4.9) | 129.92 (6.8) | 6.0 |
| Iron & Steel | 90.53 (7.2) | 117.32 (6.2) | 2.0 |
| Other Industry | 125.41 (10.0) | 165.31 (8.7) | 2.2 |
| Agriculture | 344.48 (27.6) | 334.41 (17.6) | -0.2 |
| Waste | 23.23 (1.9) | 57.73 (3.0) | 7.3 |
| Total without LULUCF | 1251.95 | 1904.73 | 3.3 |
| LULUCF | 14.29 | -177.03 | |
| **Total with LULUCF** | **1228.54** | **1727.71** | **2.9** |

*Note* : **Figures in brackets indicate percentage emissions from each sector with respect to total GHG emissions without LULUCF in 1994 and 2007 respectively.**

people. It will have wide-ranging effects on the environmental and socio-economic and related sectors. Various studies indicate that the key sectors in India such as the agriculture, water, natural ecosystem, biodiversity, and health are vulnerable to climate change. This is happening precisely at a time when it is confronted with huge development imperatives. The INCCA report warns of impacts such as sea-level rise, increase in cyclonic intensity, reduced crop yield in rain-fed crops, stress on livestock, reduction in milk productivity, increased flooding, and spread of malaria. These changes are likely to increase the pressure on Indian agriculture, in addition to existing stresses of yield stagnation, land use, and competition for land, water and other resources. Any uncertainty in agriculture can considerably affect the food systems and thus increase the vulnerability of a large section of the resource-poor population. This calls for urgency of action in reducing vulnerability to adverse impacts of climate change and enhancing adaptive capacity through sector-specific interventions and efforts.

12.36 The food and nutritional security of India currently depends to a great extent on the production of wheat and rice which together constitute around 75 per cent of total food grain production. Simulation models suggest that in the absence of adaptation and fertilizer benefits, a 1°C increase in temperature alone could lead to a 6 million tonnes drop in wheat production. Production of milk, which is increasingly becoming an important item in the food basket, may also be adversely affected by the increased heat stress associated with global climate change to dairy animals. Reduced water availability, owing to glacier retreat and decreased rainfall, and a growing population will increase water stress. India's forests are likely to experience a shift in forest type, adversely impacting associated biodiversity and regional climate dynamics as well as livelihoods based on forest products. Health is also likely to be adversely affected by climate change. Heat stress, vector-borne diseases, water contamination are some of the projected health impacts of climate change. For example, similar to other tropical countries, India is predicted to have increased susceptibility to vector-borne diseases such as malaria which is also projected to move to higher latitudes and altitudes.

## India's Voluntary Actions

12.37 India has already taken a number of actions on voluntary basis with own resources in pursuance of a sustainable development strategy. As per India's GHG Emissions Profile: Results of Five Climate Modelling Studies, a report published in 2009, India's per capita GHG emissions in 2030-31 would be between 2.77 tons and 5.00 tons of $CO_2$ eq. Four of the five studies estimated that even in 2031, India's per capita GHG emissions would stay under 4 tons of $CO_2$ eq. which is lower than the global per capita emissions of 4.22 tons of $CO_2$ eq. in 2005. This means that even two decades from now, India's per capita GHG emissions would be well below the global average of 25 years earlier.

12.38 Important measures taken by India are as follows:

(i) India has adopted the National Action Plan on Climate Change (NAPCC) in 2008 which has both mitigation and adaptation measures. The eight National Missions which form the core of the NAPCC represent multi-prolonged, long-term, and integrated strategies for achieving key goals in the context of climate change. Adaptation is the focus of the NAPCC. At the same time, Missions on Solar Energy and Energy Efficiency are geared to mitigation. Objectives in brief and cost estimates are given in the later sections (see Table 12.5).

(ii) India has announced a domestic goal of reducing the emission intensity of its GDP by 20-25 per cent of the 2005 level by 2020. This will be achieved through a multi-sector low carbon development strategy. It is intended that lower carbon sustainable growth be a central element of our Twelfth Five Year Plan.

(iii) Apart from the NAPCC, all the states have also been asked to prepare state-level action plans. These plans are envisioned as extensions of the NAPCC at various levels of governance, aligned with the eight National Missions. Some states like Delhi and Gujarat and some Himalayan states have already taken the lead and been proactive in addressing climate change. Delhi launched a climate change action plan for 2009-2012 formulated on the lines of the NAPCC.

12.39 The major policies and actions for climate change mitigation and adaptation cut across different sectors and areas of the economy. The initiatives in some of the major areas are as follows.

### *i) Energy Efficiency*

The National Mission for Enhanced Energy Efficiency (NMEEE) is the key focus for government action for energy efficiency. The NMEEE is divided into four components: (a) Perform, Achieve and Trade (PAT), a scheme for trading in energy efficiency certificates that will cover about 700 industrial units and achieve a saving of almost 17,000 MWs of energy by 2017. This scheme is mandatory for all large industrial units and facilities in thermal power, aluminum, cement, fertilizers, chlor-alkali, steel, paper and pulp, and textiles, (b) Energy Efficiency Financing platform, (c) Market Transformation for Energy Efficiency, (d) Framework for Energy Efficient Economic Development. The NMEEE, by 2014-15, is likely to achieve about 23 million tonnes oil-equivalent of fuel savings in coal, gas, and petroleum products, along with an expected avoided capacity addition of over 19,000 MW. The $CO_2$ emission reduction is estimated to be 98.55 million tons annually. The NMEEE is not the first and only effort by the government to tackle energy efficiency. The Energy Conservation Act (2001) empowers the government to prescribe and ensure compliance with standards and norms for energy consumers and prescribe energy conservation building codes and energy audits. Apart from these, there are a range of programmes being implemented by the Bureau of Energy Efficiency (BEE) in key sectors of energy demand which have resulted in savings in avoided power capacity of 7665 MW during the first four years of the Eleventh Plan period.

### *(ii) Power Plants*

For reducing emission intensity, 60 per cent of coal-based capacity addition in the Twelfth Plan and 100 per cent in the Thirteenth Plan shall be done by deploying super critical technology. Ultra super critical power plants operate at higher efficiency. The First ultra-supercritical power plant is expected in 2017. Large-scale adoption of this technology after a few years would further reduce the emission intensity of the Indian power sector. Also there are plans to retire old and inefficient coal-based power-generating units.

### *(iii) Renewable Energy*

The Electricity Act 2003 together with the National Electricity Policy 2005 (NEP) and the Tariff Policy (TP) mandate promotion of electricity generation from renewable sources. The Electricity Act and these policies envisage regulatory interventions for promotion of renewable energy sources. The initiatives of the Central Electricity Regulatory Commission (CERC) range from determination of preferential tariff for renewable energy and creating a facilitative framework of grid connectivity through the Indian Electricity Grid Code to developing market-based instruments like Renewable Energy Certificate (REC). The REC mechanism is seen as a major initiative towards promoting renewable energy and encouraging competition in this segment. It addresses the twin objectives of harnessing renewable energy sources in areas with high potential and compliance with Renewable Purchase Obligation (RPO) by resource-deficit states. This important framework was formally launched in November 2010, heralding a new era in the development of green energy in India.

### *(iv) Nuclear Energy*

India recognizes the importance of nuclear energy as a sustainable energy source. In this regard a three-stage nuclear power programme has also been chalked out. India's present nuclear installed capacity is 4780 MW and there are plans to install nuclear generation capacity of 20000 MW by 2020.

### *(v) Transport*

India has taken substantial initiatives to make the transport sector less emission intensive. One of the major initiatives has been upgradation of vehicular emission norms such as Bharat Stage II, Bharat Stage III and Bharat Stage IV. The commercial manufacture of battery-operated vehicles has begun in India with a view to promoting low/ no carbon emitting vehicles. Also in Delhi there has been a large-scale switchover from petrol and diesel to CNG, with over 50,000 vehicles already converted. In addition to this Integrated Transport Policy (2001) promotes the use of ethanol-blended petrol and bio-diesel. The National Urban Transport Policy emphasizes the development and usage of extensive public transport facilities (including non-motorized modes) over personal vehicles.

### *(vi) Agriculture and Forestry*

One of the major policy initiatives under this head is India's National Mission for Sustainable Agriculture. Apart from this, there are also programmes for crop improvement and drought proofing. India is among the few countries where forest cover has actually increased over the past two decades. It has taken strong measures to conserve forests. India has launched an ambitious Green India Mission to increase the quality and quantity of forest cover in 10 million ha of land. Also an incentive-based additional special grant of US$ 1.2 billion had been announced by the central government to all states for sustainable forestry management. Other policies and programmes in the forestry sector include the National Forest Policy (1988), Participatory Forest Management/Joint Forest Management Programme, National Afforestation Programme, National Forestry Action Programme, and National Watershed Development Project for Rainfed Areas.

### *(vii) Marine and Coastal Environment*

Ensuring stability in the coastal environment in India becomes imperative considering its densely inhabited, long coastline of more than 7500 km. Some of the major initiatives taken in this area are Coastal Ocean Monitoring and Prediction Systems (COMAPS),Land Ocean Interactions in the Coastal Zone (LOICZ),Integrated Coastal and Marine Area Management (ICMAM), and Society of Integrated Coastal Management (SICOM).

### *(viii) Initiatives for Enhancing Knowledge and Scientific Findings*

Apart from the National Mission on Strategic Knowledge for Climate Change, India has established the INCCA which will carry out scientific studies of various aspects of climate change. The INCCA has recently carried out a 4x4 assessment of climate change in India covering four major sectors in four ecological regions of the country and an updated inventory of the GHG emissions for the year 2007.

### *(ix) Enhancing Adaptive Capacity*

India's strategy for enhancing its adaptive capacity to climate variability is reflected in many of its social and economic development programmes. For developing countries like India, adaptation ultimately boils down to assisting the vulnerable population during exigencies and empowering them to build their lives and cope with uncertainties in the long run. Several of India's social-sector schemes, with their emphasis on livelihood security and welfare of the weaker sections, aim to do just that. India implements a series of central sector and centrally sponsored schemes under different ministries/ departments aimed at achieving social and economic development. Many of these schemes contain elements (objectives and targets) that are decidedly geared to adaptation. In other words, there is substantial adaptation orientation in many of the sectoral schemes currently under operation. An exercise has been carried out to measure the expenditure on adaptation-related programmes with critical adaptation components: (a) crop improvement and research, (b) poverty alleviation and livelihood preservation, (c) drought proofing and flood control, (d) risk financing, (e) forest conservation, (f) health, and (g) rural education and infrastructure. It has been found that India's expenditure on these adaptation-oriented schemes has increased from 1.45 per cent of GDP in 2000-01 to 2.82 per cent during 2009-10 This is a fairly impressive level of spending and is an obvious reflection of the multiplicity of economic and social welfare programmes under implementation in India.

## Climate Change Finance

12.40 Climate change is a complex policy issue with major implications in terms of finance. All actions to address climate change ultimately involve costs. Funding is vital in order for countries like India to design and implement adaptation and mitigation plans and projects. The problem is more severe for developing countries like India, which would be one of the hardest hit by climate change, given its need to finance development. Most countries do indeed treat climate change as a real threat and are striving to address it in a more comprehensive and integrated manner with the limited resources at their disposal. But financial ways and means must be found to enable developing countries to enhance their efforts in this direction, especially enhancing their adaptive capacity. Thus, climate change is both an environmental issue and an economic costs and development issue.

12.41 Lack of funding is a large impediment to implementing adaptation plans. The scale and magnitude of the financial support required by developing countries to enhance their domestic mitigation and adaptation actions are a matter of intense debate in the multilateral negotiations under the UNFCCC. The Convention squarely puts the responsibility for the provision of financial support on the developed countries taking into account their contribution to the stock of GHGs in the atmosphere (Box 12.7).

12.42 Countries like India that are on the path of development would need access to finance and technology if the world is to achieve emission standards in line with the stabilization and sustainable development goals. The funds that are currently available under the Convention and Kyoto Protocol are small compared to the magnitude of need assessed by many studies. The UNFCCC has estimated a requirement of US$ 200-210 billion in additional annual investment in 2030 to return GHG emissions to current levels. Further, additional investment needed worldwide for adaptation is estimated by the UNFCCC to be annually US$ 60-182 billion in 2030, inclusive of an expenditure of US$ 28-67 billion in developing countries. As various estimates point to the enormity of funds needed for meeting the long-term finance requirements for adaptation and mitigation, developing countries including India have been arguing that a global mechanism for generating and accounting for additional resources, mainly from public sources, is essential. There should be a multilateral financial mechanism under the Convention that should be set up with resources provided by developed countries on the basis of assessed contributions.

12.43 Attempts are being made to design appropriate institutions and mechanisms for this purpose at global level. This is evident in the setting up of a GCF under the Convention, developed countries' announcement of US$ 30 billion as fast start funds, US$ 100 billion (to be mobilized) as long-term finance, etc. However, these attempts do not suffice to address the challenge. On the other hand, efforts are being made by some developed countries to shift the discussions on 'sources of long-term finance' to the G20 forum where the emphasis is on evolving new and innovative financial instruments involving both developed and developing countries. This idea is strongly resisted by many developing countries in the multilateral negotiations. The high-level panel appointed by the UN Secretary General in 2010 had attempted to address some of these issues but its recommendations which favour dependence on market-related instruments (not public funding) and private-sector resources have not found favour by many in the multilateral negotiations.

12.44 At Durban, a work programme on long-term finance has been launched, with the aim of

**Box 12.7 : Some important articles on finance in the UNFCCC**

Article 4.3: "The developed country Parties and other developed Parties included in Annex II shall provide new and additional financial resources to meet the agreed full costs incurred by developing country Parties in complying with their obligations under Article 12, paragraph 1. They shall also provide such financial resources, including for the transfer of technology, needed by the developing country Parties to meet the agreed full incremental costs of implementing measures that are covered by paragraph 1 of this Article and that are agreed between a developing country Party and the international entity or entities referred to in Article 11, in accordance with that Article. The impliementation of these commitments shall take into account the need for adequacy and predictability in the flow of funds and the importance of appropriate burden sharing among the developed country Parties.''

Article 4.5: "The developed country Parties and other developed Parties included in Annex II shall take all practicable steps to promote, facilitate and finance, as appropriate, the transfer of, or access to, environmentally sound technologies and know-how to other Parties, particularly developing country Parties, to enable them to implement the provisions of the Convention. In this process, the developed country Parties shall support the development and enhancement of endogenous capacities and technologies of developing country Parties."

Article 4.7. "The extent to which developing country Parties will effectively implement their commitments under the Convention will depend on the effective implementation by developed country Parties of their commitments under the Convention related to financial resources and transfer of technology and will take fully into account that economic and social development and poverty eradication are the first and overriding priorities of the developing country Parties."

Article 11.1."A mechanism for the provision of financial resources on a grant or concessional basis, including for the transfer of technology, is hereby defined. It shall function under the guidance of and be accountable to the Conference of the Parties, which shall decide on its policies, programme priorities and eligibility criteria related to this Convention. Its operation shall be entrusted to one or more existing international entities."

contributing to the ongoing efforts to scale up mobilization of climate change finance after 2012 and analyse options for the mobilization of resources from a wide variety of sources, public and private, bilateral and multilateral, including alternative sources. The work programme will draw upon relevant reports including that of the High-level Advisory Group on Climate Financing and the report on mobilizing climate finance for the G20 and the assessment criteria in these reports.

12.45 As a responsible country, India is willing to take actions at domestic level in accordance with the policy of sustainable development and to the extent its capacities permit. A substantial portion of its GDP is already being spent on addressing vulnerability to climate variability and related adaptation. At domestic level, the assessment of financial requirements and provision of resources for meeting the needs of a low-carbon inclusive growth in the country are also under discussion in various inter-ministerial fora. The Prime Minister's Council on Climate Change assesses the financial cost of actions proposed in the National Missions. Further work is underway to evolve specific Nationally Appropriate Mitigation Actions (NAMAs), policies, and programmes and estimate the financial requirement and policy support needed to implement them. The Planning Commission has constituted a Working Group on climate change with a view to identifying the sectoral priorities for the Twelfth Five Year Plan and the modalities for their implementation. The Working Group will determine the scale of funding necessary for the NAMAs and other adaptation actions in order to reflect them in the sectoral strategy of the Twelfth Five Year Plan. In the light of resource scarcity; prioritization is required across the sectors.

12.46 A major part of the adaptation and mitigation needs of developing countries can be met by accessing international finance. The mobilization of the requisite amount of climate finance for the developing countries will be one of the biggest challenges in the times to come. Though alternative sources including the private sector can be explored to fill the gaps between the demand and supply of climate finance, public finance should be at the core to ensure predictability and reliability of flow of funds to the developing countries.

12.47 In the current scenario, India has two broad channels available for financing climate change: 1) *domestic sources* and 2) *international sources.*

## Domestic Sources of Finance

12.48 Currently, India is mostly utilizing and relying on domestic sources of finance, which are budgetary allocations for various sectors and the National Clean Energy Fund (NCEF) fed by a cess on coal at ₹ 50 per ton introduced in 2010. The NCEF will finance innovative projects in clean energy technologies and harness renewable energy sources to reduce dependence on fossil fuels. From the Fund, allocation of ₹ 200 crore has already been proposed for environmental remediation programmes and another ₹ 200 crore for the Green India Mission. The cess will also help pay for schemes to protect and regenerate forests and clean up polluted sites. It is estimated that an amount of ₹ 10,000 crore will be generated by 2015 from the clean energy cess on coal. Other fiscal incentives by the government include exemption of some parts of hybrid vehicles from customs and imposition of a concessional 5 per cent rate of excise duty to increase their domestic production, lower customs duty on light emitting diodes (LEDs) and solar lanterns, and subsidies to renewable energy projects. The NAPCC outlines a number of steps to be taken in critical sectors along with financial outlays (Table12.5). State Action Plans which are on the anvil also estimated costs which are significant by any standard for implementation of its various missions. For example, a rough and ready estimate puts the resource requirement at ₹17,000 crore over a period of five years for the state of Odisha.

## International Sources of Finance

12.49 Given the magnitude of the task and the requirement of funds, domestic finances are likely to fall short of the current and projected needs. Global funding through the multilateral mechanism of the Convention will enhance domestic capacity to finance climate-related efforts. To facilitate financial support, the Convention established a financial mechanism to provide funds to developing country Parties. Currently, GEF which is an operating entity of the financial mechanism of the Convention provides grants to developing countries for projects that benefit the global environment, linking local, national, and global environmental challenges and promoting sustainable livelihoods. With the COP finalizing the design of the GCF at the recent Durban conference after protracted negotiations, it is expected that the GCF will be the main channel of finances to address climate change needs in the developing countries in the future. There

**Table 12.5 : Objectives and Financial Outlays under the Eight Missions:**

| Sl. No. | Name of the mission/ nodal agency | Salient features and status of the National Missions |
|---|---|---|
| 1 | National Solar Mission | Seeks to deploy 20,000 MW of solar electricity capacity in the country by 2020. The first phase (2010-12) is currently underway during which 1000 MW is planned to be installed.<br>The total financial outlay during Phase 1 is estimated as ₹ 4337 crore. The requirement for Phase 2 will be assessed after review of implementation of Phase 1. |
| 2 | National Mission for Enhanced Energy Efficiency | Creates new institutional mechanisms to enable the development and Energy Efficiency strengthening of energy efficiency markets. Various programmes have been initiated, including the PAT mechanism to promote efficiency in large industries, and the Super-Efficient Equipment Programme (SEEP) to accelerate the introduction of deployment of super-efficient appliances.<br>The total requirement projected under the Mission between 2010 and 2012 is ₹ 425.35 crore. This is intended to attract private-sector investment in the energy efficiency market. |
| 3 | National Mission on Sustainable Habitat | Promotes the introduction of sustainable transport, energy-efficient buildings, Sustainable Habitat and sustainable waste management in cities.<br>The total cost projected in the Mission Document is ₹ 1000 crore. |
| 4 | National Water Mission | Promotes the integrated management of water resources and increase of Mission water use efficiency by 20 per cent<br>As per the Mission Document, the total estimated additional fund required for implementing the Mission is ₹ 89,101crore during the Eleventh and the Twelfth Five Year Plan periods. This includes expenditure on schemes implemented through the State Plans and Central Plan. |
| 5 | National Mission for Sustaining the Himalayan Eco System | Establishes an observational and monitoring network for the Himalayan the Himalayan Ecosystem environment so as to assess climate impacts on the Himalayan glaciers and promote community-based management of these ecosystems<br>For implementing the Mission activities, a total fund of ₹ 195 crore is required in the Eleventh Plan period. A total budget outlay of ₹ 1100 crore would be required in the Twelfth Plan period for initiating some broad Mission activities. |
| 6 | National Mission for Green India | Seeks to afforest an additional 10 million hectare of forest lands, wastelands and community lands.<br>An expenditure of ₹ 46,000 crore is projected under the Mission for coverage of 10 million ha over the next 10 years. |
| 7 | National Mission for Sustainable Agriculture | Focuses on enhancing productivity and resilience of agriculture so as to reduce vulnerability to extremes of weather, long dry spells, flooding, and variable moisture availability.<br>The proposed adaptation and mitigation activities under the Mission require an additional budgetary support of ₹ 1,08,000 crore out of which ₹ 91,800 crore will be required during the Twelfth Plan period. |
| 8 | National Mission on Strategic Knowledge for Climate Change | Identifies challenges arising from climate change, promotes the development Knowledge on Climate Change and diffusion of knowledge on responses to these challenges in the areas of health, demography, migration, and livelihood of coastal communities.<br>Additional funds of ₹ 150 crore are required in the Eleventh Plan period for implementing the Mission activities. Provision of ₹ 1050 crore is required under the Twelfth plan period for achieving Mission/sub-Mission programme initiatives. |

are specific funds established under the multilateral climate change regime (Box 12.8). There are also funds administered by the World Bank, Asian Development Bank, African Development Bank, etc. with clear climate change components.

## Fast Start Finance and Long-Term Finance

12.50 During COP15 in Copenhagen in 2009, the developed countries pledged to provide new and additional resources approaching US$ 30 billion for

### Box 12.8 : Funds established under the multilateral climate change regime

**Special Climate Change Fund (SCCF):** This fund is managed by the GEF and finances projects relating to: adaptation; technology transfer and capacity building; energy, transport, industry, agriculture, forestry, and waste management; and economic diversification.

**Least Developed Countries Fund (LDCF):** The Least Developed Countries Fund (LDCF) supports a work programme to assist LDC's in the preparation and implementation of National Adaptation Programmes of Action (NAPA's). As of December 2011, LDCF had approved some US $217 million for projects and mobilized more than US $919 million in co-financing.

**Adaptation Fund (AF):** This fund was established under the Kyoto Protocol to finance concrete adaptation projects and programmes in developing country Parties to the Protocol. The Adaptation Fund is financed from the 2 per cent share of proceeds on the clean development mechanism project activities and other sources of funding. The Adaptation Fund is supervised and managed by the Adaptation Fund Board (AFB). The most important characteristics of this Fund are that Parties have direct access which has led to increased country ownership over adaptation projects.

**Green Climate Fund (GCF):** At COP 17 held in Durban, South Africa, the COP established a Green Climate Fund (GCF) under the Convention to support projects, programmes, policies and other activities in developing nations. The Fund will start operating from 2013 where developed nations will provide the fund. Long term finance of $100 billion by 2020 has been decided by the nations and the GCF is expected to manage significant part of this. GCF is expected to be one of the most important sources of international finance. The important distinction of GCF is that it has an independent legal status and personality and nationally designated authorities have a paramount role to play. This has been achieved after many rounds of different negotiations.

*Source* : **UNFCCC**

the period 2010-12 with balanced allocation between mitigation and adaptation. The COP 16 in Cancún in December 2010 took note of this collective commitment by developed country Parties and reaffirmed that funding for adaptation will be prioritized for the most vulnerable developing countries, such as the LDCs, SIDS, and Africa. While the debate on climate finance continues, actual flow of money has been insignificant. According to Climate Funds Update, only about US$ 2.7 billion of the US$ 30 billion pledged, has so far been disbursed by the major climate funds to developing countries. However this includes only public source funding through multilateral channels.

12.51 Long-term finance is an issue that is very much part of the ongoing negotiations. The Cancún Agreements recognized the commitment of developed country Parties to a goal of jointly mobilizing US$ 100 billion per year by 2020 to address the needs of developing countries from a wide variety of sources, public and private, bilateral and multilateral, including alternative sources. At the Durban conference, these issues were further deliberated upon. COP 17 decided to undertake a work programme on long-term finance in 2012 to make progress on this issue. Another point of concern is that various innovative sources of finance, for example aviation tax, being deliberated upon may have incidence on developing countries (Box 12.9). Hence the multilateral negotiations must ensure that incidence (of innovative sources of financing) should not fall on developing countries which is in violation of the principle of CBDR.

## Private Finance Sources and CDM

12.52 Along with the provision of finance from the public sector, private finance could also be used to support various adaptation and mitigation projects. Funds could be directed towards climate proofing infrastructure and distribution and innovation of goods and services that reduce the vulnerability of individuals and communities towards climate change risks. Capital Markets can be utilized for channelling funds towards climate investment projects. Public-private partnerships and micro-financing schemes can be used in scaling up climate investment to service low income communities in developing countries along with the provision of insurance for healthcare and natural disaster risks associated with climate change.

12.53 However what is to be kept in mind is that the private sector driven by returns and profits could only play a supplementary role contributing mainly in mitigation projects; adaptation will and should be the responsibility of the public sector. Increasing awareness among the investor community and financial institutions towards climate change needs is essential along with the use of public finance to help re-direct private finance flows towards sustainable projects and investments contributing

## Box 12.9 : A Note on the Advisory Group on Climate Change Finance (AGF) Report

The Secretary-General of the United Nations established the High Level AGF in February 2010 to identify sources of finance to generate the US $100 billion target to be raised by the developed countries. The advisory group has identified various sources and instruments under four broad heads which can help raise the required funds. This is based on the assumption of a certain minimum price of carbon ranging from US$10 to US$ 20-25 and US$ 50 per ton. The report emphasizes that a medium price scenario of US$ 20-25 per ton of carbon would be a key element in reaching the goal of US$ 100 billion per year. Following are the estimates provided based on a medium price scenario.

| Primary sources | Instruments | US$ in bn (net) | US$ in bn (gross) | Remarks |
|---|---|---|---|---|
| 1. Public sources | Auction of emission allowance | 8-38 | | 2-10% of the market |
| | Offset levies (levy of 2-10%) | 1-5 | | |
| | Global international aviation and shipping tax | 6-12 | | 25-50% of total |
| | Carbon-related revenues | 28-33 | | |
| | i) Carbon tax of US$ 1/t $CO_2$ equivalent — 10 | | | |
| | ii) Wire charges: at US$ 0.0004/ KWH or US$ 1/t of $CO_2$ equivalent — 5 | | | |
| | iii) Reduction of fossil fuel subsidies — 3-8 | | | |
| | iv) Redirection of fossil royalties — 10 | | | |
| | Financial Transaction Tax (rate between 0.001-.01 per cent) | 2-27 | | 25-50% of the total |
| | Direct Budget Contributions (Developed countries) | NA | | |
| 2. Private sector flows | | 20-24 | 200 | |
| 3. Carbon markets offsets | | 8-14 | 38-50 | |
| 4. Development Banks Instruments | | 11 | | For every US$10 bn in paid up capital, US$ 30-40 billion in gross flows could be generated |
| **Total** | | **84-164** | | |

The AGF report is silent on many important issues of UNFCCC obligation. It does not indicate whether the developed country obligations should be met through assessed contributions or some other formula. An appropriate design for generation of revenues from each of the recommended sources is not spelt out clearly. The AGF recommendations are not designed to fit within the requirements that the finance to be mobilized should be entirely public or even channelled through a special multilateral institution acceptable to UNFCCC. Also one of the key issues that is not satisfactorily addressed is whether the target of US$ 100 billion per annum is to be viewed as the grant equivalent of all flows or the sum of the gross values of all flows.

The AGF does make an attempt to bring out a range of innovative sources and instruments for financing climate change and gives estimates of revenue potential excluding any likely primary incidence on developing countries. However, there still may be some secondary effects which the developing countries might have to face, for example deadweight losses or distributional impacts (international transportation and financial transaction tax). For example prices of imports may go up because of increase in transportation costs for some of the instruments. Therefore ensuring no net incidence for developing countries requires careful consideration of the real incidence of these charges—who is it that suffers a consequent loss of real income. A mechanism for refund of the revenues collected from developing countries will be needed and cannot be treated as climate change finance flow. With regard to instruments like carbon offsets and carbon export tax, the former violates the principle of the Convention as its incidence falls on developing countries and the latter should not qualify as a source of revenue if it leads to double counting of emissions.

**Box 12.10 : India and CDM**

As on 31 December 2011, 776 out of a total of 3797 projects registered by the CDM Executive Board are from India, which so far is the second highest for any country in the world. China leads with 1790 registered projects and Brazil has 200 projects registered. Also, as on 31 December 2011, the National CDM Authority (NCDMA) has accorded host country approval to 2160 projects facilitating an investment of more than ₹ 364,034 crore. These projects are in the sectors of energy efficiency, fuel switching, industrial processes, municipal solid waste, renewable energy, and forestry. If all these projects get registered by the CDM Executive Board, they have the potential of generating 711 million certified emission reductions (CERs) by the year 2012. At a conservative price of US$ 10 per CER, it adds up to an overall inflow of approximately US$ 7.11 billion in the country by the year 2012 if all the projects get registered. As on date CERs issued to Indian projects are 124 million.

Delhi Metro Rail Corporation (DMRC): World's first rail network to be registered under the CDM scheme:

The DMRC is the world's first rail network to be registered at the UNFCCC under the CDM scheme. The DMRC has registered two projects till date, namely: a) Emission Reduction by Low GHG Emitting Vehicles (also called Regenerative Braking project) registered on 29.12.2007 and b) Metro Delhi, India (also called Modal Shift Project) registered on 30 June 2011. It is expected that around an average 41,160 CERs per annum for next 10 years will be generated from Regenerative Braking Project and around an average of 5, 29,043 CERs per annum for next 7 years will be generated from the Modal Shift project.

in combating climate change. The key task for the decision-makers is to provide the right policy-incentives to help leverage private finance and also ensure that the private flows are in line with the national development objectives.

12.54 India has been a significant contributor and beneficiary of CDM under the Kyoto Protocol (Box 12.10).

## Challenges and Outlook

12.55 Sustainable development is a difficult balancing act in countries with low incomes. Society has to simultaneously accomplish three things with trade-offs: improve economic well-being with social justice for the present generation, yet manage with more restrained use of land, air, forest, energy, and water resources, and protect future generations. The choices are more difficult in developing countries because they affect people's livelihoods. Such a 'stewardship' to succeed therefore needs to respond to people's needs, share information on choices and costs, and ensure participation and ownership.

12.56 India has done well on all such counts of stewardship over the past decades. Economic reforms since the 1980s have accelerated growth and incomes. Social well-being has improved broadly, as measured by gains in life expectancy. India has stepped up protection of its natural environment such as forests. Its particular development path has relied on fast-growing services–a low emissions-intensity path with accelerated literacy and education promising a better future. While India could have done even better, much has been accomplished. The reasons behind such progress are undoubtedly strong institutional underpinnings: democratic participation, constitutional protection of social justice, and a steady accretion of environmental laws and regulations, multiple actors, markets, and expanding government programmes and policies.

12.57 India will nevertheless need to save and spend even more to meet its objectives of economic well-being with environmental sustainability, while continuing to reduce its carbon intensity of growth. This is possible and doable. New institutional challenges are being posed by more intense pressures on land and agriculture, rapid urbanization, the quality of public services, public environmental health, and deteriorating air and water. Differential prices, incentives, regulations, and taxes will need to be supportive, especially on energy, to help shift to a more efficient and equitable development path. New non-carbon, renewable energy sources and technologies will be crucial, mostly led by the private sector. Social justice will require stepped-up public spending on energy access and other elements of the eight National Missions.

12.58 Turning to the global context, India has voluntarily endeavoured to reduce the energy intensity of its growth path by 2020. It is well on the way to accomplishing that goal. However, the global community needs to act on its commitment to equity and fair burden sharing: reducing the massive gaps in per capita emissions between rich and poor countries and enhanced financing for massive adaptation and mitigation efforts in developing countries---so that developed countries do not end using up all the carbon space at the cost of the developing world. The recent Durban Decisions have included a second round of country commitments to reduce GHGs and established a global GCF. Rapid implementation would help dispel the widespread perception of wavering global commitment and wavering public financial support in North America, Japan and Europe, made worse by a difficult economic environment and threats of unilateral trade measures such as aviation and maritime taxes.

12.59 Though the Durban Conference has led to several positive outcomes, there are still some areas of concern in which further work will be needed to safeguard the interests of developing countries in future climate change deliberations.Some of the challenges and deliverables from India's point of view are: conversion of the targets of the second commitment period of the Kyoto Protocol into unconditional quantified emissions limitation and reduction objectives (QELROs); addressing issues such as proposed unilateral inclusion of the aviation sector in its domestic Emissions Trading Scheme by EU which applies to even non-EU airlines; and other issues which may arise if measures are used against the products and services of developing countries on grounds of climate change. Issues relating to equity and equitable access to global atmospheric resources will need to be addressed more adequately in order to resist pressure on India for an early emissions peak and legally binding agreement. The Protocol/Legal Instrument or an agreed outcome with legal force under the Convention that will be developed under the Durban Platform should respect the principles of CBDR and equity. Also we need to ensure that the Ad-hoc Working Group takes on board all unresolved issues particularly equity as these are integral to any new arrangements envisaged in the post 2020 era.The sources and channels of providing long-term finance by developed countries have not been clearly identified. It is necessary to expeditiously identify the sources of finance and provide initial capital to the GCF for its operations. Further, it is necessary to include the obligations of developed country Parties under the Convention to provide finance, technology, and capacity building as part of the new arrangements to be developed under the Durban Platform. Also the issues of mobilization and provision of necessary resources on a predictable basis and relationship of these mechanisms with the financial mechanism of the Convention remain to be addressed.It is important to continue to have a dialogue on the IPRs issue in the context of technology development and transfer. The Durban text is silent on the IPR issue.

12.60 Another challenge from India's perspective lies in preparing itself for enhanced actions on the transparency of its mitigation actions arising from the new regime of International Consultation and Analysis (ICA) and ensuring, in future negotiations, a space for equitable access of developing countries to atmospheric resources and guarantee against punitive actions embedded in the domestic legislation of developed countries. India will also need to institute necessary domestic mechanisms for effectively participating in and benefitting from the arrangements for advancing technology and forestry-related actions.

12.61 To sum up: climate change is a global phenomenon that we have to address in a spirit of cooperation taking into account the historical responsibilities and capabilities of countries. As a responsible and enlightened member of the international community, India showed flexibility along with other developing countries towards the success of the Durban Conference. At Durban, the world recognized India for its spirited defence of the interests of developing countries.India ensured that the objectives of social and economic development and poverty eradication will not be compromised in any way, whether upto 2020 or in the post 2020 arrangements that are to be negotiated and finalized by 2015. It is hoped that the developed countries will reciprocate the flexibility shown by India at Durban by addressing the concerns of developing countries on all outstanding issues. The negotiations should not prejudge the agreed outcomes. The legal nature of the outcomes under the Durban Platform shall be determined not by form but by their substance.

12.62 With the passage of time it has become hard to avoid a general sense of deep environmental vulnerability and insecurity. The direct fallout of this environmental decline will be borne by the poor and the already deprived. Therefore each action in this context must be seen from the perspective of the most underprivileged. The entire global community has to work towards this issue. More than a question of an agreed or a binding commitment it is more importantly a question of the division of fair responsibilities among nations considering historical responsibilities, development processes, the objective of poverty eradication, and capacities to provide resources of different countries.

# Human Development

13

CHAPTER

*The principal objective of development planning is human development and the attainment of higher standard of living for the people. This requires a more equitable distribution of development benefits and opportunities, better living environment and empowerment of the poor and marginalised. There is special need to empower women who can act as catalysts for change. In making the development process inclusive, the challenge is to formulate policies and programmes to bridge regional, social and economic disparities in as effective and sustainable a manner as possible. The Eleventh Five Year Plan sought to address this challenge by providing a comprehensive strategy for inclusive development, building on the growing economic strength of the economy in the past decades. This strategy has to be continued and consolidated further in the Twelfth Five Year Plan. The Approach Paper to the Twelfth Five Year Plan (2012-17) rightly stresses the need for more infrastructural investment with the aim of fostering a faster, sustainable and more inclusive growth.*

13.2 India is passing through a phase of unprecedented demographic changes. These demographic changes are likely to contribute to a substantially increased labour force in the country. The Census projection report shows that the proportion of working age population between 15 and 59 years is likely to increase from approximately 58 per cent in 2001 to more than 64 per cent by 2021. In absolute numbers, there will be approximately 63.5 million new entrants to the working age group between 2011 and 2016. Further, it is important to note that the bulk of this increase is likely to take place in the relatively younger age group of 20-35 years. Such a trend would make India one of the youngest nations in the world. In 2020, the average Indian will be only 29 years old. Comparable figures for China and the US are 37, 45 for West Europe, and 48 for Japan. This 'demographic dividend' provides India great opportunities, but it also poses a great challenge. It will benefit India only if our population is healthy, educated, and appropriately skilled. Therefore, greater focus on human and inclusive development is necessary to best utilize the demographic dividend. This chapter focuses on 'inclusive development' in India and uses both international as well as inter-state comparisons to shed light on the subject. Apart from highlighting the international position of India vis-à-vis other emerging market economies and similarly placed countries in terms of the human development index (HDI), an attempt has been made to examine the interrelations between different parameters of the HDI. From the domestic angle, the chapter focuses on trends in social-sector spending both at central and state levels. It looks at social-sector policies implemented by the government, particularly poverty alleviation and employment generation, health, education, rural infrastructure, development of the weaker sections of society, women and child development, and social security.

## Human and gender development

13.3 The Human Development Report (HDR) published by the United Nations Development Programme (UNDP) estimates the HDI in terms of three basic capabilities: to live a long and healthy

**Table 13.1 : Trends in the Human Development Index (HDI) 1980-2011**

| HDI rank | Country | 1980 | 1990 | 2000 | 2005 | 2009 | 2010 | 2011 | Average annual HDI Growth Rate (percent) 1980-2011 | 1990-2011 | 2000-2011 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Norway | 0.796 | 0.844 | 0.913 | 0.938 | 0.941 | 0.941 | 0.943 | 0.55 | 0.53 | 0.29 |
| 2 | Australia | 0.850 | 0.873 | 0.906 | 0.918 | 0.926 | 0.927 | 0.929 | 0.29 | 0.30 | 0.23 |
| 39 | Poland | - | - | 0.770 | 0.791 | 0.807 | 0.811 | 0.813 | - | - | 0.50 |
| 61 | Malaysia | 0.559 | 0.631 | 0.705 | 0.738 | 0.752 | 0.758 | 0.761 | 1.00 | 0.90 | 0.69 |
| 66 | Russian Fed. | - | - | 0.691 | 0.725 | 0.747 | 0.751 | 0.755 | - | - | 0.81 |
| 84 | Brazil | 0.549 | 0.600 | 0.665 | 0.692 | 0.708 | 0.715 | 0.718 | 0.87 | 0.86 | 0.69 |
| 92 | Turkey | 0.463 | 0.558 | 0.634 | 0.671 | 0.690 | 0.696 | 0.699 | 1.34 | 1.08 | 0.90 |
| 101 | China | 0.404 | 0.490 | 0.588 | 0.633 | 0.674 | 0.682 | 0.687 | 1.73 | 1.62 | 1.43 |
| 97 | Sri Lanka | 0.539 | 0.583 | 0.633 | 0.662 | 0.680 | 0.686 | 0.691 | 0.80 | 0.81 | 0.80 |
| 103 | Thailand | 0.486 | 0.566 | 0.626 | 0.656 | 0.673 | 0.680 | 0.682 | 1.10 | 0.89 | 0.78 |
| 112 | Philippines | 0.550 | 0.571 | 0.602 | 0.622 | 0.636 | 0.641 | 0.644 | 0.51 | 0.58 | 0.62 |
| 113 | Egypt | 0.406 | 0.497 | 0.585 | 0.611 | 0.638 | 0.644 | 0.644 | 1.50 | 1.24 | 0.88 |
| 124 | Indonesia | 0.423 | 0.481 | 0.543 | 0.572 | 0.607 | 0.613 | 0.617 | 1.23 | 1.19 | 1.17 |
| 123 | South Africa | 0.564 | 0.615 | 0.616 | 0.599 | 0.610 | 0.615 | 0.619 | 0.30 | 0.03 | 0.05 |
| 128 | Vietnam | - | 0.435 | 0.528 | 0.561 | 0.584 | 0.590 | 0.593 | - | 1.50 | 1.06 |
| **134** | **India** | **0.344** | **0.410** | **0.461** | **0.504** | **0.535** | **0.542** | **0.547** | **1.51** | **1.38** | **1.56** |
| 145 | Pakistan | 0.359 | 0.399 | 0.436 | 0.48 | 0.499 | 0.503 | 0.504 | 1.10 | 1.12 | 1.33 |
| 143 | Kenya | 0.420 | 0.456 | 0.443 | 0.467 | 0.499 | 0.505 | 0.509 | 0.62 | 0.52 | 1.27 |
| 146 | Bangladesh | 0.303 | 0.352 | 0.422 | 0.462 | 0.491 | 0.496 | 0.500 | 1.63 | 1.69 | 1.55 |
| | **World** | **0.558** | **0.594** | **0.634** | **0.66** | **0.676** | **0.679** | **0.682** | **0.65** | **0.66** | **0.66** |

***Source*** **: HDR 2011.**

life, to be educated and knowledgeable, and to enjoy a decent economic standard of living. According to HDR 2011, the HDI for India was 0.547 in 2011 with an overall global ranking of 134(out of the 187 countries) compared to 119 (out of 169 countries) as per HDR 2010. However, a comparable analysis of the trends during 1980-2011 (Table13.1) shows that although lower in HDI ranking, India has performed better than most (including high and very high human development) countries in terms of average annual HDI growth rate. India is behind only China and Bangladesh in this regard. If average annual HDI growth of 2000-11 is viewed, India (1.56 per cent) is even ahead of China (1.43 per cent) (Table13.1). While China performed very well in terms of growth of HDI in the 1980s, there was a deceleration in the 1990s and 2000s. On the other hand India, which seems to have faltered in the 1990s, has picked up again with its growth rates during 2000-11 surpassing even those of the 1980s.

13.4 However, there should be no room for complacency as India is still in the medium human development category with countries like China, Sri Lanka, Thailand, Philippines, Egypt, Indonesia, South Africa, and even Vietnam having better overall HDI ranking within the same category. The existing gap in health and education indicators as compared to developed countries and also many of the developing countries indicates the need for much faster and wider spread of basic health and education. Life expectancy at birth in India was 65.4 years in 2011 as against 81.1 years in Norway, 81.9 years in Australia, 74.9 years in Sri Lanka, 73.5 years in China, and the global average of 69.8 years. However, it has increased by one percentage points from 64.4 in 2010 to 65.4 in 2011. The other countries referred to are almost stagnant during this period. Similarly, the performance of India in terms of mean years of schooling is not only much below that of countries like Sri Lanka, China, and Egypt which have higher per capita incomes but also below that of Pakistan, Bangladesh, and Vietnam which have lower per capita incomes. It is also much lower than the global average (Table 13.2). The National Human Development Report (NHDR) 2011 of the Institute of Applied Manpower Research and Planning Commission states that India's HDI between 1999-2000 and 2007-8 has increased by 21 per cent, with an improvement of over 28 per cent in education being the main driver. The increase in HDI in the poorest states of India has been much sharper than

**Table 13.2 : India's Global Position in Human Development 2011**

| Country | HDI 2011 | HDI rank 2011 | Gross national income (GNI) per capita (constant 2005 PPP $) 2011 | Life expectancy at birth (years) 2011 | Mean years of schooling (years) 2011 a | Expected years of schooling (years) 2011 a |
|---|---|---|---|---|---|---|
| Norway | 0.943 | 1 | 47,557 | 81.1 | 12.6 | 17.3 |
| Australia | 0.929 | 2 | 34,431 | 81.9 | 12.0 | 18 |
| Poland | 0.813 | 39 | 17,451 | 76.1 | 10.0 | 15.3 |
| Malaysia | 0.761 | 61 | 13,685 | 74.2 | 9.5 | 12.6 |
| Russian Fed. | 0.755 | 66 | 14,561 | 68.8 | 9.8 | 14.1 |
| Brazil | 0.718 | 84 | 10,162 | 73.5 | 7.2 | 13.8 |
| Turkey | 0.699 | 92 | 12,246 | 74.0 | 6.5 | 11.8 |
| China | 0.687 | 101 | 7476 | 73.5 | 7.5 | 11.6 |
| Sri Lanka | 0.691 | 97 | 4943 | 74.9 | 8.2 | 12.7 |
| Thailand | 0.682 | 103 | 7694 | 74.1 | 6.6 | 12.3 |
| Philippines | 0.644 | 112 | 3478 | 68.7 | 8.9 | 11.9 |
| Egypt | 0.644 | 113 | 5269 | 73.2 | 6.4 | 11.0 |
| Indonesia | 0.617 | 124 | 3716 | 69.4 | 5.8 | 13.2 |
| South Africa | 0.619 | 123 | 9469 | 52.8 | 8.5 | 13.1 |
| Vietnam | 0.593 | 128 | 2805 | 75.2 | 5.5 | 10.4 |
| **India** | **0.547** | **134** | **3468** | **65.4** | **4.4** | **10.3** |
| Pakistan | 0.504 | 145 | 2550 | 65.4 | 4.9 | 6.9 |
| Kenya | 0.509 | 143 | 1492 | 57.1 | 7.0 | 11.0 |
| Bangladesh | 0.5 | 146 | 1529 | 68.9 | 4.8 | 8.1 |
| **World** | **0.682** | | **10,082** | **69.8** | **7.4** | **11.3** |

***Source*** **: HDR 2011.**
***Notes*** **: a - Data refer to 2011 or the most recent year available; PPP is purchasing power parity.**

the national average and hence the convergence in HDI across states (see also para. 13.19 and Table 13.10).

13.5 In terms of the gender inequality index (GII), India with a value of 0.617 ranks 129 out of a total of 187 countries as per HDR 2011. The GII captures the loss in achievement due to gender disparities in the areas of reproductive health, empowerment, and labour force participation with values ranging from 0 (perfect equality) to 1 (total inequality). The GII value of 0.617 indicates a higher degree of gender discrimination in India compared to countries like China (0.209), Pakistan (0.573), Bangladesh (0.550), Bhutan (0.495), and Sri Lanka (0.419). It is even higher than the global average 0.492.

## Inclusive Development

13.6 This section and the one that follows examine the major dimensions of inclusive development like poverty alleviation, employment generation, health, education, and social welfare besides reviewing the progress of important government programmes in these sectors.

13.7 Inclusive development can be viewed in terms of progress in social and financial inclusion. A large part of the population, particularly segments like landless agricultural labourers, marginal farmers, scheduled castes (SCs), scheduled tribes (STs), and other backward classes (OBCs), continue to suffer social and financial exclusion. Accordingly, the government's policies are directed towards economic

**Table 13.3 : Central Government Expenditure (Plan and non-Plan) on Social Services and Development**

(as per cent of total expenditure)

| ITEM | 2006-07 Actual | 2007-08 Actual | 2008-09 Actual | 2009-10 RE | 2010-11 RE | 2011-12 BE |
|---|---|---|---|---|---|---|
| 1. Social Service | | | | | | |
| a. Education, Sports, Youth Affairs | 4.28 | 4.02 | 4.27 | 4.15 | 4.24 | 4.63 |
| b. Health & Family Welfare | 1.87 | 2.05 | 2.09 | 2.00 | 1.83 | 2.15 |
| c. Water Supply, Housing, etc. | 1.72 | 2.02 | 2.54 | 2.39 | 2.13 | 2.10 |
| d. Information & Broadcasting | 0.25 | 0.22 | 0.23 | 0.20 | 0.21 | 0.20 |
| e. Welfare of SCs/STs and OBCs | 0.34 | 0.36 | 0.41 | 0.43 | 0.57 | 0.67 |
| f. Labour & Employment | 0.32 | 0.27 | 0.28 | 0.22 | 0.24 | 0.24 |
| g. Social Welfare & Nutrition | 0.85 | 0.82 | 1.15 | 0.87 | 0.90 | 1.02 |
| h. North-Eastern Areas | 0.00 | 0.00 | 0.00 | 0.02 | 1.68 | 1.86 |
| i. Other Social Services | -0.17 | 1.29 | 1.55 | 1.67 | 1.56 | 0.32 |
| **Total** | **9.47** | **11.06** | **12.52** | **11.94** | **13.36** | **13.20** |
| 2. Rural Development | 2.84 | 2.80 | 4.56 | 3.77 | 3.79 | 3.68 |
| 3. Pradhan Mantri Gram Sadak Yojana(PMGSY) | 1.08 | 0.91 | 0.88 | 1.11 | 1.81 | 1.59 |
| **4. Social Services, Rural Dev. and PMGSY** | **13.38** | **14.77** | **17.95** | **16.82** | **18.96** | **18.47** |
| 5. Total Central Government Expenditure | 100 | 100 | 100 | 100 | 100 | 100 |

***Source*** **: Budget Documents.**

***Note*** **: PMGSY-Pradhan Mantri Gram Sadak Yojana; RE-Revised Estimates; BE is Budget Estimates.**

**Table 13.4 : Trends in Social Services Expenditure by General Government (Central and State Governments combined)**

(₹ crore)

| Items | 2006-07 | 2007-08 | 2008-09 | 2009-10 | 2010-11 RE | 2011-12 BE |
|---|---|---|---|---|---|---|
| Total expenditure | 1,109,174 | 1,316,246 | 1,599,533 | 1,852,296 | 2,256,369 | 2,403,348 |
| Expenditure on social services | 239,340 | 294,584 | 380,628 | 446,382 | 562,970 | 600,516 |
| Of which: i) Education | 116,933 | 127,547 | 161,360 | 197,070 | 249,343 | 276,866 |
| ii) Health | 53,557 | 60,869 | 73,898 | 88,050 | 103,742 | 115,426 |
| iii) Others | 68,850 | 106,168 | 145,370 | 161,262 | 209,885 | 208,224 |
| | | **As per cent of GDP** | | | | |
| Total expenditure | 25.83 | 26.39 | 28.41 | 28.69 | 29.40 | 26.97 |
| Expenditure on social services | 5.57 | 5.91 | 6.76 | 6.91 | 7.34 | 6.74 |
| Of which: i) Education | 2.72 | 2.56 | 2.87 | 3.05 | 3.25 | 3.11 |
| ii) Health | 1.25 | 1.22 | 1.31 | 1.36 | 1.35 | 1.30 |
| iii) Others | 1.60 | 2.13 | 2.58 | 2.50 | 2.73 | 2.34 |
| | | **As per cent of total expenditure** | | | | |
| Expenditure on social services | 21.6 | 22.4 | 23.8 | 24.1 | 25.0 | 25.0 |
| Of which: i) Education | 10.5 | 9.7 | 10.1 | 10.6 | 11.1 | 11.5 |
| ii) Health | 4.8 | 4.6 | 4.6 | 4.8 | 4.6 | 4.8 |
| iii) Others | 6.2 | 8.1 | 9.1 | 8.7 | 9.3 | 8.7 |
| | | **As per cent of social services expenditure** | | | | |
| i) Education | 48.9 | 43.3 | 42.4 | 44.1 | 44.3 | 46.1 |
| ii) Health | 22.4 | 20.7 | 19.4 | 19.7 | 18.4 | 19.2 |
| iii) Others | 28.8 | 36.0 | 38.2 | 36.1 | 37.3 | 34.7 |

***Source*** **: RBI as obtained from Budget Documents of Union and State Governments.**
**BE: budget estimates; RE: revised estimates.**

and social upliftment of these segments so as to enable everyone to reap the benefits of growth and bring marginalized sections of the society into the mainstream. This is also reflected in social-sector expenditure by the government.

### Trends in India's social-sector expenditures

13.8 Central government expenditure on social services and rural development (Plan and non-Plan) has consistently gone up over the years (Table 13.3). It has increased from 13.38 per cent in 2006-7 to 18.47 per cent in 2011-12. Central support for social programmes has continued to expand in various forms although most social-sector subjects fall within the purview of the states. Major programme-specific funding is available to states through centrally sponsored schemes.

13.9 Expenditure on social services (which include education, sports, art and culture, medical and public health, family welfare, water supply and sanitation, housing, urban development, welfare of SCs, STs and OBCs, labour and labour welfare, social security, nutrition, and relief for natural calamities,) by the general government (centre and states combined) has also shown increase in recent years (Table 13.4) reflecting the higher priority given to this sector. Expenditure on social services as a proportion of total expenditure increased from 21.6 per cent in 2006-7 to 24.1 per cent in 2009-10 and further to 25 per cent in 2011-12 (BE). As a proportion of the gross domestic product (GDP), its share increased from 5.57 per cent in 2006-7 to 6.76 per cent, 6.91 per cent, and 7.34 per cent in 2008-09, 2009-10, and 2010-11 respectively, helping India face the global crisis without much adverse impact on the social sector. In 2011-12 it is expected to be 6.74 per cent as per the BE. While expenditure on education as a proportion of GDP has increased from 2.72 per cent in 2006-7 to 3.11 per cent in 2011-12 (BE), that on health has increased from 1.25 per cent in 2006-7 to 1.30 per cent in 2011-12 (BE). Of total social services expenditure, that on 'Others' has fallen in 2011-12 (BE).

13.10 Given the geo-economic conditions coupled with its strategic location, ethnic conflicts, and insurgency, the north eastern region has always been an area of focus in the development planning of the country. Therefore, region-specific intervention strategy for the socio-economic upliftment of this region has been in operation. While in terms of HDI parameters, the north-eastern states barring Assam are doing better compared to many other states of India, they are still lagging behind in terms of financial inclusion. Besides, lower growth rates, low population density, and lack of infrastructure development have affected the development process in the north-eastern region. Social inclusion in the north-east is closely linked to financial inclusion and corrective steps are needed in this direction (Box 13.1). The Eleventh Five Year Plan, therefore, aimed at faster and more inclusive growth by restructuring policies especially for this region.

## Poverty

13.11 The Planning Commission, the nodal agency for estimating the number and proportion of people living below the poverty line at national and state levels, separately for rural and urban areas, makes poverty estimates based on a large sample survey of household consumption expenditure carried out by the National Sample Survey Office (NSSO) approximately every five years. The methodology for estimation of poverty has been reviewed from time to time. The Planning Commission constituted an Expert Group under the Chairmanship of Professor Suresh D. Tendulkar in December 2005, which submitted its report in December 2009. The recomputed poverty estimates for the years 1993-4 and 2004-5 as recommended by the Tendulkar Committee have been accepted by the Planning Commission. As per the Tendulkar Committee Report, the national poverty line at 2004-5 prices was a monthly per capita consumption expenditure of ₹ 446.68 in rural and ₹ 578.80 in urban areas in 2004-5. The above poverty lines which refer to the national average, vary from state to state because of price differentials. The Tendulkar Committee has mentioned in its report that the proposed poverty lines have been validated by checking the adequacy of actual private expenditure per capita near the poverty lines on food, education, and health by comparing them with normative expenditures consistent with nutritional, educational, and health outcomes. In order to have a two-point comparison of changes in head-count ratio, the Expert Group has re-estimated poverty for 1993-4. The head-count ratios for 1993-4 and 2004-5 as released earlier by

## Box : 13.1 Financial Inclusion in North Eastern States

The North Eastern Region (NER) covers 8 per cent of the geographical area of the country, accounting for 3.9 percent of the population and 2.7 per cent of the all-India net domestic product (NDP). The gains of the rapid growth witnessed in the Indian Economy during the last two decades have not reached this region in an equitable manner. In fact, the banking development in the NER was, only a post-nationalization phenomenon. Prior to nationalization of banks in 1969, no bank branch of commercial banks existed in Arunachal Pradesh and Mizoram. Only two branches of commercial banks served the entire state in Manipur and Nagaland. Assam, however, with tea and oil industries was historically better served by banks among the States in the region. Since nationalization of banks in 1969, a remarkable progress was made in the banking development both geographically and demographically. Though starting from a low base, the branch network of commercial banks expanded significantly in the North-Eastern states. However, the banking development in the region is still lagging far behind all-other states in India. Even within the region, the inequalities in the availability of banking services are found to be very wide and glaring. Credit to Net State Domestic Product (NSDP) ratio ranges from 9 percent in Nagaland to 41 percent in Meghalaya and is lower than the national average of 62 percent. The ratio of current and savings accounts of the banking sector per 100 adult population ranged from 19.5 percent in Manipur to 40.9 percent in Meghalaya. The regional average is 37.3 percent, which is distinctly lower than the national average of 59.2 percent. The Credit/Deposit ratios of commercial banks excluding regional rural banks varied between 14 percent in Arunachal Pradesh and 29 percent in Meghalaya as compared to the all-India level of around 60 percent as at the end of 2008. All these banking development indicators show the slow progress of banking and resultant low level of financial outreach in North Eastern States.

**Financial Exclusion in North Eastern States - Major Indicators***

| States | Bank Branches (Number) | | Population per Branch (Number) | Bank Branches per 1000 Sq.km. | C-D Ratio | Ratios of Deposit and Credit Accounts to Population 2009-10 | | Per Capita Deposits and Credit (Amount in ₹) | |
|---|---|---|---|---|---|---|---|---|---|
| | Total | Rural | | | | Deposit | Credit | Deposit | Credit |
| Arunachal Pradesh | 80 | 51 | 17,282 | 1 | 27 | 37.7 | 4.1 | 29843 | 8218 |
| Assam | 1,477 | 791 | 21,103 | 19 | 36 | 36.8 | 4.2 | 15590 | 5892 |
| Manipur | 81 | 35 | 33,602 | 3 | 41 | 18.1 | 2.7 | 9917 | 4170 |
| Meghalaya | 213 | 126 | 13,916 | 9 | 26 | 30.9 | 3.9 | 25785 | 6605 |
| Mizoram | 98 | 54 | 11,133 | 4 | 24 | 29.7 | 5.4 | 20525 | 10916 |
| Nagaland | 90 | 37 | 22,007 | 5 | 30 | 24.3 | 4.6 | 21140 | 6406 |
| Sikkim | 74 | 48 | 8,252 | 10 | 37 | 56.9 | 7.2 | 51561 | 19188 |
| Tripura | 192 | 114 | 19,120 | 22 | 25 | 46.2 | 8.3 | 20319 | 5999 |
| **NER** | **2,342** | **1256** | **19,465** | **9** | **35** | **39.8** | **4.9** | **16879** | **6255** |
| **All-India** | **86,960** | **32,627** | **13,916** | **26** | **73** | **60.7** | **9.8** | **37688** | **27642** |

*as on 31st March 2010

There is an imperative need for accelerating the spread of banking in this region to make it compatible with the rest of the country. Banking development, however, cannot take place in isolation. As the geographic peculiarities have also contributed to the tardy progress made by the banking sector, the necessary conditions for development have to be created through planned investments. The banking sector also has to formulate a specific programme for enhancing its presence in this region.

*Source* : Based on the research study report on 'Expanding Financial Inclusion in the North-Eastern States' by Justice K. S. Hegde Institute of Management, Nitte, Karnataka

the Planning Commission and using the Tendulkar methodology, are given in Table 13.5. Even though the Tendulkar methodology gives higher estimates of headcount ratios for both 1993-4 and 2004-5, the extent of poverty reduction is 8.1 percentage points which is not very different from the reduction of 8.5 percentage points during the same period as per Lakdawala Methodology. (Also see inter-state comparisons in Table 13.10.)

## Inequality

13.12 According to HDR 2011, inequality in India for the period 2000-11 in terms of the income Gini coefficient was 36.8. India's Gini index was more favourable than those of comparable countries like South Africa (57.8), Brazil (53.9), Thailand (53.6), Turkey (39.7), China (41.5), Sri Lanka (40.3), Malaysia (46.2), Vietnam (37.6), and even the USA (40.8), Hong Kong (43.4), Argentina (45.8), Israel

**Table 13.5: Poverty Ratios (per cent)**

| | Earlier estimates(URP) based on the Lakdawala methodology | | Estimates (MRP)based on the Tendulkar methodology | |
|---|---|---|---|---|
| | 1993-1994 | 2004-2005 | 1993-1994 | 2004-2005 |
| Rural | 37.3 | 28.3 | 50.1 | 41.8 |
| Urban | 32.4 | 25.7 | 31.8 | 25.7 |
| Total | 36.0 | 27.5 | 45.3 | 37.2 |

*Source* : Planning Commission.
URP - Uniform Reference Period, MRP- Mixed Reference Period.

(39.2), and Bulgaria (45.3) which are otherwise ranked very high in human development.

13.13 Turning to the rural urban gap, we begin with the Monthly per capita expenditure (MPCE) defined first at household level to assign a value that indicates level of living to each individual or household. Based on the 66th round (2009-10) of the National Sample Survey (NSS), average MPCE [Modified Mixed Reference Period (MMRP) based] is ₹ 1054 and ₹ 1984 respectively for rural and urban India at the all India level indicating rural-urban income disparities. Out of the MPCE, the share of food is ₹ 600(57 per cent) and ₹ 881(44 per cent) for rural and urban India respectively which shows that food share is more in rural India as compared to urban India. (Also see inter-state comparisons in para. 13.19 and Table 13.10)

## Employment

13.14 For growth to be inclusive it must create adequate livelihood opportunities and add to decent employment commensurate with the expectations of a growing labour force. The Eleventh Five Year Plan (2007-12) aimed at generation of 58 million work opportunities. The NSSO quinquennial survey has reported an increase in work opportunities to the tune of 18 million under the current daily status (CDS) between 2004-5 and 2009-10. However, the overall labour force expanded by only 11.7 million. This was considerably lower than in comparable periods earlier, and can be attributed to the much larger retention of youth in education and also because of lower labour force participation among working-age women. As a result, unemployment in absolute terms came down by 6.3 million (Table 13.6). The lower growth in the

**Table 13.6 : Estimated Persons/Person Days (in million)**

| Approach | Indicator | 2004-2005 (NSS 61st round) | 2009-2010 (NSS 66th round) |
|---|---|---|---|
| Usual(principal + subsidiary) status (UPSS) | Labour Force | 469.0 | 468.8 |
| | Workforce | 457.9 | 459.0 |
| | Unemployed | 11.3 | 9.8 |
| Current Weekly Status (CWS) | Labour Force | 445.2 | 450.4 |
| | Workforce | 425.2 | 434.2 |
| | Unemployed | 20.0 | 16.1 |
| Current Daily Status(CDS) | Labour Force | 417.2 | 428.9 |
| | Workforce | 382.8 | 400.8 |
| | Unemployed | 34.3 | 28.0 |

*Source* : Derived based on Key Indicators of Employment and Unemployment in India, 2009-10, NSSO.

labour force is not expected to continue as educated youth are expected to join the labour force in increasing numbers during the Twelfth Plan and in the years beyond. This means that the pace of job/ livelihood creation must be greatly accelerated. The Twelfth Plan Approach Paper therefore lays greater stress on skill building which can be viewed as an instrument for improving the effectiveness and contribution of labour to overall production. This will push the production possibility frontier outward and take the economy on to a higher growth trajectory and can also be viewed as a means of empowerment.

### Unemployment

13.15 A comparison between different estimates of unemployment in 2009-10 (Table 13.7) indicates that the CDS estimate of unemployment is the highest. The higher unemployment rates according to the CDS approach compared to the weekly status and usual status approaches indicate a high degree of intermittent unemployment. Interestingly urban

**Table 13.7 : All-India Rural and Urban Unemployment Rates for NSS 66th Round**

| Sl No. | Estimate | Rural 2009-2010 | Urban 2009-2010 | Total 2009-2010 | Total 2004-2005 |
|---|---|---|---|---|---|
| 1 | UPSS | 1.6 | 3.4 | 2.0 | 2.3 |
| 2 | CWS | 3.3 | 4.2 | 3.6 | 4.4 |
| 3 | CDS | 6.8 | 5.8 | 6.6 | 8.2 |

*Source* : Key Indicators of Employment and Unemployment in India, 2009-10, NSSO.

**Table 13.8 : All-India Employment and Unemployment Indicators (per 1000)**

| Indicator | NSS 66th round(2009-2010) | | | NSS 61st round(2004-2005) | | |
|---|---|---|---|---|---|---|
| | Total male | Total female | Total person | Total male | Total female | Total person |
| | | | **UPSS** | | | |
| LFPR | 557 | 233 | 400 | 559 | 294 | 430 |
| Work Participation Rate | 546 | 228 | 392 | 547 | 287 | 420 |
| Unemployment Rate | 20 | 23 | 20 | 22 | 26 | 23 |
| | | | **CWS** | | | |
| LFPR | 550 | 207 | 384 | 550 | 257 | 407 |
| Work Participation Rate | 532 | 198 | 370 | 527 | 244 | 389 |
| Unemployment Rate | 33 | 43 | 36 | 42 | 50 | 44 |
| | | | **CDS** | | | |
| LFPR | 540 | 179 | 365 | 538 | 215 | 381 |
| Work Participation Rate | 507 | 164 | 341 | 496 | 195 | 350 |
| Unemployment Rate | 61 | 82 | 66 | 78 | 92 | 82 |

***Source*** **: Key Indicators of Employment and Unemployment in India, 2009-10, NSSO.**

unemployment was higher under both the UPSS and CWS but rural unemployment was higher under the CDS approach. This possibly indicates higher intermittent or seasonal unemployment in rural than urban areas, something that employment generation schemes like the MGNREGA need to pay attention to. However, overall unemployment rates were lower in 2009-10 under each approach vis-a-vis 2004-5. Labour force participation rates (LFPR) under all three approaches declined in 2009-10 compared to 2004-5 (Table 13.8). However, the decline in female LFPRs was larger under each measure in comparison with male LFPRs which either declined marginally (UPSS), remained constant (CWS), or increased marginally (CDS).

## Employment in the Organized Sector

13.16 Employment growth in the organized sector, public and private combined, has increased by 1.9 per cent in 2010, which is lower than the annual growth for the previous year (Table 13.9). The annual growth rate for the private sector was much higher than that for the public sector. However, in respect of both sectors, annual increase in employment had slowed down in 2010 vis-à-vis 2009. The share of women in organized-sector employment was 20.4 per cent in 2010 March end and has remained nearly constant in recent years.

13.17 Only 15.6 per cent of the total workforce had regular wage employment/ salaried work during 2009-

**Table 13.9 : Overall Employment in Public and Private Sectors**

| Sector | Employment (in lakh) as on 31 March | | | Percentage change 2009/2008 | Percentage change 2010/2009 |
|---|---|---|---|---|---|
| | 2008 | 2009 | 2010 | | |
| Public | 176.74 | 177.95 | 178.62 | 0.7 | 0.4 |
| Private | 98.75 | 103.77 | 108.46 | 5.1 | 4.5 |
| **Total (Women)** | **275.48 (55.12)** | **281.72* (55.80)** | **287.08 (58.59)** | **2.3** | **1.9** |

***Source*** **: Annual Employment Review 2010 & 2009, Directorate General of Employment and Training, Ministry of Labour and Employment.**

***Note*** **: *Figures have been revised based on fresh data received from the states of Punjab and Uttarakhand for the year 2009. Earlier the figure of 280.98 lakh was reported. Women's employment is indicated in parentheses.**

**Box 13.2 : Twelfth Quarterly Survey Report on Effect of Economic Slowdown on Employment in India July to September 2011**

The results for selected sectors, i.e. textiles including apparel, leather, metals, automobiles, gems and jewellery, transport, information technology (IT) / business process outsourcing (BPO) and handloom/powerloom are as follows:-

- Overall employment in September, 2011 over September, 2010 has increased by 9.11 lakh, with the highest increase recorded in IT/BPO (7.96 lakh) sector followed by 1.07 lakh in Metals, 0.71 lakh in Automobiles, 0.08 lakh in Gems & Jewellery and 0.07 lakh in Leather industries during the period.
- An upward trend in employment has been continuously observed since July 2009. During the quarter July to September 2011, employment has increased in respect of all sectors except Leather and Transport where there was a marginal fall. The overall employment has increased by 3.15 lakh during the quarter. At the sectoral level, the maximum increase of 2.04 lakh in employment during the period September, 2011 over June, 2011 was in IT/ BPO sector, followed by increase of 0.42 lakh in Textiles including Apparels, 0.38 lakh in Metals, 0.22 lakh in Automobiles, 0.09 lakh in Handloom/ Powerloom, 0.07 lakh in Gems & Jewellery.
- In the export oriented units, the employment at the overall level has increased by 1.96 lakh whereas in the non-exporting units, it has increased by 1.16 lakh during the period September, 2011 over June, 2011.
- Overall estimated employment in all selected sectors has experienced a net addition of 23.58 lakh during the period October, 2008 (first survey) to September, 2011 (twelfth survey).

10 while 33.5 per cent was casual labour and 51 per cent was self-employed.

### Employment Situation in 2010-11 as Per Quarterly Survey Reports

13.18 The Labour Bureau conducted twelve quarterly quick employment surveys to assess the impact of the economic slowdown on employment in India. These surveys indicate that the upward trend in employment since July 2009 has been maintained (Box 13.2).

## SOCIO-ECONOMIC PROFILE OF THE STATES AND INTER-STATE COMPARISONS

### Human Development: Inter-state comparisons

13.19 Inclusive development also incorporates the objective of reduction of inter-state and inter-regional disparities. Inter-state comparisons of socio-economic development of selected major states based on available indicators from different sources given in Table 13.10 show some interesting results.

- The rank correlation between the ranking of the states by HDI in 1999-2000 and in 2007-8 as given in NHDR 2011 is extremely high (0.97), which suggests that almost same states have performed well in both the time periods and likewise for the worst performing states. The top five ranks in both the years go to the better performing states of Kerala, Delhi, Himachal Pradesh, Goa, and Punjab. At the other end of the spectrum are the eight relatively poorer states which are below the national average HDI of 0.47. Among them Bihar, Chhattisgarh, and Rajasthan have slipped in their rankings in 2007-8, while Assam and Jharkhand have improved theirs. What is noteworthy is that the seven north-eastern states excluding Assam (taken together) have done remarkably well in terms of human development outcomes. Over the eight-year period, this group has moved up by three ranks.
- The best performer in terms of growth in 2009-10 was Uttarakhand, followed by Odisha, Chhattisgarh, and Gujarat and the worst performers were Karnataka, Rajasthan, and Jharkhand. States with above 10 per cent growth rate for the period 2004-5 to 2009-10 are Uttarakhand, followed by Maharashtra, Gujarat, and Bihar.
- The state-wise estimates of poverty as recomputed by the Tendulkar Committee show that the highest poverty headcount ratios (PHRs) for 2004-5 exist in Odisha (57.2 per cent), followed by Bihar (54.4 per cent) and Chattisgarh (49.4 per cent) against the national average of 37.2 per cent.
- The MPCE indicator shows that there is disparity both in the MPCE and food share across states. Bihar has the lowest MPCE of ₹ 780 with 65 per cent food share in rural areas and ₹ 1238 with 53 per cent food share in urban areas whereas Kerala has the highest MPCE of ₹ 1835 with 46 per cent food share in rural areas and ₹ 2413 with 40 per cent food share in urban areas.

## Table 13.10 : Socio Economic Profile and Inter-State comparison of some Major States of India

| Socio Economic Indicators/Items | Andhra Pradesh | Assam | Bihar | Chhattis-garh | Gujarat | Haryana | H.P. |
|---|---|---|---|---|---|---|---|
| **Population based on Census 2011 (Provisional) (persons in '000) *** | 84,666 | 31,169 | 103,805 | 25,540 | 60,384 | 25,353 | 6857 |
| **Ranking of States based on HDI and its Components, 2007-08 **** | | | | | | | |
| HDI Ranking 2007-08 | 15(15) | 16(17) | 21(19) | 23(21) | 11(10) | 9(7) | 3(4) |
| HDI 2007-08 | 0.473 | 0.444 | 0.367 | 0.358 | 0.527 | 0.552 | 0.652 |
| Health Index 2008 | 0.580 | 0.407 | 0.563 | 0.417 | 0.633 | 0.627 | 0.717 |
| Income Index 2007-08 | 0.287 | 0.288 | 0.127 | 0.133 | 0.371 | 0.408 | 0.491 |
| Education Index 2007-08 | 0.553 | 0.636 | 0.409 | 0.526 | 0.577 | 0.622 | 0.747 |
| **Growth Related (Increase over previous year of States-GSDP at constant prices(2004-05) as on 2 August 2011) #** | | | | | | | |
| 2009-10 | 5.79 | 8.08 | 9.30 | 10.29 | 10.23 | 9.95 | 8.12 |
| Average 2004-05 to 2009-10 | 8.72 | 5.55 | 10.01 | 9.82 | 10.31 | 9.74 | 8.31 |
| **Poverty Headcount Ratio(HCR) (Per cent) ***** | | | | | | | |
| 2004-05 (Rural) | 32.3 | 36.4 | 55.7 | 55.1 | 39.1 | 24.8 | 25.0 |
| 2004-05 (Urban) | 23.4 | 21.8 | 43.7 | 28.4 | 20.1 | 22.4 | 4.6 |
| 2004-05(Total) | 29.9 | 34.4 | 54.4 | 49.4 | 31.8 | 24.1 | 22.9 |
| 1993-94 (Rural) | 48.1 | 54.9 | 62.3 | 55.9 | 43.1 | 40.0 | 36.7 |
| 1993-94 (Urban) | 35.2 | 27.7 | 44.7 | 28.1 | 28.0 | 24.2 | 13.6 |
| 1993-94(Total) | 44.6 | 51.8 | 60.5 | 50.9 | 37.8 | 35.9 | 34.6 |
| **Average Monthly Per Capita Expenditure (MPCE)(MMRP) and Food share ##** | | | | | | | |
| Average MPCE (Rural)(Rs.) | 1234 | 1003 | 780 | 784 | 1110 | 1510 | 1536 |
| Per cent Share of Food(Rural) | 58.1 | 64.4 | 64.7 | 58.2 | 57.7 | 54.0 | NA |
| Average MPCE (Urban)(Rs.) | 2238 | 1755 | 1238 | 1647 | 1909 | 2321 | 2654 |
| Per cent Share of Food(Urban) | 44.8 | 52.9 | 52.9 | 43.7 | 46.2 | 43.1 | NA |
| **Unemployment Rates(per 1000) according to usual status (adjusted) ##** | | | | | | | |
| Rural | 12 | 39 | 20 | 6 | 8 | 18 | 16 |
| Urban | 31 | 52 | 73 | 29 | 18 | 25 | 49 |
| **Health Related** (life expectancy at Birth)(2002-06) $ | | | | | | | |
| Male | 62.9 | 58.6 | 62.2 | NA | 62.9 | 65.9 | 66.5 |
| Female | 65.5 | 59.3 | 60.4 | NA | 65.2 | 66.3 | 67.3 |
| Infant Mortality Rates(per 1000 live births) 2010* | 46 | 58 | 48 | 51 | 44 | 48 | 40 |
| Birth Rate (per 1000) 2010* | 17.9 | 23.2 | 28.1 | 25.3 | 21.8 | 22.3 | 16.9 |
| Death Rate (per 1000) 2010* | 7.6 | 8.2 | 6.8 | 8.0 | 6.7 | 6.6 | 6.9 |
| **Education Related** $$ | | | | | | | |
| GER(6-10 years)(2008-09) Total | 96.4 | 135.6 | 113.4 | 141.1 | 121.1 | 89.9 | 111.0 |
| GER(11-13 years)(2008-09) Total | 77.3 | 37.0 | 49.2 | 92.8 | 87.1 | 73.0 | 114.1 |
| GER(6-13 years)(2008-09) Total | 88.9 | 97.6 | 88.9 | 123.0 | 108.2 | 83.4 | 112.2 |
| Pupil-Teacher Ratio (2009-10) | | | | | | | |
| Pre-Primary/Primary/ Jr.Basic School | 32 | 28 | 80 | 29 | 30 | 52 | 15 |
| Pupil-Teacher Ratio (2009-10) Middle/Sr. Basic School | 27 | 21 | 53 | 23 | 36 | 41 | 13 |
| Pupil-Teacher Ratio (2009-10) High/Post Basic School | 29 | 22 | 59 | 39 | 29 | 26 | 23 |
| **Key Social Sector Programmes** | | | | | | | |
| Progress under NRHM 24x7 (primary health centres as on 30.09.2011)$ | 800 | 415 | 480 | 67 | 321 | 298 | 95 |
| Percentage of HH Provided Employment during 2010-11 under Mahatma Gandhi NREGA @ | 11.28 | 3.27 | 8.62 | 4.52 | 1.99 | 0.43 | 0.81 |
| Percentage Share in Employment during 2010-11 under Mahatma Gandhi NREGA | | | | | | | |
| SCs | 24.32 | 10.99 | 45.40 | 14.57 | 14.54 | 48.93 | 32.58 |
| STs | 16.02 | 27.26 | 2.14 | 36.51 | 41.18 | 0.00 | 8.19 |
| Women | 57.05 | 26.51 | 28.5 | 48.63 | 44.23 | 35.62 | 48.25 |
| Indira Awas Yojana(IAY) | | | | | | | |
| Houses constructed during 2010-11(Nos.) @ | 257104 | 156911 | 566148 | 58419 | 167313 | 18055 | 5834 |
| Percentage share of total houses constructed during 2010-11 under IAY | 9.47 | 5.78 | 20.85 | 2.15 | 6.16 | 0.66 | 0.21 |

**Source:** * : Office of Registrar General of India(RGI)
** : India HDR 2011 (Figures in parantheses show HDI ranking during 1999-2000)
***: Planning Commission
$ : M/O H & FW, $$ : M/O HRD, # : CSO, ## : NSS(66th round)2009-10
@ : DMU/MPR of M/O RD, NA : Not Available

| Jharkhand | Karnataka | Kerala | Madhya Pradesh | Maharashtra | Odisha | Punjab | Rajasthan | Tamil Nadu | Uttar Pradesh | Uttarkhand | West Bengal | All-India |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 32,966 | 61,131 | 33,388 | 72,598 | 112,373 | 41,947 | 27,704 | 68,621 | 72,139 | 199,581 | 10117 | 91,348 | **1,210,193** |
| 19(23) | 12(12) | 1(2) | 20(20) | 7(6) | 22(22) | 5(5) | 17(14) | 8(8) | 18(18) | 14(16) | 13(13) | |
| 0.376 | 0.519 | 0.790 | 0.375 | 0.572 | 0.362 | 0.605 | 0.434 | 0.570 | 0.380 | 0.490 | 0.492 | **0.467** |
| 0.500 | 0.627 | 0.817 | 0.430 | 0.650 | 0.450 | 0.667 | 0.587 | 0.637 | 0.473 | 0.530 | 0.650 | **0.563** |
| 0.142 | 0.326 | 0.629 | 0.173 | 0.351 | 0.139 | 0.495 | 0.253 | 0.355 | 0.175 | 0.302 | 0.252 | **0.271** |
| 0.485 | 0.605 | 0.924 | 0.522 | 0.715 | 0.499 | 0.654 | 0.462 | 0.719 | 0.492 | 0.638 | 0.575 | **0.568** |
| 5.30 | 3.88 | 9.73 | 8.49 | 8.08 | 10.57 | 7.57 | 4.30 | 9.43 | 6.99 | 11.61 | 8.44 | **7.96** |
| 4.59 | 8.65 | 8.74 | 7.11 | 11.17 | 9.44 | 7.69 | 6.98 | 9.92 | 7.11 | 14.06 | 7.04 | **8.63** |
| 51.6 | 37.5 | 20.2 | 53.6 | 47.9 | 60.8 | 22.1 | 35.8 | 37.5 | 42.7 | 35.1 | 38.2 | **41.8** |
| 23.8 | 25.9 | 18.4 | 35.1 | 25.6 | 37.6 | 18.7 | 29.7 | 19.7 | 34.1 | 26.2 | 24.4 | **25.7** |
| 45.3 | 33.4 | 19.7 | 48.6 | 38.1 | 57.2 | 20.9 | 34.4 | 28.9 | 40.9 | 32.7 | 34.3 | **37.2** |
| 65.9 | 56.6 | 33.9 | 49.0 | 59.3 | 63.0 | 20.3 | 40.8 | 51.0 | 50.9 | 36.7 | 42.5 | **50.1** |
| 41.8 | 34.2 | 23.9 | 31.8 | 30.3 | 34.5 | 27.2 | 29.9 | 33.7 | 38.3 | 18.7 | 31.2 | **31.8** |
| 60.7 | 49.5 | 31.3 | 44.6 | 47.8 | 59.1 | 22.4 | 38.3 | 44.6 | 48.4 | 32.0 | 39.4 | **45.3** |
| 825 | 1020 | 1835 | 903 | 1153 | 818 | 1649 | 1179 | 1160 | 899 | 1747 | 952 | **1054** |
| 60.9 | 56.5 | 45.9 | 55.8 | 54.0 | 61.9 | 48.2 | 54.8 | 54.7 | 57.9 | NA | 63.5 | **57.0** |
| 1584 | 2053 | 2413 | 1666 | 2437 | 1548 | 2109 | 1663 | 1948 | 1574 | 1745 | 1965 | **1984** |
| 51.5 | 42.3 | 40.2 | 41.7 | 41.0 | 48.4 | 44.3 | 48.0 | 45.0 | 46.3 | NA | 46.2 | **44.4** |
| 39 | 5 | 75 | 7 | 6 | 30 | 26 | 4 | 15 | 10 | 16 | 19 | **16** |
| 63 | 27 | 73 | 29 | 32 | 42 | 48 | 22 | 32 | 29 | 29 | 40 | **34** |
| NA | 63.6 | 71.4 | 58.1 | 66.0 | 59.5 | 68.4 | 61.5 | 65.0 | 60.3 | NA | 64.1 | **62.6** |
| NA | 67.1 | 76.3 | 57.9 | 68.4 | 59.6 | 70.4 | 62.3 | 67.4 | 59.5 | NA | 65.8 | **64.2** |
| 42 | 38 | 13 | 62 | 28 | 61 | 34 | 55 | 24 | 61 | 38 | 31 | **47** |
| 25.3 | 19.2 | 14.8 | 27.3 | 17.1 | 20.5 | 16.6 | 26.7 | 15.9 | 28.3 | 19.3 | 16.8 | **22.1** |
| 7.0 | 7.1 | 7.0 | 8.3 | 6.5 | 8.6 | 7.0 | 6.7 | 7.6 | 8.1 | 6.3 | 6.0 | **7.2** |
| 151.0 | 106.6 | 91.4 | 150.0 | 103.0 | 121.0 | 73.0 | 118.5 | 118.3 | 110.5 | 110.7 | 102.0 | **114.4** |
| 66.2 | 91.0 | 101.5 | 102.2 | 89.0 | 84.8 | 69.9 | 84.0 | 115.4 | 54.2 | 111.2 | 74.0 | **76.2** |
| 118.4 | 100.6 | 95.2 | 132.2 | 97.6 | 106.9 | 71.8 | 105.4 | 117.2 | 89.4 | 109.2 | 91.0 | **99.8** |
| 73 | 18 | 30 | 41 | 33 | 33 | 35 | 44 | 43 | 67 | 24 | 34 | **42** |
| 55 | 29 | 26 | 32 | 32 | 27 | 14 | 28 | 49 | 78 | 27 | 33 | **34** |
| 60 | 24 | 27 | 32 | 34 | 22 | 29 | 22 | 38 | 57 | 18 | 51 | **30** |
| 23 | 1001 | 175 | 241 | 543 | 158 | 243 | 1100 | 1154 | 405 | 94 | 248 | **8330** |
| 3.62 | 4.05 | 2.14 | 8.02 | 0.82 | 3.65 | 0.51 | 10.66 | 9.04 | 11.70 | 0.99 | 9.10 | 100.00 |
| 13.44 | 16.16 | 16.22 | 19.34 | 22.00 | 18.13 | 78.31 | 25.50 | 57.71 | 53.96 | 26.37 | 36.91 | **30.63** |
| 42.08 | 9.36 | 3.10 | 43.45 | 25.57 | 35.55 | 0.02 | 23.28 | 2.19 | 2.10 | 4.24 | 13.41 | **20.85** |
| 33.47 | 46.01 | 90.39 | 44.4 | 45.88 | 39.4 | 33.83 | 68.34 | 82.59 | 21.42 | 40.3 | 33.69 | **47.73** |
| 167254 | 95567 | 54843 | 79097 | 156575 | 171223 | 20483 | 63464 | 96256 | 305376 | 15924 | 178832 | **2715453** |
| 6.16 | 3.52 | 2.02 | 2.91 | 5.77 | 6.31 | 0.75 | 2.34 | 3.54 | 11.25 | 0.59 | 6.59 | **100** |

States with low average MPCE tend to have a higher share of food in total consumer expenditure as food is the primary need for survival and takes up a larger proportion of overall expenditure in the poorer sections of population. The top states spending more than the national average on food items both in rural and urban India are Bihar, Assam, Odisha, and Jharkhand.

- The unemployment rate (per 1000) according to usual status(adjusted) as per the NSS 66th round 2009-10 among the major states is lowest in Rajasthan(4) and highest in Kerala(75) in rural areas and the lowest in Gujarat(18) and highest again in Kerala(73) and Bihar(73) in urban areas.
- Health-wise, Kerala is the best performer and Madhya Pradesh the worst in terms of life expectancy at birth(both male and female) during 2002-6. IMR in 2010 is also the lowest in Kerala and highest in Madhya Pradesh. Kerala has the lowest and Uttar Pradesh the highest birth rate in 2010, followed by Bihar and Madhya Pradesh. Odisha has the highest and interestingly West Bengal the lowest death rate.
- In the area of education, Madhya Pradesh has the highest GER (6-13 years) in 2008-9 while Punjab has the lowest. Pupil-teacher ratios in primary and middle/basic schools are the lowest in Himachal Pradesh and high in states like Bihar and Uttar Pradesh.
- While there are state-wise indicators for some social-sector programmes, it is not possible to evaluate the performance of states, based just on numbers. The percentage of households provided employment under the MGNREGA in 2010-11 is the highest in Uttar Pradesh and lowest in Haryana. Progress in terms of 24x7 primary health centres (PHCs) under the National Rural Health Mission (NRHM) as on September 2011 is the highest in Tamil Nadu and lowest in Jharkhand. Bihar, followed by Uttar Pradesh, has the highest percentage share of total houses constructed during 2010-11 under the IAY while Himachal Pradesh has the lowest.

## Poverty Alleviation and Employment Generation Programmes

13.20 To achieve inclusive development, several poverty-alleviation and employment-generation programmes are being implemented by the Government of India. Some of the important schemes are as follows:

### (I) The MGNREGA

13.21 This flagship programme of the Government of India aims at enhancing livelihood security of households in rural areas of the country by providing at least one hundred days of guaranteed wage employment in a financial year to every household whose adult members volunteer to do unskilled manual work. It also mandates 1/3 participation for women. The primary objective of the scheme is to augment wage employment. This is to be done while also focusing on strengthening natural resource management through works that address causes of chronic poverty like drought, deforestation, and soil erosion and thus encourage sustainable development. The MGNREGA was notified in 200 districts in the first phase with effect from 2 February 2006 and then extended to an additional 130 districts in the financial year 2007-8. The remaining districts with rural areas were brought under the Act with effect from 1 April 2008. Out of total outlay of ₹ 40,000 crore approved for 2011-12, ₹ 21,471.92 crore has been released to the states/union territories and the total funds available with states including the opening balance of ₹ 18,185.23 crores (on 1 April 2011) are

#### Box 13.3 : MGNREGA : Major Initiatives for Effective Implementation

Major initiatives for effective implementation of the MGNREGA in addition to those indicated in last year's Economic Survey include the following:

(a) To strengthen **transparency** and **accountability** in the implementation of the MGNREGA, the government has initiated a service delivery project for information and communications technology (ICT) and biometrics-related works of the MGNREGA on public-private partnership (PPP) basis.

(b) **Wage rate:** In pursuance of the announcement in Budget 2009-10 to provide a real wage of Rs 100 per day as an entitlement under the MGNREGA, the Government of India had set up a committee for developing an index for fixing MGNREGA wage rates and their periodic revision. Its report is awaited. Till such time a satisfactory index is proposed by the committee and accepted by the government, the Government of India has taken a decision to index wage rates notified under MGNREGA to the consumer price index for agricultural labour. Accordingly, the revised wage rates under sub-section (1) of Section (6) of the MGNREGA 2005 have been notified on 14 January 2011.

**Figure 13.1** **Performance of the Mahatma Gandhi NREGA (National Overview) from 2006-07 to 2010-11**

₹ 41,615.05 crore. Of these ₹ 21,124.74 crore has been utilized as reported on 19 January 2012. About 3.80 crore households have been provided employment under the programme. During the same period, 122.37 crore persondays employment has been generated across the country out of which 60.45 crore were women (49.40 per cent), 27.27 crore (22.62 per cent) SCs, and 20.97 crore (17.13 per cent) STs. At national level, the average wage paid under the MGNREGA has increased from ₹ 65 in FY 2006-7 to ₹120 in FY 2011-12 (up to November 2011). This has led to substantial increase in purchasing power leading to strengthening of the livelihood resource base of the rural poor in India. The MGNREGA has successfully raised the bargaining power of agricultural labour, resulting in higher agricultural wages, improved economic outcomes, and reduction in distress migration. However, with better planning of project design and capacity building of the panchayati raj institutions (PRIs), pitfalls in implementation could be plugged to a great extent and the assets so created could make a much larger contribution to increasing land productivity. Many initiatives are being taken for better and more effective implementation of the MGNREGA (Box 13.3). The performance of the MGNREGA since its inception has been showing an upward trend in terms of households provided employment, average wages per persondays, and percentage share of women in total persondays generated. Though the share of women has now stagnated at 48 per cent, it is well above the stipulation of 1/3 in the Act. Persondays generated both in absolute terms and average persondays per household however show a slight fall in 2010-11 (see Figure 13.1) which may be due to the fact that demand came down owing to a good monsoon. While the overall performance of the MGNREGA has been good, there is scope for improvements like focused planning, shifting to permanent asset and infrastructure building activities, skill upgradation for enhanced employability, reducing transaction costs, better monitoring, avoiding peak seasons in agriculture, and extension to urban areas.(Also see state-wise performance during 2010-11 in para. 13.19 and Table 13.10.)

### (ii) Swarnjayanti Gram Swarozgar Yojana

13.22 The Swarnjayanti Gram Swarozgar Yojana (SGSY) is a self-employment programme with the objective of helping poor rural families cross the poverty line by assisting them to take up income-generating economic activities through a mix of bank credit and government subsidy. The SGSY specially focuses on vulnerable sections among the rural poor with SCs/STs to account for at least 50 per cent and women 40 per cent of the *swarozgaris*. From its inception in April 1999 up to September 2011, 42.05 lakh self-help groups (SHGs) have been formed under the SGSY, of which 29.38 lakh SHGs passed Grade I and 14.16 lakh passed Grade II with women SHGs accounting for about 60 per cent of the total. During this period, a total of about 168.46 lakh *swarojgaris* have been assisted with bank credit and subsidy. The total investment under the SGSY is ₹ 42,168.42 crore, including ₹ 28,824.53 crore as credit and ₹ 13,343.89 crore as subsidy disbursed. Under the special project component of the SGSY, a placement-linked skill development programme has been taken up with 148 projects sanctioned/approved so far with an outlay of ₹ 1654 crore. About 4 lakh youth have already been trained / are under training and 3 lakh placed so far. In each district of the country, one Rural Self Employment Training Institute (RSETI) has to be set up for basic and skill development training of rural below poverty line (BPL) youth to enable them to undertake micro-enterprise and wage employment. The government has approved 329 RSETIs out of which funds have been provided to 264. During 2010-11 and 2011-12 (till November 2011), approximately 183,765 rural youth (including 137,147 BPL youth) were trained in 264 RSETIs functioning in the country. The SGSY has now been restructured as the National Rural Livelihoods Mission (NRLM). The NRLM aims at reducing poverty by enabling poor households to access gainful self-employment and skilled wage employment opportunities. This should result in appreciable improvement in their livelihoods on a sustainable basis through building strong and sustainable grassroots institutions. The salient features of the NRLM are: (a) at least one member from each identified rural poor household, preferably a woman, to be brought under the SHG network in a time-bound manner, the ultimate target being100 per cent coverage of BPL families; (b) setting up of strong institutions of the poor such as SHGs for reducing dependence on external agencies; (c) a multi-pronged approach envisaged for continuous capacity building of the targeted families, SHGs, their federations, government functionaries, bankers, NGOs, and other key stakeholders; (d) subsidy to be available in the form of revolving fund and capital subsidy as an incentive for inculcating the habit of thrift and accumulation of their own funds towards meeting their credit needs in the long run and immediate consumption needs in the short run; (e) to work towards universal financial inclusion beyond basic banking services to all poor households, SHGs, and their federations on both the demand and supply sides of financial inclusion; (f) in order to ensure affordable credit, the NRLM has a provision for subsidy on interest rates above 7 per cent per annum for all eligible SHGs who have availed of loans from mainstream financial institutions, based on prompt loan repayment; (g) to look at stabilizing and enhancing existing livelihoods and subsequently diversifying them; (h) to develop backward and forward linkages and support business plans; (i) to pursue skill upgradation and placement projects through partnership mode, with the National Skill Development Corporation (NSDC) being one of the leading partners in this effort and 15 per cent of the central allocation under the NRLM earmarked for this purpose; and (j) 5 per cent of the central allocation to be earmarked for innovations.

### (iii) Swarna Jayanti Shahari Rozgar Yojana

13.23 The Swarna Jayanti Shahari Rozgar Yojana (SJSRY) was launched by the Government of India on 1 December1997 to provide gainful employment to the urban unemployed and underemployed by encouraging the setting up of self-employment ventures or provision of wage employment. This scheme subsumed the earlier three urban poverty-alleviation programmes and was also revamped with effect from April 2009 to include the Urban Self Employment Programme (USEP), Urban Women Self-help Programme (UWSP), Skill Training for Employment Promotion amongst Urban Poor (STEP-UP), Urban Wage Employment Programme (UWEP), and Urban Community Development Network (UCDN). The annual budgetary provision for the SJSRY for the year 2011-12 is ₹ 813.00 crore and ₹ 676.80 crore has been released by 16 February 2012. A total of 3,63,794 beneficiaries have been assisted in the year 2011-12.

## Social Protection Programmes

13.24 Keeping in view the importance of the informal sector's share in total workforce, the government has been focusing on expanding the coverage of social security schemes so as to provide a minimum level of social protection to workers in the unorganized sector and ensure inclusive development. These include the following:

- **Aam Admi Bima Yojana (AABY):** Under this scheme launched on 2 October 2007, insurance is provided against natural as well as accidental and partial /permanent disability of the head of the family of rural landless households in the country. Under the scheme, the head of the family or an earning member is eligible for receiving the benefit of ₹ 30,000 in case of natural death, ₹ 75,000 for accidental death, ₹ 75,000 for total permanent disability, and ₹ 37,500 for partial permanent disability. The scheme has provided insurance coverage to 1.97 crore lives in the country up to 31 January 2012.
- **Janashree Bima Yojana (JBY):** The JBY was launched on 10 August 2000 to provide life insurance protection to rural and urban persons living below and marginally above the poverty line. Persons between ages 18 and 59 years and who are the members of the 45 identified occupational groups are eligible for participation in this policy. The scheme provides coverage of ₹ 30,000 in case of natural death, ₹ 75,000 in case of death or total permanent disability due to accident, and ₹ 37,500 in case of partial permanent disability. During 2010-11, a total of 2.09 crore lives has been covered under the JBY.
- **Rashtriya Swasthya Bima Yojana (RSBY):** The RSBY was launched on 01 October 2007 to provide smart card-based cashless health insurance cover of ₹ 30,000 per family per annum on a family floater basis to BPL families (a unit of five) in the unorganized sector. The scheme became operational from 01 April 2008. The premium is shared on 75:25 basis by the centre and state governments. In the case of the north-eastern states and Jammu and Kashmir, the premium is shared in a 90:10 ratio. The scheme provides for portability of smart cards by splitting the card value for migrant workers. As on 20 December 2011, the scheme is being implemented in 23 states /UTs, namely Arunachal Pradesh, Assam, Bihar, Chhattisgarh, Delhi, Gujarat, Haryana, Himachal Pradesh, Jharkhand, Karnataka, Kerala, Maharashtra, Manipur, Meghalaya, Mizoram, Nagaland, Orissa, Punjab, Tripura, Uttar Pradesh, Uttarakhand, West Bengal, and Chandigarh Administration. More than 2.55 crore smart cards have been issued.
- **The Unorganized Workers Social Security Act 2008:** The Act came into force from 16 May 2009 with the objective of providing social security to unorganized workers. The Unorganized Workers' Social Security Rules 2009 have also been framed. Constitution of the National Social

Security Board in 2009 was another significant step. The Board recommended that social security schemes, namely the RSBY providing health insurance, JBY providing death and disability cover and Indira Gandhi National Old Age Pension Scheme (IGNOAPS) providing old age pension be extended to building and other construction workers, MGNREGA workers, Asha workers, Anganwadi workers and helpers, porters/coolies/gangmen, and casual and daily wagers.

- **National Social Security Fund:** A National Social Security Fund for Unorganized Sector Workers with initial allocation of ₹ 1000 crore has been set up. This Fund will support schemes for weavers, toddy tappers, rickshaw pullers, bidi workers, etc
- **Bilateral Social Security Agreements:** Bilateral social security agreements have been signed with Belgium, Switzerland, the Netherlands, Denmark, and Norway to protect the interests of expatriate workers and companies on a reciprocal basis. These agreements help workers by providing exemption from social security contribution in case of posting, totalization of contribution period, and exportability of pension in case of relocation to the home country or any third country.

## Rural Infrastructure And Development

13.25 The Government of India has been according high priority over the years to building rural infrastructure with the objective of facilitating a higher degree of rural-urban integration and for achieving an even pattern of growth and opportunities for the poor and disadvantaged sections of society. Programmes for achieving this include the following:

**Bharat Nirman:** This programme, launched in 2005-6 for building infrastructure and basic amenities in rural areas, has six components, namely rural housing, irrigation potential, drinking water, rural roads, electrification, and rural telephony. A goal has been set to provide connectivity to all villages with a population of 1000 (500 in hilly or tribal areas) with all-weather roads. New connectivity is proposed to a total of 63,940 habitations under Bharat Nirman. This will involve construction of 189,897 km of rural roads. In addition, Bharat Nirman envisages upgradation /renewal of 194,130 km of existing rural roads. Under the rural roads component of Bharat Nirman, 42,249 habitations have been provided all-weather road connectivity up to December 2011 and projects for connecting 16,126 habitations are at different stages of implementation. Under the PMGSY, over 19,443 km of all-weather roads have been completed including upgradation during 2011-12 (up to December 2011). New connectivity has been provided to 3710 habitations at an expenditure of ₹ 7514 crore.

**IAY :** The IAY is one of the six components of the Bharat Nirman programme. During 2010-11, as against the target of 29.09 lakh houses, 27.15 lakh houses were constructed. (Also see state-wise performance in Table 13.10.) During financial year 2011-12, against the physical target of 27.26 lakh houses, 21.18 lakh houses were sanctioned and 7.26 lakh constructed as on 31October 2011. Since the inception of the scheme, 271 lakh houses have been completed till September 2011. The unit assistance provided to rural BPL households for construction of a dwelling unit under the IAY has been revised with effect from 1 April 2010 from ₹ 35,000 to ₹ 45,000 for plain areas and from ₹ 38,500 to ₹ 48,500 for hilly/ difficult areas. In addition, construction of IAY houses have been included in the differential rate of interest (DRI) scheme for lending up to ₹ 20,000 per housing unit at an interest rate of 4 per cent. Sixty left wing extremism (LWE) affected districts have been made eligible for a higher rate of unit assistance of ₹ 48,500. Under this scheme a homestead site of 100-250 sq.m will be provided to those rural BPL households who have neither land nor a house site. For this purpose, ₹ 10,000 per beneficiary, to be shared by the centre and states in a 50:50 ratio, will be provided to the District Rural Development Agencies (DRDAs).

**Rural drinking water:** Drinking water supply is one of the components of Bharat Nirman. The present status of provision of safe drinking water in rural areas as measured by habitations where the population is fully covered, as per information reported by the states is that about 72 per cent of rural habitations are fully covered. The rest are either partially covered or have chemically contaminated drinking water sources. As against the target of 653,798 habitations during the Eleventh Five year Plan, the coverage up to 31 March 2011 was 526,667 (80.56 per cent). The States of Jharkhand, Chhattisgarh, Nagaland, Madhya Pradesh, Odisha, Himachal Pradesh, Tamil Nadu, Kerala, and Uttarakhand have exceeded their targets whereas Sikkim, Punjab, Assam, Rajasthan, Arunachal Pradesh, and Jammu and Kashmir have reported low (less than 50 per cent) achievement

**Table 13.11 : Rural Drinking Water: Cumulative Achievements**

| Components | Target (at the beginning of Bharat Nirman) | Cumulative achievements (till 14/2/2012) |
|---|---|---|
| Uncovered habitations to be provided with potable water | 55,067 | 55,067 |
| Slipped back/ Partially covered habitations to be provided with potable water | 331,604 | 634,413* |
| Quality-affected habitations to be addressed with potable water | 216,968 | 121,754 |
| Total | 603,639 | 811,234 |

* **Higher achievements reported as some states have reported coverage of habitations other than those targeted under the Bharat Nirman programme.**

against targets. Expenditure for drinking water supply during the Bharat Nirman period increased considerably from ₹ 4098 crore in 2005-6 to ₹ 8500 crore in 2011-12. All uncovered habitations have been reported covered as on 1April 2011 (Table 13.11). In order to give effect to the policy initiatives mentioned in the Eleventh Five Year Plan document, the guidelines for the Rural Water Supply Programme were revised in 2009 and renamed the National Rural Drinking Water Programme (NRDWP). The Jalmani programme, a scheme to provide 100 per cent assistance to states for installing stand-alone water purification systems in schools in rural areas was launched in 2008-9. In pursuance of the same, ₹ 200 crore was released to states in 2008-9 and 2009-10 to cover 1 lakh schools. So far about 65,503 schools have been covered under this scheme.

**Rural Sanitation—Total Sanitation Campaign (TSC):** The TSC is one of the flagship programmes of the government. As of December 28, 2011, TSC projects have been sanctioned in 607 rural districts of the country at a total outlay of ₹ 22,022 crore, with a central share of ₹ 14,425 crore. The approved central outlay for the TSC in the Eleventh Plan is ₹ 7816 crore. The annual budgetary support was gradually increased from ₹ 202 crore in 2003-4 to ₹ 1500 crore in 2011-12. The TSC follows a community-led and people-centric approach, laying emphasis on information, education, and communication (IEC) for demand generation for sanitation facilities. To motivate the community towards creating sustainable sanitation facilities and their usage, the incentive for Individual household latrines for BPL households has been increased from ₹ 2200 (₹ 2700 for hilly and difficult areas) to ₹ 3200 (₹ 3700 for hilly and difficult areas) with effect from 1 June 2011. With the scaling up of the TSC, combined with higher resource allocation, programme implementation has improved substantially. As per Census 2001 data, only 21.9 per cent rural households had access to latrines. Since 1999, over 8.30 crore toilets have been provided for rural households under the TSC. A significant achievement has also been the construction of 11.64 lakh school toilet units and 3.94 lakh Anganwadi toilets. This has led to substantial increase in rural sanitation coverage from 21.9 per cent in 2001 to about 85.95 per cent as of January 2012 as per the progress reported by states. With increasing budgetary allocations and focus on rural areas, the number of households being provided with toilets annually has increased from only 6.21 lakh in 2002-3 to 122 lakh in 2010-11. In the year 2011-12 (up to January 2012), more than 63 lakh toilets have been provided to rural households. The TSC has now turned into an inclusive programme, with participation of all sections of society. Provision of earmarked funds has been made for SCs and STs for inclusive growth of all sections of society. The active participation of women and adolescent girls in the sanitation programme has been encouraged with special components for them. The Nirmal Gram Puraskar (NGP) incentive scheme has been launched to encourage PRIs to take up sanitation promotion. The award is given to those PRIs that attain a 100 per cent open defecation-free environment. A total of 25,145 gram panchayats, 166 intermediate panchayats, and 10 district panchayats have received the award in the last six years. Sikkim has become the first state to receive the award. Comprehensive web-based separate online monitoring systems for the TSC and NGP are in place with gram panchayat-level data on objectives and achievements. The system has been upgraded with a facility for uploading details of beneficiaries including SC/ST beneficiaries and photographs of institutional sanitation and thus heading towards evidence-based monitoring system.

## Urban Infrastructure, Housing, and Sanitation

13.26 To provide better urban infrastructure, housing, and sanitation in the country, the central government has been allocating resources to state governments through various centrally sponsored schemes and providing finances through national financial institutions in the country. Some of the initiatives in this area are the following:

**Jawahar Lal Nehru National Urban Renewal Mission (JNNURM):** The JNNURM has two of its four components devoted to shelter and basic service needs of the poor. These are: Basic Services to the Urban Poor (BSUP) for 65 select cities and Integrated Housing & Slum Development Programme (IHSDP) for other cities and towns. Under the JNNURM, more than 1.57 million houses have been sanctioned as of 15 February 2012 and 1521 projects with outlay of more than ₹ 400,47.80 crore approved. A central share of ₹ 21,768.97 crore has been committed (93.89 per cent of seven-year allocation for 2005-12). Of the sanctioned houses, more than 5.69 lakh have been completed and 3.80 lakh occupied. Additional central assistance of ₹ 12,556.15 crore has also been released. All states are covered under the BSUP and all states and UTs except Lakshadweep under the IHSDP.

**Rajiv Awas Yojana (RAY):** RAY is to provide support for shelter and redevelopment and creation of affordable housing stock to states that are willing to assign property rights to slum dwellers. RAY is to be implemented in two phases: Phase I, which will be for two years from the date of approval of the scheme (2011-13) and Phase II which will be for the remaining period of the Twelfth Five Year Plan (2013-17 ). The preparatory phase of RAY, called the Slum Free City Planning Scheme, has been implemented and a budgetary allocation of ₹ 1270 crore made for the year 2011-12. In order to address the credit enablement of economically weaker section (EWS) and lower income group (LIG) households, the government has agreed to establish a Credit Risk Guarantee Fund under RAY. The government has also approved the establishment of a Credit Risk Guarantee Fund Trust for low income housing (CGFT) to administer and oversee the operations of the scheme. The fund will have an initial corpus of ₹ 1000 crore from the central government and ₹ 200 crore from the state governments who draw on it.

**Affordable Housing in Partnership (AHIP):** The government has launched the AHIP scheme with an outlay of ₹ 5000 crore for construction of one million houses for EWS/LIG/MIG with at least 25 per cent reserved for the EWS category. The scheme aims at partnership between various agencies/ government/ parastatals/ urban local bodies/ developers for realizing the goal of affordable housing for all.

**Interest Subsidy Scheme for Housing the Urban Poor (ISHUP):** The ISHUP seeks to supplement the efforts of the government through the JNNURM to comprehensively address the housing shortage. Cumulatively, till December 2011, 8734 beneficiaries in Andhra Pradesh, Chhattisgarh, Karnataka, Madhya Pradesh, Maharashtra, Rajasthan, Tamil Nadu, and Kerala have been covered under the scheme and a total net present value (NPV) of interest subsidy of ₹ 7.57 crore has been released.

**Integrated Low Cost Sanitation Scheme (ILCS):** The ILCS aims at conversion of individual dry latrines into pour flush latrines, thereby liberating manual scavengers from the age-old, obnoxious practice of manually carrying night soil. The guidelines were revised with effect from 17 January 2008. The scheme is on an all-town coverage basis irrespective of the population criterion and is limited to EWS households. The scheme is funded on a sharing basis, i.e. central subsidy 75 per cent, state subsidy 15 per cent, and beneficiary share 10 per cent. The budgetary allocation for the scheme for the year 2011-12 is ₹ 55 crore (RE) of which ₹ 23 crore has so far been released.

## Skill Development

13.27 In addition to constituting a three-tier institutional structure on Coordinated Action on Skill Development consisting of (i) the Prime Minister's National Council on Skill Development(NCSD), (ii) National Skill Development Coordination Board (NSDCB), and (iii) National Skill Development Corporation (NSDC), the NCSD appointed an adviser to the Prime Minister in the NCSD in January 2011. As on 31 October 2011, the NSDC has approved 34 training projects spread across 177 districts in 20 sectors. The NSDC has also approved eight sector skill councils (SSCs). A new strategic framework for skill development for early school leavers and existing workers has been developed since May 2007 in close consultation with industry, state governments, and experts. At present, 1386 modules for employable skills covering 60 sectors have been developed, 36 assessing bodies empanelled for conducting assessment, 6753 vocational training providers (VTPs) registered, and more than 12.19 lakh persons trained / tested (since inception).

## Unique Identification Authority of India (UIDAI)

13.28 Implementation of the Unique Identification (UID) project has progressed and about 13 crore Aadhaar numbers (UID numbers) have already been generated. The Unique Identification Authority of India (UIDAI) has scaled up enrolments and has also established infrastructure capabilities to generate 10 lakh Aadhaar numbers every day. The UIDAI is on the verge of commencing Phase III of the scheme, which apart from enrolling residents and issuing Aadhaar numbers extends to providing updation services, a robust authentication process as a means of enhancing service delivery of various social schemes, and facilitating financial inclusion and development of Aadhaar-enabled applications to leverage Aadhaar. The UIDAI has commenced interaction with Ministries/Departments for developing applications leveraging the Aadhaar number, Aadhaar-enabled transactions and infrastructure to improve the service delivery of various social-sector schemes. The Ministry of Communications and Information Technology has notified that Aadhaar shall be treated as a valid proof of identity (PoI) and proof of address (PoA) after confirming identity and address through the Aadhaar authentication procedure. The Department of Health and Family Welfare has decided to recognize UID numbers (Aadhaar) as PoI and PoA for extending financial assistance to BPL patients who are suffering from major life threatening diseases and receiving medical treatment at any of the super specialty hospitals/ institutes or other government hospitals under the Rashtriya Arogya Nidhi (RAN). The Ministry of Road Transport and Highways has issued necessary instructions for recognition of Aadhaar as PoI/ PoA for evidence of age and address for issuing a driving licence and for registration of vehicles. The Department of Expenditure has issued instructions for the revision of the format for submission of proposals for approval of the Expenditure Finance Committee wherein the linkage of the beneficiary identification mechanism with the Aadhaar number is to be indicated. The Aadhaar number has been recognized as valid PoI/PoA for obtaining new LPG connections. The state governments of Sikkim, Tripura, and Andhra Pradesh have also declared the Aadhaar number valid PoI and PoA for their various schemes. Karnataka has also drawn up a plan for implementation of the Aadhaar project and also for the Karnataka Resident Data Hub for integration of the Aadhaar number with various services. An Aadhaar Payments Bridge has been designed and is being tested on pilot basis for MGNREGA payments in Jharkhand. The Aadhaar Payments Bridge will enable the transfer of funds directly into the bank accounts of beneficiaries on the basis of the Aadhaar number. This will considerably simplify the process of disbursement of welfare funds by government departments.

## Education

13.29 India which had a bottom-heavy population is now graduating to an economy with middle- heavy population. To reap the benefits of this demographic dividend to the full, India has to provide education to its population and that too quality education. The Twelfth Plan Approach Paper focuses on teacher training and evaluation and measures to enforce accountability. It also stresses the need to build capacity in secondary schools to absorb the pass-outs from expanded primary enrolments. The GER in higher education must be targeted to increase from nearly 18 per cent at present to say 25 per cent by 2016-17.

### Elementary and Secondary Education

13.30 The government has initiated many schemes for elementary and secondary education. Some are as follows:

**Sarva Shiksha Abhiyan (SSA)/Right to Education (RTE):** Free education for all children between the ages of 6 and 14 years has been made a fundamental right under the RTE Act 2009. While the RTE Act was notified on 27 August 2009 for general information, the notification for enforcing the provisions of the Act with effect from 1 April 2010 was issued on 16 February 2010. It mandates that every child has a right to elementary education of satisfactory and equitable quality in a formal school which satisfies certain essential norms and standards. The reform processes initiated in 2010-11 continued during the year 2011-12. Some recent developments in this regard include (a) notification of Central RTE Rules on 8 April 2010, followed by notification of State RTE Rules by the states, (b) revision of the SSA norms to correspond with the provisions of the RTE Act including norms for sanctioning additional teacher posts, classrooms, teaching-learning equipment to enable states to move to an eight-year elementary education cycle, enhancement of academic support for better school supervision, and expansion of Kasturba Gandhi

Balika Vidyalayas (KGBVs), (c) revision of the fund-sharing pattern between the central and state governments for implementation of RTE-SSA programme from the earlier pattern in the sliding scale to a 65:35 ratio between the centre and states for a five-year period from 2010-11 to 2014-15, (d) notification of the National Council for Teacher Education (NCTE) as the academic authority for laying down teacher qualifications, (e) launching of a country-wide campaign for raising public awareness about the RTE and mobilizing communities to ensure that all schools become RTE compliant (f) cumulatively 334,149 new primary and upper primary schools have been opened, 267,209 school buildings and 1,410,937 additional classrooms constructed, 212,233 drinking water facilities, and 477,263 toilets have been provided, supply of free textbooks to 8.77 crore children on annual basis, and in-service training to 19.23 lakh teachers (The number of out-of-school children has come down from 134.6 lakh in 2005 to 81.5 lakh in 2009 as per an independent study conducted by the SRI-IMRB). There are 3367 KGBVs in 26 States, providing residential schooling facilities at upper primary stage for girls belonging predominantly to SC, ST, OBC, and minority communities with 458 KGBVs in blocks with substantial Muslim population, 663 KGBVs in blocks with high ST population, and 1035 in SC-dominated blocks. A total of 2.83 lakh girls was enrolled in KGBVs, of whom 30.32 per cent were SCs, 25.43 per cent STs, 26.36 per cent OBCs, 9.51 per cent Muslims, and 10 per cent from the BPL category.

**National Programme for Education of Girls at Elementary Level (NPEGEL)**: This is a focused intervention for reaching out to the hardest to reach girls. It provides additional support for enhancing girls' education over and above the investments for girls' education under the SSA, including gender sensitization of teachers, development of gender-sensitive material, and provision of need-based incentives. The scheme is implemented in educationally backward blocks (EBB) where rural female literacy is low. The NPEGEL is operational in all EBBs covering 40,623 clusters.

**National Programme of Mid Day Meals in schools:** Under the National Programme of Mid Day Meals in schools, cooked midday meals are provided to all children attending Classes I-VIII in government, local body, government-aided, and National Child Labour Project schools. EGCs/alternate and innovative education centres including madarsas/ maqtabs supported under the SSA across the country are also covered under this programme. At present the cooked midday meal provides an energy content of 450 calories and protein content of 12 grams at primary stage and an energy content of 700 calories and protein content of 20 grams at upper primary stage. Adequate quantity of micro-nutrients like iron, folic acid, and vitamin A are also recommended for convergence with the NRHM. During 2010-11, the budget allocation under this programme was ₹ 9440 crore against which the total expenditure incurred was ₹ 9128.44 crore. About 10.46 crore children (7.33 crore in primary and 3.13 crore in upper primary stages) have been benefitted under the programme during 2010-11.

**Rashtriya Madhyamik Shiksha Abhiyan (RMSA):** The RMSA was launched in March 2009 with the objective of enhancing access to secondary education and improving its quality. In addition to ensuring access, the quality interventions include ensuring all secondary schools conform to prescribed norms, removing gender, socio-economic and disability barriers, providing universal access to secondary level education by 2017, i.e. by the end of the Twelfth Five Year Plan, and achieving universal retention by 2020. The central and state governments bear 75 per cent and 25 per cent of the project expenditure respectively during the Eleventh Five Year Plan. The funding pattern is in the ratio of 90:10 for the north-eastern states. The RMSA Annual Plan 2011-12 proposals received from all 35 states/UTs were considered by the Project Approval Board (PAB) of the scheme and major interventions such as opening of 4032 new schools, strengthening of 15,567 existing schools, 832 residential quarters for teachers, and 52,352 additional teachers have been approved. During 2011-12, the budget allocation for this programme is ₹ 2423.90 crore against which, ₹ 1996.40 crore (as on 15 February 2012) has been released to state governments.

**Model Schools Scheme:** A scheme for setting up 6000 model schools as benchmarks of excellence at block level with one school per block was launched in November 2008 with a view to providing quality education to talented rural children. The scheme has two modes of implementation: (i) 3500 schools are to be set up in as many Educationally Backward Blocks(EBBs) through state/UT governments and (ii) the remaining 2500 schools are to be set up under PPP mode in blocks that are not educationally backward. At present, only the first component is being implemented. The implementation of the PPP component will start from Twelfth Five Year Plan. Since the inception of the scheme, approval has been granted for setting up 1942 model schools in 22 states. Financial sanctions have been accorded for setting up 1538 schools in 20 States and ₹ 1697.95 crore has been released as central share to these states. During 2010-11, 140 schools had become functional in Punjab (21 schools), Karnataka (74 schools), Chhattisgarh (15 schools), Tamil Nadu (18 schools), and Gujarat (12 schools) and ₹ 9.55 crore as recurring grants was released to these states. In 2011-12, the number of functional schools has increased to 438 in seven states.

**Inclusive Education for the Disabled at Secondary Stage (IEDSS):** The IEDSS scheme was launched in 2009-10 replacing the earlier Integrated Education for Disabled Children (IEDC) scheme. While inclusive education for disabled children at elementary level is being provided under the SSA, this scheme provides 100 per cent central assistance for inclusive education of disabled children studying in Classes IX-XII in mainstream government, local body, and government-aided schools. The aim of the scheme is to facilitate continuation of education of children with special needs up to higher secondary level. The scheme provides for personal requirements of the children in the form of assistive devices, helpers, transport, hostel, learning material, and scholarship for the girl child up to ₹ 3000 per disabled child per annum. In addition, assistance is also provided for salary of special teachers, capacity building of teachers, making schools barrier free, establishment of resource rooms, and awareness and orientation. A budget of ₹ 100 crore was allocated for this scheme during 2011-12 and over 1.30 lakh disabled children are proposed to be covered in this year.

**Vocational Education:** The revised centrally sponsored Vocationalisation of Secondary Education scheme aims to address the weaknesses of the earlier scheme to strengthen vocational education in Classes XI-XII. The components approved for implementation in the remaining period of the Eleventh Plan, i.e. 2011-12, include (a) strengthening of 1000 existing vocational schools and establishment of 100 new ones through state governments, (b) assistance to 500 vocational schools under the PPP mode, (c) in-service training of seven days for 2000 existing vocational teachers and induction training of 30 days for 1000 new ones, (d) development of 250 competency based modules for each individual vocational course, (e) establishment of a vocational education cell within the Central Board of Secondary Education (CBSE), (f) assistance to 150 reputed NGOs to run short-duration innovative vocational education programmes, and (g) pilot programme under the National Vocational Education Qualifications Framework(NVEQF) in Class IX in Haryana and West Bengal.

**Saakshar Bharat (SB)/Adult Education:** The National Literacy Mission, recast as Saakshar Bharat (SB) launched by the Prime Minister on 8 September 2009, reflects the enhanced focus on female literacy. The literacy rate according to the 2001 census was 64.83 per cent, improving to 74.04 per cent in 2011. The literacy rate improved sharply among females as compared to males. While the literacy rate for males rose by 6.9 per cent from 75.26 per cent to 82.14 per cent, it increased by 11.8 per cent for females from 53.67 per cent to 65.46 per cent. The target of the Eleventh Five Year Plan is to achieve 80 per cent literacy. With just one year to go for the Twelfth Five Year Plan, 74 per cent literacy has been achieved. Literacy levels remain uneven across states, districts, social groups, and minorities. The government has taken positive measures to reduce the disparities by focusing on backward areas and target groups. By March 2010, the programme had reached 167 districts in 19 states covering over 81,000 gram panchayats. During 2010-11, the programme was to cover 29,000 additional gram panchayats in 102 districts. The programme had thus reached 24 states and one UT by the end of 2010-11. By the end of March 2011, about 2 lakh literacy classes enrolling about 20 lakh learners were functioning in Andhra Pradesh (135,634), Karnataka (35,647), Chhattisgarh (13,048), Tamil Nadu (2875), Gujarat (3875), Rajasthan (2354), Uttarakhand (2176), Jharkhand (516), West Bengal (962), and Sikkim (450). The process of implementation of the programnme in the 102 districts sanctioned during 2010-11 has started and preparatory activities are being undertaken. By the end of September 2011, 372 out of 410 eligible districts had been covered under the programme comprising of 4441 blocks and 161,993 gram panchayats. Since the Mission has been envisaged as a people's programme, stakeholders, especially at grassroots level, have due say and role in its planning and implementation. The decentralized model of the Mission provides PRIs a pivotal role in implementation of the programme at district level.

13.31 Despite the efforts of the government in providing primary and elementary education, there

## Box 13.4 : Main Findings of ASER 2011

**Some Positives or status quo maintained**

**Enrollment** : In 2011, 96.7 per cent of all 6-14 year olds in rural India are enrolled in schools. This number has held steady since 2010. States that had a high proportion (over 10 per cent) of 11-14 year old girls out of school in 2006 have made significant progress. For example Bihar out of school numbers have dropped from 17.6 per cent in 2006 to 4.3 per cent in 2011. Rajasthan shows a decline from 18.9 per cent in 2006 to 8.9 per cent in 2011. Uttar Pradesh has shown the least progress with 11.1 per cent in 2006 and 9.7 per cent in 2011. Substantial numbers of five year old children are enrolled in schools. The All India figure stands at 57.8 per cent for 2011. This proportion varies across states, ranging from 87.1 per cent in Nagaland to 18.8 per cent in Karnataka.

**Private school enrollment is rising in most states :** Nationally, private school enrollment has risen year after year for the 6-14 age group, increasing from 18.7 per cent in 2006 to 25.6 per cent in 2011. These increases are visible in all states except Bihar. In states like Uttarakhand, Rajasthan, Uttar Pradesh, Maharashtra, Andhra Pradesh, Kerala, Manipur and Meghalaya there has been an increase of over 10 percentage points in private school enrollment in the last five years. According to ASER 2011 data, between 30 to 50 per cent of children in rural areas of Haryana, Uttar Pradesh, Nagaland, Meghalaya, Punjab, Jammu & Kashmir, Rajasthan, Uttarakhand, Maharashtra and Andhra Pradesh are enrolled in private schools.

**Better provision of girls' toilets :** The proportion of schools where there was no separate girls' toilet has declined from 31.2 per cent in 2010 to 22.6 per cent in 2011. Also, there has been a substantial improvement in the proportion of schools that have separate girls' toilets that are useable. This figure has risen nationally from 32.9 per cent in 2010 to 43.8 per cent in 2011.

**More libraries in schools, and more children using them :** The proportion of schools without libraries has declined from 37.5 per cent in 2010 to 28.6 per cent in 2011. Children were seen using the library in more schools as well - up from 37.9 per cent in 2010 to 42.3 per cent in 2011.

**Schools get their grants, but not on time :** Between FY 2008-9 and FY 2010-11 the flow of SSA grants to schools improved significantly. However, this improvement occurred largely between FY 2008-9 and 2009-10. In fact a marginal decrease in the proportion of schools receiving grants is observed between FY 2009-10 and 2010-11. The data suggest that schools tend to get their grants during the second half of the fiscal year.

**Not much change in compliance on Pupil-teacher ratio and Classroom-teacher ratio :** At the All India level, there has been a marginal improvement in the proportion of schools complying with RTE norms on pupil-teacher ratio, from 38.9 per cent in 2010 to 40.7 per cent in 2011. In 2011, Kerala stands out with 94.1 per cent of schools in compliance, and in Jammu & Kashmir, Nagaland and Manipur, more than 80 per cent schools are in compliance with these norms. At the All India level, there has been a marginal decline in the proportion of schools with at least one classroom per teacher, from 76.2 per cent in 2010 to 74.3 per cent in 2011. In Mizoram, 94.8 per cent of schools comply with the teacher-classroom norms and in Punjab, Uttarakhand, Rajasthan, Uttar Pradesh, Gujarat and Maharashtra more than 80 per cent of schools are in compliance.

**No major changes in buildings, playgrounds, boundary walls or drinking water :** All India figures for 2011 show no significant improvement in the proportion of schools with an office cum store. This figure remains at 74 per cent. Similarly, for the country as a whole, about 62 per cent of visited schools had a playground, both in 2010 and in 2011. However, there has been an increase in the proportion of all schools that have a boundary wall, from 50.9 per cent in 2010 to 54.1 per cent in 2011. Nationally, the proportion of schools with no provision for drinking water remained almost the same at 17 per cent in 2010 and 16.6 per cent in 2011. The proportion of schools with a useable drinking water facility has remained steady at about 73 per cent. Kerala has the best record with 93.8 per cent schools that have a useable drinking water facility.

**Some Negatives**

**Basic reading levels showing decline in many states :** Nationally, reading levels are estimated to have declined in many states across North India. The All India figure for the proportion of children in Std V able to read a Std 2 level text has dropped from 53.7 per cent in 2010 to 48.2 per cent in 2011. Such declines are not visible in the southern states. In a few states there is good news. In Gujarat, Punjab and Tamil Nadu the numbers for 2011 are better than for 2010. Several states in the north-eastern region of India also show positive change. Karnataka and Andhra Pradesh numbers remain unchanged from last year.

**Arithmetic levels also show a decline across most states :** Basic arithmetic levels estimated in ASER 2011 show a decline. For example, nationally, the proportion of Std III children able to solve a 2 digit subtraction problem with borrowing has dropped from 36.3 per cent in 2010 to 29.9 per cent in 2011. Among Std V children, the ability to do similar subtraction problems has dropped from 70.9 per cent in 2010 to 61.0 per cent in 2011. This decline is visible in almost every state; only Andhra Pradesh, Karnataka and Tamil Nadu show improvements from 2010 to 2011. Several states in the north-eastern region of India also show positive change. There is no change in arithmetic levels in Gujarat.

**Children's attendance has declined :** At all India level, children's attendance shows a decline from 73.4 per cent in 2007 to 70.9 per cent in 2011 in rural primary schools. In some states, children's attendance shows a sharp decline over time: for example in primary schools of Bihar, average attendance of children was 59 per cent in 2007 and 50 per cent in 2011. In Madhya Pradesh it has fallen from 67 per cent in 2007 to 54.5 per cent in 2011 and in Uttar Pradesh from 64.4 per cent (2007) to 57.3 per cent (2011).

**More than half of all Std 2 and Std 4 classes sit together with another class :** Nationally, for rural government primary schools, over half of all classes visited are multigrade. For example, at the all India level Std 2 children were sitting with one or more other classes in 58.3 per cent of Std 2 classes in primary schools. This figure was 53 per cent for Std 4.

*Source* : ASER 2011, Press Release Dated 16 January 2011, website http://images2.asercentre.org/aserreports/ASER_2011_PRESS_RELEASE.pdf is a lot more to be done. The Annual Status of Education Report (ASER) by Pratham, an NGO, in its seventh annual survey of rural children since 2005 conducted in 558 districts, 16,017 villages, 327,372 households, and 633,465 children highlights many positives as well as negatives (Box 13.4). It particularly indicates that more needs to be done in terms of quality of education.

## Higher and Technical Education

13.32 Higher education is of vital importance for the country, as it is a powerful tool for building a knowledge-based twenty-first-century society. The Indian higher education system is one of the largest in the world. At the time of Independence, there were only 20 universities and 500 colleges with 0.1 million students; these have increased to 611 universities and university-level institutions and 31,324 colleges as on August 2011. To prepare for the challenges of the twenty-first century, the government has taken a number of initiatives during the Eleventh Plan period focusing on improvement of access along with equity and excellence, adoption of state-specific strategies, enhancement of the relevance of higher education through curriculum reforms, vocationalization, networking, and use of information technology and distance education along with reforms in governance in higher education. A large-scale expansion in university education has been initiated during the Eleventh Five Year Plan by setting up new educational institutions comprising 30 central universities, 8 new Indian Institutes of Technology (IITs), 8 new Indian Institutes of Management (IIMs), 10 new National Institutes of Technology (NITs), 20 new Indian Institutes of information Technology (IIITs), 3 new Indian Institutes of Science education and Research (IISERs), 2 new Schools of Planning and Architecture (SPAs), 374 model colleges, and 1000 polytechnics. Other important initiatives include upgradation of state engineering institutions, expansion of research fellowships and provision of hostels for girls, reservation for SCs, STs and OBCs, focus on backward, hilly and remote locations including the north-east, facilitating greater participation of students belonging to minorities, girls, and persons with disabilities, scholarships, provision of education loans with interest free subsidies, setting up of polytechnics in unserved areas, and degree colleges in low GER districts. The National Mission in Education through ICT, which aims at providing high speed broadband connectivity to universities and colleges and development of e-content in various disciplines, is under implementation. Open and distance learning is encouraged for increasing access to and making quality education available at any time, any place. Internationalization and collaborative arrangements and setting up of UNESCO Category I institute are other initiatives for extending the global reach of education. A new Scheme of Interest Subsidy on Educational Loans to EWS students has been introduced from 2009-10. Under the scheme, full interest subsidy during the period of moratorium on loans taken by EWS students from scheduled banks under the Educational Loan Scheme of the Indian Banks' Association for pursuing technical and professional courses from recognized institutions in India, is paid by the central government. Education being an important component of economic development and a driving force for economic growth, governments in India and across the world are subsidizing higher education. However, over the years, the diverging trajectories of costs and revenues due to rapidly increasing per-student costs and increasing tertiary level participation has created immense pressures on the exchequer. Moreover, subsidies are inequitable in the sense that irrespective of one's parents' wealth, all individuals in a state subsidized institution get the same level of subsidy. Therefore, there are views that argue for reducing government support for higher education and replacing it with better commercial student loan schemes. (See Box 13.5)

13.33 Some of the major initiatives taken during 2011-12 for promoting higher and technical education are the following:

- National Mission in Education through ICT: Content generation and connectivity along with provision for access devices for institutions and learners are the major components of the Mission. So far nearly 400 universities have been provided 1 Gbps connectivity or have been configured under the scheme and more than 14,000 colleges have also been provided VPN connectivity. A number of projects have been sanctioned for innovative use of ICT. Creation of e-content for 996 courses in Phase II in engineering, sciences, technology, humanities, and management has been undertaken by IIT Madras. The Consortium for Educational Communication (CEC) has been tasked with creation of e-content for 87 undergraduate subjects. For creation of e-content for 77 postgraduate subjects, a proposal by the University Grants Commission (UGC) has been approved. More than 2000 e-journals and 55,000

**Box 13.5 : Avoiding educational poverty traps: Income Contingent Loans and the Financing of Higher Education**

Existing debt markets for student loans, are highly imperfect (with high interest rates and collateral requirements). An alternative is a type of student loans called Income Contingent Loans (henceforth ICL). Friedman and Kuznets were the first to suggest that people could sell "shares" in their future income streams and take loans. Nerlove discusses the idea formally and proposes an ICL scheme. An ICL is essentially a loan given to anyone who wants to invest in higher education and the repayment, which starts once the individual gets a job, is denominated in terms of a certain percentage of the income to be paid for a stipulated time period. Such loans are usually given directly to the educational institution and then recovered from the student once she gains employment. The distinguishing feature of an ICL is insurance against unfavourable outcomes, since the repayment amount is positively linked to income and could even be zero below a certain threshold income level.

Australia was the first country to institute a broadly based income-contingent charging system for higher education called Higher Education Contribution Scheme (HECS) in 1973. New Zealand, South Africa with its National Student Financial Aid Scheme (NSFAS) introduced in 1991, the UK, Israel and the US also have similar schemes. All these schemes have the basic flavour of the ICL but other ingredients vary. There is evidence that the social composition of university participants in Australia was more equal after the implementation of HECS than before. Moreover, there was a strong relative growth in participation by middle income groups and females post-HECS.

A recently developed theoretical paper by the Indian Statistical Institute(ISI) deals with the impact of an ICL scheme as an alternative to standard mortgage loans in a developing country framework. In the absence of active government intervention, poor economies are characterized by low levels of education and high rates of school drop-outs. Poverty combined with impediments to the financing of higher education compel households to send their children to work, which hampers their education and skill formation, thereby restricting their future earning capabilities. In designing policies to combat chronic poverty (or poverty 'traps'), the dynamic consequences of any such scheme should be taken into account. A government sponsored ICL scheme can be used as an effective anti-poverty measure as it creates dynamic incentives for poorer households to invest in education, thereby allowing them to escape long run poverty traps. In the stylized version of ICL the agents repay the loan as an additional tax to the government, only in the event of success. In that case, when the agents fail, there is a lower bound to which their income can fall. Thus, by providing a cushion for those who go for skill formation, the ICL scheme ensures that the dynamic incentives for skill formation remain intact even for those who fail in initial attempts. At the same time, by relaxing the life-time budget constraint of the poor households, it incentivizes more people to go for skill formation. The advantages of ICLs over subsidies and standard mortgage loans include fiscal advantages as they are self-financing; equity as ICLs can be targeted to benefit the poor; outcome orientation instead of outlay orientation of subsidies; and risk reduction for households. The risk borne by government is more than balanced by the positive spillovers from aggregate human capital accumulation, better socio-economic outcomes, and consequent tax base expansion and revenue increases.

*Source*: Based on study by Indian Statistical Institute(ISI), New Delhi

e-books from 297 publishers have been made available online under this programme. A major development during the year has been the launch of Aakash, the low cost access-cum-computing device that was launched on 5 October 2011. IIT Rajasthan has been granted ₹ 47.72 crore for acquisition and testing of Aakash devices under the National Mission on Education through Information and Communication Technology scheme.

- To address the increasing skill challenges of the Indian IT industry, the government has approved setting up of twenty new IIITs on a PPP basis. The partners in setting up the IIITs would be the Human Resource Development (HRD) Ministry, respective states where each IIIT will be established, and industry. Completion of the project is targeted in nine years from 2011-12 to 2019-20. In this regard, the government has invited proposals from the states for setting up of 20 IIITs.

- An Expert Group was set up by the Prime Minister for enhancing employment opportunities in Jammu & Kashmir and for formulating a job plan involving the public and private sectors. One key recommendation of the Expert Group was to offer 5000 scholarships per annum over the next five years, for encouraging the youth of Jammu & Kashmir to pursue higher studies outside the State of Jammu & Kashmir. The scheme provides tuition fees, hostel fees, cost of books, and other incidental charges to students belonging to Jammu & Kashmir who, after passing Class XII or equivalent examination, secure admission in government colleges/ institutions and other select institutions outside the State of Jammu & Kashmir. This scheme is being implemented since 2011-12.

- Some institutions like the IITs have, in order to promote innovation, created technology business incubation facilities in their campuses. These are proving to be focal points amongst students and faculty for working towards taking some of their applied research to the market through the creation of business models for the same. These efforts need to be expanded greatly (a) by scaling up the previously successful centres of such innovations, and (b) by creating many such centres across the higher technical institutions in the country.

## Health

13.34 The National Health Policy of 2002 and the priorities set in the successive Five year Plans provide the framework for the implementation of policies and programmes for health care. The National Health Policy seeks to provide prophylactic and curative health-care services and aims at achieving an acceptable standard of good health amongst the general population in the country by increasing access to the decentralized public health system. Access to the decentralized public health system is sought to be increased through establishment of new infrastructure in deficient areas and upgrading of existing infrastructure. Success in eliminating or controlling diseases such as small pox, leprosy, polio, and TB is indicative of the progress made in some areas of health. Overall sex ratio in the country has increased from 933 in 2001 to 940 as per census 2011 (prov.). The health indicators in Table 13.12 show the progress made by India over the years.

13.35 Despite progress made on many fronts, there are areas of concern as progress has been quite uneven across regions with large-scale inter-state variations and rural and remote areas continue to have deficit in health facilities and manpower. This is also indicated in some of the recent reports (Box 13.6).

13.36 In 2011-12, the Plan outlay for health is ₹ 26760 crore. This outlay constitutes among others ₹ 17,840 crore under the NRHM and ₹ 2356 crore for schemes/projects in the north-eastern region and Sikkim. A provision of ₹ 1616.57 crore has been earmarked for the Pradhan Mantri Swasthya Suraksha Yojana (PMSSY) aimed at strengthening the tertiary sector. The National Programme for Prevention and Control of Cancer, Diabetes, Cardiovascular Diseases and Stroke (NPCDCS) has been allocated ₹ 125 crore in 2011-12. During 2011-12, ₹ 1700 crore has been earmarked for the National Aids Control Programme with the objective of halting and reversing the HIV epidemic in the country by integrating programmes for prevention, care, support, and treatment. The government also seeks to develop and promote the Indian system of medicines in an

**Table 13.12 : India — Selected health indicators**

| Sl. No. | Parameter | 1981 | 1991 | Current level |
|---|---|---|---|---|
| 1. | Crude Birth Rate (CBR) (per 1000 population) | 33.9 | 29.5 | 22.1 (2010*) |
| 2. | Crude Death Rate (CDR)(per 1000 population) | 12.5 | 9.8 | 7.2 (2010*) |
| 3. | Total Fertility Rate (TFR)(per woman) | 4.5 | 3.6 | 2.6 (2009*) |
| 4. | Maternal Mortality Rate (MMR) (per 100,000 live births) | NA | NA | 212 (2007-9*) |
| 5. | IMR (per 1000 live births): | 110 | 80 | 47(2010*) |
| | Rural | | | 51 |
| | Urban | | | 31 |
| 6. | Child (0-4 years) Mortality Rate ( per 1000 children) | 41.2 | 26.5 | 14.1 (2009*) |
| 7. | Life Expectancy at Birth: | **(1981-85)** | **(1989-93)** | **(2002-06)**** |
| | Total | 55.4 | 59.4 | 63.5 |
| | Male | 55.4 | 59.0 | 62.6 |
| | Female | 55.7 | 59.7 | 64.2 |

**Source: Ministry of Health and Family Welfare.**
***Sample Registration Survey (SRS), RGI.**
**** Abridged Life Table 2002-06, RGI.**

### Box.13.6 : Findings of HUNGaMA Survey in 100 Focus Districts on Hunger and Malnutrition

**A reduction in the prevalence of child malnutrition is observed :** Prevalence of child underweight has decreased from 53 per cent to 42 per cent; this represents a 20.3 per cent decrease over a 7 year period with an average annual rate of reduction of 2.9 per cent.

**Child malnutrition is widespread across states and districts and starts early in life :** 42 per cent of children under five are underweight and 59 per cent are stunted. Of the children suffering from stunting, about half are severely stunted; about half of all children are underweight or stunted by age 24 months.

**Birth weight is an important risk-factor for child malnutrition :** Prevalence of underweight in children born with a weight below 2.5 kg is 50 per cent while that among children born with a weight above 2.5 kg is 34 per cent.

**Household socio-economic status has a significant effect on children's nutrition status :** Prevalence of malnutrition is significantly higher among children from low-income families. Children from Muslim or SC/ST households generally have worse nutrition indicators.

**Girls' nutrition advantage over boys fades away with time :** Nutrition advantage girls have over boys in the first months of life seems to be reversed over time as they grow older, potentially indicating neglect vis-à-vis girls in early childhood.

**Mothers' education level determines children's nutrition :** Prevalence of child underweight among mothers who cannot read is 45 per cent while that among mothers with 10 or more years of education is 27 per cent; 92 per cent mothers had never heard the word "malnutrition".

**Giving colostrum to the newborn and exclusive breastfeeding for first 6 months of a child's life are not commonly practiced :** 51 per cent of the mothers did not give colostrum to the newborn soon after birth and 58 per cent mothers fed water to their infants before 6 months.

**Hand washing with soap is not a common practice :** 11 per cent mothers said they used soap to wash hands before a meal and 19 per cent do so after a visit to the toilet.

**Anganwadi Centres are widespread but not always efficient :** There is an Anganwadi Centre in 96 per cent of the villages, 61 per cent of them in pucca buildings; the Anganwadi service accessed by the largest proportion of mothers(86 per cent) is immunization; 61 per cent of Anganwadi Centres had dried rations available and 50 per cent provided food on the day of survey; only 19 per cent of the mothers reported that the Anganwadi Centre provides nutrition counseling to parents.

*Source* **:** HUNGaMA http://hungamaforchange.org Survey Report on Poorest Child Development Indicators in 100 Focus Districts in Six States;- Bihar, Jharkhand, Madhya Pradesh, Orissa, Rajasthan & UP.

organized and scientific manner by involvement/ integration of AYUSH (Ayurveda, Yoga, Unani, Siddha, and Homeopathy) systems in national health-care delivery and has allocated ₹ 900 crore plan outlay for it in 2011-12.

13.37 There has been an increase in public health investment in the country. The combined revenue and capital expenditure of the centre and states on medical and public health, water supply and sanitation, and family welfare has increased from ₹ 53,057.80 crore in 2006-7 to ₹ 96,672.79 crore in 2010-11(BE). In addition to increasing resource allocation for the health sector the government is also playing a critical role in facilitating access to health care delivery channels, public and private, through subsidized health insurance schemes like the RSBY for providing basic health care to poor and marginal workers. The RSBY is being extended to cover MGNREGA beneficiaries and beedi workers. Despite efforts by the government to provide affordable access to the decentralized public health system, the expenditure of the government on public health as a percentage of GDP is low.

13.38 The government has launched a large number of programmes and schemes to address major concerns and bridge the gaps in existing health infrastructure and provide accessible, affordable, equitable health care. These include the NRHM, National Programme for Health Care of the Elderly (NPHCE), National Mental Health Programme, NPCDCS, Pradhan Mantri Swasthya Suraksha Yojana (PMSSY), upgradation/strengthening of state government medical colleges, development of paramedical services and the Programmes of AYUSH. The details of major programmes are as follows:

**NRHM:** The NRHM launched in 2005 aims to improve accessibility to quality health care for the rural population, bridge gaps in health care, facilitate decentralized planning in the health sector and bring about inter-sectoral convergence. The NRHM provided an overarching umbrella to the existing health and family welfare programmes including Reproductive and Child Health (RCH-II) and various programmes for control of diseases, including tuberculosis, leprosy, vector-borne diseases and blindness. The effort is to integrate all vertical programmes. All the programmes have now been brought under the District Health Society at district level and State Health Society at state level. Under the NRHM, over 1.4 lakh health human resources have been added to the health system across the country (up to September 2011) which include 11,712 doctors/specialists, 10,851 AYUSH doctors, 66,784 auxiliary nurse midwives (ANMs), 32,860 staff nurses, and 14,434 paramedics including AYUSH paramedics. Accredited social health activists (ASHAs) are engaged in each village / large habitation in the ratio of one per 1000 population. Till September 2011, 8.55 lakh ASHAs have been selected in the entire country out of which 8.07 lakh have been given orientation training and engaged. Further, 7.41 lakh ASHAs have been provided with drug kits. So far over 8330 primary health centres (PHCs), accounting for nearly 35 per cent of total PHCs, have been made functional as 24x7 services across the country. Further, 442 districts in the country are equipped with mobile medical units under the NRHM. Under the NRHM, emphasis has been laid on prevention and promotion aspects of health care. At village level, village health sanitation and nutrition committees (VHSNCs) have been constituted to create awareness about disease prevention and take preventive measures. Each VHSNC is provided ₹ 10,000 every year. So far 496,338 VHSNCs have been constituted. Funds are also provided to the states for capacity building and training of VHSNC members. There has been a steady increase in health-care infrastructure available over the plan period. As on March 2010, 147,069 sub-centres, 23,673 PHCs and 4,535 community health centres (CHCs) were functioning in the country (Table 13.13). Some of the weaknesses identified in the health delivery system in the public sector are poor upkeep and maintenance and high absenteeism of manpower in rural areas. The NRHM seeks to strengthen the public health delivery system at all levels.

**Reproductive and Child Health (RCH):** The RCH Programme was launched in 1997-8 as a separate entity up to the year 2004-5 as a part of the Family Welfare Programme and was brought under the ambit of the NRHM during the Eleventh Plan. It has components such as pulse polio immunization and routine immunization for protection of children from life threatening conditions that are preventable such as tuberculosis, diphtheria, pertussis, tetanus, polio, and measles.

**Table 13.13: Health Care Infrastructure**

| Facilities | No. |
|---|---|
| SC/PHC/CHC*(2010) | 175,277 |
| Government hospitals (rural & urban areas)** | 12,760 |
| AYUSH hospitals & dispensaries | 24,943 |
| Nursing personnel (as on 31-12-09)** | 1,702,555 |
| Doctors (modern system) (2010)** | 816,629 |

***Sources*** **: *RHS: Rural Health Statistics in India 2010.**
**** National Health Profile, 2010.**

**Janani Suraksha Yojana (JSY):** The JSY was launched with focus on demand promotion for institutional deliveries in states and regions where these are low. It integrates cash assistance with delivery and post-delivery care. It targets lowering of MMR by ensuring that deliveries are conducted by skilled birth attendants. The JSY scheme has shown rapid growth in the last three years, with 90.37 lakh beneficiaries in 2008-9 to 106.96 lakh beneficiaries in 2010-11. The issues of governance, transparency, and grievance redressal mechanisms are now the thrust areas for the JSY.

**Janani Shishu Suraksha Karyakram (JSSK):** The JSSK is a new initiative launched on 1 June 2011 to give free entitlements to pregnant women and sick new borns for cashless delivery, C-Section, drugs and consumables, diagnostics, diet during stay in the health institutions, provision of blood, exemption from user charges, transport from home to health institutions, transport between facilities in case of referral, and drop back from Institutions to home. A sum of ₹ 1437 crore has been allocated to the states during 2011-12 under the JSSK. In order to reach out to difficult, inaccessible, backward and under-served areas with poor health indicators, 264 high focus districts in 21 states have been identified based on concentration of SC/ST population and presence of left wing extremism for focused attention. A Mother and Child Tracking System has been introduced, which provides complete data of the mothers with their addresses, telephone numbers, etc. for effective monitoring of ante-natal and post-natal check-up of mothers and immunization services.

**National Vector Borne Disease Control Programme:** This Programme is being implemented for prevention and control of vector-borne diseases such as malaria, filariasis, kala-azar, Japanese encephalitis, dengue, and chikungunya. The government has taken various steps for tackling of vector-borne diseases including dengue and chikungunya by the states. There are 250 filaria-endemic districts in 20 states /UTs in the country. The National Health Policy (2002) aims at elimination of lymphatic filariasis in country by 2015. Kala-azar is endemic in four states, namely Bihar, West Bengal, Jharkhand, and Uttar Pradesh. During 2011, 31,322 cases and 78 deaths have been reported. The disease has been targeted for elimination by 2015 as per a tripartite agreement between India, Nepal, and Bangladesh. Under the elimination programme, the centre provides 100 per cent operational cost to the states, besides anti kala-azar medicines, drugs, and insecticides.

**Revised National Tuberculosis Control programme (RNTCP):** The RNTCP, a centrally sponsored ongoing scheme, is an application in India of the WHO-recommended directly observed treatment short course popularly known as DOTS. Under the programme, quality diagnosis and treatment facilities including a supply of anti-TB drugs are provided free of cost to all TB patients. More than 13,000 microscopy centres have been established in the country. During 2010-11, the programme has achieved new sputem positive case detection rate of 71 per cent and treatment success rate of 87 per cent which is in line with global targets for TB control.

**National Leprosy Eradication Programme (NLEP):** The NLEP was started in 1983 with the objective of eradication of the disease. In 2005, the dreaded disease after 22 years recorded a case load less than 1 per 10,000 population at national level. The recorded prevalence further came down to 0.69 per 10,000 in March 2011.

**National Programme for Control of Blindness (NPCB):** The NPCB, launched in the year 1976 as a 100 per cent centrally sponsored scheme with the goal of reducing the prevalence of blindness to 0.3 per cent by 2020, showed reduction in the prevalence rate of blindness from 1.1 per cent (2001-2) to 1 per cent (2006-7).

**National Programme for Health Care of the Elderly (NPHCE):** The NPHCE aims to provide separate and specialized comprehensive health care to senior citizens at various levels of the state health-care delivery system including outreach services. Some of the strategies include preventive and promotive care, management of illness, health manpower development for geriatric services, medical rehabilitation, and therapeutic intervention and Information Education and Communication(IEC) activities. The major components of the NPHCE are establishment of 30 bedded departments of geriatrics in 8 identified regional medical institutions, and provision of dedicated health-care facilities at district, CHC, PHC and sub-centres levels in 100 identified districts of 21 states of the country.

**NPCDCS:** The NPCDCS was launched during the Eleventh Five year plan. It envisages health promotion and health education advocacy, early detection of persons with high levels of risk factors through opportunistic screening and strengthening of health systems at all levels to tackle Non Communicable Disease (NCDs), and improvement of quality of care. At present the programme is being implemented in 100 districts covering 21 states.

**Human Resources and infrastructure development in Tertiary Health care:** The Eleventh Plan also witnessed a number of initiatives to improve the availability of human resources in the health sector. With a view to strengthening government medical colleges, the land requirement norms and infrastructural requirements for opening new medical colleges have been revised. The faculty requirements have also been revised. Besides, increased intake at MBBS level has been enabled especially in the under-served states.

**PMSSY:** The PMSSY has been launched with the objectives of correcting regional imbalances in the availability of affordable/reliable tertiary health-care services and augmenting facilities for quality medical education in the country. These are sought to be achieved through establishing AIIMS-like Institutions and upgrading existing medical college institutions. The PMSSY aims at (i) construction of 6 AIIMS like institutions in the first phase at Bhopal, Bhubaneswar, Jodhpur, Patna, Raipur, and Rishikesh and in the second phase in West Bengal and Uttar Pradesh, ii) upgradation of 13 medical college institutions in the first phase and 6 in the second phase. The upgradation programmes broadly envisages improving health infrastructure through construction of super speciality blocks/trauma centres, etc. and procurement of medical equipment for existing as well as new facilities. Seven more medical colleges are proposed to be upgraded, one each in Kerala, Karnataka and Madhya Pradesh and two each in Bihar and Uttar Pradesh in the third phase.

**Upgradation/Strengthening of State Government Medical Colleges:** This is a centrally sponsored scheme for strengthening /upgradation of state government medical colleges. The scheme envisages a one-time grant of ₹1350 crore to be funded by central and state governments in the ratio of 75:25. During 2009-10 to 2011-12, 70 medical colleges have been funded.

**Ayurveda, Yoga & Naturopathy, Unani, Siddha and Homeopathy (AYUSH):** Mainstreaming of AYUSH in national health care delivery is an important goal under the NRHM for which the government has sanctioned ₹ 42.19 crore upto December 31, during the current financial year. A new component of upgradation of AYUSH dispensaries has been incorporated in the centrally sponsored scheme of Development of AYUSH Hospitals and Dispensaries in July 2010. Besides, a component of setting up of 50/10 bedded integrated AYUSH hospitals for North Eastern and other hilly states has been introduced in 2011. The States of Himachal Pradesh, Jammu and Kashmir, Mizoram, Manipur, Tripura, have been financially assisted for setting up of 50 bedded hospitals while Assam and Sikkim for 10 bedded hospitals upto December 31, 2011.

## Women and Child Development

13.39 The government has started several schemes and initiated many new policy initiatives for the welfare and development of women and children which also include initiatives for economic and social empowerment of women and securing gender equality in various aspects of social, economic, and political life(Box 13.7). The scope and coverage of the schemes for women and child development have been expanding under various Plans. The major schemes are as follows:

**Integrated Child Development Services (ICDS):** The scheme was launched in 1975 for holistic development of children below 6 years of age and proper nutritional and health education of pregnant and lactating mothers with 33 projects and 4,891 anganwadi centres (AWCs). It has now been universalized with the government cumulatively approving 7,076 projects and 14 lakh AWCs including 20,000 anganwadis 'on demand'. Apart from universalizing the ICDS scheme, the government has taken various other initiatives such as revision in financial norms of existing interventions including the Supplementary Nutrition Programme (SNP), revision in nutritional and feeding norms of supplementary nutrition and introduction of new WHO growth standards. In addition, the government has also changed the cost sharing between the centre and states from 2009-10 from 50:50 to 90:10 for all components including the SNP for the north-east and 50:50 for the SNP and 90:10 for all other components for all states. The Annual Plan outlay for 2011-12 for the ICDS was ₹ 14,048 crore (RE) of which ₹ 10,750 crore was released to states/ UTs up to December 2011. There were 6,779 ICDS projects and 12.96 lakh AWCs operational as on 30 November 2011.

**Rajiv Gandhi Scheme for Empowerment of Adolescent Girls (RGSEAG):** This scheme was launched on 19 November 2010 with the objective of empowering adolescent girls in the age group 11-18 years by bringing improvement in their nutritional and health status and upgrading various skills like home skills, life skills, and vocational skills. To start with, it is being implemented in 200 selected districts across the country on a pilot basis. The RGSEAG is being implemented through state governments / UT administrations with 100 per cent financial assistance from the central government for all inputs other than nutrition provision for which 50 per cent central assistance is provided. AWCs are the focal points for delivery of services. Nearly 100 lakh adolescent girls in 200 districts are expected to be benefited per annum under the scheme. In these 200 districts, the Kishori Shakti Yojana (KSY) and Nutrition Programme for Adolescent Girls (NPAG) have been merged in the RGSEAG. Against an allocation of ₹ 750 crore under the scheme for the year, ₹ 512.35 crore has been released to states/ UTs.

**The Rajiv Gandhi National Creche Scheme for Children of Working Mothers:** This scheme provides for day-care facilities to 0-6 year-old children of working mothers by opening crèches and development services, i.e. supplementary nutrition, health-care inputs like immunization, polio drops, basic health monitoring, and recreation. The combined monthly income of both the parents should not exceed ₹ 12,000 for availing of the facilities. The number of crèches functional at present are 23,785 and beneficiary children are 594,625. The approved outlay for 2011-12 for the scheme was ₹ 85 crore.

**Integrated Child Protection Scheme (ICPS):** This centrally sponsored scheme implemented through states was launched in 2009-10 with the objective of providing a safe and secure environment for comprehensive development of children in the country who are in need of care and protection as well as children in conflict with the law. The ICPS provides preventive and statutory care and rehabilitation services to any vulnerable child including, but not limited to, children of potentially vulnerable families and families at risk, children of socially excluded groups like migrant families, families living in extreme poverty, families subjected to or affected by discrimination and minority families, children infected and / or affected by HIV / AIDS, orphans, child drug abusers, children of substance abusers, child beggars, trafficked or sexually exploited children, children of prisoners, and street and working children. All the states/UTs except Jammu & Kashmir have signed memorandums of understanding (MOUs) for implementation of this scheme and the states are at various stage of preparation of their implementation plans and financial proposals. Release of grants to states/UTs is linked to setting up of statutory bodies and delivery structures by them. The allocation of funds under this scheme for 2011-12 is ₹ 213.40 crore at RE stage, against which ₹ 148.60 crore has been released.

**Support to Training and Employment Programme for Women (STEP) Scheme :** This scheme seeks to provide updated skills and new knowledge to poor women in 10 traditional sectors of agriculture, animal husbandry, dairy, fisheries, handlooms, handicrafts, khadi and village industries, sericulture, social forestry, and wasteland development so as to enhance their productivity and income generation. For expanding the reach of the programme and further strengthening it, implementation of the scheme was revised in November 2009. The scheme aims at introduction of locally appropriate sectors. The number of beneficiaries in each project may now vary from 200 to 10,000 with the funding ceiling at ₹ 16,000 per beneficiary up to a period of five years. Since inception, around 250 projects have been provided financial assistance under this scheme. Since January 2011, 12 new projects have been sanctioned up to January 2012, covering 14,225 beneficiaries and a sum of ₹ 11.50 crore has been allocated in financial year 2011-12 under the STEP scheme.

**Rashtriya Mahila Kosh (RMK):** The RMK (National Credit Fund for Women) was created in 1993 with a corpus fund of ₹ 31crore. The initial corpus has now grown to over ₹ 180 crore including reserves and surplus due to credit, investment and recovery management, and an additional budgetary allocation of ₹ 69 crore. Since its creation, the RMK has established itself as a premier advocacy organization for the development of the micro-finance sector at national and international levels to enhance the flow of micro credit in the unorganized sector for poor women. It focuses on poor women and their empowerment through the provision of credit for livelihood-related activities. The RMK provides micro-credit in a quasi-informal manner, lending to intermediate micro-credit organizations (IMOs) across states. The RMK has taken a number of promotional measures through micro-financing, thrift and credit, formation and stabilization of SHGs, and also enterprise development for poor women. From its inception till 15 December 2011, the RMK has sanctioned loans worth ₹ 315.32 crore and released ₹ 260.23 crore, covering over 6.94 lakh women beneficiaries.

**Other Schemes:** Some other schemes related to Women and Child Development,are as follows: (i) Ujjawala launched on 4 December 2007 aims at prevention of trafficking with five specific components- prevention, rescue, rehabilitation, reintegration, and repatriation of victims. During 2011-12, up to January 2012, financial assistance was provided for 27 new projects to NGOs, taking the total number of approved projects to 173. The total number of rehabilitation centres under these projects went up to 86 as compared to 75 in 2010-11, creating capacity for care and rehabilitation of more than 4,000 victims of trafficking. (ii) Bal Bandhu Scheme for protection of children in areas of civil unrest is being implemented through the National Commission for Protection of Child Rights (NCPCR) with the grant sanctioned from the Prime Minister's National Relief Fund. (iii) Swadhar Greh Scheme: Two existing schemes, i.e. Swadhar and Short Stay Home, being implemented with similar objectives and for the same target group have been merged into the 'Swadhar Greh' scheme in order to reach out to those women who are victims of unfortunate circumstances and are in need of institutional support for rehabilitation, so that they can lead their lives with dignity. Under the new scheme, women are provided emotional support and counselling to enable them to become self-reliant and get rehabilitated socially and economically through education, skill upgradation, and personality development. The envisaged coverage of the proposed scheme is all 641 districts of the country.

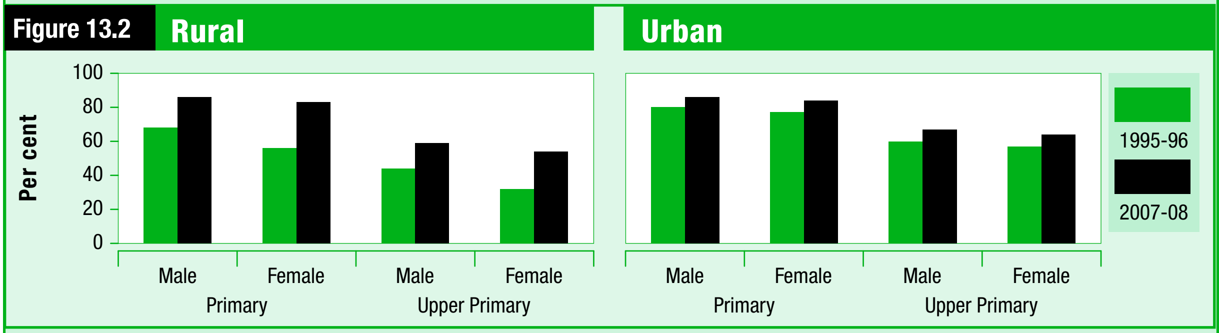
## Box 13.7 : Empowerment of Women

Empowerment of women is closely linked to the opportunities they have in education, health, and economic and political participation. Government has been operationalising this approach through legislative and programmatic interventions as well as by mainstreaming gender into the development planning process. Major advancements over the years are the following:

**Women and Education :** The SSA has had positive outcomes for girl child education leading to an increase in the gender parity index (GPI) in primary (0.94) as well as upper primary (0.92) education. Enrolment of girls at primary level and upper primary level increased over the years. Data also shows that the number of girls in schools in the age group of 5-14 years has increased from 79.6 per cent in 2004-5 to 87.7 per cent in 2009-10. Similarly, the number of girls in the educational system in the 15-19 years age group increased from 40.3per cent to 54.6 per cent and in the age group 20-4 years from 7.6 per cent to 12.8 per cent over the same period. According to India Human Development Report 2011, despite attaining high enrolment rates, the net attendance rates (NAR) remained low. Further, attendance at the upper primary level was lower compared to primary level. (Figure 13.2). Therefore the challenge is to translate the high enrolment into high attendance rates.

**Net Attendance Rates in rural and urban areas**

Figure 13.2




The National Literacy Mission or Saakshar Bharat targeted female literacy as a critical instrument of women's empowerment. This has led to an increase in literacy amongst women from 53.67 per cent (Census 2001) to 65.46 per cent (Census 2011). For the first time, out of the total of 217.70 million literates added during the decade, women (110.07million) out numbered men.

**Women and Health :** Implementation of the NRHM has resulted in an improvement in many development indicators for women. As per the India Human Development Report, fertility rates have come down and have reached replacement levels in a number of states; MMR has come down to 212 per 100,000 live births in 2009 from 301 in 2003. IMR, though still high, has fallen to 50 per 1000 in 2009. Institutional deliveries have risen from 39 per cent in 2006 to 78 per cent in 2009.

**Women and the Economy :** The participation of women in the workforce, the quality of work allotted to them, and their contribution to the GDP are indicators of the extent of their being mainstreamed into the economy. The National Skill Development Programme (NSDP) has identified 231 modular courses for women. It is critical that the training has relevance to the changing labour markets. Efforts are needed to link skill development programmes to the NSDP to ensure relevance and enhance employability. An important strategy for financial inclusion of women, which is crucial for their integration into the economy, has been micro-finance. The model encourages access of SHGs to banks both as a means of savings and as providers of loan services. By March 2010, 69.53 lakh SHGs including those formed under the SGSY had been covered under the National Bank for Agricultural and Rural Development's (NABARD) SHG-bank linkage programme. Of these 76 per cent are exclusively women SHGs, accounting for 72.5 per cent of savings and 82 per cent of outstanding loans.

**Promoting Gender Mainstreaming through Gender Budgeting (GB) :** Recognizing that women, constituting 48 per cent of India's population, lag behind men on many social indicators like health, education, and economic opportunities and warrant special attention due to their vulnerability and lack of access to resources, GB, as a tool for achieving gender mainstreaming, has been adopted by the government in 2005. GB is not an accounting exercise but an ongoing process to ensure that the benefits of development reach women as much as men. It entails incorporating a gender perspective at all levels and stages of the budgetary process. The first step in this direction was the establishment of Gender Budgeting Cells in 56 ministries/departments at union level. A significant breakthrough was the introduction of the GB Statement in 2005-6, which is placed in parliament with the Union Budget documents every year. It serves as a reporting mechanism and provides an indication of the funds flowing to women. Over the years, the number of ministries/departments reporting in the GB Statement has gone up from 9 (2005-6) to 29 (2011-12). The magnitude of GB allocations as a percentage of total budget has also gone up from 2.79 per cent in 2005-6 to 6.22 per cent in 2011-12.

**National Mission for Empowerment of Women (NMEW) :** The NMEW, an umbrella mission to strengthen inter-sectoral convergence and facilitate the process of coordination of all the women's welfare and socio-economic development programmes across ministries and departments, was launched on 8 March 2010 to ensure economic and social empowerment of women. The NMEW is piloting the 'convergence model' across the country in 32 select districts with the aim of bridging the gap between demand and supply of women-related services by undertaking realistic estimates of the demand, creating greater awareness about women-based schemes and programmes of the government, augmenting the demand for various services/ schemes for women, and connecting them with the service providers. The model includes introduction of convergence-cum-facilitation centres for women at district, tehsil / block and village levels. The first such pilot convergence project was launched in Pali district in Rajasthan on 16 September 2011 with the opening of 150 village-level centres.

## Welfare And Development of SCs, STs, OBCs, and Other Weaker Sections

13.40 As part of the strategy to achieve inclusive development, the government is committed to the economic and social empowerment and educational upliftment of socially disadvantaged groups and marginalized sections of society. Accordingly, such programmes are implemented through states, government's apex corporations and NGOs. The PPP approach is also being explored for effective delivery of services with more accountability and transparency.

### SCs

13.41 A number of schemes to encourage SC students to continue their studies from school to higher education level as well as for the economic advancement of needy SC families are under implementation. During 2011-12, the physical target under the Scheme for Pre-Matric Scholarship for those students whose parents are engaged in unclean occupations was 8 lakh. Against an allocation of ₹ 80 crore for 2011-12, ₹ 37.58 crore has been released to state governments/UT administrations for providing scholarship to an estimated 6 lakh beneficiaries up to 31 December 2011. The Post-Matric scheme has been revised with effect from 1 July 2010 so as to (i) raise the parental annual income ceiling for eligibility from ₹ 1 lakh to ₹ 2 lakh, (ii) rationalize the grouping of courses, and (iii) upwardly revise maintenance and other allowances by 60 per cent. Under the Post-Matric Scholarship scheme, ₹ 2,146.77 crore has already been released to states/UTs out of the BE of ₹ 2,218 crore. The number of beneficiaries during 2011-12 is estimated at 51 lakh. Under the Rajiv Gandhi National Fellowship Scheme which aims at providing financial assistance to SC students pursuing M Phil and PhD courses, the number of scholarships has been increased from 1,333 to 2,000 with effect from 1 April 2010 and ₹ 103.69 crore released during 2011-12 (up to December 2011) for 2,000 new fellowships and 5999 renewals. The specified subjects under National Overseas Scholarships have been revised for the selection year 2010-11 and new subjects, namely medicine, pure sciences, engineering, agricultural sciences, and management have been specified for providing financial assistance to students pursuing master's-level courses and PhD/post-doctoral courses abroad. Thirty awards are given per year. During 2011-12 the amount released up to December 2011 was ₹ 2.22 crore against an allocation of ₹ 6 crore.

13.42 The Scheme of Top Class Education for SCs provides financial assistance for quality education to SC students up to degree/post-degree level. SC students who secure admission in notified institutions are awarded scholarships. During 2011-12, ₹ 9.08 crore to assist 652 SC students studying in institutions like IITs and IIMs has been released (up to December 2011). Twenty-four new institutions have been added to the notified list of premier institutions under the scheme with effect from the current financial year. The total number of specified institutions has thus increased to 205. Under the revised Babu Jagjivan Ram Chhatrawas Yojna' a centrally sponsored scheme for hostels for SC boys and girls, assistance for the construction of girls hostels has been raised from 50 per cent to 100 per cent. During 2011-12, the physical target is 4,750 seats for girls and 5,000 seats for boys, for which ₹ 8.27 crore and ₹ 3.90 crore has been released up to 31 December 2011 for 200 seats for girls and 200 seats for boys respectively.

13.43 Special Central Assistance to the Scheduled Castes Sub Plan is a major scheme for economic advancement of SCs. The main thrust is on economic development of the SC population in order to bring them above the poverty line through self-employment or training. The amount of subsidy admissible under the scheme is 50 per cent of the project cost, subject to a maximum of ₹ 10,000 per beneficiary. During 2011-12, the physical target is to cover over 7 lakh beneficiaries. An amount of ₹ 513.42 crore was released to state governments/UT administrations against a revised allocation of ₹ 675 crore up to December 2011.

### STs

13.44 An outlay of ₹ 3,723.01 crore has been provided for the welfare and development of STs in the Annual Plan for 2011-12 and ₹ 1,096.01 crore as Special Central Assistance (SCA) to the Tribal Sub-Plan (TSP), which includes ₹ 42.01 crore for development of forest villages. The SCA to the TSP is a 100 per cent grant extended to states as additional funding to their TSPs for family-oriented income-generating schemes, creation of incidental infrastructure, extending financial assistance to SHGs, community-based activities, and development of forest villages. The outlay for grants-in-aid under Article 275(1) during 2011-12 is ₹ 1,197 crore. The funds are provided to states with the objective of promoting the welfare of STs and improving administration of scheduled areas in conjunction with other schemes/programmes. The Scheme for Post-Matric Scholarship with 100 per cent financial assistance to ST students whose family income is less than or equal to ₹ 2 lakh per annum for pursuing post-matric-level education including professional, graduate, and postgraduate courses in recognized institutions, the Scheme for Top Class Education for STs providing financial assistance for quality education to 625 ST students per annum to pursue studies at degree and post-degree levels in any of the 183 identified institutes, the National Overseas Scholarship Scheme with financial assistance to 15 eligible ST students for pursuing higher studies abroad in specified fields and the Scheme for Strengthening of Education among ST Girls in low literacy districts are some other schemes for the development of STs. Some measures for economic empowerment of STs include extension of financial support through the National Scheduled Tribes Finance and Development Corporation (NSTFDC) in the form of loans and micro-credit at concessional rates of interest for income-generating activities and in market development of tribal products and their retail marketing through its sales outlets by the Tribal Cooperative Marketing Development Federation of India Limited (TRIFED). More than 31.68 lakh claims have been filed under the Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act and more than 12.51 titles distributed till January, 2012.

## Minorities

13.45 Five communities-Muslims, Christians, Sikhs, Buddhists, and Parsis-notified by the government as minority communities constitute 18.42 per cent of total population as per the 2001 Census. Over the Eleventh Five Year Plan, with an outlay of ₹ 7,000 crore, a three pronged strategy including (a) educational empowerment, (b) area development, and (c) economic empowerment of minority communities was adopted. Educational empowerment was sought through three scholarship schemes, namely, Pre-matric, Post-matric, and Merit-cum-means based, with more than 1 crore scholarships given at a cost of ₹ 2,129.29 crore. These schemes were supplemented by the activities of the Maulana Azad Education Foundation (MAEF), the corpus of which was enhanced from ₹ 100 crore in 2005-6 to ₹ 700 crore. Under area development, the Multi-Sectoral Development Programme (MSDP) addresses the 'development deficits' brought out by the socio-economic survey conducted in 90 minority concentration districts (MCDs) of the country with an outlay of ₹ 3,780 crore during Eleventh Plan. Besides the MSDP, the Prime Minister's New 15 Point Programme for Welfare of Minorities earmarks 15 per cent of the outlays and targets in most flagship programmes of the government for areas with substantial minority population. The schemes cover important sectors including education, employment, and basic infrastructure. The programme has been recently enlarged by covering more schemes with greater focus on the monitoring mechanism by including elected representatives of state assemblies and Parliament. Economic empowerment is sought to be achieved through infusion of credit under priority-sector lending (PSL) by banks and through credit provided by the National Minorities Development and Finance Corporation (NMDFC). PSL to minorities has shown a steady rise from 10.6 per cent of total PSL in 2007-8 to 14.50 per cent as on 30 September 2011. The authorized share capital of the NMDFC has been raised from ₹ 650 crore in 2006-7 to ₹ 1,500 crore in 2010-11 for expanding its loan and micro-finance operations. Efforts are also being made to improve the management of Wakf properties and a scheme for computerization of Wakf Board records is a significant step in this direction. The Wakf Amendment Bill 2010 has also been introduced in Parliament to improve and streamline the functioning of Wakf Boards in India.

## OBCs

13.46 The government provides central assistance to state governments /UT administrations for educational development of OBCs. During 2011-12 under the Scheme of Pre-Matric Scholarship for OBCs, it is proposed to provide scholarships to 14 lakh OBC students. Against an allocation of ₹ 50 crore for the scheme during financial year 2011-12, ₹ 17.66 crore was released to state governments/ UT administrations up to December 2011. Under the revised Scheme of Post-Matric Scholarship for OBCs, it is proposed to provide scholarship to 17 lakh OBC students. Against an allocation of ₹ 535 crore during financial year 2011-12, ₹ 424.33 crore was released to state governments/UT administrations up to December 2011. In order to provide hostel facilities to OBC students studying in middle and secondary schools, colleges, and universities to enable them to pursue higher studies ₹ 8.82 crore was released up to December 2011 against an allocation of ₹ 45 crore for additional 5000 hostel seats in 2011-12. The government has added

170 new entries since April 2011 to the existing central list of OBCs which now stands at 2343.

## Persons with Disabilities

13.47 A number of schemes are being implemented for the empowerment and rehabilitation of persons with disabilities. These schemes aim to promote physical, psychological, social, educational, and economic rehabilitation and development of persons with disabilities to enhance their quality of life and enable them to lead their lives with dignity. There are seven autonomous National Institutes working in different fields of disabilities. These institutes are engaged in human resource development in the field of disability, providing rehabilitation services to persons with disabilities and undertaking research and development in their respective areas of specializations. As of 31 January 2011, ₹ 34 crore has been released to these national institutes against the budgeted outlay of ₹ 60 crore for the year. Under the Scheme of Assistance to the Disabled for Purchase/Fitting of Aids and Appliances (ADIP), approximately 2 lakh persons with disabilities are provided assistive devices every year. During 2011-12, ₹ 27.78 crore was released to implementing agencies, including ₹ 7.05 crore for camp activities up to December 2011 against an allocation of ₹100 crore. The target is to cover about 2.8 lakh persons with disabilities. Under the Deen Dayal Disabled Rehabilitation Scheme (DDRS), ₹ 31.27 crore had been sanctioned for release up to December 2011 against an allocation of ₹ 120 crore during 2011-12 to voluntary organizations for running special schools for children with hearing, visual, and mental disability and vocational rehabilitation centers for persons with disabilities and for manpower development in the field of mental retardation and cerebral palsy. The target under the scheme is to cover 2.5 lakh beneficiaries during the year. Besides, in order to facilitate the creation of infrastructure and capacity building at district level for awareness generation, rehabilitation, and training and guiding rehabilitation professionals, the central government with active support from state governments is providing comprehensive services to persons with disabilities through setting up of District Disability Rehabilitation Centers in all the unserved districts of the country. The scheme for setting up of DDRCs was initiated in Ninth Five Year Plan and is continuing in Eleventh Five Year Plan. Hundred new DDRCs were targeted to be set up during the last two years (2010-11 and 2011-12) of the Eleventh Five Year Plan. Twenty-one DDRCs have been set up in 2010-11 and ₹ 1.2 crore has been released in financial year 2011-12 for setting up of six new DDRCs to the state governments of Gujarat, Andhra Pradesh, Uttar Pradesh, West Bengal, and Bihar.

## Social Defence

13.48 Under the social defence sector, schemes/ programmes are implemented for senior citizens and for victims of substance (drug) abuse. Programmes for senior citizens aim at the welfare and maintenance especially of indigent senior citizens. For victims of substance abuse, drug demand reduction is achieved through awareness campaigns and treatment of addicts and their detoxification so that they may join the mainstream. Under the Integrated Programme for Older Persons (IPOP), grants-in-aid are given to NGOs for running old age homes (OAH), day care centres (DCCs), and mobile medical units (MMUs). During 2011-12, ₹ 7.31 crore was released up to December 2011 against a budgetary allocation of ₹ 40 crore. The scheme aims to cover 64,000 beneficiaries during 2011-12. The Maintenance and Welfare of Parents and Senior Citizens Act 2007 was enacted in order to ensure need-based maintenance for parents and welfare measures for senior citizens. States/UTs are required to implement the Act by notifying the same in the official gazette. The Act has been notified by 23 States and all the UTs so far. Besides, grants-in-aid are provided to NGOs for running integrated rehabilitation centers for addicts, regional resource and training centers, and other projects. During 2011-12, ₹18.25 crore has been released up to December, 2011 against a budgetary allocation of ₹ 41 crore. The scheme aims to benefit 1.2 lakh persons. For effective implementation of social defence programmes, personnel engaged in delivery of services in this area are being trained under various programmes being organized by the National Institute of Social Defence (NISD). The NISD has been allocated ₹ 10 crore for the current financial year.

13.49 There are also different financial institutions to further the cause of upliftment of the weaker sections of society. The National Scheduled Castes Finance and Development Corporation (NSCFDC), National Safai Karamcharis Finance and Development Corporation (NSKFDC), National Backward Classes Finance and Development Corporation (NBCFDC), and National Handicapped Finance and Development Corporation (NHFDC) provide credit facilities to their target groups at concessional rates of interest for various income-generating activities. During 2011-12, 1.42 lakh

**Table 13.14 : Details of the Loan Disbursed/Beneficiaries covered under the NSCFDC, NSKFDC, NBCFDC and NHFDC**

| Sl. No. | Corporation | Amount of Loan Disbursed (₹ crore) Term Loan | Micro-finance | Others | Total | No. of Beneficiaries Term Loan | Micro-finance | Others | Total |
|---|---|---|---|---|---|---|---|---|---|
| 1 | NSCFDC | 90.65 | 28.36 | — | 119.01 | 10,022 | 23,240 | 2490 | 35,752 |
| 2 | NSKFDC | 28.97 | 12.03 | 20.39 | 61.39 | 2991 | 5292 | 7604 | 15,887 |
| 3 | NBCFDC | 67.60 | 20.52 | 43.83 | 131.95 | 19,983 | 19,444 | 43,833 | 83,260 |
| 4 | NHFDC | 31.01 | — | 0.41 | 31.42 | 6597 | — | 10 | 6607* |
| | **Total** | **218.23** | **60.91** | **64.63** | **343.77** | **39,593** | **47,976** | **53,937** | **141,506** |

***Source:*** **Ministry of Social Justice and Empowerment.**

*** Estimated.**

beneficiaries were disbursed loans as on 31 December 2011, as compared to 1.34 lakh beneficiaries during the corresponding period of 2010-11. The details are given in Table 13.14.

## Outlook and Challenges

13.50 The recent economic crisis in several industrialized nations caused by unbridled public expenditure resulting in huge sovereign debts and fiscal imbalances has put the world economy again at the crossroads. The second crisis is coming in quick succession, at a time when countries have less fiscal space to counter the crisis and its fallouts on the social sector. The focus now has shifted from giving bailout packages to curtailing government expenditure through austerity measures. India weathered the 2008 global crisis well with some deft handling by the government and by using the available fiscal space for inclusive growth through higher spending on employment generation and poverty-alleviation programmes.

13.51 On the employment front, the country has been able to withstand the adverse impact of the global crisis and generate employment since July 2009, as reported in the quarterly surveys conducted by the Labour Bureau. Unlike other developed countries, where the measures to counter job losses were ad hoc and contained elements of protectionism, in the Indian case, the programmes for employment generation were planned with a longterm outlook free of any elements of protectionism. The employment-generation programmes of the government like the MGNREGA have been instrumental in creating employment opportunities and placing additional income in the hands of the poor and disadvantaged sections of society which has also created demand for consumer durables and non-durables to sustain the supply side, albeit at higher food inflation. It has also been able to make a positive dent in addressing the problem of depleting water tables in many areas since the focus of the programme is on water conservation activities. Measures like interest subvention for employment-intensive sectors have also helped arrest any likely job losses in these sectors.

13.52 Moving forward, India has to achieve a skillful balancing act. While fiscal prudence is important, development policies that aim at bringing the economy back on a higher growth trajectory and at the same time ensuring adequate spending on the social sector especially education, health care, and employment generation are equally important. Since India is behind not only China but also Sri Lanka and many others neighbouring countries in terms of human development, any additional fiscal space available or created needs to be utilized for human development through growth-oriented social sector programmes. This will help achieve the twin objectives of maintaining the growth trajectory and achieving more inclusive development.

13.53 It is also high time that we bring in effective measures to improve the efficiency, especially in the delivery mechanism, of all social-sector programmes in the fields of education, health, and employment, while taking note of region-specific successes and failures in the past so that these interventions yield desired outcomes. All programmes and legislations have laid stress on developing planning and implementation strategy in a bottom-up approach which can be achieved only by developing and strengthening grassroots level institutions like the PRIs and making them vibrant. For example, the flagship programme of the government, the MGNREGA has a provision for preparation of district perspective plans for five years, which is basically a holistic village development plan based on which annual action plans of all sectoral/line agencies having mandate in the social sector could be arrived at. This perspective plan takes care of convergence of activities and is a very effective tool for pooling of resources (under various developmental programmes meant to be utilized at village level) that would also enable avoiding duplicacy. The PRIs have to play the principal role in preparation of this perspective plan. Since PRIs and the gram sabhas are not adequately informed and aware of the provisions of the Act and the processes involved, these plans are generally not prepared or are left to the bureaucracy and so the planning process merely becomes an action plan for utilization of resources and therefore falls far short of expectations. Well-informed and empowered grassroots-level institutions(PRIs) and further improvements in the MGNREGA like shifting to permanent asset building and infrastructure development activities, better monitoring, skill upgradation for enhanced employability, and extension of the legislation to urban areas can yield better results. It also needs to be ensured that implementation of the programme doesn't result in shortage of labour during the peak agricultural season for which PRIs and the gram sabhas have to be adequately sensitized. Similar changes in other social-sector programmes are needed. While the government has consciously undertaken a large increase in budgetary allocations for anti-poverty programmes and employment-generation schemes, policy structures need to be firmed up to facilitate effective implementation of these programmes and to ensure that allocation results in outputs and outputs in outcomes. While initiatives like the outcome budget and the setting up of the UIDAI by the government are some steps in this direction, there is need to quickly link the UID to all social-sector programmes for better monitorable outcomes.

13.54 To reap the much hyped demographic dividend advantage of India, better educated and healthy population is a must. This calls for more reforms in the education system and health sector. While the National Skill Development Mission is a step in the right direction, much more is needed both in terms of achievements and speed. The RTE Act must face no implementation deficit for it to work towards realizing the demographic dividend. Similar reforms are needed in university and higher education and the demand-supply mismatch in the job market needs to be corrected. Mobilization of funds for higher education is indeed a challenge for the government. Proposals for the establishment of the National Commission for Higher Education and Research (NCHER) as an overarching regulatory body for higher education and creation of a National Accreditation Regulatory Authority to put in place a mandatory accreditation system to ensure quality assurance and certification of institutions and programmes of study could be steps in the right direction. In short, a long-term vision and plans in mission mode are needed for the timely harvest of the demographic dividend. The gap in available resources could possibly be met by a tailor-made PPP mode of funding without diluting the regulatory oversight of the government.

13.55 Finally, there is the issue of convergence of programmes/schemes which has always been talked about but little has been done about it. For example, there are the AABY, JBY, and RSBY with significant overlap and catering to same or similar categories of the population. There is also the Shiksha Sahyoga Yojana(SSY) as a add-on benefit under the former two schemes. Similar examples are available in other areas as well. Sincere efforts for real convergence of schemes are needed.

# India and the Global Economy

14

CHAPTER

*The big story of the last decade for India has been its arrival on the global scene. The Indian economy had broken free of the low-growth trap from the early 1980s. By the mid-1990s, following the economic reforms of 1991-3, India began to appear as a player of some significance in the global economy. Then, following the East Asian crisis of the late 1990s, and from the first years of the first decade of the 21st century there was no looking back. India's exports began to climb, its foreign exchange reserves, which for decades had hovered around 5 billion dollars, rose exponentially after the economic reforms and in little more than a decade had risen to 300 billion dollars. Indian corporations that rarely ventured out of India were suddenly investing all over the world and even in some industrialized countries. When, in 2009, the Group of 20 (G-20) was raised to the level of a forum for leaders, India was a significant member of this global policy group.*

14.2 The globalization of India has given rise to new opportunities but it has also brought with it new challenges and responsibilities. It means that the global economy can no longer be viewed from a spectator's standpoint. What happens there has large implications for India. Every time there is a major financial crisis anywhere in the world, there is need to take brace position. And, in turn, the rise and fall of India's growth rate has an impact on global growth and there is need for India to take this responsibility seriously. This chapter, a new addition to the Economic Survey, is a recognition of this fact. It examines the state of the global economy and India's position therein. It analyses the current global slowdown and eurozone crisis, what this means for India and the policy challenges that these international matters give rise to on domestic soil. The chapter also discusses G-20 imperatives and India's role as a constructive player in the evolving global order.

## State of the Global Economy

14.3 The developments over the last year in major economies of the world have not been encouraging. There is an apprehension that the process of global economic recovery that began after the financial crisis of the 2008 is beginning to stall and the sovereign debt crisis in the eurozone area may persist for a while. There is an effort to build firewalls around these danger zones, but the world has little experience with this; so we need to be prepared for breaches in the walls. The US economy has shown some improvement but economic growth remains sluggish. The global economy is expected to grow by 3.3 per cent in 2012 compared to 3.8 per cent in 2011 as per the International Monetary Fund's (IMF) January 2012 update of the World Economic Outlook (WEO). Gross domestic product (GDP) growth in advanced economies declined to 1.6 per cent in 2011 compared to 3.2 per cent in 2010 and is expected to be even lower at 1.2 per cent in 2012. Growth in emerging

**Table 14.1 : Growth of the GDP (%) (Y-o-y)**

| | World | Advanced economies | US | EU | UK | Eurozone | Germany | Japan | B | R | I*# | C* | S |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2010 | 5.2 | 3.2 | 3.0 | 2.0 | 2.1 | 1.8 | 3.6 | 4.4 | 7.5 | 4.0 | 9.9 | 10.4 | 2.9 |
| **Q1** | | | 2.2 | 1.0 | 1.2 | 1.0 | 2.4 | 5.0 | 9.3 | 3.0 | 9.4 | 11.9 | 1.6 |
| Q2 | | | 3.3 | 2.2 | 2.5 | 2.1 | 4.1 | 4.5 | 8.7 | 5.2 | 8.8 | 10.3 | 3.0 |
| Q3 | | | 3.5 | 2.4 | 3.0 | 2.1 | 4.0 | 5.2 | 7.0 | 3.4 | 8.9 | 9.6 | 3.3 |
| Q4 | | | 3.1 | 2.2 | 1.7 | 2.0 | 3.8 | 3.2 | 5.3 | 4.4 | 8.3 | 9.7 | 3.6 |
| 2011 | 3.8 | 1.6 | 1.8 | 1.6 | 0.9 | 1.5 | 3.0 | -0.9 | 2.9 | 4.1 | 7.4 | 9.2 | 3.1 |
| **Q1** | | | 2.2 | 2.4 | 1.6 | 2.4 | 4.6 | 0.1 | 4.2 | 3.8 | 7.8 | 9.7 | 3.7 |
| Q2 | | | 1.6 | 1.7 | 0.5 | 1.6 | 2.9 | -1.7 | 3.3 | 3.5 | 7.7 | 9.5 | 3.3 |
| Q3 | | | 1.5 | 1.4 | 0.4 | 1.3 | 2.6 | -0.6 | 2.2 | 4.9 | 6.9 | 9.1 | 2.9 |
| Q4 | | | 1.6 | 0.9 | 0.7 | 0.7 | 2.0 | -1.0 | na | na | 6.1 | 8.9 | na |
| 2012 (P) | 3.3 | 1.2 | 1.8 | -0.1 | 0.6 | -0.5 | 0.3 | 1.7 | 3.0 | 3.3 | 7.0 | 8.2 | 2.5 |

***Source*** **: Organization for Economic Cooperation and Development (OECD) Principal Global indicators and IMF WEO.**

***Notes*** **: P Projection from IMF World Economic outlook January 2012 update.**

**na: not available. Growth rates may not necessarily correspond to country sources.**

*** Country website. Y-o- y is year-on-year. EU is European Union. B,R,I,C,S stand for the separate countries of the BRICS grouping, i.e. Brazil, Russia, India, China, and South Africa. Q1, Q2, Q3, and Q4 stand for the first, second, third, and fourth quarters**

**Aggregations for World and Advanced Economies use purchasing power parity weights.**

**# India's GDP growth is in terms of factor cost whereas for other countries it is in terms of market prices.**

economies slowed to 6.2 per cent in 2011 compared to 7.3 per cent in 2010 and is projected to be 5.4 per cent in 2012.The US economy seems to have revived somewhat and is projected to maintain its growth rate at 1.8 per cent for 2012. Even so, economic growth in the US remains sluggish despite extensive use of both fiscal and monetary policy tools. The eurozone is expected to contract by 0.5 per cent in 2012 (Table 14. 1).

14.4 The predominant reason for the subdued growth in advanced economies at this juncture remains the sovereign debt crisis that started in the peripheral economies of the eurozone, but from the latter half of 2011, started to adversely affect the major economies there, as well (see Box 14.1). Issues relating to medium-term fiscal consolidation, the exposure of European banks to public and private debt, and recurring differences in the ways to resolve the crisis have continued to weigh on the global economic outlook as the eurozone accounts for close to one-fifths of global GDP.

14.5 Volatility in capital flows resulting from the spillover effects of monetary policy choices and other uncertainties in the advanced financial markets further impacted exchange rates and made the task of macroeconomic management difficult in many emerging economies. This has brought out a new dimension of globalization in the post financial crisis world, where easy monetary policy in one set of countries may result in inflation elsewhere due to cross-border capital flows.

14.6 Unemployment situation in advanced economies in general, and the peripheral economies of the eurozone in particular, which had deteriorated in the wake of global crisis has not improved. The OECD Employment Outlook 2011 observed that with the recovery stalling, OECD unemployment remained high, with close to 44.5 million persons unemployed. The extent of unemployment has been varied across OECD countries, with Spain exhibiting the highest unemployment rate (21.7 per cent). As per the OECD report, the main losers have been youth and temporary workers, some of whom have been getting out of the job market. The unemployment rate in the US has shown some improvement (8.7 per cent in Q4 2011 compared to 9.1 per cent in Q3 2011), but nevertheless remains high. The persistently high rates of unemployment in advanced countries, especially in the crisis-affected countries of the eurozone, the inherent contradiction of fiscal consolidation (without worsening the contractionary tendencies) is having a social fallout in the peripheral economies and has

## Box 14.1 : The Eurozone : A Crisis after a Crisis

**The eurozone crisis**: The eurozone (a currency union of 17 European countries) has been going through a major crisis which started with Greece but spread rapidly to Ireland, Portugal, and Spain and subsequently Italy. While it got sparked off by fear over the sovereign debt crisis in Greece, it went on to impact the peripheral economies as well, especially those with over-leveraged financial institutions. These economies (especially Greece) have witnessed downgrades in the ratings of their sovereign debt due to fears of default and a rise in borrowing costs.The sovereign debt crisis has made it very difficult for some of these countries to re-finance government debt. The banking sector in these countries also stands adversely affected.

**Good times:** After the launch of the euro, the eurozone witnessed not only a decline in long-term interest rates (especially from 2002 to 2006), but an increasing degree of convergence in the interest rates of member countries. A common currency, similar interest rates, and relatively strong growth provided a basis for a rise in public and private borrowing with cross-border holdings of sovereign and private debt by banks.

**Trigger:** In the aftermath of the global financial crisis in 2008, sovereign debt levels started to mount. The revelation that the fiscal deficit in Greece was much higher than stated earlier set off serious concerns in early 2010 about the sustainability of the debt. The downgrade of ratings led to a spiral of rising bond yields and further downgrade of government debt of other peripheral eurozone economies as well, that had high public debt or a build-up of bank lending or both.

**How it spread:** Concerns intensified in early 2010 as cross-border holdings of sovereign debt and exposure of banks came to light. The financial markets quickly transmitted the shocks which not only led to a sharp rise in credit default swap (CDS) spreads but later impacted capital flows elsewhere.

**Underlying weaknesses:** The crisis has been difficult to resolve due to certain specificities:

- *The eurozone lacks a single fiscal authority capable of strict enforcement;*
- *Economies with different levels of competitiveness (and fiscal positions) have a single currency;*
- *These economies cannot adjust through a depreciation of the currency;*
- *There is no lender of last resort, i.e. a full-fledged central bank.*

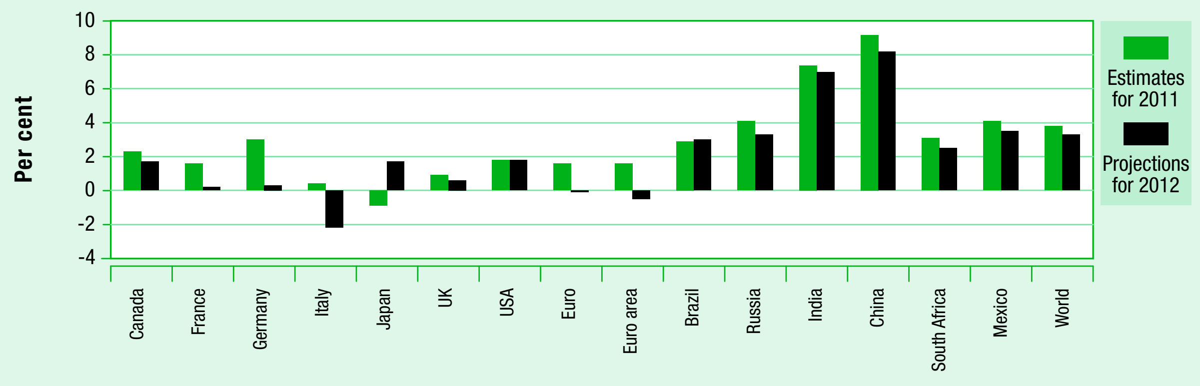
**Steps to resolve it:** In May 2010, the European finance ministers agreed on a rescue package worth •750 billion to ensure financial stability by creating the European Financial Stability Facility (EFSF). In October 2011, the eurozone leaders agreed to a package of measures that included an agreement whereby banks would accept a 50 per cent write-off of Greek debt owed to private creditors, an increase in the EFSF to about •1 trillion, and requiring European banks to achieve 9 per cent capitalization. The date for starting the European Stability Mechanism was brought forward to July 2012. To restore confidence in Europe, EU leaders also agreed to a fiscal compact with a commitment that participating countries would introduce a balanced budget amendment. In December 2011, the European Central Bank (ECB) took the step of offering a three-year long-term refinancing operation (LTRO) at highly favourable rates to alleviate funding stress which helped bring down the yields somewhat during January and February 2012. But overall uncertainty about the effectiveness of all these measures and how further resources would be raised, their adequacy, and doubts about sovereign debt levels coming down and the ability of Greece and other economies to undertake further fiscal austerity remain, *especially* due to the low-growth scenario.

**The Euro zone and India:** The eurozone, though distinct from the European Union (EU) is a major subset of the EU. The eurozone and EU account for about 19 and 25 per cent respectively of global GDP. The EU is a major trade partner for India accounting for about 20 per cent of India's exports and is an important source of foreign direct investment (FDI). The IMF has forecast that the eurozone is likely to go through a mild recession in 2012. A slowdown in the eurozone is likely to impact the EU and the world economy as well as India.

sharply polarized public debate on the appropriate economic policies to be adopted.

14.7 The petering out of the revival of global growth in 2011 came on top of disruptions in supply-chain networks resulting from the devastating earthquake and tsunami in Japan (in March 2011). Later in the year (October and November), severe flooding in Thailand also disrupted some supply chains. Political uncertainties in some Middle East and North African countries have been another source of uncertainty apart from their obvious implications for oil prices. The severe uncertainty in the eurozone impacted the global financial markets leading to capital reversals to safe havens in December 2011.

Figure 14.1 GDP growth estimates and projections




14.8 At this juncture, in the short run, the global economy is being buffeted by multiple shocks emanating from various sources, economic, social, and geopolitical. The lower global growth forecast by the IMF for most countries in 2012 *perhaps* reflects the repeated bouts of uncertainty arising from these diverse sets of factors (Figure 14.1).

14.9 Nevertheless, India is projected to be the second-fastest-growing major economy (7 per cent) after China (8.2 per cent) as per the IMF. In the medium term, challenges for the global economy continue to emanate from the way the eurozone crisis is addressed. The high deficits and debts in Japan and the United States and slow growth in high income countries in general, have not been resolved. The looming risk to the global outlook is also on account of the geopolitical tensions centred on Iran that could disrupt oil supply and result in a sharp increase in oil prices and even disrupt supply routes.

14.10 While the current conjuncture is important for anticipating outcomes in the short to medium term, the current global situation is also a manifestation of certain long-term developments and changes in the relative positions of the major economies that have now perhaps reached certain critical proportions.

## Global Economy and the Shifting Balance

14.11 A few traditional metrics like the shares of major economies in global GDP, manufacturing, and trade suggest that there has been a marked change in the configuration of the world economy, especially over the last decade.

**Table 14.2 : Share in world GDP**

| | Advanced economies | US | EU | Euro-zone | UK | Germany | Japan | B | R | I | C | S |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | (current prices) | | | | | | | |
| 1980 | 76.2 | 26.0 | 34.1 | na | 5.1 | 7.7 | 10.0 | 1.5 | na | 1.7 | 1.9 | 0.8 |
| 1990 | 79.7 | 26.1 | 31.7 | na | 4.6 | 7.0 | 13.8 | 2.3 | na | 1.5 | 1.8 | 0.5 |
| 2000 | 79.7 | 30.9 | 26.4 | 19.4 | 4.6 | 5.9 | 14.5 | 2.0 | 0.8 | 1.5 | 3.7 | 0.4 |
| 2005 | 76.1 | 27.7 | 30.2 | 22.3 | 5.0 | 6.1 | 10.0 | 2.0 | 1.7 | 1.8 | 5.0 | 0.5 |
| 2010 | 65.8 | 23.1 | 25.8 | 19.3 | 3.6 | 5.2 | 8.7 | 3.3 | 2.4 | 2.6 | 9.3 | 0.6 |
| | | | | | (PPP basis) | | | | | | | |
| 1980 | 69.0 | 24.6 | 31.4 | na | 4.3 | 6.7 | 8.6 | 3.9 | na | 2.5 | 2.2 | 1.0 |
| 1990 | 69.2 | 24.7 | 28.7 | na | 4.1 | 6.2 | 9.9 | 3.3 | na | 3.2 | 3.9 | 0.9 |
| 2000 | 62.8 | 23.5 | 25.0 | 18.3 | 3.6 | 5.1 | 7.6 | 2.9 | 2.7 | 3.7 | 7.1 | 0.7 |
| 2005 | 58.6 | 22.3 | 23.0 | 16.5 | 3.4 | 4.4 | 6.8 | 2.8 | 3.0 | 4.3 | 9.5 | 0.7 |
| 2010 | 52.1 | 19.5 | 20.4 | 14.6 | 2.9 | 4.0 | 5.8 | 2.9 | 3.0 | 5.5 | 13.6 | 0.7 |

***Source*** **: IMF, WEO database.**

**Note: PPP is purchasing power parity.**

14.12 Over the last 20 years sustained growth of a number of large emerging economies, especially the BRICS economies, has resulted in an increase in their share in the global GDP as seen from Table 14.2. As a consequence, the value addition in the world economy has been moving away from advanced countries towards what have been termed emerging economies. The decline in share is particularly marked in the case of the EU. The shift towards Asia has been significant and, within Asia, away from Japan to China and India. The fivefold increase in share of China in the global GDP has placed it as the second largest economy in the world. The increase in share of India, though less dramatic, is nevertheless of an order that places her as the fourth largest economy in PPP terms (Table 14.2).

14.13 The reduction in share of advanced economies, particularly from 2005, has been accentuated by the slowdown that followed the subprime crisis in the United States, the crisis in the eurozone in 2010, and the near stagnation in Japan for nearly two decades on the one side and the significantly higher rate of growth in low and middle income countries (particularly the large countries like India and China) on the other.

14.14 From the perspective of whether there has been a 'catch up' (or convergence) in per capita incomes across a larger set of countries, it is seen that the standard deviation of per capita income (at PPP constant 2005 dollars) of 131 countries from 1980 to 2009 continued to increase for most of the period since the mid-1980s (indicating divergence rather than convergence), except in the last two-three years (Figure 14.2). This indicates that despite a reduction in the share of advanced countries, the inequity between the developed and developing countries might have increased for most of the time period.

14.15 Whether the recent reduction in standard deviation is associated with the 'catching up' process of countries (including low income countries), or a slowing down of developed countries following the financial and economic crisis, and whether this is likely to be a temporary phase are issues that need further investigation.

14.16 The foregoing dimension of inequality does not capture interpersonal inequality. According to a study based on consumption data undertaken by Branco Milanovic of the World Bank, global inequality has been quite high, with the bottom 50 per cent of the people accounting for only 6.6 per cent of world income / consumption on PPP basis in 2005 while the top 1 per cent accounted for 13.4 per cent and top 10 per cent for as much as 55 per cent.

14.17 As far as India is concerned, it has achieved faster growth from the 1980s. Not only was this growth higher compared to its own past, it was also much faster than that achieved by a large number of countries.

14.18 Between 1980 and 2010, India achieved a growth of 6.2 per cent, while the world as a whole registered a growth rate of 3.3 per cent. As a result, India's share in global GDP, (measured in terms of constant 2005 PPP international dollars) more than doubled from 2.5 per cent in 1980 to 5.5 per cent in 2010 (Figure 14.3). Consequently, India's rank in per capita GDP showed an improvement from 117 in 1990 to 101 in 2000 and further to 94 in 2009, out

**Figure 14.2 Standard deviation of global per capita income (Based on 2005 PPP US$)**

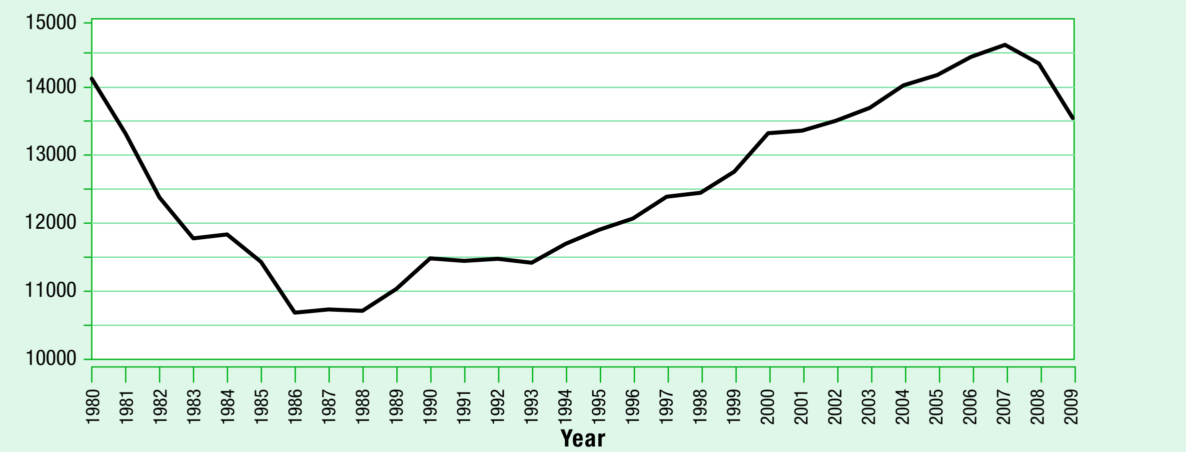
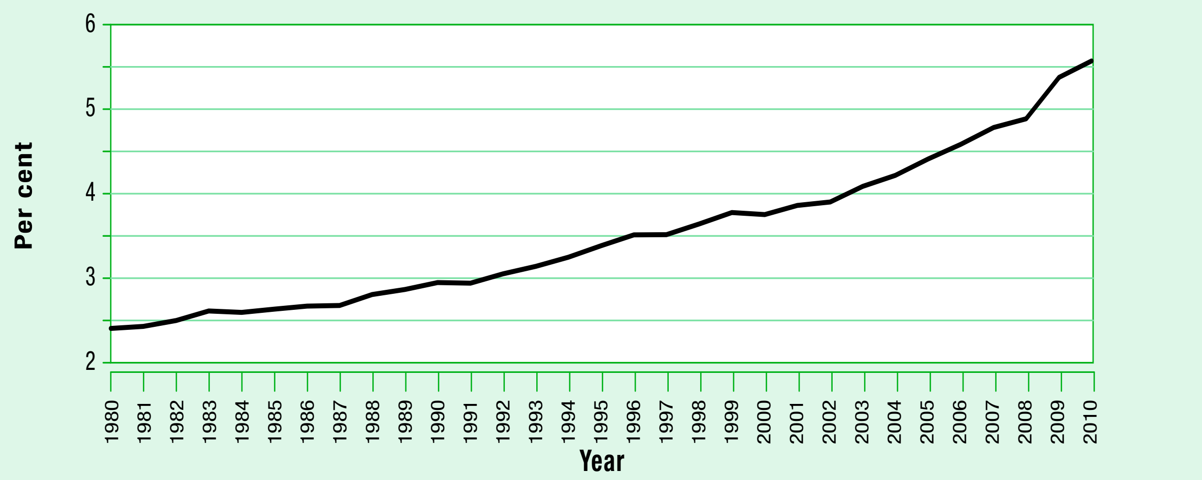


Figure 14.3 India's share in global GDP (Constant 2005 PPP international Dollar)




of 131 countries for which comparable data are available for all points in time. China improved her rank from 127 to 74 during the same period.

14.19 Underlying the relative decrease in share of advanced economies in the global GDP, there has been a marked shift in the location of manufacturing. This process was on in the 1990s too but got accelerated in the current decade. Again, the rise in share of China is particularly significant while other emerging economies, namely Brazil, India, Indonesia have also moved up in terms of their share in world manufacturing value added (Table 14.3).

**Table 14.3 : Manufacturing Value added : as percentage of World MVA (Top 15 in 2009)**

| | Country | 2000 | 2009 |
|---|---|---|---|
| 1 | United States | 25.6 | 18.7 |
| 2 | China | 6.7 | 18.1 |
| 3 | Japan | 18.0 | 10.1 |
| 4 | Germany | 6.8 | 6.4 |
| 5 | Italy | 3.6 | 3.5 |
| 6 | France | 3.3 | 2.8 |
| 7 | UK | 4.0 | 2.4 |
| 8 | Russian Fed. | na | 1.7 |
| 9 | Brazil | 1.7 | 2.4 |
| 10 | Korea, Rep. | 2.3 | 2.3 |
| 11 | Spain | 1.7 | 1.9 |
| 12 | Mexico | 1.9 | 1.6 |
| 13 | Canada (for 2007) | 2.3 | 2.0* |
| 14 | India | 1.1 | 2.1 |
| 15 | Indonesia | 0.8 | 1.6 |

***Source* : World Bank database.**

***Notes* : MVA is manufacturing value added in terms of current US dollar**

14.20 Even with the change in distribution of global GDP and manufacturing across countries, it needs to be noted that the advanced countries still account for a large share of industrial output apart from being the repositories of technology and value added in services.

**14.21 Global Trade (Exports):** The changes in distribution of manufacturing value added, to some extent, get reflected in the relative shares in world merchandise trade (which also includes non-manufactured products). Again, there is a perceptible decline in the share of developed countries and rise in the importance of emerging economies, most significantly China. The share of India in global merchandise exports increased from about 0.5 per cent in 1990 to 1.5 per cent in 2010. Yet India's share remains miniscule and it ranks 19th in the global order of exporting countries (Table 14. 4).

14.22 Even in service exports, the high income countries have witnessed a declining share but they continue to account for an overwhelming 79 per cent of global service exports. While India, by virtue of its information technology (IT) industry, has seen its share of service exports rise to 3.3 per cent, China has moved in from behind and now accounts for 4.5 per cent (Table 14.5).

14.23 Financial services play a major role in some of the developed economies and, of the top 10 financial centres, most are located in advanced markets. This is reflected in exports as well as

**Table 14.4 : Share in World Merchandise Exports (%)**

| Share in global exports | Developed economies | US | EU | UK | Euro zone | Germany | Japan | B | R | I | C | S |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **1980** | 66.3 | 11.1 | 41.5 | 5.4 | 30.8 | _ | 6.4 | 1.0 | _ | 0.4 | 0.9 | 1.3 |
| **1990** | 72.4 | 11.3 | 44.5 | 5.3 | 35.2 | 11.8 | 8.3 | 0.9 | _ | 0.5 | 1.8 | 0.7 |
| **2000** | 65.7 | 12.1 | 38.0 | 4.4 | 29.7 | 8.5 | 7.4 | 0.9 | 1.6 | 0.7 | 3.9 | 0.5 |
| **2005** | 60.4 | 8.6 | 38.7 | 3.7 | 30.3 | 9.2 | 5.7 | 1.1 | 2.3 | 0.9 | 7.3 | 0.5 |
| **2010** | 54.2 | 8.4 | 33.9 | 2.7 | 26.4 | 8.4 | 5.1 | 1.3 | 2.6 | 1.5 | 10.4 | 0.6 |

***Source*** **: United Nations Conference on Trade and Development (UNCTAD).**

**Table 14.5 : Share in World Service Exports (%)**

| Country | High income | US | EU | UK | Euro area | Germany | Japan | B | R | I | C | S |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1980 | 86.9 | 11.7 | 56.0 | 9.0 | 41.6 | 8.1 | 5.0 | 0.4 | na | 0.7 | 0.0 | 0.6 |
| 1990 | 87.8 | 17.0 | 50.7 | 6.6 | 39.7 | 7.3 | 4.8 | 0.4 | na | 0.5 | 0.7 | 0.4 |
| 2000 | 84.8 | 18.4 | 44.1 | 7.8 | 31.0 | 5.4 | 4.5 | 0.6 | 0.2 | 1.1 | 2.0 | 0.3 |
| 2010 | 78.8 | 14.3 | 42.9 | 6.3 | 30.5 | 6.3 | 3.7 | 0.8 | 0.6 | 3.3 | 4.5 | 0.4 |

***Source*** **: Computed from World Bank database.**

imports and India figures in the top ten both as an exporter of financial services with a share of 2.4 per cent and an importer with a share of 6.7 per cent (see Table 14.6). In general, the foregoing distribution of economic activities and trade has a bearing on where nations stand in terms of their position on various issues that get discussed in major economies global forums.

**Table 14.6 : Top 10 Exporters and Importers of Financial Services in 2010 and their Shares**

| Exporters | | Importers | |
|---|---|---|---|
| EU (27) | 53.0 | EU(27) | 60.0 |
| US | 23.6 | US | 15.6 |
| Switzerland | 6.4 | India | 6.7 |
| Hong Kong | 5.1 | Canada | 3.6 |
| Singapore | 4.9 | Hong Kong | 3.5 |
| Japan | 1.5 | Japan | 3.1 |
| India | 2.4 | Singapore | 2.3 |
| Canada | 1.3 | Switzerland | 1.7 |
| Korea | 1.2 | Brazil | 1.7 |
| Norway | 0.6 | Russia | 1.7 |
| Top 10 | 100.0 | Top 10 | 100.0 |

***Source*** **: World Trade Organization (WTO).**

**14.24 Demographics** play a critical role in shaping the size of the labour force and economic productivity and demographic structure has a bearing on economic growth. As compared to the 1980s, it is clear that a number of advanced countries have ageing populations. At the same time, their share in the global GDP is reducing in relative terms (Table 14.7).

14.25 Another dimension that is going to be crucial in the context of demography is international migration. As per the UN Population Division, of the 6.9 billion global population in 2010, 214 million or 3.1 per cent were international migrants. What is not so well known is the fact that South-South migration is also becoming important.

14.26 Without international migration, the working-age population (persons in age group 20-64 years as per UN classification) in the developed countries would decline by 77 million or about 11 per cent of the population in that age group. This could increase the dependence of the developed countries on international migrants or on outsourcing of work. At this juncture, there is an underlying resistance on both counts in advanced economies that may well make the revival of growth more challenging. With regard to economies like India, the availability of a larger proportion of working-age population is likely

**Table 14.7 : Share of World Population**

| | OECD | US | Europe | UK | Germany | Japan | B | R | I | C | S |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1980 | 22.2 | 5.1 | 10.4 | 1.3 | 1.8 | 2.6 | 2.7 | 3.1 | 15.5 | 22.1 | 0.6 |
| 1990 | 20.2 | 4.7 | 9.0 | 1.1 | 1.5 | 2.3 | 2.8 | 2.8 | 16.1 | 21.5 | 0.7 |
| 2000 | 19.0 | 4.6 | 8.0 | 1.0 | 1.4 | 2.1 | 2.9 | 2.4 | 16.7 | 20.8 | 0.7 |
| 2005 | 18.5 | 4.6 | 7.6 | 0.9 | 1.3 | 2.0 | 2.9 | 2.2 | 16.9 | 20.2 | 0.7 |
| 2010 | 18.1 | 4.5 | 7.3 | 0.9 | 1.2 | 1.9 | 2.8 | 2.1 | 17.1 | 19.6 | 0.7 |
| | **Total dependency ratio (ratio of population aged 0-14 and 65+ per 100 population 15-64)** | | | | | | | | | | |
| | WORLD | US | Europe | UK | Germany | Japan | B | R | I | C | S |
| 1980 | 70.3 | 51.2 | 52.8 | 56.1 | 51.7 | 48.4 | 72.4 | 46.8 | 75.9 | 68.5 | 80.7 |
| 1990 | 63.8 | 52.0 | 49.7 | 53.2 | 44.7 | 43.4 | 65.6 | 49.6 | 71.7 | 51.4 | 72.8 |
| 2000 | 59.0 | 51.0 | 47.8 | 53.4 | 47.0 | 46.6 | 54.0 | 44.1 | 63.8 | 48.1 | 59.6 |
| 2005 | 55.0 | 48.9 | 46.6 | 51.3 | 49.9 | 50.7 | 51.0 | 40.5 | 59.1 | 41.7 | 55.8 |
| 2010 | 52.4 | 49.6 | 46.2 | 51.4 | 51.2 | 56.4 | 48.0 | 38.6 | 55.1 | 38.2 | 53.3 |
| | **Old-age dependency ratio (ratio of population aged 65+ per 100 population 15-64)** | | | | | | | | | | |
| | WORLD | US | Europe | UK | Germany | Japan | B | R | I | C | S |
| 1980 | 10.1 | 17.1 | 18.9 | 23.3 | 23.7 | 13.4 | 6.9 | 15.0 | 6.3 | 8.7 | 5.6 |
| 1990 | 10.2 | 19.0 | 19.1 | 24.1 | 21.5 | 17.1 | 7.4 | 15.3 | 6.5 | 9.0 | 5.5 |
| 2000 | 10.9 | 18.7 | 21.8 | 24.3 | 24.0 | 25.2 | 8.5 | 17.9 | 6.9 | 10.4 | 5.9 |
| 2005 | 11.3 | 18.4 | 23.3 | 24.2 | 28.6 | 29.9 | 9.5 | 19.3 | 7.3 | 10.7 | 6.4 |
| 2010 | 11.6 | 19.5 | 23.7 | 25.1 | 30.8 | 35.5 | 10.4 | 17.7 | 7.6 | 11.3 | 7.1 |

***Source*** **: United Nations Population Division, World Population Prospects 2010.**

to play a central role in driving economic growth. As the dependency falls, opportunities for economic growth tend to rise, creating what is termed as a 'demographic dividend'.

**14.27 Public Debt and Deficits:** While demographic changes are incremental, the cumulative change in demographic structure has started to impinge on the fiscal capacity of many developed economies, particularly in Europe. With an increase in share of retirees, existing social compacts in many developed countries have come under strain as their capacity to service public debt has diminished and private debt has also risen. The recourse to automatic stabilizers during the financial crisis has stretched their fiscal capacity as public debt in relation to GDP has reached close to or exceeded the benchmark of 100 per cent of GDP and, in case of Japan, touched a whopping 220 per cent of GDP. An interesting point to note is that as compared to most of the major economies, expenditure of the general government in India is much lower as is the case in respect of revenue (Table 14.8).

**Table 14.8 : General Government : Revenue, Expenditure, Balance, and Debt as Percentage of GDP - 2010**

| | AE | US | EU | EA | UK | Germany | Japan | B | R | I | C | S |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Revenue | 35.9 | 30.9 | 43.4 | 44.6 | 36.6 | 43.7 | 30.6 | 37.5 | 35.0 | 17.6 | 20.4 | 27.0 |
| Expenditure | 43.3 | 41.3 | 49.8 | 50.6 | 46.8 | 47.0 | 39.8 | 40.4 | 38.5 | 26.0 | 22.7 | 32.0 |
| Balance | -7.6 | -10.5 | -6.6 | -6.3 | -9.9 | -4.3 | -9.3 | -2.8 | -3.5 | -8.9 | -2.3 | -5.1 |
| Debt | 100.0 | 94.4 | 79.8 | 85.8 | 75.5 | 84.0 | 220.0 | 66.8 | 11.7 | 64.1 | 33.8 | 33.8 |

***Source*** **: IMF, WEO Database, September 2011/ Fiscal monitor update 12 January.**

***Note*** **: AE is advanced economies. EA is euro area.**

Figure 14.4 Current account balance (2010)


**14.28 Current Account Balances and Reserves:** In response to a series of financial crises, especially after the East Asian crisis of 1997, many emerging and developing economies adopted new strategies for managing their external economy. These involved greater reliance on exports (resulting in current account surpluses) and the accumulation of foreign exchange reserves, in part to check currency appreciation and also as self-insurance against capital flow reversals.

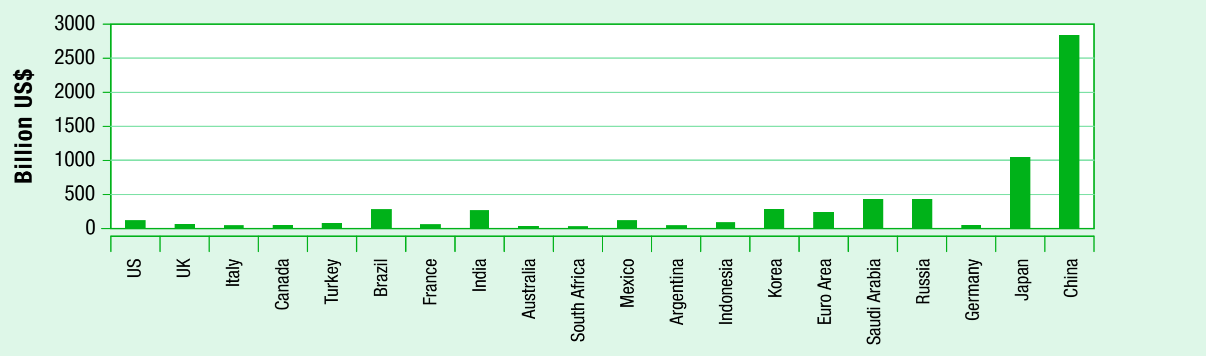
14.29 These strategies led to a shift from being net importers of financial capital to net exporters. As reserves got invested in developed economies, it led to a contradictory phenomenon of capital flowing from emerging countries to capital-rich countries (especially the US). In an accounting sense, this was equated to high saving rates in the emerging market economies (EMEs), especially China. The position of current account balances and reserves for the major G-20 economies is shown in Figures 14.4 and 14.5. India, in this regard, is somewhat of an outlier as even while holding substantial reserves, it has essentially had a structural current account deficit and is therefore not a contributor to global imbalances in the foregoing sense.

14.30 Regardless of the merits of holding reserves, it is by now agreed that the relatively stronger external financial position (reserves) of the EMEs made them less vulnerable to the capital reversals following the global financial crisis of 2008 and in that sense a vindication of the strategy of maintaining high reserves.

14.31 While holding reserves has been acknowledged to be useful in dealing with the crisis, it has also been argued that excessive reserves involve (quasi-fiscal) costs apart from yielding low returns as countries invest abroad rather than in high-return domestic investments. Furthermore, large fluctuations in the exchange rate could result in significant losses to the value of reserves. For example, if the US dollar weakens, it could result in a loss in value of reserves denominated in dollars.

14.32 Apart from the holding costs to the economy, high build-up of current account surpluses

Figure 14.5 Foreign Exchange Reserves (2010)



and reserves has been seen as a major indicator of global imbalances and potential source of instability in the international monetary system. In the global context, it has been argued that reserve accumulation was an outcome of resisting currency appreciation and an attempt to stimulate export-oriented production at the expense of domestic demand. The reserve accumulation by key emerging current account surplus economies, mostly held as dollar assets, supported a strong US dollar in spite of a growing current account deficit in the US. By thwarting exchange rate adjustment, this practice has been contributing to global economic imbalances.

14.33 On the other hand, it has also been argued that the build-up of reserves is a consequence of loose monetary policies followed by reserve currency-issuing countries. Be that as it may, the fact remains that the issue of exchange rate management, build-up of current account surpluses and of reserves cannot be viewed in isolation and these issues are embedded in a wider ongoing debate on the deficiencies of the international monetary and financial system. For the present, the asymmetry in the balances in terms of current account surplus and reserves is there for the global economy to contend with.

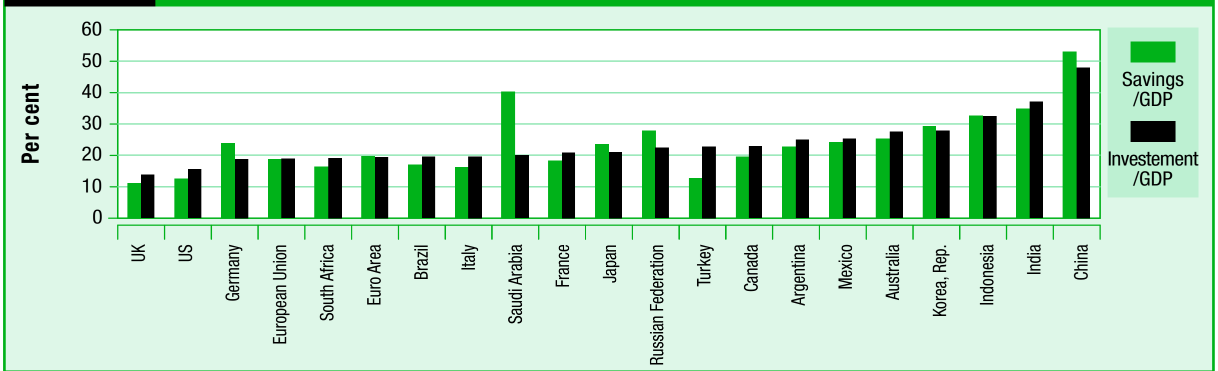
**14.34 Savings and Investment:** One of the features of the 'new normal' in the world economy is the way savings as well as investment rates are distributed between the advanced and emerging economies. As seen in Figure14.6, most advanced economies (which appear to the left of the graph) have gross saving rates below 20 per cent while the opposite is true of the EMEs. Investment trends drive growth and the divergence seen in savings is almost symmetrically reflected for the investment rates. India's investment rates, for example, have risen some 12 percentage points of GDP from the mid-1990s to around 35.1 per cent in 2010-11.

**14.35 Implications of the Global Shift:** The changes in composition of the global economy discussed thus far suggest a perceptible shift in the global balance of output of goods (especially manufacturing). While services (in particular financial services) continue to be largely concentrated in advanced economies, a larger share in world population, coupled with higher growth, implies that the EMEs and developing countries will increasingly account for incremental growth in the global market for goods, services, and commodities. A change in the global economic balance driven by supply and demand forces therefore appears to be the 'new normal' and is likely to accentuate in the years to come (see Box 14.2).

14.36 At this juncture, many of the advanced economies are geared to very high levels of private consumption and government expenditure in relation to their GDP. A prolonged slowdown could place further pressure on their budgetary balances and household savings (that are already low) and adversely impact investment and their potential growth. Thus the possibility of low growth setting off a vicious cycle of higher debt and low growth cannot be ruled out.

14.37 Therefore, even when the emerging economies (including India) witnessed a slowdown in growth in 2011 due to the renewed bouts of uncertainty in the global economy, there are reasons to suggest that the growth prospects of most of these economies remain robust in the medium to long run. This is due to various factors that drive growth such as demographics and size of the domestic market, apart from more conventional economic drivers such as high rates of investment and savings.

**Figure 14.6 Saving and investment rates – 2011**



## Box 14.2 : Tectonic Shifts

When small economic crises crop up repeatedly over a relatively short period of time, policymakers in each country may treat each such episode as an independent event requiring independent action but, in reality, such 'cluster crises' may be a sign of some fundamental shift taking place in the global economy. Hence, faced with cluster crises, it is important to occasionally step back and take a more holistic view of the situation. There has been some research trying to do precisely that.

At one level, it is not difficult to see what is happening. With rapid globalization since the end of World War II, goods and services and also capital have begun moving much more freely across nations. In addition, and maybe even more importantly, the advance of IT has meant that it is possible for people with a modicum of skills to sit in one country and do work for another country. In brief, one of the most precious resources for economic progress, namely skilled labour, which earlier sat walled in within the boundaries of their respective nations, has suddenly become available to needs arising in distant parts of the world.

What this has meant is that all emerging economies with a little ability to organize their workspace and impart skills to their workers are now capable of taking advantage of this windfall. As a consequence, the bottom end of the skilled-labour spectrum in the US and Europe is now coming under competition from the top end of the skilled labour band of India, China, the Philippines, Indonesia, and several other emerging economies. This has energized large corporations in rich and poor countries and caused booms in various regions, like Silicon Valley in the United States. But this is also causing inequality to rise in both industrialized nations and emerging economies.

In a recent paper, Spence [1] highlights how this process is one of the causes of growth and employment trends, within the US economy, diverging and inequality rising. And 'the major emerging economies are becoming more competitive in areas in which the U.S. economy has historically been dominant, such as the design and manufacture of semi-conductors, pharmaceuticals, and information technology services'. ([1], p. 29). By the same argument, the skilled end of the labour markets in India and China is competing with its counterparts in industrialized nations and, as a consequence, its salaries are rising, resulting in growing inequality in these countries.

There are other domains where these kinds of inter-country tensions have been building up. Disparities in savings rates across nations have often led to acrimonious debate and search for first cause. It has been suggested (see for instance [2]) that China's huge savings rate may not be entirely because of domestic structural factors in China but a response to the fact that the savings rate in the U S dropped sharply between 1960 and 2010.

These adjustments give rise to economic turmoil and crisis and, in addition, are politically sensitive matters that can lead to protectionism, which can do more harm than good. It is important for us to recognize that none of these structural shifts are caused by the actions of any one individual or nation. Millions of little actions and thousands of scientific discoveries over decades and human inventiveness in general have given rise to globalization and we have inherited the world we have. It is for us to take the givens as given and use collective bodies such as the G-20 to ensure that we do not fall victim to protectionism. It is important to remember that through all this turmoil the global pie is expanding. Hence, by having effective coordinated action, it is possible to convert what appears at first as adversity into advantage.

***Source*** : [1] Spence, A. M. (2011), 'The Impact of Globalization on Income and Employment: The Downside of Integrating Markets', *Foreign Affairs*, vol. 90. [2] Zagha, R., 'Global Imbalance: Policies, Structure and Finance', in S. Kochhar (ed.) *Policymaking for Indian Planning*, New Delhi, Academic Foundation.

14.38 In 2011, out of 184 countries listed in the IMF's WEO, there were only 26 with a population of at least 10 million and growth rate of over 6 per cent. Most, if not all, are the so called emerging markets. Quite understandably, the dim view about the growth prospects of advanced economies has put the spotlight on emerging and developing economies as the new growth drivers of the global economy.

14.39 The underlying shift in global economic setting raises the question as to whether future changes in the world economy would unravel in a smooth manner, or be disruptive. Needless to say India, even while carefully responding to the immediate economic challenges emanating from domestic and global sources, will also have to craft and calibrate its policies keeping both outcomes in view.

14.40 As for the present, the global situation is marked by volatility in world financial markets, uncertain growth in the advanced economies, and possible disruptions in supplies of energy apart from other geopolitical tensions. There is contradiction between the short-term need for growth and maintaining demand and the need for fiscal consolidation that marks the current policy environment. But even as the world economy, three years after the global financial crisis of 2008, continues to move from one uncertainty to another, there have been continuing efforts in multilateral fora such as the G-20 to bring about greater understanding and coordination in dealing with global imbalances and addressing the weaknesses that might have led to the global crisis, to arrive at measures to revive global growth. Before turning to this it is however, worth while locating India in the global economy.

## Locating India in the New Global Economy

14.41 India has over the years become a more open economy. The total share of imports and exports accounts for close to 50 per cent of GDP while that of capital inflows and outflows measures up to 54 per cent of GDP. Yet economic outcomes and their impact on growth and development arising from the interaction between the domestic and external economies are contingent on a large number of factors. Though economic outcomes are to some extent contingent on choosing policies appropriate to the conditions characterizing an economy, the relative position of an economy vis-à-vis other countries in a global setting could facilitate (or even constrain) policy choices. This section flags a few features that characterize India that may be relevant in its further engagement with the global economy as also for its future development.

**14.42 India has moved up the Ranks but is still the poorest among the G-20:** India has emerged as the fourth largest economy globally with a high growth rate and has also improved its global ranking in terms of per capita income (as mentioned earlier). Yet the fact remains that its per capita income continues to be quite low (at current US $ 1527 in 2011). Addressing this is perhaps the most visible challenge. Nevertheless, India has a diverse set of factors, domestic as well as external, that could drive growth well into the future.

**14.43 Demographics:** With over 1.2 billion people, India accounts for nearly one-sixth of global population. While the rate of growth of population has consistently declined, India's population increased by nearly 180 million persons during 2001-11 (the highest in the world in absolute terms). However, India is also passing through a phase when its dependency ratio will decline from an estimated 74.8 in 2001 to 55.6 in 2026 with a corresponding increase in the share of persons in working-age group. With labour being a key factor of production, a demographic dividend is a clear positive for growth. It has, however, been pointed out that much of the growth in population will occur in states that are currently poor. Therefore, for this dividend to accrue, it will be necessary to build human capital in adequate measure.

14.44 On this count, India has shown some improvement in terms of its human development index (HDI). The UNDP's HDI, which captures the progress of a country in terms of economic indicators as well as education and health indicators increased from 0.344 in 1980 to 0.547 in 2011. India moved up from a rank of 82 in 1980 to 72 in 2011 (in a group of 100 countries for which HDI is available for these points of time. Even though India's score has improved, her HDI rank has not moved very significantly. A possible reason could be that some other countries may have registered faster improvement in these indices. India therefore needs to benchmark her achievements (on various fronts) not only in absolute terms but also in relation to other countries.

**14.45 Exports and External Demand:** The process of globalization has been marked by a rising share of exports (as also imports) that reached 27.9 per cent for the world as a whole in 2010, with some countries showing much higher dependence of exports. A stylized fact of the so called East Asian miracle economies was that an export-led, investment-fuelled strategy propelled growth and helped them acquire manufacturing capabilities. This strategy was supported by a favourable exchange rate, cheap credit, and relatively low wages which helped to gain competitive advantage. Global demand for goods, particularly in the advanced markets, lent support to this growth strategy. As a result, these economies moved up the value chain in manufacturing (Table 14.9).

**Table 14.9 : Exports of Goods and Services (% of GDP)**

| Year | World | High income | USA | UK | EU | EA | Germany | Japan | B | R | I | C | S |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1980 | 19.1 | 19.9 | 10.1 | 27.1 | 25.5 | 24.7 | 20.2 | 13.5 | 9.1 | na | 6.2 | 10.6 | 35.4 |
| 1990 | 19.2 | 19.3 | 9.6 | 24.0 | 27.0 | 27.1 | 24.8 | 10.4 | 8.2 | 18.2 | 7.1 | 16.1 | 24.2 |
| 2000 | 24.7 | 24.3 | 11.0 | 27.6 | 35.8 | 36.7 | 33.4 | 11.0 | 10.0 | 44.1 | 13.2 | 23.3 | 27.9 |
| 2005 | 26.7 | 25.6 | 10.4 | 26.4 | 36.9 | 38.0 | 41.3 | 14.3 | 15.1 | 35.2 | 19.3 | 37.1 | 27.4 |
| 2010 | 27.9 | 27.8 | 12.6 | 29.4 | 39.7 | 40.6 | 46.8 | 15.2 | 11.2 | 30.0 | 21.5 | 29.6 | 25.5 |

***Source*** **: World Bank Database.**

14.46 This leads to the question of how far export can be a driver of growth for India at this point in time. With a slowdown in advanced economies, the prospect of their growth fuelling demand for imports (i.e. exports from other countries), seems somewhat bleak at this juncture. Second, the large build-up of capacity in some countries (including China) suggests that they *might* act as barriers to new entrants for some time. Third, the costs of energy are rising and there are growing concerns about climate change.

14.47 In this regard, India's export (of goods and services) to GDP ratio increased from 6.2 per cent in 1990 to 21.5 per cent in 2010. Yet India accounts for only 1.5 per cent of world exports. India's exports are also evenly balanced between merchandise and services. Moreover, the change in direction of exports suggests that India has been diversifying the destination of its exports away from traditional markets (Figure 14.7).

14.48 There is therefore some scope for exports to grow, particularly to the fast growing economies, many of which are in Asia and Africa and to some extent Latin America, while some of the mature markets may remain important, albeit with declining shares on the whole for the group. Moreover, the main advantage of a presence in the global market is of being able to benchmark to global standards and therefore worth pursuing in its own right. Additionally, the advantage of having the twin engines of domestic and export demand is that it lends the economy greater resilience to fluctuations in global demand.

14.49 **Investing in Research and Development (R&D) and Innovation:** The World Bank Study titled 'Unleashing India's Innovation' (2007) observed that India had increasingly become a top global innovator in high–tech products and services. Yet the country is underperforming in terms of its innovation potential. India spends less than 0.9 per cent of its GDP in the area of R&D, which covers basic research, applied research, and experimental development. This fact emerges from the OECD Fact Book 2010 that lists 41 countries with Israel

**Figure 14.7 Direction of exports from India – Percentage shares**

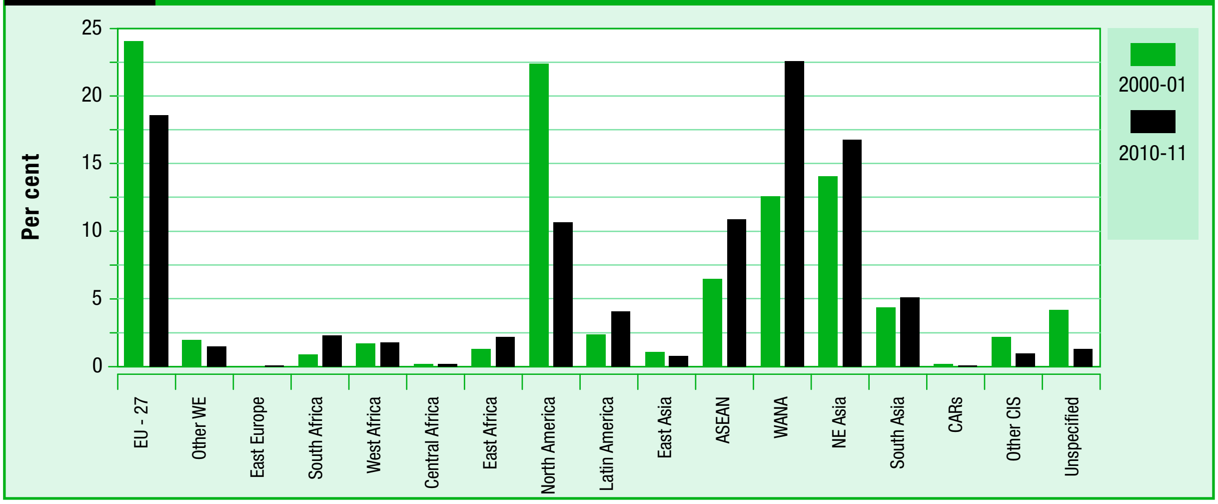
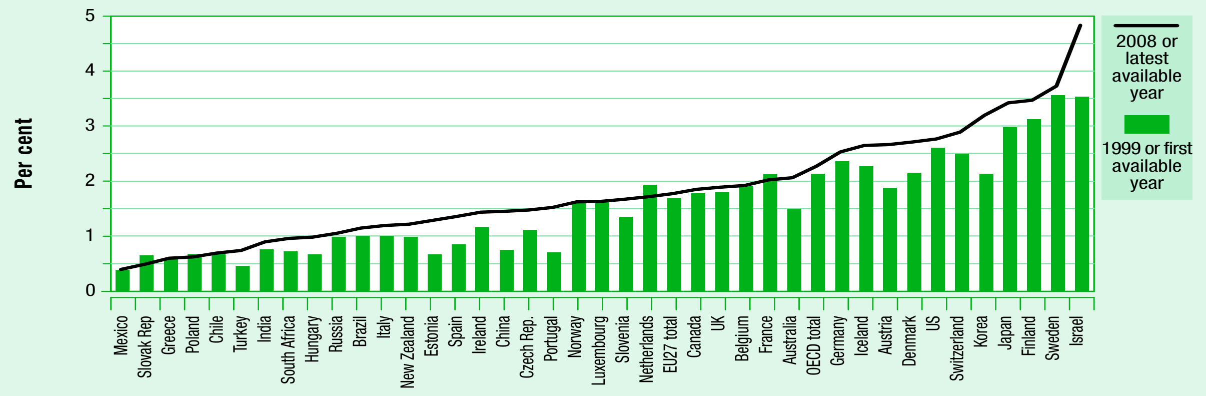


**Figure 14.8 Gross Domestic Expenditure on R&D as per cent of GDP**




topping the list on this count and most developed countries spending over 2 per cent of their GDP on R&D. While more resources into R&D would be needed, equally critical would be to harness existing institutions and organizations set up for formal R&D and also to encourage grass-roots level innovation (Figure 14.8).

14.50 Given the increasing acceptance of the fact that land, water, and energy are likely to be in short supply and environment a major concern, India is well placed to advance through the route of frugal innovation and devising of specific applications suited to the bottom of the pyramid that would not only open new market segments within India but also in other countries in the developing world. That apart, with regard to frontier areas, India is well placed to take advantage of its vast diaspora to jump-start its R&D efforts. Strategically positioning India as a hub for FDI in R&D may well be a way for it to leapfrog into the next generation of technologies and products.

14.51 **Energy Security and Growth:** India is characterized by a relatively lower energy intensity of GDP as compared to China, South Africa, and Russia but higher than that of Brazil. Advanced countries, in particular EU countries and Japan, have been witnessing a decline in the energy intensity of GDP due, apart from technological improvements, to various factors, the main one being a shift in the structure of their economies towards services (Table 14.10).

14.52 As regards dependence on imported energy sources, at an overall level, India' energy dependence appears modest at 25.7 per cent in terms of total energy usage. (Table 14.11) However, this masks the fact the around 80 per cent of the crude oil consumed is imported, whereas the bulk of coal is domestically produced. Even with respect to coal, the country is importing on the margin to meet domestic demand. On the other side, there is a large fraction of population that has little or no access to commercial sources of energy and depends on traditional sources.

**Table 14.10 GDP per unit of energy use**

| Country name | 1980 | 1990 | 2000 | 2009 |
|---|---|---|---|---|
| China | 0.9 | 1.4 | 3.1 | 3.7 |
| EU | 5.4 | 5.9 | 7.1 | 8.2 |
| India | 3.0 | 3.3 | 3.9 | 5.1 |
| Russian Federation | na | 2.1 | 2.0 | 3.0 |
| Brazil | 8.1 | 7.7 | 7.3 | 7.6 |
| United States | 2.8 | 4.2 | 4.9 | 5.9 |
| United Kingdom | 5.2 | 6.6 | 7.8 | 10.1 |
| South Africa | 3.7 | 3.0 | 2.9 | 3.2 |
| Japan | 6.4 | 7.3 | 7.0 | 7.9 |

***Note*** **: * Constant 2005 PPP dollars.** ***Source*****: World Bank database.**

**Table 14.11 : Energy Imports, Net (% of energy use)**

| Country name | 1980 | 1990 | 2000 | 2009 |
|---|---|---|---|---|
| United States | 13.9 | 13.7 | 26.7 | 22.0 |
| EU | 44.9 | 42.2 | 43.9 | 50.6 |
| United Kingdom | 0.3 | -1.0 | -22.2 | 19.2 |
| Germany | 48.0 | 47.0 | 59.9 | 60.1 |
| Japan | 87.4 | 82.9 | 79.6 | 80.1 |
| Brazil | 43.5 | 25.7 | 21.6 | 4.1 |
| Russia | | -47.1 | -57.9 | -82.6 |
| India | 8.9 | 7.9 | 19.9 | 25.7 |
| China | -2.8 | -2.7 | 2.8 | 7.6 |
| South Africa | -12.0 | -22.0 | -27.3 | -11.5 |

***Source*** **: World Bank database.**

14.53 A rise in the price of oil in international markets has mostly been a source of vulnerability for the macroeconomy of India on account of its impact on the current account deficit. High international prices of fossil fuels also result in a higher import bill, which either gets passed on to the consumers or results in higher subsidy thereby affecting fiscal health. That apart, the growing tensions in many oil- producing economies are a source of vulnerability for the energy security of India. In this one area, the strategic advantage for India would lie in diversifying its energy sources.

14.54 **Food Security:** Food security in the Indian context would imply meeting minimum energy and protein norms along with requisite micro-nutrients for all at affordable prices. With the increase in income, the demand for food in India is bound to further rise. It has also been observed that even marginal shortages in specific food items in India tend to have a disproportionately large impact on the relevant prices even in the international market. Even though India, for most food products, is not an importer in most years, dependence on global markets could imply greater vulnerability both in terms of prices and availability. The link between financialization of commodities and its impact on commodity prices and their volatility has been an issue of international concern, even though there has been no clear consensus on the cause-effect relationship.

14.55 **Resources for Development and the Availability of Capital:** A case is often made for the virtues of a minimalist state and the need to disengage from a number of activities. The actual facts speak otherwise. India's general government expenditure in relation to GDP is actually lower even in comparison to many market economies by a factor of at least half. More importantly, the ratio of general government revenues to GDP at 17.6 per cent (refer to Table 14.8 ) is one of the lowest in emerging economies and certainly very low vis-à-vis the advanced economies. Therefore, even if fiscal consolidation is needed, the priority has to be on raising resources. Recent developments in the developed economies reveal how important it is to maintain the revenue base and keep government finances in shape. As India becomes more exposed to the external economy, its fiscal strength based on a large revenue base would become even more critical.

14.56 **FDI—Playing Strategically:** Many of the advanced economies, with deep technological strengths, are now aging societies and need to invest overseas and rely on factor incomes. At the stage at which India is placed, the need for sustained investment has already been stressed elsewhere in the survey. There is an inherent complementary relationship between India's requirement for more 'real' investment and the need for some of the advanced economies, including some of the Asian industrialized economies, to invest in production facilities in friendly countries overseas in order to diversify their supply chains.

14.57 **Remittances** are an important source of financial flows and, as per World Bank estimates, remittance flows into developing countries in 2011 were to the tune of US $ 351 billion. Remittance flows into India are estimated to be of the order of US $ 58 billion. In 2010, remittances into the country accounted for 3 per cent of GDP. One of the reasons for such high inflows could be higher oil prices that helped the Gulf countries and other oil exporters, where a large number of Indian workers are employed. The depreciation of the Indian rupee in the latter half of 2011 might also have helped.

14.58 **An Economy in a Democratic Framework:** The global economic crisis opened afresh the debate on the relative role of the market and the state as also the relative advantages of democratic vis-à-vis state-led economies. The challenge of managing a mixed economy within a democratic and federal system is a complex task. However, the challenge of transiting from a state-led monolith to a more representative system may be even more daunting. In either case, for a system to thrive, economic outcomes need to be tangible. The critical question is therefore not of state versus markets but, rather, of how to maximize market outcomes (minimize market failures) and have effective governance (i.e. minimize government failure) with a democratic system as the political basis for governance.

14.59 As already discussed, India enjoys at this juncture the unique advantage of having *multiple drivers of growth—demographic, investment (backed by domestic savings), domestic consumption, as well as exports and ample scope for FDI – all within a pluralistic and democratic system*. This unique combination more or less assures it of strong and sustained growth with the caveat that at every stage and for every section of society, positive economic outcomes in a tangible way will be required.

## Reviving the Global Economy

14.60 The explanations for the global financial crisis (that reached a flash point in October 2008 with the collapse of Lehman Brothers) have been all encompassing. At macro level, they have held the loose monetary policies adopted by reserve currency-issuing advanced economies (particularly the US) in the run up to the crisis responsible on the one side and the mercantilist policies adopted by export-led economies leading to accumulation of large current account surpluses and reserves on the other. These policies were facilitated by weaknesses in the international monetary system (IMS), particularly the absence of alternative reserve assets to the dollar. Weak regulation of financial markets and intermediaries and excessive financial innovation and risk taking by finance and banking intermediaries at micro level have also figured as proximate causes of the crisis.

14.61 The debates and discussions in the G 20 (and other fora involving international organizations and financial institutions) have therefore been on wide-ranging issues. The question of how policies for reviving growth of individual countries impinge on the global economy and its imbalances and whether they could somehow be better coordinated has been at the centre of these discussions. These discussions are of some importance as they may, in the years to come, shape the style and substance of governance of the global economy. It is critical that the outcomes, if any, address the concerns of emerging economies (such as India) that are major drivers of global economic growth.

14.62 The following section therefore examines only a few selected issues that have been the subject of international deliberations (mainly in the G 20) and how they are relevant to India. However, this would not necessarily present a formal view of the proceedings or the official stand of India on specific issues, many of which are still evolving.

14.63 **The G-20 in 2011:** The G-20, formed in 1999 in the aftermath of the East Asian Crisis as a forum for Finance Ministers and central bank Governors, came to centrestage following the Leaders' Summit in Washington DC in November 2008. It focused on coordinated measures to address the challenges faced in the immediate aftermath of the global financial crisis. A declaration in the G-20 Summit at Pittsburgh, USA, in 2009 formally raised the forum to the level of leaders and transformed it into the premier forum for international economic cooperation.

14.64 The agenda for the latest (sixth) summit held at Cannes, France, on 3-4 November 2011 followed the priorities laid out by the French Presidency. This agenda got deliberated in 2011 in two channels. The first was the finance channel, which largely focused on the framework for strong, sustainable and balanced growth, reform of the International Monetary System (IMS), strengthening financial regulation, and other issues relating to commodity price volatility. The second set of issues in the Sherpa's channel focused on development-related issues.

14.65 **The Framework Exercise:** During the global financial crisis, collective and coordinated policy action by the G-20 through macroeconomic stimulus (fiscal and monetary) and financial-sector intervention helped avoid a catastrophic meltdown. Building on this, G-20 Leaders launched the 'Framework for Strong, Sustainable, and Balanced Growth' with India and Canada as the co-chairs of the Working Group in 2009. In this signature effort of the G-20, the Mutual Assessment Process (MAP) forms a medium-term exercise to ensure that collective policy actions benefit all and policies are collectively consistent with the G-20's growth objectives.

14.66 At the 2010 summit in Seoul, the G-20 committed to working to address key imbalances that could jeopardize growth and to enhance the MAP with indicative guidelines for key imbalances. In February 2011, the G-20 agreed to include i) public debt and fiscal deficits, ii) private saving and private debt, and iii) the external position—trade balance and net investment income flows and transfers—as the key indicators for assessing external and internal imbalances. Subsequently, it was agreed that the indicative guidelines would be used to identify systemically important countries and assess each other's economic policies, suggest policy remedies, address potentially destabilizing imbalances, and set the stage for assessing the progress toward external sustainability.

14.67 In this regard, measured in terms of share in global GDP, India has been identified as systemically important economy. But it is clearly a net contributor to global demand as evidenced from its current account deficit. While India's exchange rate is largely market determined, its domestic savings are largely oriented to financing domestic investment appropriate at a stage of high growth but not at the cost of curbing consumption. Even if India is not a contributor to global imbalances, its interest clearly lies in smooth resolution of these issues and towards measures that could help revive global growth.

14.68 **Reform of the International Monetary System:** It has been argued that the IMS has no mechanism to prevent a build-up of imbalances on the external account and the burden of adjustment falls on deficit nations. In the run up to the crisis of 2008, it was felt that countries like the US could somehow sustain fiscal and current account deficits by virtue of the privilege of issuing a reserve currency. But this trend instead accentuated the so called external imbalances, even if it was not the primary cause of the crisis that turned global.

14.69 The French Presidency constituted a G 20 Working group on reform of the IMS which focused, among others, on capital flows and their management (CFM), the measurement of global liquidity, holding of international reserves, and future role and composition of the special drawing rights (SDR). While the latter two issues remain areas of continuing work, drawing on the work of the IMS group, the Cannes Summit communiqué mentions that the 'Coherent Conclusions for the Management of Capital Flows' would guide the G-20 in order to reap the benefits of financial globalization, while preventing and managing risks that could undermine financial stability and sustainable growth at national and global levels.

14.70 The issue of volatility in capital flows has been of concern for several emerging markets (including India). The management of capital flows is tempered by two considerations. First, a challenge, common to most developing countries and EMEs at this juncture, arises from the uncertainties in global capital flows and monetary policies pursued in advanced countries. Emerging markets face sudden stops or reversals (witnessed in December of 2011) for reasons not necessarily linked to developments in their own economies but to serious difficulties faced by financial institutions in advanced economies. Quantitative easing pursued by monetary authorities in advanced countries (while understandable in the context of liquidity needed to repair adverse private and public balance sheets) is a relatively new phenomenon that has altered the composition of capital flows and made their management by recipients more difficult.

14.71 The second consideration arises from India's specific situation. Notwithstanding the stability of India's balance of payments after an episode in 1991, India's current account deficit has widened over the last year. The dependence on private capital inflows to finance the same has widened. It is by now known that the burden of adjustment in the current IMS falls predominantly on non-reserve-issuing current account deficit countries (like India). On that count, the Indian economy has moved towards greater openness to capital flows, albeit following a cautious and calibrated approach keeping both domestic and international factors and risks in view and through judicious use of multiple instruments.

14.72 In view of the shift in external vulnerability indicators and India's currently high dependence on imported oil, there is need to reinforce management of the capital account (which has served India well) and also encourage more stable capital flows rather than short-term flows. Countries like India may well need to rely on a matrix of choices comprising macroeconomic and macro prudential tools and other measures as policy instruments without being bound by a prescribed sequence. Under the circumstances, the fact that the 'Coherent Conclusions on Management of Capital Flows' (as endorsed by the G-20) are 'non-binding' needs to be taken note of.

14.73 An issue related to trends in global liquidity is dealing with the build-up of international reserves by some countries. It has been argued that the accumulation of reserves has negative externalities and also entails avoidable costs to the holding countries. The issue is when the holding of reserves can be deemed excessive or rather what the optimal level could be, if any, and whether some kind of 'reserve metrics' could be adopted. While the optimal size and the utility of using reserves to intervene in currency markets may be debatable, the experience, especially in the case of economies like India, has been that reserves have helped graduate to a more open economy and smoothen investment and consumption during periods of external uncertainties caused by extraneous factors. In this context, a distinction needs to be drawn between holding of reserves by countries running a current account deficit (such as India) and reserves accumulated by countries with persistent current account surpluses in addition to large sovereign wealth funds. A related set of issues on which deliberations have been going on in the G 20 concern strengthening of global financial safety nets, cooperation between the IMF and Regional Financial Agreements to help countries deal with exogenous shocks (and access emergency assistance) and the adequacy of IMF's resources to play systemic role for the benefit of its whole membership.

14.74 **Financial Regulation:** The Group of 7 (G-7) countries along with a few more advanced economies with large financial sectors were the most important participants in a grouping that established the Basel Committee on Banking Supervision 1974, whose primary function was to act as a forum for coordination of supervision of the financial sector, particularly large banks, in these economies. In the wake of the major 2007-9 global financial crisis, the most severe since the 1930s, the effectiveness of financial regulation was called into question. Since then, quite significant reforms of financial regulation have taken place both within countries and internationally in terms of international regulatory standards and organizations.

14.75 **Financial Regulation Reforms**: In general, regulating financial markets and intermediaries and striking a balance between the need for maintaining financial stability and good market conduct without stifling innovation have always been a challenge. The global crisis brought home the inherent difficulty in doing that especially where financial institutions have had cross-border operations and exposures. This was because, with financial globalization, many banks and other financial market participants had cross-border operations but were mostly subject to national regulations.

14.76 The weaknesses in financial regulation (apart from global imbalances) were perceived as a major cause of the global crisis. The Cannes Summit communiqué 2011 reiterated the commitment that financial markets, products, and participants be regulated or subject to oversight appropriate to their circumstances in an internationally consistent and non-discriminatory way. The declaration spells out the initiatives taken that include the regulation of banks, over-the-counter (OTC) derivatives, compensation practices, and credit-rating agencies. The Cannes action plan commits to taking these initiatives further based on the work done by the Bank of International Settlements (BIS) and the Financial Stability Board (FSB) on new standards for financial regulation.

14.77 The commitment to implementing the Basel III standards for banks is of particular significance to the global economy. The implementation of Basel III capital and liquidity standards starts in 2013 with full implementation envisaged by 2019.To make sure that no financial firm is 'too big to fail' and taxpayers do not bear the costs of resolution, the FSB framework comprising new international standards for resolution, supervision, cross-border cooperation, recovery, and resolution planning from 2016 was endorsed. The FSB has also published an initial list of Globally Systemically Important Financial Institutions (G-SIFI) and a five-pronged work plan to develop guidelines on shadow banking. In order to prevent excessive risk taking and discourage excessive pay and bonuses, the FSB has developed principles and standards on compensation.

14.78 India is a member of the Basel Committee on Banking Supervision (BCBS) and FSB and is actively participating in post crisis reforms of the international regulatory and supervisory framework. The Indian financial sector is well regulated and India remains committed to adopting international standards and best practices *calibrated to its conditions*. As such, banks in India are well capitalized and it is expected that the Basel III norms are unlikely to put undue pressure on the banking system on aggregate. India had even earlier implemented some countercyclical policies like provisioning norms and differential risk weights (for example for the real estate sector, capital markets, and personal loans) to control build-up of risks even before these were internationally proposed.

14.79 There are, however, some caveats on the implementation of the emerging regulatory standards across countries. Given that the financial sector in many countries has its specificities, and there is likely to be resistance to change from several market participants, it is yet to be seen whether all these reforms will get carried out in all the countries and not diluted. While all G-20 countries have committed to implementing Basel III, major jurisdictions have separately come out with their own regulatory

## Box 14.3 : Financial Regulation: New initiatives – the US and UK

**US – The Dodd-Frank Act:** The financial crisis of 2007–10 led to calls for changes in the regulatory system. In June 2009, a proposal for a 'sweeping overhaul of the financial regulatory system' was introduced in the US that culminated in a legislation called The Wall Street Reform and Consumer Protection Act (also called the Dodd-Frank Act) in July 2010. This is a voluminous and overarching Act (1601 sections) with provisions for comprehensive regulation of financial markets (including the derivatives markets), consolidation of regulatory agencies, and establishing of a new oversight council called the 'Financial Stability Oversight Council' to evaluate systemic risk. The provisions also aim to address the 'too big to bail out' problem and bring in the requirement of large complex financial companies submitting plans for their orderly shutdown. The intent is that the cost arising from liquidation of large interconnected financial companies will not fall on the taxpayers. The Act incorporates what has been termed the 'Volcker rule', whereby depository banks would be prohibited from proprietary trading (similar to the prohibition of combined investment and commercial banking in the Glass–Steagall Act). The Act includes improved standards for regulation of hedge funds and credit-rating agencies, improved accounting standards, investor protection, and norms of executive compensation. As suggested in the title of the Act, it has provisions for consumer protection reforms and the establishment of a new consumer protection bureau and also a new Office of Minority and Women Inclusion as Federal banking and securities regulatory agencies.

**UK – Vickers Commission report:** The Independent Commission on Banking under Sir John Vickers submitted its report to the UK government in September 2011. The report starts with the argument that one of the *main reasons* for bank failure during the global crisis was that they had too little equity in relation to risk. There were few restrictions on leverage. The weights assigned in the 'risk-weighted' assets turned out unreliable. The erosion of equity led to concerns of solvency and contagion. Though risks in banking have to rest somewhere, they should not fall on the taxpayer. Structural separation and Ring fencing: The main recommendation is that there should be a *structural separation* between retail banking and wholesale/ investment banking. There should be a ring fence to isolate banking activities where continuous provision of service is vital to the economy and to bank customers. Domestic retail banking should be inside the ring fence. Services should not be provided from within the ring fence if they are not integral to the provision of payments services to customers in the European economic area. Banks with both retail and investment activities will need to keep these activities at arm's length but they could share information, infrastructure, etc. Structural separation would help sustain the UK's position as a pre-eminent international financial centre, while UK banking is made more resilient.Loss absorbency: The report is in broad agreement with the direction of Basel III but notes that it does not go far enough since the leverage cap is too lax for systemically important banks and has recommended that retail banks should have equity capital of at least 10 per cent of risk- weighted assets. The Commission has also recommended the introduction of a redirection service for personal and Small and Medium Enterprises (SME) current accounts which, among other things, would transfers accounts within seven working days.

*Note:* The text in the box is aimed at giving only a very brief overview of these documents and is neither exhaustive nor an interpretation.

standards: the Dodd Frank Act in the United States and the Vickers Commission recommendations in the United Kingdom (see Box 14.3) with the EU too having its own rules. A concern that arises is that if same standards are not implemented in all jurisdictions simultaneously, there could be scope for regulatory arbitrage that could result in financial activity migrating to less-regulated jurisdictions, as well as into shadow banking. In the short run, there are also concerns that tightening of regulatory standards, even while recovery in advanced economies from the past and continuing crisis is not over, may make banks risk averse and adversely impact financial intermediation and lending to the real sector.

14.80 **Development Issues:** The G-20 Development Agenda comprised a Multi-Year Action Plan based on nine pillars announced at the Seoul Summit, of which the French Presidency focused on infrastructure and food security for the Cannes Summit. The other pillars are human resource development; trade; private investment and job creation; financial inclusion; growth with resilience; knowledge sharing; and domestic resource mobilization. Many of these issues have been in the subject domain of a number of developmental agencies.

14.81 While India has assigned high priority to issues relating to development appropriate to country-specific conditions, an issue deserving priority is of recycling global savings for infrastructure investment. Enhancing infrastructure investment in emerging economies and developing countries would have positive implications for rebalancing global demand as also for reviving and sustaining growth. At the same time, high savings would find productive use.

14.82 **The Cannes Summit:** By November 2011, just before the G-20 Summit in Cannes, the global economy found itself in a difficult phase with weakened recovery and intensifying financial stability risks. The eurozone sovereign debt crisis came to loom large just before the G-20 deliberations. Problems in relatively small economies (like Greece) had got transmitted to the global financial markets resulting in a flight to safety. The resolution of the eurozone crisis that simmered through 2011 came to occupy centre stage in the global economic agenda, even though the G-20, as such, did not have a direct role in the matter. Also reflecting the lack of growth and high unemployment, 'growth and jobs' came to be the focus of the Cannes Action Plan

14.83 **The Cannes Action Plan for Growth and Jobs:** The Action Plan announced at the Summit reiterated the leaders' commitment to the spirit of multilateral cooperation that lies at the heart of the MAP. Key policy actions outlined included near-term actions of expeditiously implementing measures announced by euro-zone leaders on 26 October 2011. The G-20 also committed to taking significant strides towards a more stable and resilient IMS and agreed to continue strengthening financial regulation. Under medium-term policy imperatives, the G-20 leaders endorsed policy actions by members that aim to correct imbalances over the medium term and ensure progress toward strong, sustainable, and balanced growth. They also committed to working with greater resolve on pressing social issues, including high unemployment and inadequate social safety nets. The Cannes Action Plan also stresses on the need for further efforts to support capacity building and channelling of surplus savings for growth-enhancing investments in developing countries, including infrastructure development and welcomed the recommendations of the High Level Panel on infrastructure set up by the G 20.

14.84 **G-20 Agenda in 2012**: Mexico has since taken over presidency of the G-20 after the Cannes Summit and released a strategic vision of the G-20 agenda spelling out the following priorities.

1) Economic stabilization and structural reforms as foundation of growth and employment.
2) Strengthening the financial system and fostering financial inclusion to promote growth.
3) Improving the international financial architecture in an interconnected world.
4) Enhancing food security and addressing commodity price volatility.
5) Promoting sustainable development and green growth in the fight against climate change.

14.85 **Role of Finance in Development**: While on one side global forums like the G-20 and international regulatory bodies continued to deliberate on issues relating to financial regulation, the year 2011 was also marked by rising concern across the world that 'finance' had somehow got de-linked from serving the interests of the real economy and that various regulatory and compensation practices are out of sync with the needs of the rest of the economy.

14.86 The issue of compensation in the financial sector has been a major area of debate not just in the G-20 but also in the media in general. Similarly, the issue of financialization of commodities and speculation leading to volatility in commodity prices and the idea of implementing a tax on financial transactions have been contentious issues on which no clear consensus has emerged. Of late, an area of concern even among serious academic researchers has been whether the financial sector has become just too big in some advanced economies and whether its value addition is really genuine and correctly measured.

14.87 Regardless of whether these views and perceptions are correct or misplaced, these debates and the ongoing work need to be taken note of in policy. Fortunately, the Indian financial sector and its banks have thus far been well regulated and to ensure that it serves the real sector has been an abiding policy concern. Nevertheless, given the criticality of the role of finance in development, the Indian regulatory system would also need to maintain and strengthen its vigil to ensure that growth in the financial sector and the intermediation process go towards furthering economic development and financial inclusion.

## Engaging the World

14.88 A recently published book notes that India has entered a 'critical decade'. It has emerged as a large and systemically important economy on the global stage. It enjoys the unique advantage of having many economic indicators in its favour, particularly a large domestic market, robust investment-to-GDP ratio, and demographic advantage. However, all of these will need to be leveraged to get the full advantage out of them. Undoubtedly this requires India to address its internal challenges, which include the long-standing problem of poverty and the development of its social and physical infrastructure.

14.89 Given its size and its profile in the global economy, India will inevitably need to play an active role at global level, not just in debates about how to resolve the continuing crisis and prevent the recurrence of similar crises in the future, but in influencing the rules for the global economy on overarching macroeconomic issues such as trade, capital flows, financial regulation, climate change, and governance of global financial institutions.

14.90 It may be argued, and in some ways it may seem the easy option, that India should take a passive stance in the current global debate and just wait out the period of crisis. But that option is no longer realistically feasible. India is already too much a part of the global economy and polity; developments in the world will affect India deeply and what India does will affect the world. There is, therefore, a need for India to engage with the world in terms of action and ideas.

# ECONOMIC SURVEY 2011-12

# STATISTICAL APPENDIX

## STATISTICAL APPENDIX : ECONOMIC SURVEY 2011-2012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Note :na = not available ; '…' = nil or negligible; P= Provisional ; Q = Quick Estimate; Rs.= Rupee; $=US Dollar; Cr.=Crore; Mn.=Million

## 0.1 : SELECT INDICATORS

| | 1950-51 | 1960-61 | 1970-71 | 1980-81 | 1990-91 | 2000-01 | 2007-08 | 2008-09 | 2009-10 | 2010-11 |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
| **ECONOMIC INDICATORS** | | | | | | | | | | |
| GDP at factor cost:at current prices in ₹ crore | 9719 | 16512 | 42981 | 132520 | 515032 | 1925017 | 4582086 | 5303567 | 6091485[PE] | 7157412[QE] |
| GDP at factor cost: at constant prices in ₹ crore | 224786 | 329825 | 474131 | 641921 | 1083572 | 1864300 | 3896636 | 4158676 | 4507637[PE] | 4885954[QE] |
| Per capita Net National Product at factor cost at constant prices in ₹ | 5708 | 7121 | 8091 | 8594 | 11535 | 16172 | 30332 | 31754 | 33843[PE] | 35993[QE] |
| Gross Domestic Capital Formation as percentage of GDP at current market prices | 8.4 | 14.0 | 15.1 | 19.9 | 26.0 | 24.3 | 38.1 | 34.3 | 36.6 | 35.1 |
| Gross domestic savings as percentage of GDP at current market prices | 8.6 | 11.2 | 14.2 | 18.5 | 22.8 | 23.7 | 36.8 | 32.0 | 33.8 | 32.3 |
| Index of agricultural production [base: triennium ending 1981-82] | 46.2 | 68.8 | 85.9 | 102.1 | 148.4 | 165.7 | 207.1 | 194.1 | 191.4 | 215.3 |
| Index of industrial production (Base: 2004-05=100)[a] | 7.9[b] | 15.6 | 28.1 | 43.1 | 91.6 | 162.6 | 141.7 | 145.2 | 152.9 | 165.5 |
| Wholesale Price Index average[c] | 6.8 | 7.9 | 14.3 | 36.8 | 73.7 | 155.7 | 116.6 | 126.0 | 132.8 | 143.3 |
| Consumer Price Index[d] for Industrial worker | 17.0 | 21.0 | 38.0 | 81.0 | 193.0 | 444.0 | 133.0 | 144.8 | 162.8 | 179.8 |
| OUTPUT | | | | | | | | | | |
| (a) Foodgrains [millon tonnes] | 50.8 | 82 | 108.4 | 129.6 | 176.4 | 196.8 | 230.8 | 234.4 | 218.1 | 241.6[e] |
| (b) Finished Steel[f] [millon tonnes] | 1 | 2.4 | 4.6 | 6.8 | 13.5 | 32.3 | 56.1 | 57.2 | 69.1 | 75.8[g] |
| (c) Cement [millon tonnes] | 2.7 | 8 | 14.3 | 18.6 | 48.8 | 99.2 | 167.6 | 181.4 | 207.1 | 216.0[g] |
| (d) Coal and lignite[h] [millon tonnes] | 32.3 | 55.2 | 76.3 | 119 | 225.5 | 332.6 | 491.1 | 525.2 | 566.1 | 570.9[g] |
| (e) Crude oil [millon tonnes] | 0.3 | 0.5 | 6.8 | 10.5 | 33 | 32.4 | 34.1 | 33.5 | 33.7 | 37.8 |
| (f) Electricity generated [utilities only] [billon KWH] | 5 | 17 | 56 | 111 | 264 | 499 | 704 | 724 | 771 | 811 |
| Plan outlay (₹ crore) | 260[i] | 1117 | 2524 | 15023 | 58369 | 185737 | 371569 | 477236 | 529024 | 688816[j] |
| FOREIGN TRADE | | | | | | | | | | |
| (i) Exports | | | | | | | | | | |
| ₹ crore | 606 | 642 | 1535 | 6711 | 32553 | 203571 | 655864 | 840755 | 845534 | 1142649 |
| US $ million | 1269 | 1346 | 2031 | 8486 | 18143 | 44560 | 163132 | 185295 | 178751 | 251136 |
| (ii) Imports | | | | | | | | | | |
| ₹ crore | 608 | 1122 | 1634 | 12549 | 43198 | 230873 | 1012312 | 1374436 | 1363736 | 1683467 |
| US $ million | 1273 | 2353 | 2162 | 15869 | 24075 | 50536 | 251654 | 303696 | 288373 | 369769 |
| Foreign exchange reserves[k] [excluding gold, SDRs and Reserve Tranche Position at IMF]; | | | | | | | | | | |
| ₹ crore | 911 | 186 | 438 | 4822 | 4388 | 184482 | 1196023 | 1231340 | 1150778 | 1225999 |
| US $ million | 1914 | 390 | 584 | 5850 | 2236 | 39554 | 299230 | 241676 | 254935 | 274580 |

Contd....

## 0.1 : SELECT INDICATORS

| | 1950-51 | 1960-61 | 1970-71 | 1980-81 | 1990-91 | 2000-01 | 2007-08 | 2008-09 | 2009-10 | 2010-11 |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
| **SOCIAL INDICATORS** | | | | | | | | | | |
| Population (Million)[l] | 359 | 434 | 541 | 679 | 839 | 1019 | 1138 | 1154 | na | 1210[r] |
| Birth Rate (per 1000)[m] | 39.9 | 41.7 | 36.9 | 33.9 | 29.5 | 25.4 | 23.5 | 22.8 | na | 22.1[q] |
| Death Rate (per 1000)[m] | 27.4 | 22.8 | 14.9 | 12.5 | 9.8 | 8.4 | 7.4 | 7.4 | na | 7.2[q] |
| Life Expectancy at Birth | 32.1 | 41.3 | 45.6 | 50.4 | 58.7 | 62.5 | na | na | na | 63.5[q] |
| (in Years)[n] | | | | | | | | | | |
| (a) Male | 32.5 | 41.9 | 46.4 | 50.9 | 58.6 | 61.6 | na | na | na | 62.6[q] |
| (b) Female | 31.7 | 40.6 | 44.7 | 50 | 59 | 63.3 | na | na | na | 64.2[q] |
| Education: Literacy Rate (%)[o] | 18.3 | 28.3 | 34.4 | 43.6 | 52.2 | 64.8 | na | na | na | 74.0 |
| (a) Male | 27.2 | 40.4 | 46 | 56.4 | 64.1 | 75.3 | na | na | na | na |
| (b) Female | 8.9 | 15.4 | 22 | 29.8 | 39.3 | 53.7 | na | na | na | na |
| Health & Family Welfare | | | | | | | | | | |
| Registered Medical Practitioner (RMP) (Allopathy) (Thousand) on 31st Dec | 61.8 | 83.7 | 151.1 | 268.7 | 393.6 | 577.1 | na | na | na | na |
| RMP per 10,000 population | 1.7 | 1.9 | 2.8 | 3.9 | 4.7 | 5.6 | na | na | na | na |
| Beds (All Types)[p] per 10,000 | 3.2 | 5.7 | 6.4 | 8.3 | 9.5 | na | na | na | na | na |

PE Provisional Estimates, QE Quick Estimates.

na : Not available.

[a] The Index of Industrial Production has been revised since 2005-06 on base(2004-05=100). The figures for the year 2007-08 onwards are on the new base.

[b] Relates to the calender year 1950.

[c] New series of WPI has been released from 2004-05 with base 2004-05=100.

[d] CPI-IW: New series is based on 2001=100.

[e] 4th Advance Estimates.

[f] Includes main producers, majors and others

[g] Provisional.

[h] Coal output includes Meghalaya Coal from 2005-06 onwards.

[i] Relates to 1951-52.

[j] Revised Estimates only.

[k] As on end-March.

[l] Relate to mid-financial year (as on October 1) based on population figures of C.S.O.

[m] For calendar year. Figure shown against 1990-91 is for calendar year 1991 and so on. Source : Office of R.G.I.

[n] Data for 1950-51, 1960-61, 1970-71 and 1980-81 relate to the decades 1941-50, 1951-60, 1961-70 and 1971-80 respectively, centred at midpoints of the decade, i.e., 1946, 1956, 1966 and 1976. The estimates for 1990-91 and 1991-92 refer to the periods 1988-92 and 1989-93 respectively. The estimates for 2005-06 refers to the period 2001-05. The estimates for 2006-07 refers to the period 2002-06.

[o] Data for 1950-51, 1960-61, 1970-71, 1980-81, 1990-91 and 2000-01 are as per Census of India 1951, 1961, 1971, 1981, 1991 and 2001. The figures for 1951, 1961 and 1971 relate to population aged 5 years and above and those for 1981, 1991 and 2001 to population aged 7 years and above. All India literacy rates exclude Assam for 1981 and J&K for 1991. For 2005-06, data is based on National Family Health Survey (2005-06) (+ 6 years).

[p] Includes beds in hospitals, dispensaries, P.H.Cs, clinics, sanatoriums, etc.

[q] Abridged Life Table 2002-06, RGI.

[r] Sample Registration Survey (SRS), Registrar General of India (RGI).

## 1.1 : GROSS NATIONAL PRODUCT AND NET NATIONAL PRODUCT

| Year | Gross national product at factor cost (₹ crore) | | Net national product at factor cost (₹ crore) | | Per capita net national product (₹) | | Index numbers (1950-51=100) | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Net national product | | Per capita net national product | |
| | At current prices | At 2004-05 prices | At current prices | At 2004-05 prices | At current prices | At 2004-05 prices | At current prices | At 2004-05 prices | At current prices | At 2004-05 prices |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
| 1950-51 | 9995 | 278677 | 9464 | 255405 | 264 | 7114 | 100.0 | 100.0 | 100.0 | 100.0 |
| 1951-52 | 10561 | 285558 | 9985 | 262804 | 274 | 7200 | 105.5 | 102.9 | 103.8 | 101.2 |
| 1952-53 | 10424 | 293791 | 9840 | 271541 | 265 | 7299 | 104.0 | 106.3 | 100.3 | 102.6 |
| 1953-54 | 11359 | 311784 | 10803 | 289931 | 285 | 7650 | 114.1 | 113.5 | 108.1 | 107.5 |
| 1954-55 | 10660 | 324830 | 10154 | 305985 | 263 | 7927 | 107.3 | 119.8 | 99.8 | 111.4 |
| 1955-56 | 10851 | 333542 | 10309 | 314238 | 262 | 7996 | 108.9 | 123.0 | 99.5 | 112.4 |
| 1956-57 | 12948 | 352418 | 12362 | 332192 | 308 | 8284 | 130.6 | 130.1 | 116.9 | 116.4 |
| 1957-58 | 13235 | 347970 | 12581 | 326992 | 308 | 7995 | 132.9 | 128.0 | 116.7 | 112.4 |
| 1958-59 | 14792 | 374219 | 14078 | 352054 | 337 | 8422 | 148.8 | 137.8 | 127.8 | 118.4 |
| 1959-60 | 15517 | 381864 | 14754 | 358913 | 346 | 8425 | 155.9 | 140.5 | 131.4 | 118.4 |
| 1960-61 | 16977 | 408739 | 16169 | 385761 | 373 | 8889 | 170.9 | 151.0 | 141.3 | 124.9 |
| 1961-62 | 17894 | 420953 | 16998 | 396844 | 383 | 8938 | 179.6 | 155.4 | 145.2 | 125.6 |
| 1962-63 | 19130 | 429594 | 18159 | 404119 | 400 | 8901 | 191.9 | 158.2 | 151.7 | 125.1 |
| 1963-64 | 21874 | 451446 | 20790 | 424527 | 448 | 9149 | 219.7 | 166.2 | 170.0 | 128.6 |
| 1964-65 | 25541 | 485193 | 24301 | 456327 | 513 | 9627 | 256.8 | 178.7 | 194.5 | 135.3 |
| 1965-66 | 26731 | 467155 | 25338 | 436650 | 522 | 9003 | 267.7 | 171.0 | 198.2 | 126.5 |
| 1966-67 | 30383 | 472024 | 28750 | 439345 | 581 | 8876 | 303.8 | 172.0 | 220.3 | 124.8 |
| 1967-68 | 35718 | 509965 | 33851 | 475052 | 669 | 9388 | 357.7 | 186.0 | 253.8 | 132.0 |
| 1968-69 | 37683 | 523558 | 35685 | 486775 | 689 | 9397 | 377.1 | 190.6 | 261.3 | 132.1 |
| 1969-70 | 41451 | 557652 | 39152 | 518434 | 740 | 9800 | 413.7 | 203.0 | 280.8 | 137.8 |
| 1970-71 | 44098 | 585672 | 41294 | 541867 | 763 | 10016 | 436.3 | 212.2 | 289.6 | 140.8 |
| 1971-72 | 46930 | 591703 | 43852 | 545976 | 792 | 9855 | 463.4 | 213.8 | 300.3 | 138.5 |
| 1972-73 | 51641 | 590138 | 48216 | 542686 | 850 | 9571 | 509.5 | 212.5 | 322.6 | 134.5 |
| 1973-74 | 63333 | 617498 | 59221 | 567937 | 1021 | 9792 | 625.8 | 222.4 | 387.3 | 137.6 |
| 1974-75 | 74639 | 625437 | 69342 | 572741 | 1169 | 9658 | 732.7 | 224.2 | 443.6 | 135.8 |
| 1975-76 | 79327 | 682355 | 73064 | 626779 | 1204 | 10326 | 772.1 | 245.4 | 456.6 | 145.1 |
| 1976-77 | 85312 | 691096 | 78505 | 631897 | 1266 | 10192 | 829.5 | 247.4 | 480.3 | 143.3 |
| 1977-78 | 97400 | 743223 | 90072 | 681442 | 1421 | 10748 | 951.8 | 266.8 | 538.9 | 151.1 |
| 1978-79 | 104774 | 784297 | 96663 | 719996 | 1492 | 11111 | 1021.4 | 281.9 | 565.9 | 156.2 |
| 1979-80 | 114653 | 744772 | 104766 | 677340 | 1578 | 10201 | 1107.0 | 265.2 | 598.5 | 143.4 |
| 1980-81 | 137183 | 798504 | 125761 | 727359 | 1852 | 10712 | 1328.9 | 284.8 | 702.6 | 150.6 |
| 1981-82 | 160253 | 842324 | 146332 | 767481 | 2115 | 11091 | 1546.3 | 300.5 | 802.2 | 155.9 |
| 1982-83 | 178351 | 864288 | 162236 | 785134 | 2291 | 11089 | 1714.3 | 307.4 | 869.3 | 155.9 |
| 1983-84 | 208412 | 932051 | 190443 | 848950 | 2634 | 11742 | 2012.4 | 332.4 | 999.2 | 165.0 |
| 1984-85 | 233689 | 967485 | 212713 | 878609 | 2878 | 11889 | 2247.7 | 344.0 | 1091.9 | 167.1 |
| 1985-86 | 261288 | 1007999 | 236151 | 913143 | 3128 | 12095 | 2495.3 | 357.5 | 1186.5 | 170.0 |
| 1986-87 | 291119 | 1051071 | 262781 | 950457 | 3408 | 12328 | 2776.7 | 372.1 | 1292.9 | 173.3 |
| 1987-88 | 329449 | 1086209 | 296257 | 978464 | 3760 | 12417 | 3130.5 | 383.1 | 1426.2 | 174.5 |
| 1988-89 | 391799 | 1193697 | 352948 | 1080137 | 4384 | 13418 | 3729.5 | 422.9 | 1663.2 | 188.6 |
| 1989-90 | 450809 | 1266767 | 405561 | 1146446 | 4934 | 13947 | 4285.5 | 448.9 | 1871.6 | 196.0 |
| 1990-91 | 524268 | 1331040 | 471618 | 1202305 | 5621 | 14330 | 4983.5 | 470.7 | 2132.4 | 201.4 |
| 1991-92 | 603451 | 1349541 | 538824 | 1211877 | 6295 | 14157 | 5693.6 | 474.5 | 2387.9 | 199.0 |
| 1992-93 | 692078 | 1422692 | 617940 | 1276845 | 7086 | 14643 | 6529.6 | 499.9 | 2688.2 | 205.8 |
| 1993-94 | 805881 | 1506138 | 723024 | 1354116 | 8106 | 15181 | 7640.0 | 530.2 | 3074.9 | 213.4 |
| 1994-95 | 942302 | 1603264 | 845554 | 1440972 | 9292 | 15835 | 8934.8 | 564.2 | 3524.8 | 222.6 |
| 1995-96 | 1105102 | 1720069 | 992516 | 1547480 | 10695 | 16675 | 10487.7 | 605.9 | 4057.2 | 234.4 |
| 1996-97 | 1288706 | 1859370 | 1158858 | 1675759 | 12250 | 17714 | 12245.4 | 656.1 | 4647.0 | 249.0 |
| 1997-98 | 1434408 | 1943208 | 1287141 | 1745160 | 13352 | 18103 | 13600.9 | 683.3 | 5065.1 | 254.5 |
| 1998-99 | 1653771 | 2073140 | 1490030 | 1861252 | 15158 | 18934 | 15744.8 | 728.7 | 5750.1 | 266.1 |
| 1999-00 | 1831842 | 2229900 | 1645370 | 2001250 | 16437 | 19993 | 17386.2 | 783.6 | 6235.4 | 281.0 |
| 2000-01 | 1969249 | 2318974 | 1762358 | 2074858 | 17295 | 20362 | 18622.4 | 812.4 | 6560.8 | 286.2 |
| 2001-02 | 2147677 | 2450681 | 1918827 | 2190737 | 18450 | 21065 | 20275.8 | 857.7 | 6999.0 | 296.1 |
| 2002-03 | 2321510 | 2551730 | 2075329 | 2278363 | 19653 | 21575 | 21929.5 | 892.1 | 7455.2 | 303.3 |
| 2003-04 | 2601508 | 2757120 | 2329354 | 2466093 | 21729 | 23005 | 24613.7 | 965.6 | 8242.8 | 323.4 |
| 2004-05 | 2949089 | 2949089 | 2629198 | 2629198 | 24143 | 24143 | 27782.1 | 1029.4 | 9158.6 | 339.4 |
| 2005-06 | 3364387 | 3228177 | 3000666 | 2877284 | 27131 | 26015 | 31707.3 | 1126.6 | 10292.1 | 365.7 |
| 2006-07 | 3920042 | 3534849 | 3501313 | 3149149 | 31206 | 28067 | 36997.5 | 1233.0 | 11837.9 | 394.5 |
| 2007-08 | 4561574 | 3879457 | 4076878 | 3451829 | 35825 | 30332 | 43079.4 | 1351.5 | 13590.1 | 426.3 |
| 2008-09 | 5270644 | 4133292 | 4705447 | 3664388 | 40775 | 31754 | 49721.3 | 1434.7 | 15467.9 | 446.3 |
| 2009-10 | 6053585 | 4479973 | 5395687 | 3959653 | 46117 | 33843 | 57014.9 | 1550.3 | 17494.3 | 475.7 |
| 2010-11(Q) | 7078512 | 4833178 | 6325038 | 4268715 | 53331 | 35993 | 66835.2 | 1671.3 | 20230.9 | 505.9 |
| 2011-12(A) | 8198276 | 5171538 | 7328878 | 4568249 | 60972 | 38005 | 73402.4 | 1738.3 | 22289.3 | 527.8 |

Source : Central Statistics Office (CSO).

Q : Quick estimates. A : Advance estimates

http://indiabudget.nic.in

## 1.2 : ANNUAL GROWTH RATES OF GROSS NATIONAL PRODUCT AND NET NATIONAL PRODUCT

(Per cent)

| Year | Gross national product at factor cost | | Net national product at factor cost | | Per capita net national product | |
|---|---|---|---|---|---|---|
| | At current prices | At 2004-05 prices | At current prices | At 2004-05 prices | At current prices | At 2004-05 prices |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 1951-52 | 5.7 | 2.5 | 5.5 | 2.9 | 3.8 | 1.2 |
| 1955-56 | 1.8 | 2.7 | 1.5 | 2.7 | -0.3 | 0.9 |
| 1956-57 | 19.3 | 5.7 | 19.9 | 5.7 | 17.5 | 3.6 |
| 1957-58 | 2.2 | -1.3 | 1.8 | -1.6 | -0.2 | -3.5 |
| 1958-59 | 11.8 | 7.5 | 11.9 | 7.7 | 9.5 | 5.3 |
| 1959-60 | 4.9 | 2.0 | 4.8 | 1.9 | 2.8 | 0.0 |
| 1960-61 | 9.4 | 7.0 | 9.6 | 7.5 | 7.6 | 5.5 |
| 1961-62 | 5.4 | 3.0 | 5.1 | 2.9 | 2.8 | 0.6 |
| 1962-63 | 6.9 | 2.1 | 6.8 | 1.8 | 4.5 | -0.4 |
| 1963-64 | 14.3 | 5.1 | 14.5 | 5.1 | 12.0 | 2.8 |
| 1964-65 | 16.8 | 7.5 | 16.9 | 7.5 | 14.4 | 5.2 |
| 1965-66 | 4.7 | -3.7 | 4.3 | -4.3 | 1.9 | -6.5 |
| 1966-67 | 13.7 | 1.0 | 13.5 | 0.6 | 11.2 | -1.4 |
| 1967-68 | 17.6 | 8.0 | 17.7 | 8.1 | 15.2 | 5.8 |
| 1968-69 | 5.5 | 2.7 | 5.4 | 2.5 | 3.0 | 0.1 |
| 1969-70 | 10.0 | 6.5 | 9.7 | 6.5 | 7.4 | 4.3 |
| 1970-71 | 6.4 | 5.0 | 5.5 | 4.5 | 3.1 | 2.2 |
| 1971-72 | 6.4 | 1.0 | 6.2 | 0.8 | 3.7 | -1.6 |
| 1972-73 | 10.0 | -0.3 | 10.0 | -0.6 | 7.4 | -2.9 |
| 1973-74 | 22.6 | 4.6 | 22.8 | 4.7 | 20.1 | 2.3 |
| 1974-75 | 17.9 | 1.3 | 17.1 | 0.8 | 14.5 | -1.4 |
| 1975-76 | 6.3 | 9.1 | 5.4 | 9.4 | 2.9 | 6.9 |
| 1976-77 | 7.5 | 1.3 | 7.4 | 0.8 | 5.2 | -1.3 |
| 1977-78 | 14.2 | 7.5 | 14.7 | 7.8 | 12.2 | 5.5 |
| 1978-79 | 7.6 | 5.5 | 7.3 | 5.7 | 5.0 | 3.4 |
| 1979-80 | 9.4 | -5.0 | 8.4 | -5.9 | 5.8 | -8.2 |
| 1980-81 | 19.7 | 7.2 | 20.0 | 7.4 | 17.4 | 5.0 |
| 1981-82 | 16.8 | 5.5 | 16.4 | 5.5 | 14.2 | 3.5 |
| 1982-83 | 11.3 | 2.6 | 10.9 | 2.3 | 8.4 | 0.0 |
| 1983-84 | 16.9 | 7.8 | 17.4 | 8.1 | 15.0 | 5.9 |
| 1984-85 | 12.1 | 3.8 | 11.7 | 3.5 | 9.3 | 1.3 |
| 1985-86 | 11.8 | 4.2 | 11.0 | 3.9 | 8.7 | 1.7 |
| 1986-87 | 11.4 | 4.3 | 11.3 | 4.1 | 9.0 | 1.9 |
| 1987-88 | 13.2 | 3.3 | 12.7 | 2.9 | 10.3 | 0.7 |
| 1988-89 | 18.9 | 9.9 | 19.1 | 10.4 | 16.6 | 8.1 |
| 1989-90 | 15.1 | 6.1 | 14.9 | 6.1 | 12.5 | 3.9 |
| 1990-91 | 16.3 | 5.1 | 16.3 | 4.9 | 13.9 | 2.7 |
| 1991-92 | 15.1 | 1.4 | 14.2 | 0.8 | 12.0 | -1.2 |
| 1992-93 | 14.7 | 5.4 | 14.7 | 5.4 | 12.6 | 3.4 |
| 1993-94 | 16.4 | 5.9 | 17.0 | 6.1 | 14.4 | 3.7 |
| 1994-95 | 16.9 | 6.4 | 16.9 | 6.4 | 14.6 | 4.3 |
| 1995-96 | 17.3 | 7.3 | 17.4 | 7.4 | 15.1 | 5.3 |
| 1996-97 | 16.6 | 8.1 | 16.8 | 8.3 | 14.5 | 6.2 |
| 1997-98 | 11.3 | 4.5 | 11.1 | 4.1 | 9.0 | 2.2 |
| 1998-99 | 15.3 | 6.7 | 15.8 | 6.7 | 13.5 | 4.6 |
| 1999-00 | 10.8 | 7.6 | 10.4 | 7.5 | 8.4 | 5.6 |
| 2000-01 | 7.5 | 4.0 | 7.1 | 3.7 | 5.2 | 1.8 |
| 2001-02 | 9.1 | 5.7 | 8.9 | 5.6 | 6.7 | 3.5 |
| 2002-03 | 8.1 | 4.1 | 8.2 | 4.0 | 6.5 | 2.4 |
| 2003-04 | 12.1 | 8.0 | 12.2 | 8.2 | 10.6 | 6.6 |
| 2004-05 | 13.4 | 7.0 | 12.9 | 6.6 | 11.1 | 4.9 |
| 2005-06 | 14.1 | 9.5 | 14.1 | 9.4 | 12.4 | 7.8 |
| 2006-07 | 16.5 | 9.5 | 16.7 | 9.4 | 15.0 | 7.9 |
| 2007-08 | 16.4 | 9.7 | 16.4 | 9.6 | 14.8 | 8.1 |
| 2008-09 | 15.5 | 6.5 | 15.4 | 6.2 | 13.8 | 4.7 |
| 2009-10 | 14.9 | 8.4 | 14.7 | 8.1 | 13.1 | 6.6 |
| 2010-11(Q) | 16.9 | 7.9 | 17.2 | 7.8 | 15.6 | 6.4 |
| 2011-12(A) | 15.8 | 7.0 | 15.9 | 7.0 | 14.3 | 5.6 |
| **ANNUAL AVERAGE GROWTH RATES** | | | | | | |
| FIRST PLAN (1951-56) | 1.8 | 3.7 | 1.9 | 4.2 | 0.0 | 2.4 |
| SECOND PLAN (1956-61) | 9.5 | 4.2 | 9.6 | 4.2 | 7.4 | 2.2 |
| THIRD PLAN (1961-66) | 9.6 | 2.8 | 9.5 | 2.6 | 7.1 | 0.3 |
| THREE ANNUAL PLANS (1966-69) | 12.2 | 3.9 | 12.2 | 3.7 | 9.8 | 1.5 |
| FOURTH PLAN (1969-74) | 11.1 | 3.4 | 10.8 | 3.2 | 8.4 | 0.9 |
| FIFTH PLAN (1974-79) | 10.7 | 4.9 | 10.4 | 4.9 | 8.0 | 2.6 |
| ANNUAL PLAN (1979-80) | 9.4 | -5.0 | 8.4 | -5.9 | 5.8 | -8.2 |
| SIXTH PLAN (1980-85) | 15.3 | 5.4 | 15.3 | 5.4 | 12.8 | 3.1 |
| SEVENTH PLAN (1985-90) | 14.1 | 5.6 | 13.8 | 5.5 | 11.4 | 3.3 |
| TWO ANNUAL PLANS (1990-92) | 15.7 | 3.2 | 15.3 | 2.8 | 13.0 | 0.8 |
| EIGHTH PLAN (1992-97) | 16.4 | 6.6 | 16.6 | 6.7 | 14.2 | 4.6 |
| NINTH PLAN (1997-2002) | 10.8 | 5.7 | 10.6 | 5.5 | 8.6 | 3.5 |
| TENTH PLAN (2002-2007) | 12.8 | 7.6 | 12.8 | 7.5 | 11.1 | 5.9 |
| EIEVENTH PLAN (2007-2012)P | 15.9 | 7.9 | 15.9 | 7.7 | 14.3 | 6.3 |

Source : Compiled from CSO data. Q : Quick estimates. A : Advance estimates P : Provisional

## 1.3A : GROSS DOMESTIC PRODUCT AT FACTOR COST BY INDUSTRY OF ORIGIN

At constant 2004-05 prices (₹ crore)

| Year | Agriculture, forestry & fishing, mining and quarrying | Manufacturing, construction, electricity, gas and water supply | Trade, hotels, transport & communication | Financing, insurance, real estate and business services | Public administration & defence and other services | Gross domestic product at factor cost (2 to 6) |
|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 1950-51 | 150191 | 40138 | 30792 | 23325 | 28474 | 279618 |
| 1951-52 | 152987 | 41996 | 31608 | 23863 | 29329 | 286147 |
| 1952-53 | 157764 | 41834 | 32641 | 24863 | 29934 | 294267 |
| 1953-54 | 169547 | 44416 | 33861 | 25219 | 30860 | 312177 |
| 1954-55 | 174611 | 48325 | 36065 | 26140 | 31967 | 325431 |
| 1955-56 | 173255 | 53962 | 38700 | 27190 | 32955 | 333766 |
| 1956-57 | 182651 | 58809 | 41537 | 27635 | 34219 | 352766 |
| 1957-58 | 175180 | 57737 | 42831 | 28679 | 35765 | 348500 |
| 1958-59 | 192337 | 62009 | 44965 | 29492 | 37233 | 374948 |
| 1959-60 | 190851 | 66378 | 47779 | 30619 | 38834 | 383153 |
| 1960-61 | 204340 | 73555 | 51879 | 31252 | 40741 | 410279 |
| 1961-62 | 205014 | 78638 | 55259 | 32596 | 42656 | 423011 |
| 1962-63 | 202234 | 83517 | 58503 | 33693 | 45686 | 431960 |
| 1963-64 | 207030 | 92432 | 62650 | 34735 | 48684 | 453829 |
| 1964-65 | 225287 | 99250 | 66890 | 35688 | 51894 | 488247 |
| 1965-66 | 202906 | 102475 | 68079 | 36766 | 53950 | 470402 |
| 1966-67 | 200481 | 106304 | 69862 | 37412 | 56438 | 475190 |
| 1967-68 | 228813 | 109856 | 72852 | 38431 | 58659 | 513860 |
| 1968-69 | 228836 | 115422 | 76155 | 40305 | 61272 | 527270 |
| 1969-70 | 243347 | 124372 | 80275 | 41980 | 64655 | 561630 |
| 1970-71 | 258665 | 126356 | 84205 | 43735 | 68218 | 589787 |
| 1971-72 | 254395 | 129506 | 86121 | 45989 | 71264 | 595741 |
| 1972-73 | 243082 | 133917 | 87991 | 47767 | 73594 | 593843 |
| 1973-74 | 259751 | 134649 | 91686 | 48936 | 75541 | 620872 |
| 1974-75 | 256719 | 136045 | 97176 | 48779 | 79120 | 628079 |
| 1975-76 | 289695 | 144928 | 105980 | 52142 | 81914 | 684634 |
| 1976-77 | 274522 | 158354 | 110697 | 56277 | 84190 | 693191 |
| 1977-78 | 300873 | 170123 | 118084 | 59032 | 86450 | 744972 |
| 1978-79 | 307874 | 182590 | 127772 | 63203 | 90186 | 785965 |
| 1979-80 | 271096 | 176035 | 126751 | 63818 | 96779 | 745083 |
| 1980-81 | 305906 | 183970 | 133906 | 65041 | 101666 | 798506 |
| 1981-82 | 321876 | 197519 | 142057 | 70326 | 103842 | 843426 |
| 1982-83 | 323862 | 197833 | 149903 | 77029 | 111849 | 868092 |
| 1983-84 | 354720 | 214737 | 157545 | 84585 | 116027 | 936270 |
| 1984-85 | 360230 | 224284 | 165037 | 90907 | 124065 | 973357 |
| 1985-86 | 362783 | 233818 | 178195 | 99783 | 131184 | 1013866 |
| 1986-87 | 364989 | 245385 | 188888 | 110295 | 141043 | 1057612 |
| 1987-88 | 360949 | 259641 | 198578 | 118383 | 151240 | 1094993 |
| 1988-89 | 417581 | 280863 | 210405 | 129934 | 160385 | 1206243 |
| 1989-90 | 425075 | 304461 | 226074 | 146088 | 173022 | 1280228 |
| 1990-91 | 444880 | 325450 | 237736 | 155165 | 180564 | 1347889 |
| 1991-92 | 438685 | 325150 | 243178 | 171956 | 185232 | 1367171 |
| 1992-93 | 465084 | 336716 | 256897 | 181320 | 196332 | 1440504 |
| 1993-94 | 479592 | 357237 | 274682 | 201568 | 205101 | 1522344 |
| 1994-95 | 504477 | 389903 | 301997 | 209401 | 209742 | 1619694 |
| 1995-96 | 504527 | 436863 | 342536 | 226348 | 225157 | 1737741 |
| 1996-97 | 549202 | 468146 | 370200 | 240354 | 243288 | 1876319 |
| 1997-98 | 542313 | 483585 | 398109 | 268495 | 263486 | 1957032 |
| 1998-99 | 574374 | 504485 | 428613 | 289440 | 289085 | 2087828 |
| 1999-00 | 590696 | 535730 | 476088 | 314990 | 328771 | 2246276 |
| 2000-01 | 592227 | 570571 | 506742 | 329271 | 343963 | 2342774 |
| 2001-02 | 624923 | 585971 | 550383 | 352792 | 357984 | 2472052 |
| 2002-03 | 594280 | 627374 | 596906 | 380081 | 372048 | 2570690 |
| 2003-04 | 643183 | 676833 | 663432 | 402243 | 392121 | 2777813 |
| 2004-05 | 650454 | 744755 | 727720 | 437174 | 411361 | 2971464 |
| 2005-06 | 680628 | 824272 | 815407 | 492340 | 440426 | 3253073 |
| 2006-07 | 711768 | 928626 | 910084 | 561063 | 452823 | 3564364 |
| 2007-08 | 751077 | 1023998 | 1009520 | 628124 | 483917 | 3896636 |
| 2008-09 | 753744 | 1071681 | 1085125 | 703629 | 544497 | 4158676 |
| 2009-10 | 766734 | 1163711 | 1197213 | 769883 | 610096 | 4507637 |
| 2010-11(Q) | 818524 | 1249305 | 1330455 | 849995 | 637675 | 4885954 |
| 2011-12(A) | 834190 | 1305330 | 1479748 | 927546 | 675213 | 5222027 |

Source : CSO. A : Advance estimates Q : Quick estimates.

Note : For the year prior to 1999-2000 totals under col. 7 may not add up to totals of individual item under col. 2 to col. 6 due to splicing technique applied independently at the level of each industry and at the total level.

## 1.3B : GROSS DOMESTIC PRODUCT AT FACTOR COST BY INDUSTRY OF ORIGIN

At current prices (₹ crore)

| Year | Agriculture, forestry & fishing, mining and quarrying | Manufacturing, construction, electricity, gas and water supply | Trade, hotels, transport & communication | Financing, insurance, real estate and business services | Public administration & defence and other services | Gross domestic product at factor cost (2 to 6) |
|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 1950-51 | 5274 | 1346 | 968 | 1254 | 1115 | 10036 |
| 1951-52 | 5453 | 1505 | 1048 | 1349 | 1162 | 10596 |
| 1952-53 | 5316 | 1416 | 1055 | 1425 | 1201 | 10449 |
| 1953-54 | 5850 | 1559 | 1121 | 1537 | 1250 | 11378 |
| 1954-55 | 4993 | 1640 | 1151 | 1647 | 1283 | 10689 |
| 1955-56 | 4847 | 1760 | 1192 | 1768 | 1361 | 10861 |
| 1956-57 | 6152 | 2071 | 1378 | 1917 | 1430 | 12965 |
| 1957-58 | 6045 | 2148 | 1525 | 2054 | 1503 | 13255 |
| 1958-59 | 7002 | 2334 | 1667 | 2203 | 1597 | 14827 |
| 1959-60 | 7043 | 2616 | 1801 | 2364 | 1760 | 15574 |
| 1960-61 | 7434 | 3113 | 1985 | 2547 | 1989 | 17049 |
| 1961-62 | 7704 | 3398 | 2145 | 2602 | 2154 | 17992 |
| 1962-63 | 7899 | 3740 | 2348 | 2987 | 2343 | 19238 |
| 1963-64 | 9274 | 4274 | 2628 | 3231 | 2599 | 21986 |
| 1964-65 | 11291 | 4788 | 3084 | 3512 | 2945 | 25686 |
| 1965-66 | 11301 | 5199 | 3345 | 3796 | 3276 | 26895 |
| 1966-67 | 13123 | 5819 | 3890 | 4063 | 3665 | 30613 |
| 1967-68 | 16393 | 6380 | 4445 | 4458 | 4105 | 35976 |
| 1968-69 | 16912 | 6940 | 4732 | 4772 | 4422 | 37938 |
| 1969-70 | 18505 | 7944 | 5107 | 5120 | 4822 | 41722 |
| 1970-71 | 19086 | 8622 | 5627 | 5579 | 5315 | 44382 |
| 1971-72 | 19510 | 9538 | 6102 | 6117 | 5901 | 47221 |
| 1972-73 | 21448 | 10534 | 6730 | 6694 | 6456 | 51943 |
| 1973-74 | 28171 | 12230 | 8057 | 7465 | 7261 | 63658 |
| 1974-75 | 31062 | 15232 | 10642 | 8390 | 9142 | 74930 |
| 1975-76 | 31028 | 16571 | 12067 | 9511 | 10290 | 79582 |
| 1976-77 | 31833 | 18811 | 13066 | 10579 | 11311 | 85545 |
| 1977-78 | 37592 | 21270 | 14702 | 11540 | 12296 | 97633 |
| 1978-79 | 38717 | 23951 | 16119 | 12448 | 13529 | 104930 |
| 1979-80 | 40373 | 26774 | 18604 | 13576 | 15149 | 114500 |
| 1980-81 | 50760 | 30900 | 21968 | 15120 | 17537 | 136838 |
| 1981-82 | 58745 | 36090 | 26946 | 17835 | 19927 | 160214 |
| 1982-83 | 63985 | 39953 | 30749 | 20453 | 23134 | 178985 |
| 1983-84 | 75982 | 47053 | 35716 | 23388 | 26345 | 209356 |
| 1984-85 | 82204 | 53656 | 41125 | 26907 | 30311 | 235113 |
| 1985-86 | 88083 | 60593 | 48022 | 30819 | 34284 | 262717 |
| 1986-87 | 95182 | 67754 | 54272 | 35337 | 39428 | 292924 |
| 1987-88 | 105358 | 77630 | 61963 | 40387 | 45700 | 332068 |
| 1988-89 | 130731 | 91163 | 73159 | 46926 | 52994 | 396295 |
| 1989-90 | 144461 | 108908 | 85630 | 55297 | 60741 | 456540 |
| 1990-91 | 168166 | 127079 | 100318 | 64598 | 70019 | 531814 |
| 1991-92 | 195454 | 140700 | 115570 | 78904 | 81366 | 613528 |
| 1992-93 | 219680 | 163887 | 136250 | 87495 | 94507 | 703723 |
| 1993-94 | 254876 | 188251 | 160990 | 105686 | 106090 | 817961 |
| 1994-95 | 293013 | 229365 | 192142 | 119442 | 118663 | 955386 |
| 1995-96 | 319243 | 280971 | 231175 | 143791 | 140190 | 1118586 |
| 1996-97 | 381142 | 318260 | 273135 | 158637 | 166469 | 1301788 |
| 1997-98 | 408521 | 348543 | 313093 | 180642 | 193188 | 1447613 |
| 1998-99 | 466446 | 393491 | 358538 | 210593 | 236123 | 1668739 |
| 1999-00 | 497027 | 426993 | 399094 | 251145 | 273013 | 1847273 |
| 2000-01 | 506476 | 474323 | 441785 | 274940 | 294459 | 1991982 |
| 2001-02 | 546674 | 497578 | 490290 | 315689 | 317513 | 2167745 |
| 2002-03 | 548062 | 550421 | 542132 | 356089 | 341496 | 2338200 |
| 2003-04 | 608788 | 618840 | 623246 | 400056 | 371288 | 2622216 |
| 2004-05 | 650454 | 744755 | 727720 | 437174 | 411361 | 2971464 |
| 2005-06 | 732234 | 859410 | 846606 | 493102 | 459151 | 3390503 |
| 2006-07 | 829771 | 1033410 | 998379 | 586595 | 505121 | 3953276 |
| 2007-08 | 961330 | 1205458 | 1150044 | 691464 | 573790 | 4582086 |
| 2008-09 | 1083032 | 1360426 | 1310845 | 845369 | 703895 | 5303567 |
| 2009-10 | 1236765 | 1521744 | 1485476 | 962186 | 885314 | 6091485 |
| 2010-11(Q) | 1461095 | 1749648 | 1755531 | 1170522 | 1020616 | 7157412 |
| 2011-12(A) | 1650396 | 1969883 | 2084171 | 1395853 | 1179672 | 8279975 |

Source : CSO. A : Advance estimates Q : Quick estimates.

Note : For the year prior to 1999-2000 totals under col. 7 may not add up to totals of individual item under col. 2 to col. 6 due to splicing technique applied independently at the level of each industry and at the total level.

## 1.4 : ANNUAL GROWTH RATES OF REAL GROSS DOMESTIC PRODUCT AT FACTOR COST BY INDUSTRY OF ORIGIN

At 2004-05 prices (Per cent)

| Year | Agriculture, forestry & fishing, mining and quarrying | Manufacturing, construction, electricity, gas and water supply | Trade, hotels, transport & communication | Financing, insurance, real estate and business services | Public administration & defence and other services | Gross domestic product at factor cost (2 to 6) |
|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 1951-52 | 1.9 | 4.6 | 2.6 | 2.3 | 3.0 | 2.3 |
| 1952-53 | 3.1 | -0.4 | 3.3 | 4.2 | 2.1 | 2.8 |
| 1953-54 | 7.5 | 6.2 | 3.7 | 1.4 | 3.1 | 6.1 |
| 1954-55 | 3.0 | 8.8 | 6.5 | 3.7 | 3.6 | 4.2 |
| 1955-56 | -0.8 | 11.7 | 7.3 | 4.0 | 3.1 | 2.6 |
| 1956-57 | 5.4 | 9.0 | 7.3 | 1.6 | 3.8 | 5.7 |
| 1957-58 | -4.1 | -1.8 | 3.1 | 3.8 | 4.5 | -1.2 |
| 1958-59 | 9.8 | 7.4 | 5.0 | 2.8 | 4.1 | 7.6 |
| 1959-60 | -0.8 | 7.0 | 6.3 | 3.8 | 4.3 | 2.2 |
| 1960-61 | 7.1 | 10.8 | 8.6 | 2.1 | 4.9 | 7.1 |
| 1961-62 | 0.3 | 6.9 | 6.5 | 4.3 | 4.7 | 3.1 |
| 1962-63 | -1.4 | 6.2 | 5.9 | 3.4 | 7.1 | 2.1 |
| 1963-64 | 2.4 | 10.7 | 7.1 | 3.1 | 6.6 | 5.1 |
| 1964-65 | 8.8 | 7.4 | 6.8 | 2.7 | 6.6 | 7.6 |
| 1965-66 | -9.9 | 3.2 | 1.8 | 3.0 | 4.0 | -3.7 |
| 1966-67 | -1.2 | 3.7 | 2.6 | 1.8 | 4.6 | 1.0 |
| 1967-68 | 14.1 | 3.3 | 4.3 | 2.7 | 3.9 | 8.1 |
| 1968-69 | 0.0 | 5.1 | 4.5 | 4.9 | 4.5 | 2.6 |
| 1969-70 | 6.3 | 7.8 | 5.4 | 4.2 | 5.5 | 6.5 |
| 1970-71 | 6.3 | 1.6 | 4.9 | 4.2 | 5.5 | 5.0 |
| 1971-72 | -1.7 | 2.5 | 2.3 | 5.2 | 4.5 | 1.0 |
| 1972-73 | -4.4 | 3.4 | 2.2 | 3.9 | 3.3 | -0.3 |
| 1973-74 | 6.9 | 0.5 | 4.2 | 2.4 | 2.6 | 4.6 |
| 1974-75 | -1.2 | 1.0 | 6.0 | -0.3 | 4.7 | 1.2 |
| 1975-76 | 12.8 | 6.5 | 9.1 | 6.9 | 3.5 | 9.0 |
| 1976-77 | -5.2 | 9.3 | 4.5 | 7.9 | 2.8 | 1.2 |
| 1977-78 | 9.6 | 7.4 | 6.7 | 4.9 | 2.7 | 7.5 |
| 1978-79 | 2.3 | 7.3 | 8.2 | 7.1 | 4.3 | 5.5 |
| 1979-80 | -11.9 | -3.6 | -0.8 | 1.0 | 7.3 | -5.2 |
| 1980-81 | 12.8 | 4.5 | 5.6 | 1.9 | 5.0 | 7.2 |
| 1981-82 | 5.2 | 7.4 | 6.1 | 8.1 | 2.1 | 5.6 |
| 1982-83 | 0.6 | 0.2 | 5.5 | 9.5 | 7.7 | 2.9 |
| 1983-84 | 9.5 | 8.5 | 5.1 | 9.8 | 3.7 | 7.9 |
| 1984-85 | 1.6 | 4.4 | 4.8 | 7.5 | 6.9 | 4.0 |
| 1985-86 | 0.7 | 4.3 | 8.0 | 9.8 | 5.7 | 4.2 |
| 1986-87 | 0.6 | 4.9 | 6.0 | 10.5 | 7.5 | 4.3 |
| 1987-88 | -1.1 | 5.8 | 5.1 | 7.3 | 7.2 | 3.5 |
| 1988-89 | 15.7 | 8.2 | 6.0 | 9.8 | 6.0 | 10.2 |
| 1989-90 | 1.8 | 8.4 | 7.4 | 12.4 | 7.9 | 6.1 |
| 1990-91 | 4.7 | 6.9 | 5.2 | 6.2 | 4.4 | 5.3 |
| 1991-92 | -1.4 | -0.1 | 2.3 | 10.8 | 2.6 | 1.4 |
| 1992-93 | 6.0 | 3.6 | 5.6 | 5.4 | 6.0 | 5.4 |
| 1993-94 | 3.1 | 6.1 | 6.9 | 11.2 | 4.5 | 5.7 |
| 1994-95 | 5.2 | 9.1 | 9.9 | 3.9 | 2.3 | 6.4 |
| 1995-96 | 0.0 | 12.0 | 13.4 | 8.1 | 7.3 | 7.3 |
| 1996-97 | 8.9 | 7.2 | 8.1 | 6.2 | 8.1 | 8.0 |
| 1997-98 | -1.3 | 3.3 | 7.5 | 11.7 | 8.3 | 4.3 |
| 1998-99 | 5.9 | 4.3 | 7.7 | 7.8 | 9.7 | 6.7 |
| 1999-00 | 2.8 | 6.2 | 11.1 | 8.8 | 13.7 | 7.6 |
| 2000-01 | 0.3 | 6.5 | 6.4 | 4.5 | 4.6 | 4.3 |
| 2001-02 | 5.5 | 2.7 | 8.6 | 7.1 | 4.1 | 5.5 |
| 2002-03 | -4.9 | 7.1 | 8.5 | 7.7 | 3.9 | 4.0 |
| 2003-04 | 8.2 | 7.9 | 11.1 | 5.8 | 5.4 | 8.1 |
| 2004-05 | 1.1 | 10.0 | 9.7 | 8.7 | 4.9 | 7.0 |
| 2005-06 | 4.6 | 10.7 | 12.0 | 12.6 | 7.1 | 9.5 |
| 2006-07 | 4.6 | 12.7 | 11.6 | 14.0 | 2.8 | 9.6 |
| 2007-08 | 5.5 | 10.3 | 10.9 | 12.0 | 6.9 | 9.3 |
| 2008-09 | 0.4 | 4.7 | 7.5 | 12.0 | 12.5 | 6.7 |
| 2009-10 | 1.7 | 8.6 | 10.3 | 9.4 | 12.0 | 8.4 |
| 2010-11(Q) | 6.8 | 7.4 | 11.1 | 10.4 | 4.5 | 8.4 |
| 2011-12(A) | 1.9 | 4.5 | 11.2 | 9.1 | 5.9 | 6.9 |

Source : CSO. [A] : Advance estimates [Q] : Quick estimates.

Note : For the year prior to 1999-2000 totals under col. 7 may not add up to totals of individual item under col. 2 to col. 6 due to splicing technique applied independently at the level of each industry and at the total level.

## 1.5 : GROSS DOMESTIC SAVING AND

(At current prices)

| Year | Gross Domestic Saving | | | | Gross Fixed Capital Formation | | | Change in Stocks |
|---|---|---|---|---|---|---|---|---|
| | House-hold sector | Private corporate sector | Public sector | Total (2+3+4) | Public sector | Private sector | Total (6+7) | Public sector |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 1950-51 | 681 | 93 | 215 | 989 | 264 | 704 | 968 | 26 |
| 1951-52 | 634 | 136 | 309 | 1079 | 304 | 741 | 1045 | 30 |
| 1952-53 | 695 | 64 | 195 | 954 | 324 | 650 | 974 | -18 |
| 1953-54 | 672 | 90 | 181 | 943 | 381 | 587 | 968 | -26 |
| 1954-55 | 774 | 118 | 213 | 1105 | 453 | 659 | 1112 | 45 |
| 1955-56 | 1041 | 134 | 247 | 1422 | 619 | 765 | 1384 | -25 |
| 1956-57 | 1222 | 155 | 318 | 1696 | 721 | 1050 | 1771 | 37 |
| 1957-58 | 1028 | 121 | 336 | 1485 | 752 | 1051 | 1803 | 139 |
| 1958-59 | 986 | 140 | 325 | 1450 | 817 | 965 | 1782 | 83 |
| 1959-60 | 1267 | 185 | 351 | 1803 | 1045 | 958 | 2003 | 12 |
| 1960-61 | 1226 | 281 | 572 | 2079 | 1215 | 1075 | 2290 | 63 |
| 1961-62 | 1237 | 320 | 654 | 2211 | 1269 | 1285 | 2554 | 29 |
| 1962-63 | 1519 | 344 | 750 | 2613 | 1510 | 1332 | 2842 | 97 |
| 1963-64 | 1589 | 394 | 929 | 2912 | 1794 | 1580 | 3374 | 87 |
| 1964-65 | 1897 | 389 | 1072 | 3358 | 2106 | 1866 | 3972 | 90 |
| 1965-66 | 2596 | 405 | 1085 | 4086 | 2348 | 2072 | 4420 | 124 |
| 1966-67 | 3161 | 424 | 941 | 4526 | 2360 | 2506 | 4866 | 64 |
| 1967-68 | 3275 | 410 | 944 | 4629 | 2320 | 3075 | 5395 | 233 |
| 1968-69 | 3277 | 439 | 1165 | 4881 | 2431 | 3241 | 5672 | 41 |
| 1969-70 | 4375 | 549 | 1361 | 6285 | 2525 | 3667 | 6192 | 50 |
| 1970-71 | 4531 | 672 | 1618 | 6821 | 2742 | 3746 | 6488 | 302 |
| 1971-72 | 5229 | 769 | 1689 | 7687 | 3245 | 4234 | 7479 | 356 |
| 1972-73 | 5330 | 806 | 1816 | 7952 | 4185 | 4295 | 8480 | 88 |
| 1973-74 | 8020 | 1083 | 2363 | 11466 | 4631 | 5044 | 9675 | 541 |
| 1974-75 | 8677 | 1465 | 3340 | 13482 | 4948 | 7132 | 12080 | 938 |
| 1975-76 | 9790 | 1083 | 4192 | 15066 | 6401 | 7494 | 13895 | 1447 |
| 1976-77 | 11206 | 1181 | 5195 | 17582 | 8051 | 7495 | 15546 | 1121 |
| 1977-78 | 13679 | 1413 | 5253 | 20345 | 8792 | 9043 | 17835 | 109 |
| 1978-79 | 16482 | 1652 | 5976 | 24110 | 9638 | 10081 | 19719 | 1100 |
| 1979-80 | 16338 | 2398 | 6331 | 25068 | 11532 | 11032 | 22564 | 1346 |
| 1980-81 | 18116 | 2339 | 6135 | 26590 | 13656 | 13159 | 26815 | 71 |
| 1981-82 | 19013 | 2560 | 9120 | 30692 | 17376 | 15274 | 32650 | 2006 |
| 1982-83 | 21972 | 2980 | 10004 | 34956 | 22276 | 16629 | 38905 | 1136 |
| 1983-84 | 26955 | 3254 | 9030 | 39239 | 24225 | 19780 | 44005 | 337 |
| 1984-85 | 32796 | 4040 | 8950 | 45786 | 27823 | 22626 | 50449 | 1676 |
| 1985-86 | 36666 | 5426 | 11322 | 53414 | 32590 | 27050 | 59640 | 1932 |
| 1986-87 | 42111 | 5336 | 11246 | 58693 | 39723 | 29753 | 69476 | 896 |
| 1987-88 | 57304 | 5932 | 10471 | 73707 | 41211 | 39993 | 81204 | -1515 |
| 1988-89 | 67063 | 8486 | 11943 | 87492 | 47566 | 48051 | 95617 | -493 |
| 1989-90 | 82985 | 11845 | 11900 | 106730 | 52517 | 61476 | 113993 | 1690 |
| 1990-91 | 108603 | 15164 | 10641 | 134408 | 60013 | 79650 | 139663 | 1987 |
| 1991-92 | 105632 | 20304 | 17594 | 143530 | 70701 | 81765 | 152466 | -2207 |
| 1992-93 | 127943 | 19968 | 16709 | 164621 | 71197 | 106732 | 177929 | 2657 |
| 1993-94 | 151454 | 29866 | 11674 | 192994 | 79309 | 112147 | 191456 | 1974 |
| 1994-95 | 187142 | 35260 | 24266 | 246668 | 102134 | 126308 | 228442 | -604 |
| 1995-96 | 198585 | 59153 | 31527 | 289265 | 105704 | 189342 | 295046 | -613 |
| 1996-97 | 224653 | 62540 | 31194 | 318387 | 108750 | 219296 | 328046 | 1883 |
| 1997-98 | 284127 | 66080 | 29583 | 379790 | 112814 | 259587 | 372401 | 3553 |
| 1998-99 | 352114 | 69191 | -3146 | 418159 | 128621 | 298448 | 427069 | 2277 |
| 1999-00 | 438851 | 87234 | -9238 | 516847 | 138611 | 346055 | 484666 | 15553 |
| 2000-01 | 463750 | 81062 | -29266 | 515545 | 145973 | 349223 | 495196 | 9326 |
| 2001-02 | 545288 | 76906 | -36820 | 585374 | 160190 | 430050 | 590240 | 9079 |
| 2002-03 | 564161 | 99217 | -7148 | 656230 | 168143 | 432977 | 601120 | -4740 |
| 2003-04 | 657587 | 129816 | 36372 | 823775 | 190806 | 506672 | 697478 | -3076 |
| 2004-05 | 763685 | 212519 | 74499 | 1050703 | 224108 | 706920 | 931028 | 16472 |
| 2005-06 | 868988 | 277208 | 88955 | 1235151 | 271342 | 848950 | 1120292 | 22008 |
| 2006-07 | 994396 | 338584 | 152929 | 1485909 | 339617 | 1004157 | 1343774 | 16939 |
| 2007-08 | 1118347 | 469023 | 248962 | 1836332 | 401326 | 1240347 | 1641673 | 40597 |
| 2008-09 | 1330873 | 417467 | 54280 | 1802620 | 480698 | 1340401 | 1821099 | 51032 |
| 2009-10 | 1639038 | 532136 | 11796 | 2182970 | 543337 | 1498421 | 2041758 | 48285 |
| 2010-11(Q) | 1749311 | 602464 | 130155 | 2481931 | 619923 | 1711459 | 2331382 | 56297 |

Q : Quick estimates.

## GROSS DOMESTIC CAPITAL FORMATION

(₹ crore)

| Change in stocks | | Gross Domestic Capital Formation | | | | | | Gross domestic product at market prices | Year |
|---|---|---|---|---|---|---|---|---|---|
| Private sector | Total (9+10) | Public sector | Private sector | Valuables | Total (12+13+14) | Errors & omissions | Adjusted total | | |
| 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 |
| 140 | 165 | 290 | 844 | na | 1133 | -165 | 968 | 10401 | 1950-51 |
| 143 | 173 | 334 | 884 | na | 1218 | 44 | 1262 | 11054 | 1951-52 |
| 59 | 40 | 306 | 709 | na | 1014 | -95 | 920 | 10850 | 1952-53 |
| -42 | -67 | 355 | 545 | na | 901 | 29 | 930 | 11810 | 1953-54 |
| -9 | 36 | 498 | 650 | na | 1148 | -28 | 1121 | 11170 | 1954-55 |
| 77 | 53 | 594 | 842 | na | 1437 | 24 | 1461 | 11371 | 1955-56 |
| 198 | 235 | 758 | 1248 | na | 2006 | 49 | 2056 | 13547 | 1956-57 |
| 103 | 242 | 891 | 1154 | na | 2045 | -87 | 1958 | 13951 | 1957-58 |
| -81 | 2 | 900 | 884 | na | 1784 | 42 | 1826 | 15551 | 1958-59 |
| 198 | 209 | 1057 | 1156 | na | 2212 | -178 | 2034 | 16384 | 1959-60 |
| 265 | 328 | 1278 | 1340 | na | 2618 | -58 | 2560 | 17942 | 1960-61 |
| 247 | 276 | 1298 | 1532 | na | 2830 | -274 | 2556 | 19010 | 1961-62 |
| 260 | 357 | 1607 | 1592 | na | 3199 | -146 | 3053 | 20429 | 1962-63 |
| 188 | 275 | 1881 | 1768 | na | 3649 | -297 | 3352 | 23462 | 1963-64 |
| 272 | 363 | 2196 | 2138 | na | 4335 | -377 | 3958 | 27367 | 1964-65 |
| 192 | 316 | 2472 | 2264 | na | 4736 | -51 | 4685 | 28857 | 1965-66 |
| 450 | 514 | 2424 | 2956 | na | 5380 | 69 | 5449 | 32669 | 1966-67 |
| 199 | 432 | 2553 | 3274 | na | 5827 | -361 | 5466 | 38261 | 1967-68 |
| 55 | 96 | 2472 | 3296 | na | 5768 | -471 | 5297 | 40512 | 1968-69 |
| 504 | 554 | 2575 | 4171 | na | 6746 | -220 | 6526 | 44605 | 1969-70 |
| 507 | 809 | 3044 | 4253 | na | 7297 | -82 | 7215 | 47638 | 1970-71 |
| 710 | 1066 | 3601 | 4944 | na | 8545 | -380 | 8165 | 50999 | 1971-72 |
| 322 | 411 | 4273 | 4617 | na | 8891 | -641 | 8249 | 56214 | 1972-73 |
| 1097 | 1639 | 5172 | 6141 | na | 11314 | 545 | 11858 | 68420 | 1973-74 |
| 1992 | 2929 | 5886 | 9124 | na | 15009 | -874 | 14135 | 80770 | 1974-75 |
| 676 | 2123 | 7848 | 8170 | na | 16018 | -1070 | 14949 | 86707 | 1975-76 |
| 272 | 1393 | 9172 | 7767 | na | 16939 | -666 | 16273 | 93422 | 1976-77 |
| 1278 | 1387 | 8901 | 10321 | na | 19222 | -341 | 18880 | 105848 | 1977-78 |
| 2118 | 3218 | 10738 | 12199 | na | 22937 | 1301 | 24238 | 114647 | 1978-79 |
| 2445 | 3791 | 12878 | 13477 | na | 26355 | -707 | 25648 | 125729 | 1979-80 |
| 116 | 188 | 13727 | 13275 | na | 27003 | 1682 | 28684 | 149642 | 1980-81 |
| 3747 | 5753 | 19382 | 19021 | na | 38403 | -5100 | 33303 | 175805 | 1981-82 |
| 3315 | 4451 | 23412 | 19944 | na | 43356 | -5833 | 37522 | 196644 | 1982-83 |
| 1450 | 1787 | 24562 | 21230 | na | 45792 | -4037 | 41756 | 229021 | 1983-84 |
| 3144 | 4820 | 29499 | 25770 | na | 55269 | -6191 | 49078 | 256611 | 1984-85 |
| 6383 | 8314 | 34522 | 33433 | na | 67954 | -8306 | 59648 | 289524 | 1985-86 |
| 5636 | 6532 | 40619 | 35389 | na | 76008 | -10960 | 65048 | 323949 | 1986-87 |
| 3534 | 2019 | 39696 | 43527 | na | 83223 | -2691 | 80532 | 368211 | 1987-88 |
| 9036 | 8543 | 47073 | 57087 | na | 104160 | -4364 | 99796 | 436893 | 1988-89 |
| 4324 | 6014 | 54207 | 65800 | na | 120007 | -998 | 119009 | 501928 | 1989-90 |
| 4368 | 6355 | 62000 | 84018 | na | 146018 | 6586 | 152604 | 586212 | 1990-91 |
| 1304 | -903 | 68494 | 83069 | na | 151563 | -4656 | 146907 | 673875 | 1991-92 |
| 7182 | 9839 | 73854 | 113914 | na | 187768 | -9331 | 178437 | 774545 | 1992-93 |
| -3693 | -1719 | 81283 | 108454 | na | 189737 | 8048 | 197785 | 891355 | 1993-94 |
| 14676 | 14072 | 101530 | 140984 | na | 242514 | 16047 | 258561 | 1045590 | 1994-95 |
| 25170 | 24557 | 105091 | 214512 | na | 319603 | -9558 | 310045 | 1226725 | 1995-96 |
| -16873 | -14991 | 110633 | 202423 | na | 313055 | 23069 | 336125 | 1419277 | 1996-97 |
| 9491 | 13044 | 116367 | 269078 | na | 385445 | 16647 | 402092 | 1572394 | 1997-98 |
| -5300 | -3023 | 130898 | 293148 | na | 424046 | 12475 | 436521 | 1803378 | 1998-99 |
| 26944 | 42497 | 154164 | 372999 | 15519 | 542682 | -3848 | 538834 | 2012198 | 1999-00 |
| 5831 | 15158 | 155299 | 355054 | 14724 | 525078 | 3222 | 528299 | 2168652 | 2000-01 |
| -11050 | -1971 | 169269 | 419000 | 14187 | 602456 | -31310 | 571146 | 2348330 | 2001-02 |
| 22940 | 18200 | 163403 | 455917 | 13957 | 633277 | -5534 | 627743 | 2530663 | 2002-03 |
| 23743 | 20667 | 187730 | 530415 | 24572 | 742717 | 19699 | 762416 | 2837900 | 2003-04 |
| 63678 | 80150 | 240580 | 770598 | 41054 | 1052231 | 11809 | 1064041 | 3242209 | 2004-05 |
| 82381 | 104389 | 293350 | 931331 | 41392 | 1266073 | 13680 | 1279754 | 3693369 | 2005-06 |
| 130162 | 147101 | 356556 | 1134319 | 49709 | 1540583 | -9151 | 1531433 | 4294706 | 2006-07 |
| 160937 | 201534 | 441923 | 1401284 | 53592 | 1896799 | 3963 | 1900762 | 4987090 | 2007-08 |
| 55759 | 106791 | 531730 | 1396160 | 72213 | 2000103 | -68723 | 1931380 | 5630063 | 2008-09 |
| 126025 | 174310 | 591622 | 1624446 | 116312 | 2332380 | 31290 | 2363670 | 6457352 | 2009-10 |
| 198673 | 254970 | 676220 | 1910132 | 162837 | 2749189 | -57159 | 2692031 | 7674148 | 2010-11(Q) |

na : Not available.

## 1.6 : GROSS DOMESTIC SAVING AND

(As per cent of GDP

| Year | Gross Domestic Saving | | | | Gross Fixed Capital Formation | | |
|---|---|---|---|---|---|---|---|
| | House-hold sector | Private corporate sector | Public sector | Total (2+3+4) | Public sector | Private sector | Total (6+7) |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| 1950-51 | 6.5 | 0.9 | 2.1 | 9.5 | 2.5 | 6.8 | 9.3 |
| 1951-52 | 5.7 | 1.2 | 2.8 | 9.8 | 2.8 | 6.7 | 9.5 |
| 1952-53 | 6.4 | 0.6 | 1.8 | 8.8 | 3.0 | 6.0 | 9.0 |
| 1953-54 | 5.7 | 0.8 | 1.5 | 8.0 | 3.2 | 5.0 | 8.2 |
| 1954-55 | 6.9 | 1.1 | 1.9 | 9.9 | 4.1 | 5.9 | 10.0 |
| 1955-56 | 9.2 | 1.2 | 2.2 | 12.5 | 5.4 | 6.7 | 12.2 |
| 1956-57 | 9.0 | 1.1 | 2.4 | 12.5 | 5.3 | 7.8 | 13.1 |
| 1957-58 | 7.4 | 0.9 | 2.4 | 10.6 | 5.4 | 7.5 | 12.9 |
| 1958-59 | 6.3 | 0.9 | 2.1 | 9.3 | 5.3 | 6.2 | 11.5 |
| 1959-60 | 7.7 | 1.1 | 2.1 | 11.0 | 6.4 | 5.8 | 12.2 |
| 1960-61 | 6.8 | 1.6 | 3.2 | 11.6 | 6.8 | 6.0 | 12.8 |
| 1961-62 | 6.5 | 1.7 | 3.4 | 11.6 | 6.7 | 6.8 | 13.4 |
| 1962-63 | 7.4 | 1.7 | 3.7 | 12.8 | 7.4 | 6.5 | 13.9 |
| 1963-64 | 6.8 | 1.7 | 4.0 | 12.4 | 7.6 | 6.7 | 14.4 |
| 1964-65 | 6.9 | 1.4 | 3.9 | 12.3 | 7.7 | 6.8 | 14.5 |
| 1965-66 | 9.0 | 1.4 | 3.8 | 14.2 | 8.1 | 7.2 | 15.3 |
| 1966-67 | 9.7 | 1.3 | 2.9 | 13.9 | 7.2 | 7.7 | 14.9 |
| 1967-68 | 8.6 | 1.1 | 2.5 | 12.1 | 6.1 | 8.0 | 14.1 |
| 1968-69 | 8.1 | 1.1 | 2.9 | 12.0 | 6.0 | 8.0 | 14.0 |
| 1969-70 | 9.8 | 1.2 | 3.1 | 14.1 | 5.7 | 8.2 | 13.9 |
| 1970-71 | 9.5 | 1.4 | 3.4 | 14.3 | 5.8 | 7.9 | 13.6 |
| 1971-72 | 10.3 | 1.5 | 3.3 | 15.1 | 6.4 | 8.3 | 14.7 |
| 1972-73 | 9.5 | 1.4 | 3.2 | 14.1 | 7.4 | 7.6 | 15.1 |
| 1973-74 | 11.7 | 1.6 | 3.5 | 16.8 | 6.8 | 7.4 | 14.1 |
| 1974-75 | 10.7 | 1.8 | 4.1 | 16.7 | 6.1 | 8.8 | 15.0 |
| 1975-76 | 11.3 | 1.2 | 4.8 | 17.4 | 7.4 | 8.6 | 16.0 |
| 1976-77 | 12.0 | 1.3 | 5.6 | 18.8 | 8.6 | 8.0 | 16.6 |
| 1977-78 | 12.9 | 1.3 | 5.0 | 19.2 | 8.3 | 8.5 | 16.8 |
| 1978-79 | 14.4 | 1.4 | 5.2 | 21.0 | 8.4 | 8.8 | 17.2 |
| 1979-80 | 13.0 | 1.9 | 5.0 | 19.9 | 9.2 | 8.8 | 17.9 |
| 1980-81 | 12.1 | 1.6 | 4.1 | 17.8 | 9.1 | 8.8 | 17.9 |
| 1981-82 | 10.8 | 1.5 | 5.2 | 17.5 | 9.9 | 8.7 | 18.6 |
| 1982-83 | 11.2 | 1.5 | 5.1 | 17.8 | 11.3 | 8.5 | 19.8 |
| 1983-84 | 11.8 | 1.4 | 3.9 | 17.1 | 10.6 | 8.6 | 19.2 |
| 1984-85 | 12.8 | 1.6 | 3.5 | 17.8 | 10.8 | 8.8 | 19.7 |
| 1985-86 | 12.7 | 1.9 | 3.9 | 18.4 | 11.3 | 9.3 | 20.6 |
| 1986-87 | 13.0 | 1.6 | 3.5 | 18.1 | 12.3 | 9.2 | 21.4 |
| 1987-88 | 15.6 | 1.6 | 2.8 | 20.0 | 11.2 | 10.9 | 22.1 |
| 1988-89 | 15.3 | 1.9 | 2.7 | 20.0 | 10.9 | 11.0 | 21.9 |
| 1989-90 | 16.5 | 2.4 | 2.4 | 21.3 | 10.5 | 12.2 | 22.7 |
| 1990-91 | 18.5 | 2.6 | 1.8 | 22.9 | 10.2 | 13.6 | 23.8 |
| 1991-92 | 15.7 | 3.0 | 2.6 | 21.3 | 10.5 | 12.1 | 22.6 |
| 1992-93 | 16.5 | 2.6 | 2.2 | 21.3 | 9.2 | 13.8 | 23.0 |
| 1993-94 | 17.0 | 3.4 | 1.3 | 21.7 | 8.9 | 12.6 | 21.5 |
| 1994-95 | 17.9 | 3.4 | 2.3 | 23.6 | 9.8 | 12.1 | 21.8 |
| 1995-96 | 16.2 | 4.8 | 2.6 | 23.6 | 8.6 | 15.4 | 24.1 |
| 1996-97 | 15.8 | 4.4 | 2.2 | 22.4 | 7.7 | 15.5 | 23.1 |
| 1997-98 | 18.1 | 4.2 | 1.9 | 24.2 | 7.2 | 16.5 | 23.7 |
| 1998-99 | 19.5 | 3.8 | -0.2 | 23.2 | 7.1 | 16.5 | 23.7 |
| 1999-2000 | 21.8 | 4.3 | -0.5 | 25.7 | 6.9 | 17.2 | 24.1 |
| 2000-01 | 21.4 | 3.7 | -1.3 | 23.8 | 6.7 | 16.1 | 22.8 |
| 2001-02 | 23.2 | 3.3 | -1.6 | 24.9 | 6.8 | 18.3 | 25.1 |
| 2002-03 | 22.3 | 3.9 | -0.3 | 25.9 | 6.6 | 17.1 | 23.8 |
| 2003-04 | 23.2 | 4.6 | 1.3 | 29.0 | 6.7 | 17.9 | 24.6 |
| 2004-05 | 23.6 | 6.6 | 2.3 | 32.4 | 6.9 | 21.8 | 28.7 |
| 2005-06 | 23.5 | 7.5 | 2.4 | 33.4 | 7.3 | 23.0 | 30.3 |
| 2006-07 | 23.2 | 7.9 | 3.6 | 34.6 | 7.9 | 23.4 | 31.3 |
| 2007-08 | 22.4 | 9.4 | 5.0 | 36.8 | 8.0 | 24.9 | 32.9 |
| 2008-09 | 23.6 | 7.4 | 1.0 | 32.0 | 8.5 | 23.8 | 32.3 |
| 2009-10 | 25.4 | 8.2 | 0.2 | 33.8 | 8.4 | 23.2 | 31.6 |
| 2010-11(Q) | 22.8 | 7.9 | 1.7 | 32.3 | 8.1 | 22.3 | 30.4 |

Q : Quick estimates

## GROSS DOMESTIC CAPITAL FORMATION

at current market prices)

| Change in stocks | | | Gross Fixed Capital Formation | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Public sector | Private sector | Total (9+10) | Public sector | Private sector | Valuables | Total (12+13) | Errors & omissions (14+15) | Adjusted Total | Year |
| 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 |
| 0.2 | 1.3 | 1.6 | 2.8 | 8.1 | .... | 10.9 | -1.6 | 9.3 | 1950-51 |
| 0.3 | 1.3 | 1.6 | 3.0 | 8.0 | .... | 11.0 | 0.4 | 11.4 | 1951-52 |
| -0.2 | 0.5 | 0.4 | 2.8 | 6.5 | .... | 9.3 | -0.9 | 8.5 | 1952-53 |
| -0.2 | -0.4 | -0.6 | 3.0 | 4.6 | .... | 7.6 | 0.2 | 7.9 | 1953-54 |
| 0.4 | -0.1 | 0.3 | 4.5 | 5.8 | .... | 10.3 | -0.2 | 10.0 | 1954-55 |
| -0.2 | 0.7 | 0.5 | 5.2 | 7.4 | .... | 12.6 | 0.2 | 12.8 | 1955-56 |
| 0.3 | 1.5 | 1.7 | 5.6 | 9.2 | .... | 14.8 | 0.4 | 15.2 | 1956-57 |
| 1.0 | 0.7 | 1.7 | 6.4 | 8.3 | .... | 14.7 | -0.6 | 14.0 | 1957-58 |
| 0.5 | -0.5 | 0.0 | 5.8 | 5.7 | .... | 11.5 | 0.3 | 11.7 | 1958-59 |
| 0.1 | 1.2 | 1.3 | 6.4 | 7.1 | .... | 13.5 | -1.1 | 12.4 | 1959-60 |
| 0.4 | 1.5 | 1.8 | 7.1 | 7.5 | .... | 14.6 | -0.3 | 14.3 | 1960-61 |
| 0.2 | 1.3 | 1.5 | 6.8 | 8.1 | .... | 14.9 | -1.4 | 13.4 | 1961-62 |
| 0.5 | 1.3 | 1.7 | 7.9 | 7.8 | .... | 15.7 | -0.7 | 14.9 | 1962-63 |
| 0.4 | 0.8 | 1.2 | 8.0 | 7.5 | .... | 15.6 | -1.3 | 14.3 | 1963-64 |
| 0.3 | 1.0 | 1.3 | 8.0 | 7.8 | .... | 15.8 | -1.4 | 14.5 | 1964-65 |
| 0.4 | 0.7 | 1.1 | 8.6 | 7.8 | .... | 16.4 | -0.2 | 16.2 | 1965-66 |
| 0.2 | 1.4 | 1.6 | 7.4 | 9.0 | .... | 16.5 | 0.2 | 16.7 | 1966-67 |
| 0.6 | 0.5 | 1.1 | 6.7 | 8.6 | .... | 15.2 | -0.9 | 14.3 | 1967-68 |
| 0.1 | 0.1 | 0.2 | 6.1 | 8.1 | .... | 14.2 | -1.2 | 13.1 | 1968-69 |
| 0.1 | 1.1 | 1.2 | 5.8 | 9.4 | .... | 15.1 | -0.5 | 14.6 | 1969-70 |
| 0.6 | 1.1 | 1.7 | 6.4 | 8.9 | .... | 15.3 | -0.2 | 15.1 | 1970-71 |
| 0.7 | 1.4 | 2.1 | 7.1 | 9.7 | .... | 16.8 | -0.7 | 16.0 | 1971-72 |
| 0.2 | 0.6 | 0.7 | 7.6 | 8.2 | .... | 15.8 | -1.1 | 14.7 | 1972-73 |
| 0.8 | 1.6 | 2.4 | 7.6 | 9.0 | .... | 16.5 | 0.8 | 17.3 | 1973-74 |
| 1.2 | 2.5 | 3.6 | 7.3 | 11.3 | .... | 18.6 | -1.1 | 17.5 | 1974-75 |
| 1.7 | 0.8 | 2.4 | 9.1 | 9.4 | .... | 18.5 | -1.2 | 17.2 | 1975-76 |
| 1.2 | 0.3 | 1.5 | 9.8 | 8.3 | .... | 18.1 | -0.7 | 17.4 | 1976-77 |
| 0.1 | 1.2 | 1.3 | 8.4 | 9.8 | .... | 18.2 | -0.3 | 17.8 | 1977-78 |
| 1.0 | 1.8 | 2.8 | 9.4 | 10.6 | .... | 20.0 | 1.1 | 21.1 | 1978-79 |
| 1.1 | 1.9 | 3.0 | 10.2 | 10.7 | .... | 21.0 | -0.6 | 20.4 | 1979-80 |
| 0.0 | 0.1 | 0.1 | 9.2 | 8.9 | .... | 18.0 | 1.1 | 19.2 | 1980-81 |
| 1.1 | 2.1 | 3.3 | 11.0 | 10.8 | .... | 21.8 | -2.9 | 18.9 | 1981-82 |
| 0.6 | 1.7 | 2.3 | 11.9 | 10.1 | .... | 22.0 | -3.0 | 19.1 | 1982-83 |
| 0.1 | 0.6 | 0.8 | 10.7 | 9.3 | .... | 20.0 | -1.8 | 18.2 | 1983-84 |
| 0.7 | 1.2 | 1.9 | 11.5 | 10.0 | .... | 21.5 | -2.4 | 19.1 | 1984-85 |
| 0.7 | 2.2 | 2.9 | 11.9 | 11.5 | .... | 23.5 | -2.9 | 20.6 | 1985-86 |
| 0.3 | 1.7 | 2.0 | 12.5 | 10.9 | .... | 23.5 | -3.4 | 20.1 | 1986-87 |
| -0.4 | 1.0 | 0.5 | 10.8 | 11.8 | .... | 22.6 | -0.7 | 21.9 | 1987-88 |
| -0.1 | 2.1 | 2.0 | 10.8 | 13.1 | .... | 23.8 | -1.0 | 22.8 | 1988-89 |
| 0.3 | 0.9 | 1.2 | 10.8 | 13.1 | .... | 23.9 | -0.2 | 23.7 | 1989-90 |
| 0.3 | 0.7 | 1.1 | 10.6 | 14.3 | .... | 24.9 | 1.1 | 26.0 | 1990-91 |
| -0.3 | 0.2 | -0.1 | 10.2 | 12.3 | .... | 22.5 | -0.7 | 21.8 | 1991-92 |
| 0.3 | 0.9 | 1.3 | 9.5 | 14.7 | .... | 24.2 | -1.2 | 23.0 | 1992-93 |
| 0.2 | -0.4 | -0.2 | 9.1 | 12.2 | .... | 21.3 | 0.9 | 22.2 | 1993-94 |
| -0.1 | 1.4 | 1.3 | 9.7 | 13.5 | .... | 23.2 | 1.5 | 24.7 | 1994-95 |
| -0.1 | 2.1 | 2.0 | 8.6 | 17.5 | .... | 26.1 | -0.8 | 25.3 | 1995-96 |
| 0.1 | -1.2 | -1.1 | 7.8 | 14.3 | .... | 22.1 | 1.6 | 23.7 | 1996-97 |
| 0.2 | 0.6 | 0.8 | 7.4 | 17.1 | .... | 24.5 | 1.1 | 25.6 | 1997-98 |
| 0.1 | -0.3 | -0.2 | 7.3 | 16.3 | .... | 23.5 | 0.7 | 24.2 | 1998-99 |
| 0.8 | 1.3 | 2.1 | 7.7 | 18.5 | 0.8 | 27.0 | -0.2 | 26.8 | 1999-2000 |
| 0.4 | 0.3 | 0.7 | 7.2 | 16.4 | 0.7 | 24.2 | 0.1 | 24.4 | 2000-01 |
| 0.4 | -0.5 | -0.1 | 7.2 | 17.8 | 0.6 | 25.7 | -1.3 | 24.3 | 2001-02 |
| -0.2 | 0.9 | 0.7 | 6.5 | 18.0 | 0.6 | 25.0 | -0.2 | 24.8 | 2002-03 |
| -0.1 | 0.8 | 0.7 | 6.6 | 18.7 | 0.9 | 26.2 | 0.7 | 26.9 | 2003-04 |
| 0.5 | 2.0 | 2.5 | 7.4 | 23.8 | 1.3 | 32.5 | 0.4 | 32.8 | 2004-05 |
| 0.6 | 2.2 | 2.8 | 7.9 | 25.2 | 1.1 | 34.3 | 0.4 | 34.7 | 2005-06 |
| 0.4 | 3.0 | 3.4 | 8.3 | 26.4 | 1.2 | 35.9 | -0.2 | 35.7 | 2006-07 |
| 0.8 | 3.2 | 4.0 | 8.9 | 28.1 | 1.1 | 38.0 | 0.1 | 38.1 | 2007-08 |
| 0.9 | 1.0 | 1.9 | 9.4 | 24.8 | 1.3 | 35.5 | -1.2 | 34.3 | 2008-09 |
| 0.7 | 2.0 | 2.7 | 9.2 | 25.2 | 1.8 | 36.1 | 0.5 | 36.6 | 2009-10 |
| 0.7 | 2.6 | 3.3 | 8.8 | 24.9 | 2.1 | 35.8 | -0.7 | 35.1 | 2010-11(Q) |

## 1.7 : NET STATE DOMESTIC PRODUCT AT CURRENT PRICES

| Sl. No. | State\UT | 2004-05 | 2005-06 | 2006-07 | 2007-08 | 2008-09 | 2009-10 | 2010-2011 | 2005-06 | 2006-07 | 2007-08 | 2008-09 | 2009-10 | 2010-11 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | ( ₹ crore) | | | | | | | (% Growth over previous year) | | | | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 |
| 1. | Andhra Pradesh | 201303 | 229367 | 269120 | 325955 | 372916 | 426816 | 510421 | 13.94 | 17.33 | 21.12 | 14.41 | 14.45 | 19.59 |
| 2. | Arunachal Pradesh | 3185 | 3428 | 3751 | 4374 | 5240 | 6276 | na | 7.63 | 9.42 | 16.61 | 19.80 | 19.77 | na |
| 3. | Assam | 47181 | 52440 | 57033 | 62342 | 71763 | 81691 | 92496 | 11.15 | 8.76 | 9.31 | 15.11 | 13.83 | 13.23 |
| 4. | Bihar | 70167 | 75203 | 93911 | 107860 | 138207 | 160213 | 195050 | 7.18 | 24.88 | 14.85 | 28.14 | 15.92 | 21.74 |
| 5. | Jharkhand | 53056 | 53358 | 58512 | 74388 | 75685 | 83744 | 93211 | 0.57 | 9.66 | 27.13 | 1.74 | 10.65 | 11.30 |
| 6. | Goa | 10921 | 12573 | 14337 | 16826 | 19346 | 22283 | na | 15.13 | 14.03 | 17.36 | 14.98 | 15.18 | na |
| 7. | Gujarat | 172265 | 206440 | 240733 | 281579 | 314899 | 370400 | na | 19.84 | 16.61 | 16.97 | 11.83 | 17.63 | na |
| 8. | Haryana | 85928 | 97496 | 117590 | 139400 | 165496 | 195762 | 233310 | 13.46 | 20.61 | 18.55 | 18.72 | 18.29 | 19.18 |
| 9. | Himachal Pradesh | 21189 | 23743 | 26247 | 28873 | 31951 | 35593 | 42062 | 12.05 | 10.55 | 10.00 | 10.66 | 11.40 | 18.17 |
| 10. | Jammu & Kashmir | 22842 | 24814 | 26973 | 29419 | 32157 | 35187 | 38540 | 8.63 | 8.70 | 9.07 | 9.31 | 9.42 | na |
| 11. | Karnataka | 148299 | 174503 | 203756 | 242600 | 275758 | 305039 | 353616 | 17.67 | 16.76 | 19.06 | 13.67 | 10.62 | 15.92 |
| 12. | Kerala | 104776 | 120269 | 135104 | 153981 | 176623 | 202487 | na | 14.79 | 12.33 | 13.97 | 14.70 | 14.64 | na |
| 13. | Madhya Pradesh | 99940 | 109612 | 127663 | 142917 | 164941 | 192333 | na | 9.68 | 16.47 | 11.95 | 15.41 | 16.61 | na |
| 14. | Chhattisgarh | 41387 | 45664 | 57536 | 69348 | 82809 | 93245 | 110243 | 10.33 | 26.00 | 20.53 | 19.41 | 12.60 | 18.23 |
| 15. | Maharashtra | 368369 | 433559 | 524137 | 614071 | 680173 | 817891 | 935222 | 17.70 | 20.89 | 17.16 | 10.76 | 20.25 | 14.35 |
| 16. | Manipur | 4603 | 5138 | 5503 | 6049 | 6614 | 7436 | 8228 | 11.62 | 7.10 | 9.92 | 9.34 | 12.43 | 10.65 |
| 17. | Meghalaya | 5846 | 6461 | 7701 | 8642 | 10352 | 11229 | 12623 | 10.52 | 19.19 | 12.22 | 19.79 | 8.47 | 12.41 |
| 18. | Mizoram | 2400 | 2664 | 2944 | 3411 | 4154 | 5078 | na | 11.00 | 10.51 | 15.86 | 21.78 | 22.24 | na |
| 19. | Nagaland | 5421 | 6116 | 6728 | 7477 | 8622 | na | na | 12.82 | 10.01 | 11.13 | 15.31 | na | na |
| 20. | Odisha | 66614 | 72103 | 85987 | 108874 | 120334 | 134242 | 150868 | 8.24 | 19.26 | 26.62 | 10.53 | 11.56 | 12.39 |
| 21. | Punjab | 86108 | 95750 | 112626 | 135199 | 152918 | 173169 | 195901 | 11.20 | 17.63 | 20.04 | 13.11 | 13.24 | 13.13 |
| 22. | Rajasthan | 112636 | 125333 | 151428 | 172250 | 199457 | 225730 | 269381 | 11.27 | 20.82 | 13.75 | 15.80 | 13.17 | 19.34 |
| 23. | Sikkim | 1511 | 1734 | 1871 | 2140 | 2796 | 4144 | 4943 | 14.76 | 7.90 | 14.38 | 30.65 | 48.21 | 19.28 |
| 24. | Tamil Nadu | 193645 | 228846 | 276711 | 313812 | 359412 | 424724 | 491049 | 18.18 | 20.92 | 13.41 | 14.53 | 18.17 | 15.62 |
| 25. | Tripura | 8170 | 9040 | 9981 | 10808 | 11723 | 12734 | 13854 | 10.65 | 10.41 | 8.29 | 8.47 | 8.62 | 8.80 |
| 26. | Uttar Pradesh | 231037 | 258648 | 296497 | 335829 | 391224 | 458162 | 519328 | 11.95 | 14.63 | 13.27 | 16.50 | 17.11 | 13.35 |
| 27. | Uttarakhand | 22288 | 26952 | 32671 | 40279 | 48632 | 58047 | 67506 | 20.93 | 21.22 | 23.29 | 20.74 | 19.36 | 16.30 |
| 28. | West Bengal | 190029 | 209726 | 238629 | 273557 | 310757 | 364111 | na | 10.37 | 13.78 | 14.64 | 13.60 | 17.17 | na |
| 29. | A & N islands | 1633 | 1848 | 2296 | 2715 | 3169 | 3524 | na | 13.17 | 24.24 | 18.25 | 16.72 | 11.20 | na |
| 30. | Chandigarh | 7610 | 9179 | 11074 | 12327 | 13745 | 15842 | 18253 | 20.62 | 20.64 | 11.31 | 11.50 | 15.26 | 15.22 |
| 31. | Delhi | 94717 | 109127 | 128276 | 149519 | 174740 | 207180 | 247602 | 15.21 | 17.55 | 16.56 | 16.87 | 18.56 | 19.51 |
| 32. | Puducherry | 5033 | 7135 | 7429 | 8179 | 8908 | 10089 | 11512 | 41.76 | 4.12 | 10.10 | 8.91 | 13.26 | 14.10 |
| | **All-India NDP(2004-05 base)** | **2651573** | **3025908** | **3533630** | **4096864** | **4718796** | **5477557** | **6569358** | **14.12** | **16.78** | **15.94** | **15.18** | **16.08** | **19.93** |

Source : For Sl. No. 1-32 — Directorate of Economics & Statistics of respective State Governments (2/8/2011) and for All-India — CSO.

## 1.8 : PER CAPITA NET STATE DOMESTIC PRODUCT AT CURRENT PRICES

| Sl. No. | State\UT | 2004-05 | 2005-06 | 2006-07 | 2007-08 | 2008-09 | 2009-10 | 2010-11 | 2005-06 | 2006-07 | 2007-08 | 2008-09 | 2009-10 | 2010-11 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | ( ₹ ) | | | | | | | (% Growth over previous year) | | | | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 |
| 1. | Andhra Pradesh | 25321 | 28539 | 33135 | 39727 | 45007 | 51025 | 60458 | 12.71 | 16.10 | 19.89 | 13.29 | 13.37 | 18.49 |
| 2. | Arunachal Pradesh | 27719 | 29473 | 31840 | 36697 | 43445 | 51405 | na | 6.33 | 8.03 | 15.26 | 18.39 | 18.32 | na |
| 3. | Assam | 16782 | 18396 | 19737 | 21290 | 24195 | 27197 | 30413 | 9.62 | 7.29 | 7.87 | 13.64 | 12.41 | 11.82 |
| 4. | Bihar | 7914 | 8341 | 10249 | 11589 | 14629 | 16715 | 20069 | 5.40 | 22.87 | 13.07 | 26.23 | 14.26 | 20.07 |
| 5. | Jharkhand | 18510 | 18326 | 19789 | 24789 | 24865 | 27132 | 29786 | -0.99 | 7.98 | 25.27 | 0.31 | 9.12 | 9.78 |
| 6. | Goa | 76426 | 85299 | 94512 | 107311 | 119273 | 132719 | na | 11.61 | 10.80 | 13.54 | 11.15 | 11.27 | na |
| 7. | Gujarat | 32021 | 37780 | 43395 | 50016 | 55140 | 63961 | na | 17.99 | 14.86 | 15.26 | 10.24 | 16.00 | na |
| 8. | Haryana | 37842 | 42133 | 49892 | 58090 | 67757 | 78781 | 92327 | 11.34 | 18.41 | 16.43 | 16.64 | 16.27 | 17.19 |
| 9. | Himachal Pradesh | 32564 | 35850 | 38931 | 42076 | 46019 | 50365 | 58493 | 10.09 | 8.59 | 8.08 | 9.37 | 9.44 | 16.14 |
| 10. | Jammu & Kashmir | 21314 | 22813 | 24443 | 26285 | 28332 | 30582 | 33056 | 7.03 | 7.15 | 7.54 | 7.79 | 7.94 | na |
| 11. | Karnataka | 26804 | 31166 | 35969 | 42345 | 47604 | 52097 | 59763 | 16.27 | 15.41 | 17.72 | 12.42 | 9.44 | 14.71 |
| 12. | Kerala | 31871 | 36276 | 40419 | 45700 | 52012 | 59179 | na | 13.82 | 11.42 | 13.07 | 13.81 | 13.78 | na |
| 13. | Madhya Pradesh | 15442 | 16631 | 19028 | 20935 | 23757 | 27250 | na | 7.70 | 14.41 | 10.03 | 13.48 | 14.70 | na |
| 14. | Chhattisgarh | 18559 | 20117 | 24800 | 29385 | 34360 | 38059 | 44097 | 8.39 | 23.28 | 18.49 | 16.93 | 10.76 | 15.86 |
| 15. | Maharashtra | 35915 | 41624 | 49568 | 57218 | 62454 | 74027 | 83471 | 15.90 | 19.09 | 15.43 | 9.15 | 18.53 | 12.76 |
| 16. | Manipur | 18640 | 20395 | 21419 | 23093 | 24773 | 27332 | 29684 | 9.42 | 5.02 | 7.82 | 7.27 | 10.33 | 8.61 |
| 17. | Meghalaya | 24086 | 26284 | 30952 | 34321 | 40628 | 43555 | 48383 | 9.13 | 17.76 | 10.88 | 18.38 | 7.20 | 11.08 |
| 18. | Mizoram | 24662 | 26698 | 28764 | 32488 | 38582 | 45982 | na | 8.26 | 7.74 | 12.95 | 18.76 | 19.18 | na |
| 19. | Nagaland | 30271 | 33792 | 36568 | 39985 | 45353 | na | na | 11.63 | 8.21 | 9.35 | 13.43 | na | na |
| 20. | Odisha | 17380 | 18618 | 21980 | 27560 | 30121 | 33226 | 36923 | 7.12 | 18.06 | 25.39 | 9.29 | 10.31 | 11.13 |
| 21. | Punjab | 33103 | 36142 | 41740 | 49195 | 54633 | 60746 | 67473 | 9.18 | 15.49 | 17.86 | 11.05 | 11.19 | 11.07 |
| 22. | Rajasthan | 18565 | 20275 | 24055 | 26882 | 30592 | 34042 | 39967 | 9.21 | 18.64 | 11.75 | 13.80 | 11.28 | 17.40 |
| 23. | Sikkim | 26693 | 30256 | 32203 | 36452 | 46989 | 68731 | 81159 | 13.35 | 6.44 | 13.20 | 28.91 | 46.27 | 18.08 |
| 24. | Tamil Nadu | 30062 | 35243 | 42288 | 47606 | 54140 | 63547 | 72993 | 17.24 | 19.99 | 12.58 | 13.73 | 17.38 | 14.86 |
| 25. | Tripura | 24394 | 26668 | 29081 | 31111 | 33350 | 35799 | 38493 | 9.32 | 9.05 | 6.98 | 7.20 | 7.34 | 7.52 |
| 26. | Uttar Pradesh | 12950 | 14222 | 15998 | 17786 | 20342 | 23395 | 26051 | 9.82 | 12.49 | 11.18 | 14.37 | 15.01 | 11.36 |
| 27. | Uttarakhand | 24726 | 29423 | 35111 | 42619 | 50674 | 59584 | 68292 | 19.00 | 19.33 | 21.38 | 18.90 | 17.58 | 14.61 |
| 28. | West Bengal | 22649 | 24720 | 27823 | 31567 | 35513 | 41219 | na | 9.14 | 12.55 | 13.46 | 12.50 | 16.07 | na |
| 29. | A & N islands | 40921 | 44754 | 53778 | 61430 | 69186 | 74340 | na | 9.37 | 20.16 | 14.23 | 12.63 | 7.45 | na |
| 30. | Chandigarh | 74173 | 84993 | 97568 | 102980 | 108486 | 118136 | 128634 | 14.59 | 14.80 | 5.55 | 5.35 | 8.90 | 8.89 |
| 31. | Delhi | 61560 | 68933 | 78741 | 89212 | 101381 | 116886 | 135814 | 11.98 | 14.23 | 13.30 | 13.64 | 15.29 | 16.19 |
| 32. | Puducherry | 48302 | 67205 | 68673 | 74201 | 79306 | 88158 | 98719 | 39.14 | 2.18 | 8.05 | 6.88 | 11.16 | 11.98 |
| | **All-India Per Capita NNI (2004-05 base)** | **24143** | **27123** | **31198** | **35820** | **40605** | **46492** | **54835** | 12.34 | 15.02 | 14.82 | 13.36 | 14.50 | 17.95 |

Source : For Sl. No. 1-32 — Directorate of Economics & Statistics of respective State Governments (2/8/2011) and for All-India — CSO.

## 1.9 : INDEX NUMBERS OF AGRICULTURAL PRODUCTION

(Base : Triennium ending 1981-82 = 100)

| | Weight | 1970-71 | 1980-81 | 1990-91 | 2000-01 | 2005-06 | 2006-07 | 2007-08 | 2008-09 | 2009-10 | 2010-11[a] |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| **A. Foodgrains** | **62.9** | **87.9** | **104.9** | **143.7** | **158.4** | **169.2** | **175.9** | **186.8** | **189.8** | **176.5** | **195.5** |
| **(a) Cereals** | **55.0** | **84.1** | **105.0** | **144.2** | **165.5** | **174.7** | **181.2** | **192.7** | **196.2** | **181.5** | **199.3** |
| Rice | 29.7 | 84.4 | 107.8 | 149.4 | 170.9 | 184.6 | 187.7 | 194.4 | 199.4 | 179.1 | 191.7 |
| Wheat | 14.5 | 67.7 | 103.2 | 156.6 | 198.0 | 197.0 | 215.4 | 223.2 | 229.2 | 229.6 | 244.1 |
| Coarse Cereals | 10.8 | 105.4 | 99.8 | 113.1 | 107.2 | 117.7 | 117.3 | 140.9 | 138.4 | 116.0 | 146.0 |
| **(b) Pulses** | **7.9** | **113.6** | **104.1** | **140.5** | **109.3** | **131.1** | **139.1** | **144.6** | **142.7** | **143.7** | **177.3** |
| Gram | 3.1 | 126.3 | 105.4 | 130.2 | 93.7 | 135.6 | 154.0 | 139.8 | 171.7 | 181.8 | 200.5 |
| **B. Non-foodgrains** | **37.1** | **82.6** | **97.1** | **156.3** | **178.2** | **230.3** | **242.9** | **247.3** | **223.0** | **226.2** | **256.3** |
| (a) Oilseeds Total[b] | 12.6 | 97.1 | 95.1 | 179.5 | 176.5 | 262.9 | 238.7 | 266.1 | 249.8 | 243.5 | 274.6 |
| Groundnut | 5.6 | 101.8 | 83.4 | 125.3 | 106.8 | 133.3 | 81.1 | 153.1 | 119.5 | 90.5 | 125.7 |
| Rapeseed and Mustard | 2.4 | 97.2 | 113.0 | 256.3 | 205.2 | 398.5 | 364.5 | 285.9 | 352.9 | 323.8 | 375.8 |
| **(b) Fibres** | **5.1** | **65.6** | **94.2** | **128.2** | **126.6** | **229.5** | **277.4** | **303.4** | **267.3** | **293.4** | **360.2** |
| Cotton | 4.4 | 63.4 | 93.2 | 130.9 | 126.6 | 246.0 | 300.9 | 344.1 | 296.2 | 319.4 | 444.4 |
| Jute | 0.6 | 76.5 | 100.8 | 122.6 | 144.2 | 154.3 | 159.7 | 158.2 | 149.1 | 173.8 | 154.7 |
| Mesta | 0.1 | 77.3 | 96.7 | 76.7 | 72.5 | 50.9 | 55.9 | 58.0 | 42.8 | 34.4 | 34.4 |
| **(c) Plantation Crops** | **2.3** | **73.2** | **76.0** | **144.9** | **208.8** | **236.3** | **243.3** | **236.1** | **240.7** | **240.0** | **241.1** |
| Tea | 1.5 | 74.7 | 101.6 | 132.3 | 151.0 | 168.7 | 175.1 | 168.4 | 168.4 | 168.4 | 168.4 |
| Coffee | 0.4 | 79.0 | 85.1 | 121.7 | 216.8 | 200.8 | 186.2 | 188.5 | 188.8 | 208.4 | 215.2 |
| Rubber | 0.4 | 60.8 | 101.1 | 217.2 | 416.1 | 529.8 | 563.0 | 544.7 | 570.6 | 548.8 | 548.8 |
| **(d) Others** | | | | | | | | | | | |
| Sugarcane | 8.1 | 81.2 | 98.8 | 154.3 | 189.4 | 179.9 | 227.5 | 222.8 | 182.4 | 187.1 | 217.1 |
| Tobacco | 1.1 | 75.5 | 100.2 | 115.8 | 71.8 | 115.0 | 108.2 | 102.7 | 129.9 | 155.3 | 155.3 |
| Potato | 2.1 | 50.2 | 103.9 | 163.3 | 241.5 | 256.7 | 238.2 | 305.8 | 369.3 | 392.8 | 392.8 |
| **C. ALL COMMODITIES** | **100.0** | **85.9** | **102.1** | **148.4** | **165.7** | **191.9** | **200.7** | **207.1** | **194.1** | **191.4** | **215.3** |

Source : Directorate of Economics and Statistics, Department of Agriculture and Cooperation.

[a] On the basis of Fourth Advance Estimates as on 19.07.2011.

[b] Includes groundnut, rapeseed & mustard, sesamum, linseed, nigerseed, castorseed, safflower, sunflower and soyabean.

## 1.10 : INDEX NUMBERS OF AREA UNDER PRINCIPAL CROPS

(Base : Triennium ending 1981-82 = 100)

| | 1970-71 | 1980-81 | 1990-91 | 2000-01 | 2005-06 | 2006-07 | 2007-08 | 2008-09 | 2009-10 | 2010-11[a] |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
| **A. Foodgrains** | **97.9** | **99.8** | **100.7** | **95.4** | **95.8** | **97.5** | **97.7** | **96.8** | **95.6** | **99.1** |
| **(a) Cereals** | **97.9** | **100.1** | **99.1** | **96.7** | **95.3** | **96.5** | **96.4** | **96.7** | **94.1** | **95.5** |
| Rice | 93.6 | 100.2 | 106.5 | 111.6 | 108.9 | 109.3 | 109.6 | 113.6 | 104.6 | 106.2 |
| Wheat | 82.2 | 100.4 | 108.9 | 116.0 | 119.4 | 126.2 | 126.4 | 125.1 | 128.2 | 131.8 |
| Coarse Cereals | 110.1 | 99.9 | 86.7 | 72.2 | 69.4 | 68.5 | 68.0 | 65.5 | 66.1 | 66.0 |
| **(b) Pulses** | **98.0** | **98.6** | **108.4** | **89.4** | **98.2** | **101.9** | **103.8** | **97.1** | **102.3** | **115.5** |
| Gram | 109.5 | 92.1 | 105.3 | 72.6 | 96.6 | 105.0 | 105.7 | 110.5 | 114.4 | 129.0 |
| **B. Non-foodgrains** | **91.1** | **99.4** | **120.0** | **127.0** | **140.9** | **143.0** | **145.3** | **148.7** | **143.4** | **150.1** |
| **(a) Oilseeds Total[b]** | **94.2** | **98.5** | **122.9** | **123.2** | **143.1** | **139.8** | **141.3** | **144.5** | **141.2** | **148.2** |
| Groundnut | 102.8 | 95.4 | 116.6 | 92.0 | 94.5 | 78.8 | 88.3 | 86.5 | 76.9 | 83.5 |
| Rapeseed and Mustard | 84.8 | 102.2 | 143.7 | 111.3 | 180.9 | 168.8 | 144.8 | 156.5 | 138.9 | 161.7 |
| **(b) Fibres** | **94.6** | **98.8** | **91.1** | **102.7** | **102.7** | **108.1** | **111.2** | **110.4** | **118.2** | **128.5** |
| Cotton | 95.1 | 97.7 | 92.9 | 106.6 | 108.4 | 114.2 | 117.6 | 117.5 | 126.5 | 139.2 |
| Jute | 86.4 | 108.5 | 89.7 | 95.5 | 87.7 | 91.5 | 93.9 | 90.6 | 93.6 | 88.6 |
| Mesta | 93.1 | 101.1 | 67.1 | 53.3 | 38.8 | 40.0 | 41.1 | 32.4 | 26.5 | 26.3 |
| **(c) Plantation Crops** | **79.8** | **100.5** | **122.5** | **160.0** | **171.4** | **174.1** | **203.6** | **207.8** | **211.6** | **211.6** |
| Tea | 93.2 | 100.5 | 110.3 | 132.8 | 146.3 | 149.5 | 149.5 | 149.5 | 149.5 | 149.5 |
| Coffee | 64.8 | 100.6 | 111.1 | 165.9 | 161.4 | 162.2 | 185.7 | 188.7 | 191.2 | 191.3 |
| Rubber | 73.0 | 100.4 | 158.2 | 206.5 | 230.8 | 234.4 | 328.1 | 341.8 | 354.5 | 354.5 |
| **(d) Others** | | | | | | | | | | |
| Sugarcane | 91.5 | 94.4 | 130.4 | 152.7 | 148.7 | 182.3 | 178.9 | 156.2 | 147.7 | 175.0 |
| Tobacco | 101.5 | 102.5 | 93.3 | 59.4 | 84.7 | 83.7 | 79.1 | 88.8 | 100.9 | 100.9 |
| Potato | 62.2 | 100.6 | 128.6 | 168.0 | 192.6 | 204.0 | 213.5 | 251.3 | 252.3 | 252.3 |
| **C. ALL COMMODITIES** | **96.3** | **99.7** | **105.2** | **102.7** | **106.2** | **108.0** | **108.8** | **108.8** | **106.7** | **110.9** |

Source : Directorate of Economics and Statistics, Department of Agriculture and Cooperation.

[a] On the basis of Fourth Advance Estimates as on 19.07.2011.

[b] Includes groundnut, rapeseed & mustard, sesamum, linseed, nigerseed, castorseed, safflower, sunflower and soyabean.

## 1.11 : INDEX NUMBERS OF YIELD OF PRINCIPAL CROPS

(Base : Triennium ending 1981-82 = 100)

| | 1970-71 | 1980-81 | 1990-91 | 2000-01 | 2005-06 | 2006-07 | 2007-08 | 2008-09 | 2009-10 | 2010-11[a] |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
| **A. Foodgrains** | **93.2** | **105.1** | **137.8** | **152.8** | **176.7** | **180.4** | **191.1** | **196.1** | **184.7** | **197.4** |
| **(a) Cereals** | **89.9** | **104.9** | **139.3** | **156.8** | **183.4** | **187.7** | **199.8** | **202.8** | **192.8** | **208.8** |
| Rice | 90.2 | 107.7 | 140.2 | 153.2 | 169.4 | 171.7 | 177.4 | 175.5 | 171.3 | 180.5 |
| Wheat | 82.4 | 102.8 | 143.8 | 170.7 | 165.1 | 170.7 | 176.7 | 183.3 | 179.0 | 185.2 |
| Coarse Cereals | 97.0 | 100.2 | 128.8 | 142.8 | 169.7 | 171.2 | 207.2 | 211.3 | 175.6 | 221.3 |
| **(b) Pulses** | **114.4** | **106.6** | **128.1** | **120.4** | **133.5** | **136.5** | **139.3** | **147.0** | **140.4** | **153.5** |
| Gram | 115.3 | 114.3 | 123.6 | 129.1 | 140.3 | 146.7 | 132.3 | 155.3 | 158.9 | 155.5 |
| **B. Non-foodgrains** | **91.4** | **99.2** | **128.0** | **133.3** | **163.5** | **169.9** | **170.2** | **150.0** | **157.8** | **170.7** |
| **(a) Oilseeds Total [b]** | **102.2** | **96.8** | **132.1** | **134.3** | **183.7** | **170.8** | **188.3** | **172.9** | **172.4** | **185.3** |
| Groundnut | 99.0 | 87.5 | 107.4 | 116.1 | 141.0 | 102.9 | 173.4 | 138.1 | 117.7 | 150.6 |
| Rapeseed and Mustard | 114.7 | 110.6 | 178.3 | 184.4 | 220.3 | 216.0 | 197.4 | 225.4 | 233.2 | 232.4 |
| **(b) Fibres** | **69.5** | **95.1** | **139.9** | **122.2** | **223.6** | **256.7** | **272.9** | **242.1** | **248.2** | **280.3** |
| Cotton | 66.7 | 95.4 | 140.8 | 118.8 | 226.9 | 263.5 | 292.7 | 252.1 | 252.4 | 319.3 |
| Jute | 88.6 | 92.9 | 136.6 | 151.0 | 176.1 | 174.6 | 168.4 | 164.6 | 185.8 | 174.7 |
| Mesta | 83.1 | 95.6 | 114.3 | 136.0 | 131.3 | 139.9 | 141.0 | 131.9 | 129.7 | 130.6 |
| **(c) Plantation Crops** | **86.8** | **97.9** | **122.2** | **137.6** | **137.9** | **139.7** | **116.0** | **115.8** | **113.4** | **113.9** |
| Tea | 80.2 | 101.1 | 119.9 | 113.7 | 115.3 | 117.1 | 112.7 | 112.7 | 112.7 | 112.7 |
| Coffee | 122.0 | 84.6 | 110.2 | 130.7 | 124.4 | 114.7 | 101.5 | 100.0 | 109.0 | 112.5 |
| Rubber | 83.2 | 100.7 | 137.5 | 201.5 | 229.5 | 240.1 | 166.0 | 166.9 | 154.8 | 154.8 |
| **(d) Others** | | | | | | | | | | |
| Sugarcane | 88.8 | 104.6 | 118.3 | 124.0 | 121.0 | 124.8 | 124.6 | 116.8 | 126.6 | 124.1 |
| Tobacco | 74.4 | 97.7 | 124.0 | 120.8 | 135.8 | 129.2 | 129.9 | 146.4 | 153.8 | 153.8 |
| Potato | 80.7 | 103.4 | 127.0 | 143.8 | 133.3 | 116.7 | 143.2 | 147.0 | 155.7 | 155.7 |
| **C. ALL COMMODITIES** | **92.6** | **102.9** | **133.8** | **144.3** | **180.6** | **185.8** | **190.4** | **178.4** | **179.4** | **194.1** |

Source : Directorate of Economics and Statistics, Department of Agriculture and Cooperation.

[a] On the basis of Fourth Advance Estimates as on 19.07.2011.

[b] Includes groundnut, rapeseed & mustard, sesamum, linseed, nigerseed, castorseed, safflower, sunflower and soyabean.

## 1.12 : PRODUCTION OF MAJOR CROPS

(Tonnes)

| Group/Commodity | Unit | 1970-71 | 1980-81 | 1990-91 | 2000-01 | 2006-07 | 2007-08 | 2008-09 | 2009-10 | 2010-11[a] |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
| **Foodgrains** | Million | 108.4 | 129.6 | 176.4 | 196.8 | 217.3 | 230.8 | 234.4 | 218.1 | 241.6 |
| Kharif | Million | 68.9 | 77.7 | 99.4 | 102.1 | 110.6 | 121.0 | 118.1 | 104.0 | 120.2 |
| Rabi | Million | 39.5 | 51.9 | 77.0 | 94.7 | 106.7 | 109.8 | 116.3 | 114.1 | 121.4 |
| **Cereals** | Million | 96.6 | 119.0 | 162.1 | 185.7 | 203.1 | 216.0 | 219.9 | 203.4 | 223.5 |
| Kharif | Million | 65.0 | 73.9 | 94.0 | 97.6 | 105.8 | 114.6 | 113.5 | 99.7 | 113.1 |
| Rabi | Million | 31.6 | 45.1 | 68.1 | 88.1 | 97.3 | 101.5 | 106.4 | 103.7 | 110.4 |
| **Pulses** | Million | 11.8 | 10.6 | 14.3 | 11.0 | 14.2 | 14.8 | 14.6 | 14.7 | 18.1 |
| Kharif | Million | 3.9 | 3.8 | 5.4 | 4.4 | 4.8 | 6.4 | 4.7 | 4.2 | 7.1 |
| Rabi | Million | 7.9 | 6.8 | 8.9 | 6.6 | 9.4 | 8.4 | 9.9 | 10.5 | 11.0 |
| **Rice** | Million | 42.2 | 53.6 | 74.3 | 85.0 | 93.4 | 96.7 | 99.2 | 89.1 | 95.3 |
| Kharif | Million | 39.5 | 50.1 | 66.3 | 72.8 | 80.2 | 82.7 | 84.9 | 75.9 | 80.7 |
| Rabi | Million | 2.7 | 3.5 | 8.0 | 12.2 | 13.2 | 14.0 | 14.3 | 13.2 | 14.6 |
| **Wheat** | Million | 23.8 | 36.3 | 55.1 | 69.7 | 75.8 | 78.6 | 80.7 | 80.8 | 85.9 |
| Jowar | Million | 8.1 | 10.4 | 11.7 | 7.5 | 7.2 | 7.9 | 7.2 | 6.7 | 6.7 |
| Kharif | Million | 5.8 | 7.5 | 8.3 | 4.5 | 3.7 | 4.1 | 3.1 | 2.8 | 3.5 |
| Rabi | Million | 2.3 | 2.9 | 3.4 | 3.0 | 3.4 | 3.8 | 4.1 | 3.9 | 3.2 |
| Maize | Million | 7.5 | 7.0 | 9.0 | 12.0 | 15.1 | 19.0 | 19.7 | 16.7 | 21.3 |
| Bajra | Million | 8.0 | 5.3 | 6.9 | 6.8 | 8.4 | 10.0 | 8.9 | 6.5 | 10.1 |
| Gram | Million | 5.2 | 4.3 | 5.4 | 3.9 | 6.3 | 5.8 | 7.1 | 7.5 | 8.2 |
| Tur | Million | 1.9 | 2.0 | 2.4 | 2.2 | 2.3 | 3.1 | 2.3 | 2.5 | 2.9 |
| **Oilseeds[b]** | Million | 9.6 | 9.4 | 18.6 | 18.4 | 24.3 | 29.8 | 27.7 | 24.9 | 31.1 |
| Kharif | Million | 7.0 | 5.0 | 9.8 | 11.9 | 14.0 | 20.7 | 17.8 | 15.7 | 20.8 |
| Rabi | Million | 2.6 | 4.4 | 8.8 | 6.5 | 10.3 | 9.0 | 9.9 | 9.2 | 10.3 |
| **Groundnut** | Million | 6.1 | 5.0 | 7.5 | 6.4 | 4.9 | 9.2 | 7.2 | 5.4 | 7.5 |
| Kharif | Million | na | 3.7 | 5.1 | 4.9 | 3.3 | 7.4 | 5.6 | 3.8 | 5.7 |
| Rabi | Million | na | 1.3 | 2.4 | 1.5 | 1.6 | 1.8 | 1.6 | 1.6 | 1.8 |
| **Rapeseed and Mustard** | Million | 2.0 | 2.3 | 5.2 | 4.2 | 7.4 | 5.8 | 7.2 | 6.6 | 7.7 |
| **Sugarcane** | Million | 126.4 | 154.2 | 241.0 | 296.0 | 355.5 | 348.2 | 285.0 | 292.3 | 339.2 |
| **Cotton[c]** | Million | 4.8 | 7.0 | 9.8 | 9.5 | 22.6 | 25.9 | 22.3 | 24.0 | 33.4 |
| **Jute and Mesta[d]** | Million | 6.2 | 8.2 | 9.2 | 10.5 | 11.3 | 11.2 | 10.3 | 11.8 | 10.6 |
| Jute[d] | Million | 4.9 | 6.5 | 7.9 | 9.3 | 10.3 | 10.2 | 9.6 | 11.2 | 10.0 |
| Mesta[d] | Million | 1.3 | 1.7 | 1.3 | 1.2 | 1.0 | 1.0 | 0.7 | 0.6 | 0.6 |
| **Plantation Crops** | | | | | | | | | | |
| Tea[e] | Million | 0.4 | 0.6 | 0.7 | 0.8 | 1.0 | 0.9 | 0.9 | 0.9 | 0.9 |
| Coffee | Million | 0.1 | 0.1 | 0.2 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 |
| Rubber | Million | 0.1 | 0.2 | 0.3 | 0.6 | 0.9 | 0.8 | 0.9 | 0.8 | 0.8 |
| Potato | Million | 4.8 | 9.7 | 15.2 | 22.5 | 22.2 | 28.5 | 34.4 | 36.6 | 36.6 |

Sources : Directorate of Economics and Statistics, Department of Agriculture and Cooperation, Tea Board, Coffee Board, Rubber Board.

[a] Fourth Advance Estimates as on 19.07.2011.
[b] Includes groundnut, rapeseed & mustard, sesamum, linseed, castorseed, nigerseed, safflower, sunflower and soyabean.
[c] Bales of 170 Kgs.
[d] Bales of 180 Kgs.
[e] Calender Year.
na : Not Available.

## 1.13 : GROSS AREA UNDER MAJOR CROPS

(Million hectares)

| Group/Commodity | 1970-71 | 1980-81 | 1990-91 | 2000-01 | 2005-06 | 2006-07 | 2007-08 | 2008-09 | 2009-10 | 2010-11[a] |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
| Foodgrains | 124.3 | 126.7 | 127.8 | 121.0 | 121.6 | 123.7 | 124.1 | 122.8 | 121.3 | 125.7 |
| Kharif | 82.3 | 83.2 | 80.8 | 75.2 | 72.7 | 72.7 | 73.6 | 71.4 | 69.5 | 72.1 |
| Rabi | 42.0 | 43.5 | 47.0 | 45.8 | 48.9 | 51.0 | 50.5 | 51.4 | 51.8 | 53.6 |
| Cereals | 101.8 | 104.2 | 103.2 | 100.7 | 99.2 | 100.5 | 100.4 | 100.7 | 98.0 | 99.4 |
| Kharif | 72.9 | 72.8 | 69.3 | 64.6 | 62.0 | 62.0 | 62.1 | 61.6 | 58.9 | 59.7 |
| Rabi | 28.9 | 31.4 | 33.9 | 36.1 | 37.2 | 38.5 | 38.4 | 39.1 | 39.1 | 39.7 |
| Pulses | 22.6 | 22.5 | 24.7 | 20.3 | 22.4 | 23.2 | 23.6 | 22.1 | 23.3 | 26.3 |
| Kharif | 9.5 | 10.4 | 11.5 | 10.6 | 10.7 | 10.7 | 11.5 | 9.8 | 10.6 | 12.4 |
| Rabi | 13.1 | 12.1 | 13.2 | 9.7 | 11.7 | 12.5 | 12.1 | 12.3 | 12.7 | 13.9 |
| Rice | 37.6 | 40.1 | 42.7 | 44.7 | 43.7 | 43.8 | 43.9 | 45.5 | 41.9 | 42.6 |
| Kharif | 36.0 | 38.4 | 39.7 | 40.7 | 39.3 | 39.6 | 39.5 | 40.8 | 37.6 | 38.0 |
| Rabi | 1.6 | 1.7 | 3.0 | 4.0 | 4.3 | 4.2 | 4.5 | 4.7 | 4.3 | 4.6 |
| Wheat | 18.2 | 22.3 | 24.2 | 25.7 | 26.5 | 28.0 | 28.0 | 27.8 | 28.5 | 29.2 |
| Jowar | 17.4 | 15.8 | 14.4 | 9.9 | 8.7 | 8.5 | 7.8 | 7.5 | 7.7 | 7.1 |
| Kharif | 10.9 | 10.2 | 8.6 | 4.9 | 3.8 | 3.7 | 3.5 | 2.9 | 3.2 | 3.1 |
| Rabi | 6.5 | 5.6 | 5.8 | 5.0 | 4.9 | 4.8 | 4.3 | 4.6 | 4.5 | 4.0 |
| Maize | 5.8 | 6.0 | 5.9 | 6.6 | 7.6 | 7.9 | 8.1 | 8.2 | 8.3 | 8.5 |
| Bajra | 12.9 | 11.7 | 10.5 | 9.8 | 9.6 | 9.5 | 9.6 | 8.8 | 8.9 | 9.4 |
| Gram | 7.8 | 6.6 | 7.5 | 5.2 | 6.9 | 7.5 | 7.5 | 7.9 | 8.2 | 9.2 |
| Tur | 2.7 | 2.8 | 3.6 | 3.6 | 3.6 | 3.6 | 3.7 | 3.4 | 3.5 | 4.4 |
| Oilseeds [b] | 16.6 | 17.6 | 24.1 | 22.8 | 27.9 | 26.5 | 26.7 | 27.5 | 26.0 | 26.8 |
| Kharif | 10.8 | 10.2 | 14.0 | 15.8 | 17.4 | 16.8 | 17.9 | 18.5 | 18.0 | 18.2 |
| Rabi | 5.8 | 7.4 | 10.1 | 7.0 | 10.5 | 9.7 | 8.8 | 9.0 | 8.0 | 8.6 |
| Groundnut | 7.3 | 6.8 | 8.3 | 6.6 | 6.7 | 5.6 | 6.3 | 6.2 | 5.5 | 6.0 |
| Kharif | na | 5.9 | 6.8 | 5.7 | 5.7 | 4.8 | 5.3 | 5.3 | 4.6 | 5.0 |
| Rabi | na | 0.9 | 1.5 | 0.9 | 1.0 | 0.8 | 1.0 | 0.9 | 0.9 | 1.0 |
| Rapeseed and Mustard | 3.3 | 4.1 | 5.8 | 4.5 | 7.3 | 6.8 | 5.8 | 6.3 | 5.6 | 6.5 |
| Sugarcane | 2.6 | 2.7 | 3.7 | 4.3 | 4.2 | 5.2 | 5.1 | 4.4 | 4.2 | 4.9 |
| Cotton | 7.6 | 7.8 | 7.4 | 8.6 | 8.7 | 9.1 | 9.4 | 9.4 | 10.1 | 11.1 |
| Jute and Mesta | 1.1 | 1.3 | 1.0 | 1.0 | 0.9 | 0.9 | 1.0 | 0.9 | 0.9 | 0.9 |
| Jute | 0.8 | 0.9 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 |
| Mesta | 0.3 | 0.4 | 0.2 | 0.2 | 0.1 | 0.1 | 0.2 | 0.1 | 0.1 | 0.1 |
| Plantation crops | | | | | | | | | | |
| Tea (Total area) [c] | 0.4 | 0.4 | 0.4 | 0.5 | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 |
| Coffee (Plucked area) | 0.1 | 0.2 | 0.3 | 0.3 | 0.3 | 0.3 | 0.4 | 0.4 | 0.4 | 0.4 |
| Rubber (Trapped area) | 0.2 | 0.3 | 0.5 | 0.6 | 0.4 | 0.5 | 0.6 | 0.7 | 0.7 | 0.7 |
| Potato | 0.5 | 0.7 | 0.9 | 1.2 | 1.4 | 1.5 | 1.6 | 1.8 | 1.8 | 1.8 |

Source : Directorate of Economics and Statistics, Department of Agriculture and Cooperation.

[a] Fourth Advance Estimates as on 19.07.2011.

[b] Includes groundnut, rapeseed & mustard, sesamum, linseed, castorseed, nigerseed, safflower, sunflower and soyabean.

[c] Calender Year.

na : Not available.

## 1.14 : YIELD PER HECTARE OF MAJOR CROPS

(Kg. / hectare)

| Group/Commodity | 1970-71 | 1980-81 | 1990-91 | 2000-01 | 2005-06 | 2006-07 | 2007-08 | 2008-09 | 2009-10 | 2010-11[a] |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
| Foodgrains | 872 | 1023 | 1380 | 1626 | 1715 | 1756.0 | 1860.0 | 1909.0 | 1798.0 | 1921.0 |
| Kharif | 837 | 933 | 1231 | 1357 | 1511 | 1522.0 | 1644.0 | 1654.1 | 1496.0 | 1667.0 |
| Rabi | 942 | 1195 | 1635 | 2067 | 2020 | 2091.0 | 2174.0 | 2262.6 | 2202.0 | 2264.0 |
| Cereals | 949 | 1142 | 1571 | 1844 | 1968 | 2020.0 | 2151.0 | 2183.0 | 2075.0 | 2247.0 |
| Kharif | 892 | 1015 | 1357 | 1512 | 1693 | 1706.0 | 1846.0 | 1841.0 | 1693.0 | 1894.0 |
| Rabi | 1093 | 1434 | 2010 | 2438 | 2427 | 2526.0 | 2645.0 | 2721.2 | 2649.0 | 2777.0 |
| Pulses | 524 | 473 | 578 | 544 | 598 | 612.0 | 625.0 | 659.0 | 630.0 | 689.0 |
| Kharif | 410 | 361 | 471 | 417 | 456 | 449.0 | 557.0 | 478.0 | 397.0 | 573.0 |
| Rabi | 607 | 571 | 672 | 604 | 727 | 751.0 | 688.0 | 804.0 | 823.0 | 792.0 |
| Rice | 1123 | 1336 | 1740 | 1901 | 2102 | 2131.0 | 2202.0 | 2178.0 | 2125.0 | 2240.0 |
| Kharif | 1100 | 1303 | 1670 | 1788 | 1990 | 2024.0 | 2095.0 | 2080.9 | 2019.0 | 2125.0 |
| Rabi | 1625 | 2071 | 2671 | 3042 | 3127 | 3130.0 | 3147.0 | 3009.0 | 3053.0 | 3188.0 |
| Wheat | 1307 | 1630 | 2281 | 2708 | 2619 | 2708.0 | 2802.0 | 2907.0 | 2839.0 | 2938.0 |
| Jowar | 466 | 660 | 814 | 764 | 880 | 844.0 | 1021.0 | 962.0 | 860.0 | 956.0 |
| Kharif | 533 | 737 | 969 | 938 | 1082 | 992.0 | 1176.0 | 1055.0 | 853.0 | 1129.0 |
| Rabi | 354 | 520 | 582 | 594 | 726 | 727.0 | 894.0 | 904.0 | 865.0 | 821.0 |
| Maize | 1279 | 1159 | 1518 | 1822 | 1938 | 1912.0 | 2335.0 | 2414.0 | 2024.0 | 2507.0 |
| Bajra | 622 | 458 | 658 | 688 | 802 | 886.0 | 1042.0 | 1015.0 | 731.0 | 1069.0 |
| Gram | 663 | 657 | 712 | 744 | 808 | 845.0 | 762.0 | 895.0 | 915.0 | 896.0 |
| Tur | 709 | 689 | 673 | 618 | 765 | 650.0 | 826.0 | 671.0 | 711.0 | 655.0 |
| Oilseeds[b] | 579 | 532 | 771 | 810 | 1004 | 916.0 | 1115.0 | 1007.0 | 958.0 | 1159.0 |
| Kharif | 649 | 492 | 698 | 757 | 965 | 836.0 | 1154.0 | 961.0 | 875.0 | 1146.0 |
| Rabi | 449 | 588 | 872 | 929 | 1068 | 1055.0 | 1034.0 | 1097.0 | 1146.0 | 1188.0 |
| Groundnut | 834 | 736 | 904 | 977 | 1187 | 866.0 | 1459.0 | 1163.0 | 991.0 | 1268.0 |
| Kharif | na | 629 | 751 | 861 | 1097 | 689.0 | 1386.0 | 1063.0 | 835.0 | 1139.0 |
| Rabi | na | 1444 | 1611 | 1756 | 1702 | 1880.0 | 1857.0 | 1764.0 | 1830.0 | 1921.0 |
| Rapeseed and Mustard | 594 | 560 | 904 | 935 | 1117 | 1095.0 | 1001.0 | 1142.9 | 1183.0 | 1179.0 |
| Sugarcane (tonnes/hect.) | 48 | 58 | 65 | 69 | 67 | 69.0 | 69.0 | 65.0 | 70.0 | 69.0 |
| Cotton | 106 | 152 | 225 | 190 | 362 | 421.0 | 467.0 | 403.3 | 403.0 | 510.0 |
| Jute and Mesta | 1032 | 1130 | 1634 | 1867 | 2173 | 2170.0 | 2101.0 | 2071.0 | 2349.0 | 2212.0 |
| Jute | 1186 | 1245 | 1833 | 2026 | 2362 | 2342.0 | 2260.0 | 2207.0 | 2492.0 | 2344.0 |
| Mesta | 684 | 828 | 988 | 1078 | 1136 | 1210.0 | 1219.0 | 1141.0 | 1121.0 | 1129.0 |
| Plantation Crops | | | | | | | | | | |
| Tea[c] | 1182 | 1491 | 1794 | 1673 | 1500 | 1666.7 | 1500.0 | 1500.0 | 1500.0 | 1500.0 |
| Coffee[c] | 814 | 624 | 759 | 959 | 1000 | 1000.0 | 750.0 | 750.0 | 750.0 | 750.0 |
| Rubber[c] | 653 | 788 | 1076 | 1576 | 2000 | 1800.0 | 1333.3 | 1285.7 | 1142.9 | 1142.9 |
| Potato (tonnes/hect.) | 10 | 13 | 16 | 18 | 17 | 15.0 | 18.0 | 19.1 | 20.3 | 20.3 |

Source : Directorate of Economics and Statistics, Department of Agriculture and Cooperation.

a Fourth Advance Estimates as on 19.07.2011.

b Includes groundnut, rapeseed & mustard, sesamum, linseed, castorseed, nigerseed, safflower, sunflower and soyabean.

c Calender Year.

na : Not available.

## 1.15 : PRODUCTION OF IMPORTANT CROPS IN THREE LARGEST PRODUCING STATES IN 2009-10

(Million tonnes)

| Crops/Groups of Crops | States | Production | Per cent Share to All India | Cumulative per cent Share of Production |
|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 |
| I. Foodgrains | | | | |
| Rice | West Bengal | 14.34 | 16.10 | 16.10 |
| | Punjab | 11.24 | 12.62 | 28.71 |
| | Uttar Pradesh | 10.81 | 12.13 | 40.85 |
| Wheat | Uttar Pradesh | 27.52 | 34.06 | 34.06 |
| | Punjab | 15.17 | 18.77 | 52.83 |
| | Haryana | 10.50 | 13.00 | 65.83 |
| Maize | Karnataka | 3.01 | 18.00 | 18.00 |
| | Andhra Pradesh | 2.76 | 16.51 | 34.51 |
| | Maharashtra | 1.83 | 10.94 | 45.45 |
| Total Coarse Cereals | Maharashtra | 6.29 | 18.75 | 18.75 |
| | Karnataka | 5.90 | 17.59 | 36.33 |
| | Rajasthan | 3.91 | 11.65 | 47.99 |
| Total Pulses | Madhya Pradesh | 4.30 | 29.33 | 29.33 |
| | Maharashtra | 2.37 | 16.17 | 45.50 |
| | Uttar Pradesh | 1.90 | 12.96 | 58.46 |
| Total Foodgrains | Uttar Pradesh | 43.20 | 19.81 | 19.81 |
| | Punjab | 26.95 | 12.36 | 32.16 |
| | Madhya Pradesh | 16.02 | 7.34 | 39.51 |
| II. Oilseeds | | | | |
| Groundnut | Gujarat | 1.76 | 32.41 | 32.41 |
| | Andhra Pradesh | 1.01 | 18.60 | 51.01 |
| | Tamil Nadu | 0.89 | 16.39 | 67.40 |
| Rapeseed & Mustard | Rajasthan | 2.95 | 44.63 | 44.63 |
| | Haryana | 0.85 | 12.86 | 57.49 |
| | Madhya Pradesh | 0.85 | 12.86 | 70.35 |
| Soyabean | Madhya Pradesh | 6.41 | 64.29 | 64.29 |
| | Maharashtra | 2.20 | 22.07 | 86.36 |
| | Rajasthan | 0.91 | 9.13 | 95.49 |
| Sunflower | Karnataka | 0.30 | 35.29 | 35.29 |
| | Andhra Pradesh | 0.27 | 31.76 | 67.06 |
| | Maharashtra | 0.11 | 12.94 | 80.00 |
| Total Oilseeds | Madhya Pradesh | 7.64 | 30.71 | 30.71 |
| | Rajasthan | 4.41 | 17.73 | 48.43 |
| | Gujarat | 3.10 | 12.46 | 60.89 |
| III. Other Cash Crops | | | | |
| Sugarcane | Uttar Pradesh | 117.14 | 40.08 | 40.08 |
| | Maharashtra | 64.16 | 21.95 | 62.03 |
| | Karnataka | 30.44 | 10.41 | 72.44 |
| Cotton[a] | Gujarat | 7.99 | 33.26 | 33.26 |
| | Maharashtra | 5.86 | 24.40 | 57.66 |
| | Andhra Pradesh | 3.23 | 13.45 | 71.11 |
| Jute & Mesta[b] | West Bengal | 9.40 | 79.53 | 79.53 |
| | Bihar | 1.28 | 10.83 | 90.36 |
| | Assam | 0.74 | 6.26 | 96.62 |
| Potato | West Bengal | 13.81 | 33.32 | 32.44 |
| | Uttar Pradesh | 13.45 | 32.44 | 65.76 |
| | Bihar | 5.39 | 13.00 | 78.76 |
| Onion | Maharashtra | 3.15 | 25.87 | 25.87 |
| | Karnataka | 2.27 | 18.63 | 44.50 |
| | Gujarat | 1.01 | 8.87 | 53.37 |

Source : Directorate of Economics and Statistics, Department of Agriculture and Cooperation.

[a] Production in million bales of 170 kgs. [b] Production in million bales of 180 kgs.

## 1.16 : IRRIGATED AREA UNDER DIFFERENT CROPS

(Million hectares)

| | 1970-71 | 1980-81 | 1990-91 | 2000-01 | 2005-06 | 2006-07 | 2007-08 | 2008-09 |
|---|---|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| Rice | 14.3 | 16.4 | 19.5 | 24.3 | 25.0 | 25.3 | 25.2 | 26.5 |
| % | 38.4 | 40.7 | 45.5 | 54.4 | 56.6 | 58.1 | 57.8 | 58.7 |
| Jowar | 0.6 | 0.8 | 0.8 | 0.8 | 0.7 | 0.7 | 0.7 | 0.7 |
| % | 3.6 | 4.7 | 5.6 | 8.3 | 8.2 | 8.1 | 8.6 | 8.9 |
| Bajra | 0.5 | 0.6 | 0.5 | 0.8 | 0.9 | 0.9 | 1.0 | 0.8 |
| % | 4.0 | 5.5 | 5.1 | 7.8 | 9.2 | 9.6 | 10.3 | 9.4 |
| Maize | 0.9 | 1.2 | 1.2 | 1.5 | 1.7 | 1.7 | 2.0 | 2.0 |
| % | 15.9 | 20.1 | 19.7 | 21.8 | 22.5 | 22.4 | 24.4 | 25.2 |
| Wheat | 9.9 | 15.6 | 19.5 | 22.8 | 24.1 | 25.7 | 26.0 | 25.5 |
| % | 54.3 | 70.0 | 81.1 | 88.4 | 90.3 | 90.6 | 91.0 | 91.3 |
| Barley | 1.3 | 0.9 | 0.5 | 0.5 | 0.4 | 0.5 | 0.5 | 0.5 |
| % | 52.0 | 50.6 | 54.5 | 67.0 | 68.8 | 70.9 | 72.2 | 75.1 |
| Total Cereals | 28.1 | 35.8 | 42.3 | 50.9 | 53.0 | 55.0 | 55.5 | 56.2 |
| % | 27.6 | 34.1 | 41.0 | 50.2 | 52.9 | 54.6 | 55.0 | 55.9 |
| Total Pulses | 2.0 | 2.0 | 2.6 | 2.7 | 3.4 | 3.6 | 3.9 | 3.8 |
| % | 8.8 | 9.0 | 10.5 | 12.6 | 14.4 | 15.4 | 15.8 | 16.0 |
| Total Foodgrains | 30.1 | 37.9 | 44.9 | 53.6 | 56.5 | 58.6 | 59.4 | 60.0 |
| % | 24.1 | 29.7 | 35.1 | 43.7 | 45.5 | 47.2 | 47.3 | 48.3 |
| Sugarcane | 1.9 | 2.4 | 3.4 | 4.3 | 4.3 | 4.9 | 4.8 | 4.5 |
| % | 72.4 | 81.3 | 86.9 | 92.2 | 93.2 | 93.8 | 94.0 | 93.7 |
| Oil Seeds | 1.1 | 2.3 | 5.8 | 5.5 | 8.6 | 8.2 | 7.8 | 8.2 |
| % | 7.4 | 14.5 | 22.9 | 22.4 | 28.1 | 28.7 | 27.0 | 27.1 |
| Cotton | 1.4 | 2.1 | 2.5 | 2.8 | 3.2 | 3.4 | 3.5 | 3.3 |
| % | 17.3 | 27.3 | 32.9 | 32.2 | 37.3 | 37.8 | 37.1 | 35.3 |

Source : Directorate of Economics and Statistics, Department of Agriculture and Cooperation.

## 1.17 : NET AVAILABILITY OF CEREALS AND PULSES

| Year | Population (million) | Cereals: Net production (million tonnes) | Cereals: Net imports (million tonnes) | Cereals: Change in Government stocks (million tonnes) | Cereals: Net availability (Col. 3+4-5) (million tonnes) | Pulses: Net availability (million tonnes) | Per capita net availability per day (grams): Cereals | Pulses | Total |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| 1961 | 442.4 | 60.9 | 3.5 | (-)0.2 | 64.6 | 11.1 | 399.7 | 69.0 | 468.7 |
| 1962 | 452.2 | 61.8 | 3.6 | (-)0.4 | 65.8 | 10.2 | 398.9 | 62.0 | 460.9 |
| 1963 | 462.0 | 60.2 | 4.6 | ... | 64.8 | 10.1 | 384.0 | 59.8 | 443.8 |
| 1964 | 472.1 | 61.8 | 6.3 | (-)1.2 | 69.3 | 8.8 | 401.0 | 51.0 | 452.0 |
| 1965 | 482.5 | 67.3 | 7.4 | (+)1.1 | 73.7 | 10.8 | 418.5 | 61.6 | 480.1 |
| 1966 | 493.2 | 54.6 | 10.3 | (+)0.1 | 64.8 | 8.7 | 359.9 | 48.2 | 408.1 |
| 1967 | 504.2 | 57.6 | 8.7 | (-)0.3 | 66.6 | 7.3 | 361.8 | 39.6 | 401.4 |
| 1968 | 515.4 | 72.6 | 5.7 | (+)2.0 | 76.2 | 10.6 | 404.1 | 56.1 | 460.2 |
| 1969 | 527.0 | 73.1 | 3.8 | (+)0.5 | 76.5 | 9.1 | 397.8 | 47.3 | 445.1 |
| 1970 | 538.9 | 76.8 | 3.6 | (+)1.1 | 79.3 | 10.2 | 403.1 | 51.9 | 455.0 |
| 1971 | 551.3 | 84.5 | 2.0 | (+)2.6 | 84.0 | 10.3 | 417.6 | 51.2 | 468.8 |
| 1972 | 563.9 | 82.3 | (-)0.5 | (-)4.7 | 86.5 | 9.7 | 419.1 | 47.0 | 466.1 |
| 1973 | 576.8 | 76.2 | 3.6 | (-)0.3 | 80.1 | 8.7 | 350.5 | 41.1 | 421.6 |
| 1974 | 590.0 | 82.8 | 5.2 | (-)0.4 | 88.4 | 8.8 | 410.4 | 40.8 | 451.2 |
| 1975 | 603.5 | 78.6 | 7.5 | (+)5.6 | 80.6 | 8.8 | 365.8 | 39.7 | 405.5 |
| 1976 | 617.2 | 94.5 | 0.7 | (+)10.7 | 84.4 | 11.4 | 373.8 | 50.5 | 424.3 |
| 1977 | 631.3 | 87.3 | 0.1 | (-)1.6 | 89.0 | 10.0 | 386.3 | 43.3 | 429.6 |
| 1978 | 645.7 | 100.1 | (-)0.8 | (-)0.3 | 99.6 | 10.7 | 422.5 | 45.5 | 468.0 |
| 1979 | 660.3 | 104.8 | (-)0.3 | (+)0.4 | 104.1 | 10.8 | 431.8 | 44.7 | 476.5 |
| 1980 | 675.2 | 88.5 | (-)0.5 | (-)5.8 | 93.8 | 7.6 | 379.5 | 30.9 | 410.4 |
| 1981 | 688.5 | 104.1 | 0.5 | (-)0.2 | 104.8 | 9.4 | 417.3 | 37.5 | 454.8 |
| 1982 | 703.8 | 106.6 | 1.6 | (+)1.3 | 106.8 | 10.1 | 415.6 | 39.2 | 454.8 |
| 1983 | 718.9 | 103.0 | 4.1 | (+)2.7 | 104.4 | 10.4 | 397.8 | 39.5 | 437.3 |
| 1984 | 734.5 | 122.0 | 2.4 | (+)7.1 | 117.4 | 11.3 | 437.8 | 41.9 | 479.7 |
| 1985 | 750.4 | 116.9 | (-)0.3 | (+)2.7 | 113.9 | 10.5 | 415.6 | 38.4 | 454.0 |
| 1986 | 766.5 | 119.9 | (-)0.1 | (-)1.6 | 121.5 | 12.3 | 434.2 | 43.9 | 478.1 |
| 1987 | 782.7 | 115.2 | (-)0.4 | (-)9.5 | 124.4 | 10.4 | 435.4 | 36.4 | 471.8 |
| 1988 | 799.2 | 113.2 | 2.3 | (-)4.6 | 120.1 | 10.7 | 411.8 | 36.7 | 448.5 |
| 1989 | 815.8 | 136.6 | 0.8 | (+)2.6 | 134.7 | 12.5 | 452.6 | 41.9 | 494.5 |
| 1990 | 832.6 | 138.4 | ... | (+)6.2 | 132.3 | 12.5 | 435.3 | 41.1 | 476.4 |
| 1991 | 851.7 | 141.9 | (-)0.6 | (-)4.4 | 145.7 | 12.9 | 468.5 | 41.6 | 510.1 |
| 1992 | 867.8 | 136.8 | (-)0.7 | (-)1.6 | 137.7 | 10.9 | 434.5 | 34.3 | 468.8 |
| 1993 | 883.9 | 145.8 | 2.6 | (+)10.3 | 138.1 | 11.7 | 427.9 | 36.2 | 464.1 |
| 1994 | 899.9 | 149.6 | 0.5 | (+)7.5 | 142.6 | 12.2 | 434.0 | 37.2 | 471.2 |
| 1995 | 922.0 | 155.3 | (-)3.0 | (-)1.7 | 154.0 | 12.7 | 457.6 | 37.8 | 495.4 |
| 1996 | 941.6 | 147.1 | (-)3.5 | (-)8.5 | 152.1 | 11.3 | 442.5 | 32.7 | 475.2 |
| 1997 | 959.8 | 162.0 | (-)0.6 | (-)1.8 | 163.2 | 13.0 | 466.0 | 37.1 | 503.1 |
| 1998 | 978.1 | 156.9 | (-)2.9 | (+)6.1 | 147.9 | 11.7 | 414.2 | 32.8 | 447.0 |
| 1999 | 996.4 | 165.1 | (-)1.5 | (+)7.5 | 156.1 | 13.3 | 429.2 | 36.5 | 465.7 |
| 2000 | 1014.8 | 171.8 | (-)1.4 | (+)13.9 | 156.6 | 11.7 | 422.7 | 31.8 | 454.4 |
| 2001 | 1033.2 | 162.5 | (-)4.5 | (+)12.3 | 145.6 | 11.3 | 386.2 | 30.0 | 416.2 |
| 2002 | 1050.6 | 174.5 | (-)8.5 | (-)9.9 | 175.9 | 13.6 | 458.7 | 35.4 | 494.1 |
| 2003 | 1068.2 | 143.2 | (-)7.1 | (-)23.2 | 159.3 | 11.3 | 408.5 | 29.1 | 437.6 |
| 2004 | 1085.6 | 173.5 | (-)7.7 | (-)3.3 | 169.1 | 14.2 | 426.9 | 35.8 | 462.7 |
| 2005 | 1102.8 | 162.1 | (-)7.2 | (-)2.4 | 157.3 | 12.7 | 390.9 | 31.5 | 422.4 |
| 2006 | 1119.8 | 170.8 | (-)3.8 | (-)1.8 | 168.8 | 13.3 | 412.8 | 32.5 | 445.3 |
| 2007 | 1136.6 | 177.7 | (-)7.0 | (+)1.7 | 169.0 | 14.7 | 407.4 | 35.5 | 442.8 |
| 2008 | 1153.1 | 197.2 | -14.4 | (+)17.0 | 165.9 | 17.6 | 394.2 | 41.8 | 436.0 |
| 2009 | 1169.4 | 192.4 | -7.2 | (+)11.5 | 173.7 | 15.8 | 407.0 | 37.0 | 444.0 |
| 2010 P | 1185.8 | 178.0 | -2.4 | (-)0.5 | 176.1 | 13.7 | 407.0 | 31.6 | 438.6 |

Sources : 1. Directorate of Economics and Statistics, Department of Agriculture & Cooperation. ... Negligible P Provisional
2. Registrar General of India.

Notes : 1. Population figure relates to mid year.
2. Production figures relate to the agricultural year July-June: 1951 figures correspond to the production of 1950-51 and so on for subsequent years.
3. The net availability of foodgrains is estimated to be gross production [-] seed,feed and wastage ,[-] exports[+]imports,[+/-] change in stocks.
4. The net availability of foodgrains divided by the population estimates for a particular year indicate per capita availability of foodgrains in terms of kg/year. Net availability, thus worked out further divided by the number of days in a year i.e.,365 days gives us net availability of foodgrains in terms of grams/day.
5. Figures in respect of per capita net availability given above are not strictly representative of actual level of consumption in the country especially as they do not take in to account any change in stocks in possession of trader, producers and consumers.
6. For calculation of per capita net availability, the figure of net imports from 1981 to 1994 are based on imports and exports on Government of India account only. Net import from 1995 are, however, based on the total exports and imports (both Government as well as private accounts). Cereals includes rice, wheat and other cereals. Pulses include all kharif and rabi pulses. Foodgrains include rice, wheat,other cereals and all pulses.

## 1.18 : NET AVAILABILITY, PROCUREMENT AND PUBLIC DISTRIBUTION OF FOODGRAINS

(Million tonnes)

| Year | Net production of foodgrains | Net imports | Net availability of foodgrains[a] | Procure-ment | Public distribution[b] | Col. 3 as per cent of Col. 4 | Col. 5 as per cent of Col. 2 | Col. 6 as per cent of Col. 4 |
|---|---|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 1951 | 48.1 | 4.8 | 52.4 | 3.8 | 8.0 | 9.2 | 7.9 | 15.3 |
| 1961 | 72.0 | 3.5 | 75.7 | 0.5 | 4.0 | 4.6 | 0.7 | 5.3 |
| 1962 | 72.1 | 3.6 | 76.1 | 0.5 | 4.4 | 4.8 | 0.7 | 5.7 |
| 1963 | 70.3 | 4.5 | 74.8 | 0.8 | 5.2 | 6.1 | 1.1 | 6.9 |
| 1964 | 70.6 | 6.2 | 78.1 | 1.4 | 8.7 | 8.0 | 2.0 | 11.1 |
| 1965 | 78.2 | 7.4 | 84.6 | 4.0 | 10.1 | 8.8 | 5.2 | 11.9 |
| 1966 | 63.3 | 10.3 | 73.5 | 4.0 | 14.1 | 14.0 | 6.3 | 19.2 |
| 1967 | 65.0 | 8.7 | 73.9 | 4.5 | 13.2 | 11.7 | 6.9 | 17.8 |
| 1968 | 83.2 | 5.7 | 86.8 | 6.8 | 10.2 | 6.5 | 8.2 | 11.8 |
| 1969 | 82.3 | 3.8 | 85.6 | 6.4 | 9.4 | 4.5 | 7.8 | 11.0 |
| 1970 | 87.1 | 3.6 | 89.5 | 6.7 | 8.8 | 4.0 | 7.7 | 9.9 |
| 1971 | 94.9 | 2.0 | 94.3 | 8.9 | 7.8 | 2.1 | 9.3 | 8.3 |
| 1972 | 92.0 | (-)0.5 | 96.2 | 7.7 | 10.5 | (-)0.5 | 8.3 | 10.9 |
| 1973 | 84.9 | 3.6 | 88.8 | 8.4 | 11.4 | 4.0 | 9.9 | 12.8 |
| 1974 | 91.6 | 5.2 | 97.1 | 5.6 | 10.8 | 5.3 | 6.2 | 11.1 |
| 1975 | 87.4 | 7.5 | 89.3 | 9.6 | 11.3 | 8.4 | 10.9 | 12.6 |
| 1976 | 105.9 | 0.7 | 95.8 | 12.8 | 9.2 | 0.7 | 12.1 | 9.6 |
| 1977 | 97.3 | 0.1 | 99.0 | 9.9 | 11.7 | 0.1 | 10.1 | 11.8 |
| 1978 | 110.6 | (-)0.6 | 110.2 | 11.1 | 10.2 | (-)0.5 | 10.0 | 9.2 |
| 1979 | 115.4 | (-)0.2 | 114.9 | 13.8 | 11.7 | (-)0.2 | 12.0 | 10.2 |
| 1980 | 96.0 | (-)0.3 | 101.4 | 11.2 | 15.0 | (-)0.3 | 11.6 | 14.8 |
| 1981 | 113.4 | 0.7 | 114.3 | 13.0 | 13.0 | 0.6 | 11.4 | 11.4 |
| 1982 | 116.6 | 1.6 | 116.9 | 15.4 | 14.8 | 1.4 | 13.2 | 12.6 |
| 1983 | 113.3 | 4.1 | 114.7 | 15.6 | 16.2 | 3.5 | 13.7 | 14.1 |
| 1984 | 133.3 | 2.4 | 128.6 | 18.7 | 13.3 | 1.8 | 14.0 | 10.4 |
| 1985 | 127.4 | (-)0.4 | 124.3 | 20.1 | 15.8 | (-)0.3 | 15.8 | 12.7 |
| 1986 | 131.6 | 0.5 | 133.8 | 19.7 | 17.3 | 0.4 | 15.0 | 12.9 |
| 1987 | 125.5 | (-)0.2 | 134.8 | 15.7 | 18.7 | (-)0.1 | 12.5 | 13.8 |
| 1988 | 122.8 | 3.8 | 130.8 | 14.1 | 18.6 | 2.9 | 11.5 | 14.2 |
| 1989 | 148.7 | 1.2 | 147.2 | 18.9 | 16.4 | 0.8 | 12.7 | 11.1 |
| 1990 | 149.7 | 1.3 | 144.8 | 24.0 | 16.0 | 0.9 | 16.0 | 11.0 |
| 1991 | 154.3 | (-)0.1 | 158.6 | 19.6 | 20.8 | ... | 12.7 | 13.1 |
| 1992 | 147.3 | (-)0.4 | 148.5 | 17.9 | 18.8 | (-)0.3 | 12.2 | 12.7 |
| 1993 | 157.5 | 3.1 | 149.8 | 28.1 | 16.4 | 2.1 | 17.9 | 10.9 |
| 1994 | 161.2 | 1.1 | 154.8 | 26.0 | 14.0 | 0.7 | 16.1 | 9.1 |
| 1995 | 167.6 | (-)2.6 | 166.7 | 22.6 | 15.3 | (-)1.6 | 13.5 | 9.0 |
| 1996 | 157.9 | (-)3.1 | 163.3 | 19.8 | 18.3 | (-)1.9 | 12.5 | 11.2 |
| 1997 | 174.5 | (-)0.1 | 176.2 | 23.6 | 17.8 | ... | 13.5 | 10.1 |
| 1998 | 168.2 | (-)2.5 | 159.6 | 26.3 | 18.6 | (-)1.6 | 15.6 | 11.1 |
| 1999 | 178.2 | (-)1.3 | 169.4 | 30.8 | 17.7 | (-)0.8 | 17.3 | 9.9 |
| 2000 | 183.6 | (-)1.4 | 168.3 | 35.6 | 13.0 | (-)0.8 | 19.4 | 7.7 |
| 2001 | 172.2 | (-)2.9 | 156.9 | 42.6 | 13.2 | (-)1.8 | 24.7 | 8.4 |
| 2002 | 186.2 | (-)6.7 | 189.5 | 40.3 | 18.2 | (-)3.5 | 21.7 | 9.6 |
| 2003 | 152.9 | (-)5.5 | 170.6 | 34.5 | 23.2 | (-)2.8 | 22.6 | 13.2 |
| 2004 | 186.5 | (-)6.5 | 183.3 | 41.1 | 28.3 | (-)3.5 | 22.0 | 15.5 |
| 2005 | 173.6 | (-)6.0 | 170.0 | 41.5 | 31.0 | (-)3.5 | 23.9 | 18.2 |
| 2006 | 182.5 | (-)2.3 | 181.9 | 37.0 | 31.8 | (-)1.3 | 20.3 | 17.5 |
| 2007 | 190.1 | (-)4.7 | 183.7 | 35.8 | 32.8 | (-)2.6 | 18.8 | 17.8 |
| 2008 | 210.2 | (-)9.7 | 183.5 | 54.2 | 34.7 | (-)5.3 | 25.8 | 18.9 |
| 2009 | 205.2 | (-)4.1 | 189.5 | 60.5 | 41.3 | (-)2.2 | 29.5 | 21.8 |
| 2010[P] | 190.8 | (-)1.5 | 189.8 | 56.1 | 43.7 | (-)0.8 | 29.4 | 23.0 |

Sources : 1. Department of Food and Public Distribution.
2. Directorate of Economics & Statistics, Department of Agriculture & Cooperation.
a Net availability = Net production+Net imports - changes in Government stocks.
b Includes quantities released under the Food for Work Programme during the years 1978 to 1990.
... Negligible P Provisional

Notes : 1. Production figures relate to agricultural year: 1951 figures correspond to 1950-51 and so on. Figures for procurement and public distribution relate to calender years.
2. Net Imports from 1981 to 1994 are only on Government account and from 1995 onwards the net Imports are total Imports and Exports of the Country.

## 1.19 : PER CAPITA AVAILABILITY OF CERTAIN IMPORTANT ARTICLES OF CONSUMPTION

| Year | Edible oil [a] (Kg.) | Vanaspati [b] (Kg.) | Sugar (Nov.-Oct.) (Kg.)[c] | Cloth[d] Cotton [e] (meters) | Cloth[d] Man-made (meters) | Cloth[d] Total (meters) | Tea (Gram) | Coffee [f] (Gram) | Electricity Domestic (KWH) |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| 1955-56 | 2.5 | 0.7 | 5.0 | 14.4 | na | na | 362.0 | 67.0 | 2.4[g] |
| 1960-61 | 3.2 | 0.8 | 4.8 | 13.8 | 1.2 | 15.0 | 296.0 | 80.0 | 3.4 |
| 1965-66 | 2.7 | 0.8 | 5.7 | 14.7 | 1.7 | 16.4 | 346.0 | 72.0 | 4.8 |
| 1966-67 | 2.7 | 0.7 | 5.2 | 14.0 | 1.7 | 15.7 | 399.0 | 72.0 | 5.2 |
| 1967-68 | 3.4 | 0.8 | 4.3 [h] | 13.6 | 1.7 | 15.3 | 339.0 | 69.0 | 5.7 |
| 1968-69 | 2.6 | 0.9 | 5.0 | 14.4 | 1.9 | 16.3 | 376.0 | 73.0 | 6.0 |
| 1969-70 | 3.0 | 0.9 | 6.1 | 13.6 | 2.0 | 15.6 | 430.0 | 62.0 | 6.5 |
| 1970-71 | 3.5 | 1.0 | 7.4 | 13.6 | 2.0 | 15.6 | 401.0 | 65.0 | 7.0 |
| 1971-72 | 3.0 | 1.1 | 6.8 | 12.4 | 2.2 | 14.6 | 426.0 | 65.0 | 7.3 |
| 1972-73 | 2.4 | 1.0 | 6.2 | 13.2 | 2.0 | 15.2 | 458.0 | 69.0 | 7.3 |
| 1973-74 | 3.4 | 0.8 | 6.1 | 12.0 | 1.9 | 13.9 | 492.0 | 64.0 | 8.1 |
| 1974-75 | 3.3 | 0.6 | 5.8 | 12.9 | 1.7 | 14.6 | 471.0 | 62.0 | 8.8 |
| 1975-76 | 3.5 | 0.8 | 6.1 | 12.6 | 2.0 | 14.6 | 446.0 | 62.0 | 9.7 |
| 1976-77 | 3.2 | 0.9 | 6.0 | 11.4 | 2.4 | 13.8 | 450.0 | 71.0 | 10.4 |
| 1977-78 | 3.8 | 0.9 | 7.2 | 9.5 | 4.0 | 13.5 | 516.0 | 73.0 | 10.9 |
| 1978-79 | 3.8 | 1.0 | 9.6 | 10.2 | 4.8 | 15.0 | 599.0 | 77.0 | 11.9 |
| 1979-80 | 3.7 | 1.0 | 7.8 | 10.1 | 4.6 | 14.7 | 521.0 | 73.0 | 12.1 |
| 1980-81 | 3.8 | 1.2 | 7.3 | 12.9 | 4.4 | 17.3 | 511.0 | 79.0 | 13.5 |
| 1981-82 | 5.1 | 1.3 | 8.2 | 12.2 | 4.9 | 17.1 | 466.0 | 79.0 | 15.1 |
| 1982-83 | 4.5 | 1.3 | 9.0 | 11.8 | 4.3 | 16.1 | 525.0 | 82.0 | 17.0 |
| 1983-84 | 5.8 | 1.2 | 10.5 | 12.6 | 4.7 | 17.3 | 519.0 | 78.0 | 18.3 |
| 1984-85 | 5.5 | 1.3 | 10.7 | 12.6 | 4.6 | 17.2 | 576.0 | 72.0 | 21.0 |
| 1985-86 | 5.0 | 1.3 | 11.1 | 15.4 | 6.1 | 21.5 | 589.0 | 71.0 | 22.9 |
| 1986-87 | 5.0 | 1.2 | 11.4 | 15.2 | 6.6 | 21.8 | 545.0 | 76.0 | 25.1 |
| 1987-88 | 5.8 | 1.2 | 11.7 | 14.0 | 7.0 | 21.0 | 592.0 | 72.0 | 28.2 |
| 1988-89 | 5.3 | 1.2 | 12.1 | 15.0 | 8.0 | 23.0 | 612.0 | 79.0 | 30.9 |
| 1989-90 | 5.3 | 1.1 | 12.3 | 14.6 | 8.1 | 22.7 | 571.0 | 65.0 | 36.1 |
| 1990-91 | 5.5 | 1.0 | 12.7 | 15.1 | 9.0 | 24.1 | 612.0 | 59.0 | 38.2 |
| 1991-92 | 5.4 | 1.0 | 13.0 | 13.7 | 9.2 | 22.9 | 655.0 | 64.0 | 41.9 |
| 1992-93 | 5.8 | 1.0 | 13.7 | 15.6 | 8.9 | 24.5 | 649.0 | 60.0 | 45.6 |
| 1993-94 | 6.1 | 1.0 | 12.5 | 15.9 | 10.3 | 26.2 | 667.0 | 56.0 | 48.8 |
| 1994-95 | 6.3 | 1.0 | 13.2 | 15.2 | 10.8 | 26.0 | 664.0 | 55.0 | 53.0 |
| 1995-96 | 7.0 | 1.0 | 14.1 | 16.3 | 11.7 | 28.0 | 646.0 | 55.0 | 56.2 |
| 1996-97 | 8.0 | 1.0 | 14.6 | 16.2 | 13.1 | 29.3 | 657.0 | 58.0 | 58.6 |
| 1997-98 | 6.2 | 1.0 | 14.5 | 15.9 | 15.0 | 30.9 | 635.0 | 58.0 | 62.9 |
| 1998-99 | 8.5 | 1.3 | 14.9 | 13.1 | 15.1 | 28.2 | 684.0 | 65.0 | 66.7 |
| 1999-00 | 9.0 | 1.4 | 15.6 | 14.2 | 16.4 | 30.6 | 642.0 | 55.0 | 71.2 |
| 2000-01 | 8.2 | 1.3 | 15.8 | 14.2 | 16.5 | 30.7 | 631.0 | 58.0 | 75.2 |
| 2001-02 | 8.8 | 1.4 | 16.0 | 14.8 | 17.2 | 32.0 | 650.0 | 67.0 | 76.8 |
| 2002-03 | 7.2 | 1.4 | 16.3 | 14.4 | 17.0 | 31.4 | 623.0 | 67.0 | 79.0 |
| 2003-04 | 9.9 | 1.2 | 16.1 | 13.4 | 17.6 | 31.0 | 662.0 | 70.0 | 83.6 |
| 2004-05 | 10.2 | 1.1 | 15.5 | 14.1 | 19.4 | 33.5 | 663.0 | 72.0 | 87.8 |
| 2005-06 | 10.6 | 1.1 | 16.3 | 16.4 | 19.7 | 36.1 | 687.0 | 75.0 | 90.4 |
| 2006-07 | 11.1 | 1.2 | 16.8 | 18.0 | 21.6 | 39.6 | 687.0 | 77.0 | 98.8 |
| 2007-08 | 11.4 | 1.2 | 17.8 | 19.0 | 22.8 | 41.9 | 701.0 | 80.0 | 106.0 |
| 2008-09 | 12.7 | 1.3 | 18.8 | 17.9 | 21.1 | 39.0 | 704.0 | 82.0 | 112.7 |
| 2009-10 | 13.3 | 1.1 | 17.9 | 19.7 | 23.4 | 43.1 | 709.0 | 86.0 | 121.2 |
| 2010-11[P] | 13.6 | 1.0 | 17.0 | 21.4 | 22.5 | 43.9 | 715.0 | 90.0 | na |

Sources : 1. Directorate of Vanaspati, Vegetable Oils & Fats, Ministry of Consumer Affairs, Food & Public Distribution.
2. Directorate of Sugar, Ministry of Consumer Affairs, Food & Public Distribution
3. Ministry of Textiles.
4. Tea Board.
5. Coffee Board.
6. Central Electricity Authority, Ministry of Power.

na : Not available. [P] : Provisional.

Notes: [a] Includes groundnut oil, rapeseed and mustard oil, sesamum oil, nigerseed oil, soyabean oil and sunflower oil but excludes oil for manufacture of vanaspati.
[b] Relates to calendar year.
[c] Relates to actual releases for domestic consumption.
[d] The data of cloth; prior to 1980-81 is calender year wise; in meters upto 1984-85; in square meter from 1985-86 onwards.
[e] Figures for blended/mixed fabrics were not separately available prior to 1969. These have been included under man-made fibre fabrics after 1969.
[f] Figures up to 1971-72 relate to coffee season and are thereafter on calendar year basis. The figures for 1972-73 correspond to 1973 and so on.
[g] Relates to 1956.
[h] From 1967-68 onwards sugar season from October to September.

## 1.20 : PRODUCTION, IMPORTS AND CONSUMPTION OF FERTILIZERS

(Thousand tonnes of nutrients)

| | 1970-71 | 1980-81 | 1990-91 | 2000-01 | 2005-06 | 2006-07 | 2007-08 | 2008-09 | 2009-10 | 2010-11 | 2011-12[a] |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| **A Nitrogenous fertilizers** | | | | | | | | | | | |
| Production | 830 | 2164 | 6993 | 11004 | 11354 | 11578 | 10900 | 10870 | 11900 | 12156 | 12576 |
| Imports | 477 | 1510 | 414 | 154 | 1385 | 2689 | 3677 | 3844 | 3447 | 4492 | 3883 |
| Consumption | 1487 | 3678 | 7997 | 10920 | 12723 | 13773 | 14419 | 15090 | 15580 | 16558 | na |
| **B. Phosphatic fertilizers** | | | | | | | | | | | |
| Production | 229 | 842 | 2052 | 3748 | 4221 | 4517 | 3807 | 3464 | 4321 | 4222 | 4432 |
| Imports | 32 | 452 | 1311 | 396 | 1122 | 1322 | 1391 | 2927 | 2756 | 3802 | 3471 |
| Consumption | 462 | 1214 | 3221 | 4215 | 5204 | 5543 | 5515 | 6506 | 7274 | 8050 | na |
| **C. Potassic fertilizers** | | | | | | | | | | | |
| Imports | 120 | 797 | 1328 | 1541 | 2747 | 2069 | 2653 | 3380 | 2945 | 4069 | 2248 |
| Consumption | 228 | 624 | 1328 | 1567 | 2413 | 2335 | 2636 | 3313 | 3632 | 3514 | na |
| **D. All fertilizers (NPK)** | | | | | | | | | | | |
| Production | 1059 | 3006 | 9045 | 14752 | 15575 | 16095 | 14707 | 14334 | 16221 | 16378 | 17008 |
| Imports | 629 | 2759 | 2758 | 2090 | 5254 | 6080 | 7721 | 10151 | 9148 | 12363 | 9602 |
| Consumption | 2177 | 5516 | 12546 | 19702 | 20340 | 21651 | 22570 | 24909 | 26486 | 28122 | na |

Source : Ministry of Chemicals & Fertilizers, Department of Fertilizers. na : Not available

[a] Estimated

Note : Import figures for 2011-12 are from April - November 2011

## 1.21 : PRODUCTION OF MAJOR LIVESTOCK PRODUCTS AND FISH

| Year | Milk (Million tonnes) | Eggs (Million Nos.) | Fish (Thousand tonnes) |
|---|---|---|---|
| 1 | 2 | 3 | 4 |
| 1950-51 | 17.0 | 1832 | 752 |
| 1960-61 | 20.0 | 2881 | 1160 |
| 1970-71 | 22.0 | 6172 | 1756 |
| 1980-81 | 31.6 | 10060 | 2442 |
| 1990-91 | 53.9 | 21101 | 3836 |
| 1991-92 | 55.7 | 21983 | 4157 |
| 1992-93 | 58.0 | 22929 | 4365 |
| 1993-94 | 60.6 | 24167 | 4644 |
| 1994-95 | 63.8 | 25975 | 4789 |
| 1995-96 | 66.2 | 27198 | 4949 |
| 1996-97 | 69.1 | 27496 | 5348 |
| 1997-98 | 72.1 | 28689 | 5388 |
| 1998-99 | 75.4 | 29476 | 5298 |
| 1999-00 | 78.3 | 30447 | 5675 |
| 2000-01 | 80.6 | 36632 | 5656 |
| 2001-02 | 84.4 | 38729 | 5956 |
| 2002-03 | 86.2 | 39823 | 6200 |
| 2003-04 | 88.1 | 40403 | 6399 |
| 2004-05 | 92.5 | 45201 | 6304 |
| 2005-06 | 97.1 | 46235 | 6572 |
| 2006-07 | 102.6 | 50663 | 6869 |
| 2007-08 | 107.9 | 53583 | 7127 |
| 2008-09 | 112.2 | 55562 | 7620 |
| 2009-10 | 116.4 | 60267 | 7914 |
| 2010-11 | 121.8 | 63024 | 8290 |

Source : Department of Animal Husbandry, Dairying & Fisheries.

## 1.22 : PRODUCTION OF COAL AND LIGNITE

(Million tonnes)

| Year | Coal | | | | Lignite | Total coal and lignite (5)+(6) |
|---|---|---|---|---|---|---|
| | Coking | | Non-coking | Total | | |
| | Metallurgical | Non-Metallurgical | | | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 1950-51 | na | na | na | 32.30 | na | na |
| 1960-61 | 16.99 | na | 38.24 | na | na | na |
| 1970-71 | 17.82 | na | 55.13 | na | 3.39 | na |
| 1980-81 | 24.59 | 8.03 | 81.29 | 113.91 | 5.11 | 119.02 |
| 1981-82 | 26.89 | 9.23 | 88.11 | 124.23 | 6.31 | 130.54 |
| 1982-83 | 30.10 | 7.47 | 92.93 | 130.50 | 6.93 | 137.43 |
| 1983-84 | 30.11 | 6.24 | 101.87 | 138.22 | 7.30 | 145.52 |
| 1984-85 | 30.57 | 6.04 | 110.80 | 147.41 | 7.80 | 155.21 |
| 1985-86 | 29.07 | 6.57 | 118.56 | 154.20 | 8.05 | 162.25 |
| 1986-87 | 27.91 | 11.63 | 126.23 | 165.77 | 9.43 | 175.20 |
| 1987-88 | 26.28 | 14.73 | 138.71 | 179.72 | 11.16 | 190.88 |
| 1988-89 | 25.16 | 17.56 | 151.88 | 194.60 | 12.40 | 207.00 |
| 1989-90 | 24.50 | 19.93 | 156.46 | 200.89 | 12.80 | 213.69 |
| 1990-91 | 24.10 | 21.20 | 166.43 | 211.73 | 13.77 | 225.50 |
| 1991-92 | 26.33 | 19.95 | 183.00 | 229.28 | 14.55 | 243.83 |
| 1992-93 | 25.72 | 19.64 | 192.90 | 238.26 | 16.62 | 254.88 |
| 1993-94 | 25.99 | 19.07 | 200.98 | 246.04 | 18.10 | 264.14 |
| 1994-95 | 24.54 | 19.71 | 209.55 | 253.80 | 19.34 | 273.14 |
| 1995-96 | 23.53 | 16.57 | 230.03 | 270.13 | 22.14 | 292.27 |
| 1996-97 | 22.64 | 17.90 | 245.12 | 285.66 | 22.54 | 308.20 |
| 1997-98 | 24.16 | 19.34 | 252.43 | 295.93 | 23.05 | 318.98 |
| 1998-99 | 23.82 | 15.36 | 253.09 | 292.27 | 23.42 | 315.69 |
| 1999-2000 | 21.23 | 12.02 | 266.72 | 299.97 | 22.12 | 322.09 |
| 2000-01 | 19.31 | 11.77 | 278.55 | 309.63 | 22.95 | 332.58 |
| 2001-02[a] | 17.96 | 10.71 | 299.12 | 327.79 | 24.81 | 352.60 |
| 2002-03[a] | 18.35 | 11.84 | 311.08 | 341.29 | 26.02 | 367.29 |
| 2003-04 | 18.27 | 11.13 | 331.85 | 361.25 | 27.96 | 389.25 |
| 2004-05 | 18.19 | 12.03 | 352.39 | 382.61 | 30.34 | 412.95 |
| 2005-06 | 16.97 | 14.54 | 375.53 | 407.04 | 30.06 | 437.11 |
| 2006-07 | 17.23 | 14.87 | 398.74 | 430.83 | 31.29 | 462.12 |
| 2007-08 | 18.07 | 16.39 | 422.63 | 457.08 | 33.98 | 491.01 |
| 2008-09 | 17.30 | 17.51 | 457.95 | 492.76 | 32.42 | 525.18 |
| 2009-10 | 17.68 | 26.57 | 487.81 | 532.06 | 34.07 | 566.13 |
| 2010-11P | 17.84 | 31.69 | 483.54 | 533.08 | 37.74 | 570.81 |

Source : Ministry of Coal

na : Not available. [a] Including Meghalaya Coal. [P] Figures are provisional.

## 1.23 : PRODUCTION OF FABRICS

(million sq. mtrs.)

| Sector | 2003-04 | 2004-05 | 2005-06 | 2006-07 | 2007-08 | 2008-09 | 2009-10 | 2010-11[P] |
|---|---|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| Mill sector | 1,434 | 1526 | 1656 | 1746 | 1781 | 1796 | 2016 | 2205 |
| Power looms (inc. Hosiery) | 34,794 | 37,437 | 41,044 | 44,383 | 46,529 | 45725 | 50699 | 52576 |
| Handlooms | 5493 | 5722 | 6108 | 6536 | 6947 | 6677 | 6806 | 6949 |
| Others | 662 | 693 | 769 | 724 | 768 | 768 | 812 | 812 |
| Total | 42383 | 45378 | 49577 | 53389 | 56025 | 54966 | 60333 | 62542 |
| | Share in output (per cent) | | | | | | | |
| Mill sector | 3.4 | 3.4 | 3.3 | 3.3 | 3.2 | 3.3 | 3.3 | 3.5 |
| Power looms (inc. Hosiery) | 82.1 | 82.5 | 82.8 | 83.1 | 83.1 | 83.2 | 84.1 | 84.1 |
| Handlooms | 13.0 | 12.6 | 12.3 | 12.2 | 12.4 | 12.1 | 11.3 | 11.1 |
| Others | 1.6 | 1.5 | 1.6 | 1.4 | 1.4 | 1.4 | 1.3 | 1.3 |
| Total | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100 | 100 |

Source : Office of Textile Commissioner, Mumbai.

[P] : Provisonal

## 1.24 A : PROGRESS OF ELECTRICITY SUPPLY (UTILITIES AND NON-UTILITIES) INSTALLED PLANT CAPACITY

(Thousand MW)

| | Utilities | | | | Non- | Total |
|---|---|---|---|---|---|---|
| Year | Hydro | Thermal+Res* | Nuclear | Total | Utilities | (5)+(6) |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 1950-51[a] | 0.6 | 1.1 | 0 | 1.7 | 0.6 | 2.3 |
| 1960-61 | 1.9 | 2.7 | 0 | 4.6 | 1 | 5.6 |
| 1970-71 | 6.4 | 7.9 | 0.4 | 14.7 | 1.6 | 16.3 |
| 1980-81 | 11.8 | 17.6 | 0.9 | 30.3 | 3.1 | 33.4 |
| 1982-83 | 13.1 | 21.4 | 0.9 | 35.4 | 3.9 | 39.3 |
| 1983-84 | 13.9 | 24.4 | 1.1 | 39.4 | 4.4 | 43.8 |
| 1984-85 | 14.5 | 27 | 1.1 | 42.6 | 5.1 | 47.7 |
| 1985-86 | 15.5 | 30 | 1.3 | 46.8 | 5.5 | 52.3 |
| 1986-87 | 16.2 | 31.8 | 1.3 | 49.3 | 5.7 | 55 |
| 1987-88 | 17.3 | 35.6 | 1.3 | 54.2 | 6.3 | 60.5 |
| 1988-89 | 17.8 | 39.7 | 1.5 | 59 | 7.5 | 66.5 |
| 1989-90 | 18.3 | 43.8 | 1.5 | 63.6 | 8.2 | 71.8 |
| 1990-91 | 18.8 | 45.8 | 1.5 | 66.1 | 8.6 | 74.7 |
| 1991-92 | 19.2 | 48.1 | 1.8 | 69.1 | 9.3 | 78.4 |
| 1992-93 | 19.6 | 50.7 | 2 | 72.3 | 10.1 | 82.4 |
| 1993-94 | 20.4 | 54.4 | 2 | 76.8 | 10.7 | 87.5 |
| 1994-95 | 20.8 | 58.1 | 2.2 | 81.1 | 11.2 | 92.3 |
| 1995-96 | 21 | 60.1 | 2.2 | 83.3 | 11.8 | 95.1 |
| 1996-97 | 21.7 | 61.9 | 2.2 | 85.8 | 12.1 | 97.9 |
| 1997-98 | 21.9 | 65 | 2.2 | 89.1 | 13.2 | 102.3 |
| 1998-99 | 22.4 | 68.7 | 2.2 | 93.3 | 14.1 | 107.4 |
| 1999-00 | 23.9 | 71.3 | 2.7 | 97.9 | 14.7 | 112.6 |
| 2000-01 | 25.1 | 73.6 | 2.9 | 101.6 | 16.2 | 117.8 |
| 2001-02 | 26.3 | 76 | 2.7 | 105 | 17.1 | 122.1 |
| 2002-03 | 26.8 | 78.4 | 2.7 | 107.9 | 18.3 | 126.2 |
| 2003-04 | 29.5 | 80.5 | 2.7 | 112.7 | 18.7 | 131.4 |
| 2004-05 | 30.9 | 84.7 | 2.8 | 118.4 | 19.1 | 137.5 |
| 2005-06 | 32.3 | 88.6 | 3.4 | 124.3 | 21.3 | 145.6 |
| 2006-07 | 34.7 | 93.7 | 3.9 | 132.3 | 24.7 | 157.0 |
| 2007-08 | 35.9 | 103.0 | 4.1 | 143.0 | 25.0 | 168.0 |
| 2008-09 | 36.9 | 107.0 | 4.1 | 148.0 | 27.0 | 175.0 |
| 2009-10 | 36.9 | 118.0 | 4.6 | 159.4 | 31.5 | 190.9 |
| 2010-11[P] | 37.6 | 131.2 | 4.8 | 173.6 | 32.9 | 206.5 |

## B : ENERGY GENERATED (GROSS)

(Billion KwH)

| | Utilities | | | | Non- | Total |
|---|---|---|---|---|---|---|
| Year | Hydro | Thermal+Res* | Nuclear | Total | Utilities | (5)+(6) |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 1950-51[a] | 2.5 | 2.6 | …. | 5.1 | 1.5 | 6.6 |
| 1960-61 | 7.8 | 9.1 | …. | 16.9 | 3.2 | 20.1 |
| 1970-71 | 25.2 | 28.2 | 2.4 | 55.8 | 5.4 | 61.2 |
| 1977-78 | 38 | 51.1 | 2.3 | 91.4 | 7.6 | 99 |
| 1978-79 | 47.1 | 52.6 | 2.8 | 102.5 | 7.6 | 110.1 |
| 1979-80 | 45.5 | 56.3 | 2.9 | 104.7 | 8.2 | 112.9 |
| 1980-81 | 56.5 | 61.3 | 3 | 120.8 | 8.4 | 129.2 |
| 1981-82 | 49.6 | 69.5 | 3 | 122.1 | 9 | 131.1 |
| 1982-83 | 48.4 | 79.9 | 2 | 130.3 | 10 | 140.3 |
| 1983-84 | 50 | 86.7 | 3.5 | 140.2 | 10.8 | 151 |
| 1984-85 | 53.9 | 98.8 | 4.1 | 156.8 | 12.3 | 169.1 |
| 1985-86 | 51 | 114.4 | 5 | 170.4 | 13 | 183.4 |
| 1986-87 | 53.8 | 128.9 | 5 | 187.7 | 13.6 | 201.3 |
| 1987-88 | 47.5 | 149.6 | 5 | 202.1 | 16.9 | 219 |
| 1988-89 | 57.9 | 157.7 | 5.8 | 221.4 | 19.9 | 241.3 |
| 1989-90 | 62.1 | 178.7 | 4.6 | 245.4 | 23 | 268.4 |
| 1990-91 | 71.7 | 186.5 | 6.1 | 264.3 | 25.1 | 289.4 |
| 1991-92 | 72.8 | 208.7 | 5.5 | 287 | 28.6 | 315.6 |
| 1992-93 | 69.9 | 224.8 | 6.7 | 301.4 | 31.3 | 332.7 |
| 1993-94 | 70.4 | 248.2 | 5.4 | 324 | 32.3 | 356.3 |
| 1994-95 | 82.7 | 262.1 | 5.6 | 350.4 | 35.1 | 385.5 |
| 1995-96 | 72.6 | 299.3 | 8.0 | 379.9 | 38.2 | 418.1 |
| 1996-97 | 68.9 | 317.9 | 9.1 | 395.9 | 40.8 | 436.7 |
| 1997-98 | 74.6 | 337.0 | 10.1 | 421.7 | 44.1 | 465.8 |
| 1998-99 | 82.9 | 353.7 | 11.9 | 448.5 | 48.4 | 496.9 |
| 1999-00 | 80.6 | 386.8 | 13.3 | 480.7 | 51.5 | 532.2 |
| 2000-01 | 74.5 | 408.1 | 16.9 | 499.5 | 55.0 | 554.5 |
| 2001-02 | 73.5 | 424.4 | 19.5 | 517.4 | 61.7 | 579.1 |
| 2002-03 | 64.0 | 449.3 | 19.4 | 532.7 | 63.8 | 596.5 |
| 2003-04 | 75.2 | 472.1 | 17.8 | 565.1 | 68.2 | 633.3 |
| 2004-05 | 84.6 | 492.8 | 17.0 | 594.4 | 71.4 | 665.8 |
| 2005-06 | 101.5 | 506.0 | 17.3 | 623.8 | 73.6 | 697.4 |
| 2006-07 | 113.5 | 538.4 | 18.8 | 670.7 | 81.8 | 752.5 |
| 2007-08 | 120.4 | 585.3 | 16.9 | 722.6 | 90.5 | 813.1 |
| 2008-09[a] | 110.1 | 616.2 | 14.9 | 741.2 | 99.7 | 840.9 |
| 2009-10 | 104.1 | 677.1 | 18.6 | 799.8 | 106.1 | 906.0 |
| 2010-11[p] | 114.2 | 704.3 | 26.3 | 844.8 | 114.2 | 959.0 |

Source : Ministry of Power.
p Provisional    a Calendar year    *Res: Renewable Energy Sources includes Small Hydro Projects, Wind Power, Biomass Power, Biomass Gasifier, Urban & Industrial Waste & Solar Power.

## 1.25 : PATTERN OF ELECTRICITY CONSUMPTION (UTILITIES)

(per cent)

| Year | Domestic | Commercial | Industry | Traction | Agriculture | Others |
|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 1950-51 | 12.6 | 7.5 | 62.6 | 7.4 | 3.9 | 6.0 |
| 1960-61 | 10.7 | 6.1 | 69.4 | 3.3 | 6.0 | 4.5 |
| 1970-71 | 8.8 | 5.9 | 67.6 | 3.2 | 10.2 | 4.3 |
| 1980-81 | 11.2 | 5.7 | 58.4 | 2.7 | 17.6 | 4.4 |
| 1982-83 | 12.7 | 6.1 | 55.4 | 2.8 | 18.6 | 4.4 |
| 1983-84 | 12.9 | 6.4 | 55.8 | 2.6 | 17.8 | 4.5 |
| 1984-85 | 13.6 | 6.1 | 55.2 | 2.5 | 18.4 | 4.2 |
| 1985-86 | 14.0 | 5.9 | 54.5 | 2.5 | 19.1 | 4.0 |
| 1986-87 | 14.2 | 5.7 | 51.7 | 2.4 | 21.7 | 4.3 |
| 1987-88 | 15.2 | 6.1 | 47.5 | 2.5 | 24.2 | 4.5 |
| 1988-89 | 15.5 | 6.2 | 47.1 | 2.3 | 24.3 | 4.6 |
| 1989-90 | 16.9 | 5.4 | 46 | 2.3 | 25.1 | 4.3 |
| 1990-91 | 16.8 | 5.9 | 44.2 | 2.2 | 26.4 | 4.5 |
| 1991-92 | 17.3 | 5.8 | 42.0 | 2.2 | 28.2 | 4.5 |
| 1992-93 | 18.0 | 5.7 | 40.9 | 2.3 | 28.7 | 4.4 |
| 1993-94 | 18.2 | 5.9 | 39.6 | 2.3 | 29.7 | 4.3 |
| 1994-95 | 18.5 | 6.1 | 38.6 | 2.3 | 30.5 | 4.0 |
| 1995-96 | 18.7 | 6.1 | 37.8 | 2.3 | 30.9 | 4.2 |
| 1996-97 | 19.7 | 6.2 | 37.2 | 2.4 | 30.0 | 4.5 |
| 1997-98 | 20.3 | 6.5 | 35.4 | 2.3 | 30.8 | 4.7 |
| 1998-99 | 21.0 | 6.4 | 33.9 | 2.4 | 31.4 | 4.9 |
| 1999-00 | 22.2 | 6.3 | 34.8 | 2.6 | 29.2 | 4.9 |
| 2000-01 | 23.9 | 7.1 | 34.0 | 2.6 | 26.8 | 5.6 |
| 2001-02 | 24.7 | 7.5 | 33.3 | 2.5 | 25.3 | 6.7 |
| 2002-03 | 24.6 | 7.5 | 33.9 | 2.6 | 24.9 | 6.5 |
| 2003-04 | 24.9 | 7.8 | 34.5 | 2.6 | 24.1 | 6.1 |
| 2004-05 | 24.8 | 8.1 | 35.6 | 2.5 | 22.9 | 6.1 |
| 2005-06 | 24.3 | 8.7 | 36.8 | 2.4 | 21.9 | 5.9 |
| 2006-07 | 24.4 | 8.8 | 37.6 | 2.4 | 21.7 | 5.1 |
| 2007-08 | 24.0 | 9.2 | 37.5 | 2.2 | 20.6 | 6.5 |
| 2008-09 | 24.7 | 10.2 | 37.1 | 2.2 | 20.4 | 5.4 |
| 2009-10 | 24.9 | 10.4 | 36.7 | 2.2 | 21.0 | 4.8 |

Source : Ministry of Power/Central Electricity Authority

## 1.26 : OPERATIONS OF INDIAN RAILWAYS

| | 1950-51 | 1960-61 | 1970-71 | 1980-81 | 1990-91 | 2000-01 | 2006-07 | 2007-08 | 2008-09 | 2009-10 | 2010-11[Pb] |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| 1. Route Kilometres (000's) | | | | | | | | | | | |
| Electrified | 0.4 | 0.8 | 3.7 | 5.4 | 10.0 | 14.9 | 17.8 | 18.3 | 18.6 | 18.9 | 19.6 |
| Total | 53.6 | 56.2 | 59.8 | 61.2 | 62.4 | 63.0 | 63.3 | 63.3 | 64.0 | 64.0 | 64.4 |
| 2. Originating traffic (million tonnes) | | | | | | | | | | | |
| Revenue Earning | 73.2 | 119.8 | 167.9 | 195.9 | 318.4 | 473.5 | 727.8[a] | 793.9[a] | 833.4[a] | 887.8[a] | 921.7[a] |
| Total Traffic | 93.0 | 156.2 | 196.5 | 220.0 | 341.4 | 504.2 | 744.6[a] | 804.1[a] | 836.6[a] | 892.2[a] | 926.4[a] |
| 3. Goods carried (billion tonne km.) | | | | | | | | | | | |
| Revenue Earning | 37.6 | 72.3 | 110.7 | 147.7 | 235.8 | 312.4 | 481.0[a] | 521.4[a] | 551.4[a] | 600.6[a] | 625.7[a] |
| Total Traffic | 44.1 | 87.7 | 127.4 | 158.5 | 242.7 | 315.5 | 483.4[a] | 523.2[a] | 552.0[a] | 601.3[a] | 626.5[a] |
| 4. Earnings from goods carried (₹ crore) | 139.3 | 280.5 | 600.7 | 1550.9 | 8247.0 | 23045.4 | 41073.2[a] | 46425.5[a] | 51749.3[a] | 56937.3[a] | 60687.1[a] |
| 5. Average Lead: all goods traffic (km) | 470.0 | 561.0 | 648.0 | 720.0 | 711.0 | 626.0 | 649.0 | 651.0 | 660.0 | 674.0 | 676.0 |
| 6. Average rate/ tonne km. (paise) | 3.2 | 3.9 | 5.4 | 10.5 | 35.0 | 73.8 | 85.4 | 89.0 | 93.8 | 94.8 | 97.0 |
| 7. Passengers Originating (million)[b] | 1284.0 | 1594.0 | 2431.0 | 3613.0 | 3858.0 | 4833.0 | 6219.0 | 6524.0 | 6920.4 | 7245.8 | 7651.1 |
| 8. Passengers kilometers (billion) | 66.5 | 77.7 | 118.1 | 208.6 | 295.6 | 457.0 | 695.0 | 770.0 | 838.0 | 903.5 | 978.5 |
| 9. Passengers Earnings (₹ crore) | 98.2 | 131.6 | 295.5 | 827.5 | 3144.7 | 10515.1[c] | 17224.6[c] | 19844.2[c] | 21931.32[c] | 23488.2[c] | 25792.6[c] |
| 10. Average lead: passenger traffic (km) | 51.8 | 48.7 | 48.6 | 57.7 | 76.6 | 94.6 | 111.7 | 118.0 | 121.1 | 124.7 | 127.9 |
| 11. Average rate per passenger-kilometre (paise) | 1.5 | 1.7 | 2.5 | 4.0 | 10.6 | 22.9 | 24.7 | 25.7 | 26.1 | 25.9 | 26.3 |

Source : Ministry of Railways

[P] Provisional

[a] Excluding Konkan Railways Corporation Limited loading.

[b] Excluding Metro Kolkata.

[c] Includes Metro Railway/Kolkata's earnings.

## 1.27 : REVENUE EARNING GOODS TRAFFIC ON INDIAN RAILWAYS
### A : TRAFFIC ORIGINATING

(Million tonnes)

| Commodity | 1950-51 | 1960-61 | 1970-71 | 1980-81 | 1990-91 | 2000-01 | 2006-07[a] | 2007-08[a] | 2008-09[a] | 2009-10[a] | 2010-11[Pa] |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| 1. Coal | 20.2 | 30.9 | 47.9 | 64.1 | 135.2 | 223.7 | 313.3 | 336.8 | 369.6 | 396.2 | 420.4 |
| 2. Raw materials for Steel Plants except iron ore | na | 10.5 | 16.1 | 20.2 | 25.9 | 38.8 | 53.2 | 11.2 | 10.9 | 11.6 | 13.3 |
| 3. Pig iron & finished steel | | | | | | | | | | | |
| i) steel plants | na | 3.8 | 6.2 | 7.5 | 10.0 | 11.8 | 21.0 | 20.8 | 22.0 | 24.2 | 24.1 |
| ii) from other points | na | na | na | na | na | na | na | 5.0 | 6.6 | 7.7 | 8.8 |
| iii) Total | na | na | na | na | na | na | na | 25.8 | 28.6 | 31.9 | 32.8 |
| 4. Iron ore | | | | | | | | | | | |
| i) for export | na | 2.6 | 9.8 | 11.1 | 13.1 | 14.6 | 38.8 | 53.7 | 45.8 | 43.6 | 25.7 |
| ii) for steel plants | na | na | na | na | na | na | na | 43.6 | 42.9 | 44.3 | 44.7 |
| iii) for other domestic users | na | na | na | na | na | na | na | 39.3 | 41.9 | 44.8 | 48.1 |
| iv) Total | na | na | na | na | na | na | na | 136.7 | 130.6 | 132.7 | 118.5 |
| 5. Cement | 2.5 | 6.5 | 11.0 | 9.6 | 28.9 | 42.9 | 73.1 | 79.0 | 86.2 | 93.2 | 99.1 |
| 6. Foodgrains | 7.8 | 12.7 | 15.1 | 18.3 | 25.4 | 26.7 | 41.8 | 38.2 | 35.5 | 38.7 | 43.5 |
| 7. Fertilizers | na | 1.4 | 4.7 | 8.1 | 18.4 | 27.1 | 34.3 | 35.8 | 41.4 | 43.7 | 48.2 |
| 8. POL | 2.7 | 4.7 | 8.9 | 15.0 | 25.0 | 36.3 | 35.2 | 35.9 | 38.1 | 38.9 | 39.3 |
| 9. Container Service | | | | | | | | | | | |
| i) Domestic Container | na | na | na | na | na | na | na | 3.7 | 7.1 | 9.6 | 11.0 |
| ii) EXIM Containers | na | na | na | na | na | na | na | 17.4 | 23.3 | 25.3 | 26.6 |
| iii) Total | na | na | na | na | na | na | na | 21.1 | 30.3 | 35.0 | 37.6 |
| 10. Balance (other goods) | 40.0 | 46.7 | 48.2 | 42.1 | 36.6 | 51.8 | 116.9 | 73.3 | 62.2 | 66.1 | 69.2 |
| 11. Total revenue earning freight traffic | 73.2 | 119.8 | 167.9 | 195.9 | 318.4 | 473.5 | 727.8 | 793.9 | 833.4 | 887.8 | 921.7 |

### B : GOODS CARRIED

(Billion tonne-km.)

| Commodity | 1950-51 | 1960-61 | 1970-71 | 1980-81 | 1990-91 | 2000-01 | 2006-07 | 2007-08 | 2008-09 | 2009-10[a] | 2010-11[Pa] |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| 1. Coal | 11.3 | 20.5 | 27.8 | 36.4 | 85.9 | 133.4 | 191.5 | 208.5 | 230.1 | 247.0 | 268.3 |
| 2. Raw materials for Steel Plants except iron ore | na | 2.0 | 2.7 | 4.3 | 7.5 | 13.5 | 16.9 | 7.9 | 7.5 | 8.9 | 9.8 |
| 3. Pig iron & finished steel | | | | | | | | | | | |
| i) steel plants | na | 3.3 | 6.2 | 8.6 | 11.6 | 12.1 | 22.4 | 21.2 | 22.2 | 25.4 | 24.9 |
| ii) from other points | na | na | na | na | na | na | na | 3.8 | 4.7 | 6.1 | 7.4 |
| iii) Total | na | na | na | na | na | na | na | 25.1 | 27.0 | 31.5 | 32.2 |
| 4. Iron ore | | | | | | | | | | | |
| i) for export | na | na | 5.5 | 7.3 | 7.5 | 7.9 | 19.9 | 27.6 | 21.9 | 25.0 | 15.5 |
| ii) for steel plants | na | na | na | na | na | na | na | 10.8 | 10.1 | 10.0 | 9.6 |
| iii) for other domestic users | na | na | na | na | na | na | na | 15.7 | 18.8 | 19.0 | 21.2 |
| iv) Total | na | na | na | na | na | na | na | 54.1 | 50.8 | 54.0 | 46.4 |
| 5. Cement | na | 2.5 | 7.0 | 7.2 | 18.9 | 24.9 | 41.1 | 43.2 | 46.5 | 53.8 | 57.0 |
| 6. Foodgrains | 4.0 | 9.6 | 14.5 | 24.3 | 35.6 | 33.1 | 47.9 | 46.9 | 45.6 | 50.3 | 52.0 |
| 7. Fertilizers | na | na | 3.8 | 8.9 | 17.3 | 23.0 | 25.5 | 25.8 | 33.1 | 36.6 | 40.7 |
| 8. POL | na | 2.6 | 5.3 | 11.7 | 15.1 | 19.9 | 24.7 | 23.4 | 24.0 | 24.9 | 26.1 |
| 9. Container Service | | | | | | | | | | | |
| i) Domestic Container | na | na | na | na | na | na | na | 4.8 | 9.7 | 12.7 | 13.8 |
| ii) EXIM Containers | na | na | na | na | na | na | na | 18.3 | 28.4 | 31.6 | 27.2 |
| iii) Total | na | na | na | na | na | na | na | 23.1 | 38.1 | 44.3 | 41.0 |
| 10. Balance (other goods) | 22.3 | 31.9 | 37.9 | 39.1 | 36.4 | 44.5 | 91.2 | 63.5 | 48.8 | 49.5 | 52.3 |
| 11. Total revenue earning freight traffic | 37.6 | 72.3 | 110.7 | 147.7 | 235.8 | 312.4 | 481.0 | 521.4 | 551.5 | 600.6 | 625.7 |

Source : Ministry of Railways

na : Not Available P Provisional [a] Excluding Konkan Railways Corporation Limited loading.

## 1.28 : OPERATIONS OF ROAD TRANSPORT

| | Unit | 1950-51 | 1960-61 | 1970-71 | 1980-81 | 1990-91 | 2000-01 | 2006-07 | 2007-08 | 2008-09 | 2009-10 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| 1. Length of roads | (Thousand km) | | | | | | | | | | |
| Total # | | 399.9 | 524.5 | 914.9 | 1485.4 | 2331.1 | 3373.5 | 4016.4 | 4109.6 | na | na |
| Surfaced | | 157.0 | 263.0 | 398.0 | 684.0 | 1091.0 | 1601.7 | 1944.8 | 2036.1 | na | na |
| 2. Length of national highways | (Thousand km) | | | | | | | | | | |
| Total | | 19.8 | 23.8 | 23.8 | 31.7 | 33.7 | 57.7 | 66.6 | 66.8 | na | na |
| Surfaced | | na | 21.0 | 23.3 | 31.5 | 33.4 | 57.7 | 66.6 | 66.8 | na | na |
| 3. Length of state highways | (Thousand km) | | | | | | | | | | |
| Total | | na | na | 56.8 | 94.4 | 127.3 | 132.1 | 152.2 | 154.5 | na | na |
| Surfaced | | na | na | 51.7 | 90.3 | 124.8 | 129.9 | 150.7 | 152.7 | na | na |
| 4. Number of registered vehicles | (Thousand) | | | | | | | | | | |
| All vehicles | | 306.0 | 665.0 | 1865.0 | 5391.0 | 21374.0 | 54991.0 | 96707 | 105353 | 114951 | na |
| Goods vehicles | | 82.0 | 168.0 | 343.0 | 554.0 | 1356.0 | 2948.0 | 5119 | 5601 | 6041 | na |
| Buses | | 34.0 | 57.0 | 94.0 | 162.0 | 331.0 | 634.0 | 1350 | 1427 | 1486 | na |
| 5. Revenue from road transport | (₹ crore) | | | | | | | | | | |
| Central | | 34.8 | 111.7 | 451.8 | 930.9 | 4596.0 | 23861.0 | 54580.0 | 56758.2 | 53098.0 | 59345.3 |
| States | | 12.6 | 55.2 | 231.4 | 750.4 | 3259.6 | 12901.7 | 21770.0 | 24025.8 | 34241.0 | 37733.5 |

Source : Department of Road Transport & Highways.

\# Includes roads constructed under the Pradhan Mantri Gram Sadak Yojana (PMGSY) since December 2000 and erstwhile Jawahar Rozgar Yojana (JRY) of the 1990s.

na: Not Available.

Sources : National Highways - Roads Wing, Ministry of Road Transport & Highways
: State Highways – State Public Works Departments
: Registered Vehicles – Office of the State Transport Commissioners
: Revenue from Road Transport (Central) – Directorate of Data Management, Central Excise and Customs.
: Revenue from Road Transport (States) – State Finances- A Study of Budgets 2007-08 by RBI and its earlier issues.

## 1.29 : GROWTH OF CIVIL AVIATION

| | Unit | 1960-61 | 1970-71 | 1980-81 | 1990-91 | 1999-00 | 2004-05 | 2005-06 | 2006-07 | 2007-08 | 2008-09 | 2009-2010 | 2010-11 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 |
| 1. Total fleet strength | | | | | | | | | | | | | |
| (i ) Air India | | 13 | 10 | 17 | 24 | 26 | 36 | 34 | 36 | | | | |
| (ii) Indian Airlines | | 88 | 73 | 49 | 56 | 53 | 61 | 64 | 70 | | | | |
| (iii) National Aviation Company of India Limited | | | | | | | | | | 122 | 108 | 113 | 104 |
| 2. Revenue tonne-Kilometers | (₹ crore) | | | | | | | | | | | | |
| (i ) Air India | | 7.56 | 27.52 | 98.01 | 138.10 | 145.65 | 221.80 | 236.40 | 221.96 | | | | |
| (ii) Indian Airlines | | 10.0 | 20.00 | 40.03 | 69.92 | 74.03 | 101.73 | 114.09 | 23.63 | | | | |
| (iii) National Aviation Company of India Limited | | | | | | | | | | 372.90 | 328.40 | 353.30 | 367.70 |
| 3. Number of passengers carried | (Lakh) | | | | | | | | | | | | |
| (i ) Air India | | 1.25 | 4.87 | 14.18 | 21.61 | 33.50 | 44.40 | 44.40 | 43.00 | | | | |
| (ii) Indian Airlines | | 7.90 | 21.30 | 54.29 | 78.66 | 59.30 | 71.32 | 78.61 | 85.70 | | | | |
| (iii) National Aviation Company of India Limited | | | | | | | | | | 133.20 | 117.80 | 117.50 | 127.80 |
| 4. Passengers handled at | (Lakh) | | | | | | | | | | | | |
| AAI Airports | | na | na | 107.38 | 177.23 | 390.35 | 592.84 | 733.42 | 938.4 | 637.05 | 442.54 | 508.71 | 596.43 |
| Joint Venture Int'l Airports | | | | | | | | | 25.63 | 531.81 | 646.16 | 728.84 | 837.87 |
| **Total at Indian Airports** | | | | | | | | | 964.03 | 1168.86 | 1088.7 | 1237.55 | 1434.3 |
| 5. Cargo handled at AAI Airports | (Thousand tonnes) | | | | | | | | | | | | |
| AAI Airports | | na | na | 178.70 | 377.33 | 797.41 | 1278.47 | 1397.30 | 1529.52 | 723.46 | 561.42 | 592.95 | 726.52 |
| Joint Venture Int'l Airports | | | | | | | | | 21.39 | 991.52 | 1140.57 | 1366.76 | 1621.92 |
| **Total at Indian Airports** | | | | | | | | | | 1714.98 | 1701.99 | 1959.71 | 2348.44 |

Source : Ministry of Civil Aviation.

na : Not Available.

## 1.30 : COMMODITY BALANCE OF PETROLEUM AND PETROLEUM PRODUCTS

(Million tonnes)

| Item | 1950-51[a] | 1960-61[a] | 1970-71[a] | 1980-81 | 1990-91 | 2000-01 | 2006-07 | 2007-08 | 2008-09 | 2009-2010 | 2010-11 | 2011-12 (Apr.-Nov.) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 |
| **I. Crude Oil** | | | | | | | | | | | | |
| 1. Refinery throughput | 0.3 | 6.6 | 18.4 | 25.8 | 51.8 | 103.4 | 146.6 | 156.1 | 160.8 | 192.8 | 206.2 | 139.9 |
| 2. Domestic production | 0.3 | 0.5 | 6.8 | 10.5 | 32.2 | 32.4 | 34.0 | 34.1 | 33.5 | 33.7 | 37.7 | 25.5 |
| (a) On-shore | 0.3 | 0.5 | 6.8 | 5.5 | 11.8 | 11.8 | 11.3 | 11.2 | 11.3 | 11.8 | 16.4 | 11.9 |
| (b) Off-shore | … | … | … | 5.0 | 20.4 | 20.6 | 22.7 | 22.9 | 22.2 | 21.9 | 21.3 | 13.6 |
| 3. Imports | na | 6.0 | 11.7 | 16.2 | 20.7 | 74.1 | 111.5 | 121.7 | 132.8 | 159.0 | 163.6 | 112.1 |
| 4. Exports | … | … | … | … | … | … | … | … | … | … | | … |
| 5. Net imports (3-4) | na | 6.0 | 11.7 | 16.2 | 20.7 | 74.1 | 111.5 | 121.7 | 132.8 | 159.0 | 163.6 | 112.1 |
| **II. Petroleum Products** | | | | | | | | | | | | |
| 1. Domestic consumption [b] | 3.3 | 7.7 | 17.9 | 30.9 | 55.0 | 100.1 | 120.7 | 128.9 | 133.4 | 138.2 | 141.8 | 96.6 |
| of which | | | | | | | | | | | | |
| (a) Naphtha | … | … | 0.9 | 2.3 | 3.4 | 11.7 | 13.9 | 13.3 | 13.9 | 10.2 | 10.7 | 7.7 |
| (b) Kerosene | 0.9 | 2.0 | 3.3 | 4.2 | 8.4 | 11.3 | 9.5 | 9.4 | 9.3 | 9.3 | 8.9 | 5.5 |
| (c) High speed diesel oil | 0.2 | 1.2 | 3.8 | 10.3 | 21.1 | 37.9 | 42.9 | 47.7 | 51.7 | 56.3 | 60.0 | 42.0 |
| (d) Fuel oils | 0.9 | 1.7 | 4.7 | 7.5 | 9.0 | 12.7 | 12.6 | 12.7 | 12.4 | 11.6 | 10.9 | 6.1 |
| 2. Domestic production [c] | 0.2 | 5.7 | 17.1 | 24.1 | 48.6 | 95.6 | 135.3 | 144.9 | 150.5 | 179.8 | 190.4 | 130.2 |
| of which | | | | | | | | | | | | |
| (a) Naphtha | na | … | 1.2 | 2.1 | 4.9 | 9.9 | 16.7 | 16.4 | 14.8 | 17.1 | 17.5 | 13.3 |
| (b) Kerosene | na | 0.9 | 2.9 | 2.4 | 5.5 | 8.7 | 8.5 | 7.8 | 8.2 | 8.5 | 7.7 | 4.9 |
| (c) High speed diesel oil | na | 1.1 | 3.8 | 7.4 | 17.2 | 39.1 | 53.5 | 58.4 | 62.9 | 73.3 | 78.1 | 54.0 |
| (d) Fuel oils | na | 1.6 | 4.1 | 6.1 | 9.4 | 11.4 | 15.7 | 15.8 | 17.7 | 18.3 | 20.1 | 13.3 |
| 3. Imports | 3.1 | 2.5 | 1.1 | 7.3 | 8.7 | 9.3 | 17.7 | 22.5 | 18.5 | 51.0 | 12.0 | 10.0 |
| 4. Exports | na | na | 0.3 | … | 2.7 | 8.4 | 33.6 | 40.8 | 38.9 | 46.0 | 59.0 | 40.6 |
| 5. Net Imports (3-4) | na | na | 0.8 | 7.3 | 6.0 | 0.9 | -15.9 | -18.3 | -20.4 | -36.3 | -47.0 | -30.6 |

Source : Ministry of Petroleum and Natural Gas.

[a] Calender year.

[b] Excluding refinery fuel consumption. Including import by private parties.

[c] Excludes LPG production from fractionators.

## 1.31 : PRODUCTION OF SELECTED INDUSTRIES

| Industry | Unit | 1950-51 | 1960-61 | 1970-71 | 1980-81 | 1990-91 | 2000-01 | 2004-05 | 2005-06 | 2006-07 | 2007-08 | 2008-09 | 2009-10 | 2010-11 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 |
| I. MINING | | | | | | | | | | | | | | |
| 1. Coal (incl. lignite) | Million tonnes | 32.3 | 55.2 | 76.3 | 119.0 | 225.5 | 332.6 | 413.0 | 437.1 | 462.1 | 491.1 | 525.2 | 566.1 | 570.8 |
| 2. Petroleum, crude | -do- | 0.3 | 0.5 | 6.8 | 10.5 | 33.0 | 32.4 | 34.0 | 32.2 | 34.0 | 34.1 | 33.5 | 33.7 | 37.7 |
| (i) On-shore | -do- | 0.3 | 0.5 | 6.8 | 5.5 | 11.8 | 11.8 | 11.6 | 11.4 | 11.3 | 11.2 | 11.3 | 11.8 | 16.4 |
| (ii) Off-shore | -do- | na | na | na | 5.0 | 21.2 | 20.6 | 22.4 | 20.8 | 22.7 | 22.9 | 22.2 | 21.9 | 21.3 |
| 3. Iron ore | -do- | 3.0 | 10.9 | 32.5 | 42.2 | 53.7 | 80.6 | 145.9 | 154.4 | 187.7 | 213.2 | 213.0 | 218.6 | 208.0 |
| II. METALLURGICAL INDUSTRIES | | | | | | | | | | | | | | |
| 4. Hot metal (incl. Pig iron) | -do- | 1.7 | 4.3 | 7.0 | 9.6 | 12.2 | 22.6 | 31.5 | 36.5 | 39.7 | 42.1 | 43.3 | 47.4 | 50.9[a] |
| 5. Crude Steel | -do- | 1.5 | 3.5 | 6.1 | 10.3 | na | 30.6 | 43.3 | 46.5 | 50.82 | 53.86 | 58.44 | 65.84 | 69.57[a] |
| 6. Semi-finished steel (main producers) | -do- | 1.2 | 1.0 | 0.9 | 2.0 | 4.3 | 3.3 | 2.7 | 3.2 | 3.1 | 2.8 | 3.2 | 4.1 | 4.2[a] |
| 7. Finished steel | -do- | 1 | 2.4 | 4.6 | 6.8 | 13.5 | 32.3 | 43.5 | 46.6 | 52.5 | 56.1 | 57.16 | 60.62 | 66.01[a] |
| 8. Steel castings | Th tonnes | na | 35.0 | 62.0 | 71.0 | 262.0 | 352.4 | 421.7 | 449.5 | 612 | 567 | 1592 | 1486 | 1540[a] |
| 9. Aluminium | -do- | 4.0 | 18.5 | 168.8 | 199.0 | 451.1 | 620.4 | 768.3 | 831.7 | 1061.2 | 1042.7 | 934.5 | 1045.1 | 790.4 |
| 10. Copper and copper products* | -do- | na | na | na | na | an | na | 568.8 | 764.1 | 797.5 | 889.6 | 853.8 | 705.4 | 670.6 |
| III. MECHANICAL ENGINEERING INDUSTRIES | | | | | | | | | | | | | | |
| 11. Machine tools | ₹ Million | 3 | 8 | 430 | 1692 | 7731 | 12263 | 10374 | 14456 | 17311 | 17645 | 13956 | 15018 | 18400 |
| 12. Textile machinery | -do- | na | na | na | na | na | 125296 | 14382 | 17115 | 24101 | 27447 | 16890 | 15742 | 24572 |
| 13. Commercial vehicles [b] | Million | 8.6 | 28.2 | 41.2 | 71.7 | 145.5 | 152.0 | 350.0 | 391.1 | 520.0 | 545.1 | 416.5 | 566.6 | 752.6 |
| 14. Cars, jeeps & land rovers (passanger cars) | -do- | 7.9 | 26.6 | 46.7 | 49.4 | 220.8 | 632.2 | 965.4 | 1047.5 | 1238.7 | 1422.0 | 1516.8 | 1910.5 | 2452.8 |
| 15. Motor cycles* | -do- | na | 0.9 | 97.0 | 447.2 | 1842.8 | 3756.1 | 5122.0 | 6201.2 | 7112.2 | 6503.5 | 6802.0 | 8444.9 | 10527.1 |
| 16. Pumps (Power driven pumps) | -do- | 35.0 | 105.0 | 259.0 | 431.0 | 19.0 | 481.9 | 1549.8 | 1726.1 | 1954.7 | 2089.3 | 2140.3 | 2891.7 | 3139.1 |
| 17. Engines Inc. combustion & Diesel engines* | -do- | 5.5 | 43.2 | 65.0 | 173.9 | 158.4 | 306.0 | 814.1 | 855.4 | 986.2 | 1120.8 | 1136.1 | 1250.5 | 1484.3 |
| 18. Tractors (complete) | -do- | na | na | na | 71.0 | 142.2 | 284.4 | 187.7 | 236.4 | 300.5 | 295.0 | 293.6 | 373.7 | 465.4 |
| IV. ELECTRICAL ENGINEERING INDUSTRIES | | | | | | | | | | | | | | |
| 19. Transformers (small)* | Th Numbers | na | na | na | na | na | na | 3259.8 | 3542.5 | 5713.8 | 5288.9 | 4408.9 | 6956.6 | 7482.0 |
| 20. Electric motors (phase 1)* | Million | na | na | na | na | na | na | 3.3 | 3.1 | 3.3 | 3.1 | 2.8 | 2.8 | 3.0 |
| 21. Electric motors (Exc.phase 1)* | Million hp | na | na | na | na | na | 5.2 | 7.7 | 7.4 | 9.1 | 10.0 | 11.6 | 14.7 | 14.5 |
| 22. Computers* | ₹ Million | na | na | na | na | na | 7914.6 | 20043.7 | 29360.0 | 30374.2 | 33872.9 | 29931.1 | 29636.5 | 28180.7 |

Contd...

## 1.31 : PRODUCTION OF SELECTED INDUSTRIES

| Industry | Unit | 1950-51 | 1960-61 | 1970-71 | 1980-81 | 1990-91 | 2000-01 | 2004-05 | 2005-06 | 2006-07 | 2007-08 | 2008-09 | 2009-10 | 2010-11 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 |
| 23. Aluminium conductors | Th tonnes | 1.7 | 23.7 | 64.2 | 86.0 | 67.6 | 30.9 | 21.0 | 28.9 | 24.6 | 35.0 | 75.6 | 112.6 | 97.9 |
| V. CHEMICAL AND ALLIED INDUSTRIES | | | | | | | | | | | | | | |
| 24. Urea* | Th MT | na | na | na | na | na | na | 20263 | 20099 | 20308 | 19857 | 19922 | 21112 | 21880 |
| 25. Di Ammonium Phosphate (DAP)* | -do- | na | na | na | na | na | na | 5184 | 4628 | 4852 | 4212 | 2993 | 4247 | 3537 |
| 26. Soda ash | -do- | 46 | 147 | 449 | 563 | 1385 | 1631 | 2287 | 2298 | 2078 | 2006 | 1989 | 2051 | 2298 |
| 27. Caustic Soda | -do- | 12 | 99 | 371 | 578 | 992 | 1642 | 1796 | 1883 | 1914 | 2051 | 2050 | 2103 | 2168 |
| 28. Corrugated &other paper* | ₹ crore | na | na | na | na | na | na | 266 | 270 | 261 | 214 | 223 | 226 | 269 |
| 29. Craft paper* | Th tonnes | na | na | na | na | na | na | 859 | 899 | 977 | 1014 | 1060 | 1184 | 1260 |
| 30. Writing & printing paper* | Th tonnes | na | na | na | na | na | na | 1821 | 1974 | 2066 | 2144 | 2288 | 2387 | 2577 |
| 31. Automobile tyres (truck/bus)* | Million | na | 1.5 | 3.8 | 8.0 | 20.1 | 29.3 | 10.6 | 11.8 | 12.1 | 12.8 | 12.0 | 13.8 | 13.5 |
| 32. Car/cab tyres* | -do- | na | na | na | na | na | na | 9.0 | 10.2 | 11.8 | 13.9 | 14.0 | 15.9 | 20.0 |
| 33. Cement | Million tonnes | 2.7 | 8.0 | 14.3 | 18.6 | 48.8 | 99.2 | 125.3 | 140.5 | 154.7 | 167.6 | 181.4 | 200.7 | 209.7 |
| 34. Antibiotics & its preparations* | ₹ crore | na | na | na | na | na | na | 1005.1 | 921.4 | 1066.8 | 1435.6 | 1366.6 | 1260.6 | 1143.6 |
| 35. Vitamins* | -do- | na | na | na | na | na | na | 33.6 | 33.2 | 32.3 | 39.1 | 43.0 | 57.6 | 65.6 |
| 36. Petroleum refinery products[f] | Million tonnes | 0.2 | 5.7 | 17.1 | 24.1 | 48.6 | 95.6 | 118.6 | 119.8 | 135.3 | 144.9 | 150.5 | 179.8 | 190.4 |
| VI. TEXTILE INDUSTRIES | | | | | | | | | | | | | | |
| 37. Cloth | | | | | | | | | | | | | | |
| (a) Cotton cloth | Million sq. metres | 4215 | 6738 | 7602 | 8368 | 15431 | 19718 | 20655 | 23873 | 26238 | 27196 | 26898 | 28914 | 31742[a] |
| (i) Mill sector | -do- | 3401 | 4649 | 4055 | 3434 | 1859 | 1106 | 1072 | 1192 | 1305 | 1249 | 1259 | 1465 | 1604[a] |
| (ii) Decentralised sector | -do- | 814 | 2089 | 3547 | 4934 | 13572 | 18612 | 19583 | 22681 | 24933 | 25947 | 25639 | 27449 | 30138[a] |
| (b) Mixed / blended cloth | -do- | na | na | 170 | 1270 | 2380 | 6351 | 6032 | 6298 | 6882 | 6888 | 6766 | 7767 | 8279[a] |
| (i) Mill sector | -do- | na | na | 107 | 730 | 698 | 332 | 243 | 252 | 330 | 422 | 426 | 482 | 526[a] |
| (ii) Decentralised sector | -do- | na | na | 63 | 540 | 1682 | 6019 | 5789 | 6046 | 6552 | 6466 | 6340 | 7285 | 7753[a] |
| (c) Man-made fibre fabrics | -do- | 300[c] | 550[c] | 951 | 1350 | 5126 | 14164 | 18691 | 19406 | 20269 | 21941 | 21302 | 23652 | 22521[a] |
| (i) Mill sector | -do- | 13[c] | 3[c] | 2 | 4 | 41 | 232 | 211 | 212 | 111 | 110 | 111 | 69 | 75[a] |
| (ii) Decentralised sector | -do- | 287[c] | 547[c] | 949 | 1346 | 5085 | 13932 | 18480 | 19194 | 20158 | 21831 | 21191 | 23583 | 22446[a] |

Contd...

## 1.31 : PRODUCTION OF SELECTED INDUSTRIES

| Industry | Unit | 1950-51 | 1960-61 | 1970-71 | 1980-81 | 1990-91 | 2000-01 | 2004-05 | 2005-06 | 2006-07 | 2007-08 | 2008-09 | 2009-10 | 2010-11 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 |
| 38. Spun yarn (by cotton textile mills) | | | | | | | | | | | | | | |
| (i) Cotton | Million kg. | 533[c] | 788[c] | 929 | 1067 | 1510 | 2267 | 2272 | 2521 | 2824 | 2948 | 2896 | 3079 | 3490[a] |
| (ii) Mixed / blended | -do- | na | na | 22 | 144 | 207 | 646 | 585 | 588 | 635 | 677 | 655 | 707 | 797[a] |
| (iii) 100% non-cotton | -do- | 11[c] | 15[c] | 65 | 87 | 107 | 247 | 366 | 349 | 354 | 378 | 361 | 407 | 426[a] |
| 39. Filament yarn: | Th tonnes | | | | | | | | | | | | | |
| (a) Cellulosic | -do- | … | 21[c] | 38 | 43 | 51 | 55 | 53 | 53 | 54 | 51 | 42 | 43 | 41[a] |
| (i) Viscose | -do- | … | 19[c] | 36 | 41 | 51 | 55 | 54 | 53 | 54 | 51 | 42 | 43 | 41[a] |
| (b) Synthetic | -do- | na | na | 10 | 32 | 227 | 865 | 1039 | 1113 | 1303 | 1448 | 1360 | 1465 | 1495[a] |
| (i) Polyster | -do- | na | na | 1 | 11 | 187 | 839 | 1004 | 1076 | 1271 | 1420 | 1332 | 1435 | 1462[a] |
| (ii) Nylon | -do- | na | na | 9 | 21 | 40 | 26 | 35 | 37 | 32 | 28 | 28 | 30 | 33[a] |
| 40. Staple fibre: | | | | | | | | | | | | | | |
| (a) Cellulosic | -do- | na | 22[c] | 62 | 83 | 160 | 236 | 248 | 229 | 247 | 280 | 233 | 302 | 305[a] |
| (i) Viscose | -do- | na | 22[c] | 62 | 83 | 160 | 236 | 248 | 229 | 247 | 280 | 233 | 302 | 305[a] |
| (b) Synthetic | -do- | na | na | 5 | 32 | 177 | 666 | 771 | 736 | 889 | 961 | 830 | 963 | 976[a] |
| (i) Polyester | -do- | na | na | 5 | 22 | 135 | 566 | 644 | 628 | 792 | 880 | 750 | 873 | 896[a] |
| (ii) Acrelic | -do- | na | na | na | 10 | 42 | 100 | 127 | 108 | 97 | 81 | 80 | 90 | 80[a] |
| VII. FOOD INDUSTRIES | | | | | | | | | | | | | | |
| 41. Sugar ( including sugar cubes)[d] | Th tonnes | 1134[e] | 3029[e] | 3740 | 5148 | 12047 | 18510 | 13660 | 19321 | 28199 | 26300 | 14677 | 18802 | 24350 |
| 42. Tea | -do- | 277 | 318 | 423 | 568 | 705 | 827 | 831 | 893 | 949 | 948 | 968 | 991 | 967 |
| 43. Coffee | -do- | 21 | 54 | 71 | 139 | 170 | 313 | 296 | 262 | 254 | 265 | 267 | 278 | 283 |
| 44. Vanaspati/Edible hydrogenated oil*[g] | -do- | 155 | 355 | 558 | 753 | 850 | 1445 | 1898 | 1193 | 1285 | 1380 | 1532 | 1122 | 827 |
| VIII. ELECTRICITY GENERATED (utilities) | Billion KWH | 5 | 17 | 56 | 111 | 264 | 499 | 587 | 617 | 662 | 704.4 | 723.8 | 771.5 | 811.1 |

Sources :
1 Department of Coal.
2 & 36 Ministry of Petroleum & Natural Gas.
4 to 8 Ministry of Steel
9-35,42-44,& VIII Central Statistics Office {( based on total production of sample units only covered under Index of Industrial Production series ( base 2004-05=100)}
3 Ministry of Mines
37-40 Ministry of Textiles
41 Directorate of Sugar.

na Not available. Th = thousand

a Provisional
b Includes buses, trucks and tempos, 3 & 4 wheelers upto 2001-01 but excludes utility/multi purpose vehicles and three wheelers from 2004-05 onwards.
c calendar year
d Relates to October-September
e Relates to November-October.
f Excluding LPG Production from natural gas
g Relates to edible hydrogenated oil from 2004-05 onwards

* new items/change in specifications hence data prior to 2005-06 may not be comparable.

## 1.32 : INDEX OF INDUSTRIAL PRODUCTION

(Base: 2004–05=100)

| Industry Group | Industry | Weight | 2005-06 | 2006-07 | 2007-08 | 2008-09 | 2009-10 | 2010-11 |
|---|---|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| | General Index | 100.00 | 108.6 | 122.6 | 141.7 | 145.2 | 152.9 | 165.5 |
| 10 | Mining | 14.16 | 102.3 | 107.5 | 112.5 | 115.4 | 124.5 | 131.0 |
| 15-36 | Manufacturing | 75.53 | 110.3 | 126.8 | 150.1 | 153.8 | 161.3 | 175.7 |
| 15 | Food products and beverages | 7.28 | 113.2 | 131.2 | 147.5 | 135.4 | 133.5 | 142.9 |
| 16 | Tobacco products | 1.57 | 101.0 | 102.9 | 98.4 | 102.7 | 102.0 | 104.1 |
| 17 | Textiles | 6.16 | 108.3 | 116.8 | 124.6 | 120.1 | 127.4 | 135.9 |
| 18 | Wearing apparel; dressing and dyeing of fur | 2.78 | 114.1 | 137.2 | 149.9 | 134.6 | 137.1 | 142.2 |
| 19 | Luggage, handbags, saddlery, harness & footwear; tanning and dressing of leather products | 0.58 | 90.9 | 104.0 | 110.0 | 104.4 | 105.8 | 114.3 |
| 20 | Wood and products of wood & cork except furniture; articles of straw & plating materials | 1.05 | 106.8 | 126.0 | 148.0 | 155.3 | 160.1 | 156.5 |
| 21 | Paper and paper products | 1.00 | 106.3 | 111.0 | 112.6 | 118.0 | 121.1 | 131.4 |
| 22 | Publishing, printing & reproduction of recorded media | 1.08 | 113.7 | 122.8 | 140.2 | 142.4 | 133.8 | 148.8 |
| 23 | Coke, refined petroleum products & nuclear fuel | 6.72 | 100.6 | 112.6 | 119.6 | 123.4 | 121.8 | 121.5 |
| 24 | Chemicals and chemical products | 10.06 | 101.0 | 110.4 | 118.4 | 115.0 | 120.7 | 123.1 |
| 25 | Rubber and plastics products | 2.02 | 112.3 | 119.6 | 135.7 | 142.6 | 167.4 | 185.2 |
| 26 | Other non-metallic mineral products | 4.31 | 107.8 | 119.5 | 130.6 | 134.9 | 145.4 | 151.4 |
| 27 | Basic metals | 11.34 | 115.5 | 132.6 | 156.3 | 159.0 | 162.4 | 176.7 |
| 28 | Fabricated metal products, except machinery & equipment | 3.08 | 111.1 | 133.3 | 143.8 | 144.0 | 158.6 | 182.8 |
| 29 | Machinery and equipment n.e.c. | 3.76 | 126.1 | 150.9 | 185.0 | 171.0 | 198.0 | 256.3 |
| 30 | Office, accounting & computing machinery | 0.31 | 145.3 | 155.5 | 164.8 | 148.8 | 154.4 | 146.3 |
| 31 | Electrical machinery & apparatus n.e.c. | 1.98 | 116.8 | 131.6 | 373.0 | 530.8 | 459.2 | 472.1 |
| 32 | Radio, TV and communication equipment & apparatus | 0.99 | 122.7 | 312.8 | 604.2 | 726.7 | 809.1 | 911.5 |
| 33 | Medical, precision & optical instruments, watches and clocks | 0.57 | 95.4 | 104.8 | 111.4 | 119.8 | 100.9 | 107.8 |
| 34 | Motor vehicles, trailers & semi-trailers | 4.06 | 110.1 | 138.0 | 151.2 | 138.0 | 179.1 | 233.3 |
| 35 | Other transport equipment | 1.82 | 115.3 | 132.9 | 129.0 | 134.0 | 171.1 | 210.7 |
| 36 | Furniture; manufacturing n.e.c. | 3.00 | 116.2 | 111.7 | 132.7 | 142.5 | 152.7 | 141.2 |
| 40 | Electricity | 10.32 | 105.2 | 112.8 | 120.0 | 123.3 | 130.8 | 138.0 |

Source : Central Statistics Office

n.e.c. : not elsewhere classified.

## 1.33 : STATE-WISE/UTILITY WISE AVERAGE RATE OF ELECTRICITY FOR DOMESTIC & INDUSTRIAL CONSUMERS

(Rates in Paise/kwh)

| Sl. No. | Name of Utility | Tariff effective from | Domestic 4 KW (400 KWh/month) | Large Industry 1000KW 60% L.F. (438000) KWh/ Month) |
|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 |
| 1 | Andhra Pradesh | 01-08-2010 | 396.63 | 409.45 |
| 2 | Assam | 01-08-2009 | 441.50 | 399.21 |
| 3 | Bihar | 01-09-2008 | 321.98 | 501.18 |
| 4 | Chhattishgarh | 01-07-2009 | 235.63 | 410.87 |
| 5 | Gujarat | 01-04-2010 | 475.50 U | 509.13 |
| | | | 385.00 R | |
| 6 | Haryana | 01-11-2006 | 384.25 | 424.00 |
| 7 | Himachal Pradesh | 01-04-2010 | 193.13 | 424.03 |
| 8 | Jammu & Kashmir | 01-04-2010 | 234.58 | 321.47 |
| 9 | Jharkhand | 01-05-2010 | 185.50 | 321.89 |
| 10 | Karnataka | 01-12-2009 | 449.79 D | 527.80 D |
| | | | 436.67 E | 521.09 O |
| | | | 418.29 F | |
| 11 | Kerala | 01-01-2010 | 362.63 | 378.49 |
| 12 | Madhya Pradesh | 01-06-2010 | 649.02 U | 500.81 |
| | | | 625.27 R | |
| 13 | Maharashtra | 01-09-2010 | 505.49 | 617.75 B |
| | | | | 567.03 C |
| 14 | Meghalaya | 01-09-2010 | 298.75 | 410.29 |
| 15 | Odisha | 01-04-2010 | 319.80 | 402.21 |
| 16 | Punjab | 01-04-2010 | 478.27 | 517.54 |
| 17 | Rajasthan | 01-01-2005 | 396.88 U | 463.83 |
| | | | 363.81 R | |
| 18 | Tamil Nadu | 01-08-2010 | 367.50 | 499.91 |
| 19 | Uttar Pradesh | 15-04-2010 | 436.50 U | 574.61 U |
| | | | 124.00 R | 489.77 R |
| 20 | Uttarakhand | 01-04-2010 | 265.00 | 448.80 |
| 21 | West Bengal | 01-04-2010 | 570.83 U | 666.42 |
| | | | 557.69 R | |
| 22 | Arunachal Pradesh | 01-04-2010 | 360.00 | 310.00 |
| 23 | Goa | 01-04-2002 | 186.75 | 398.29 |
| 24 | Manipur | 21-03-2011 | 339.70 | 372.57 |
| 25 | Mizoram | 01-02-2011 | 370.00 | 316.49 |
| 26 | Nagaland | 01-04-2006 | 319.25 | 314.68 |
| 27 | Sikkim | 01-01-2009 | 266.06 | 441.78 |
| 28 | Tripura | 01-07-2006 | 365.00 | - |
| 29 | A & N Islands | 01-03-2008 | 342.50 | - |
| 30 | Chandigarh | 01-08-2005 | 304.00 | 360.70 |
| 31 | Dadra & Nagar Haveli | 01-08-2008 | 172.50 | 319.08 |
| 32 | Daman & Diu | 01-09-2008 | 172.50 | 279.97 |
| 33 | Delhi (BYPL/BRPL/NDPL) | 07-06-2009 | 351.75 | 561.13 |
| 34 | Delhi (NDMC) | 01-07-2009 | 254.10 | 524.07 |
| 35 | Lakshadweep | 01-09-2004 | 221.88 | - |
| 36 | Puducherry | 20-02-2010 | 128.75 | 348.21 |
| 37 | Torrent Power Ltd. (Ahmedabad) | 01-04-2010 | 419.74 | 424.99 |
| 38 | Torrent Power Ltd. (Surat) | 01-04-2010 | 439.50 | 486.42 |
| 39 | CESC Ltd. (Kolkata) | 01-04-2010 | 552.12 | 580.86 |
| 40 | DPSC Ltd. (West Bengal) | 01-04-2010 | 385.12 | 544.06 |
| 41 | Durgapur Projects Ltd. (West Bengal) | 01-04-2010 | 325.74 | 407.57 |
| 42 | D.V.C. (A) Bihar Area | 01-09-2000 | - | 437.29 |
| | (B) West Bengal Area | | - | 474.42 |
| 43 | Mumbai ( B.E.S.T ) | 01-09-2010 | 412.05 | 609.01 |
| 44 | Mumbai (Reliance Energy) | 01-06-2009 | 690.70 | 879.86 |
| 45 | Mumbai ( TATA's ) | 01-09-2010 | 326.66 | 603.61 |

Source : Ministry of Power.

B : Continuous Supply Areas
C : Non-Continuous Supply Areas
D : Bangalore, Devangere & other City Municipal Corp.
E : Areas under other local bodies
F : Areas under Village Panchayats
U : Urban
R : Rural
O : Other Areas

Note : The above rates of electricity are for certain assumed load and electricity consumption levels in a month.

## 2.1 : GROSS CAPITAL FORMATION FROM BUDGETARY RESOURCES OF THE CENTRAL GOVERNMENT

(₹ crore)

| | Gross capital formation by the Central Government | | | | Gross financial assistance for capital formation to | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | Fixed assets | Works stores | Increase in stocks of foodgrains & fertilisers | Total (2+3+4) | State governments | Non-departmental commercial undertakings[b] | Others[a] | Total (6+7+8) | Total (5+9) |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| First Plan (1951-52 to 1955-56) | 594 | 10 | 9 | 612 | 816 | 81 | 96 | 993 | 1605 |
| Second Plan (1956-57 to 1960-61) | 1362 | 8 | 74 | 1445 | 1373 | 932 | 155 | 2460 | 3905 |
| Third Plan (1961-62 to 1965-66) | 2355 | 100 | -10 | 2445 | 2837 | 1659 | 210 | 4707 | 7152 |
| Annual Plans (1966-67 to 1968-69) | 1411 | 12 | -180 | 1243 | 2127 | 1594 | 164 | 3884 | 5128 |
| Fourth Plan (1969-70 to 1973-74) | 2858 | 104 | 7 | 2969 | 4570 | 2751 | 621 | 7942 | 10911 |
| Fifth Plan(1974-75 to 1978-79) | 5222 | 68 | 661 | 5951 | 9669 | 9381 | 921 | 19980 | 25932 |
| Sixth Plan (1980-81 to 1984-85) | 14148 | 675 | na | 14823 | 25693 | 21289 | 2663 | 49645 | 64468 |
| Seventh Plan (1985-86 to 1989-90) | 30729 | 888 | na | 31616 | 61469 | 31643 | 8829 | 101941 | 133557 |
| Eighth Plan (1992-93 to 1996-97) | 74043 | -443 | na | 73599 | 130780 | 26950 | 21796 | 179526 | 253125 |
| Ninth Plan (1997-98 to 2001-02) | 95934 | 4634 | na | 100568 | 143451 | 43504 | 36547 | 223502 | 324070 |
| Tenth Plan (2002-03 to 2006-07) | 138379 | 5648 | na | 144027 | 180157 | 26055 | 74600 | 280813 | 424839 |
| Eleventh Plan (2007-08 to 2011-12) | 295535 | 9958 | na | 305493 | 307056 | 110552 | 304369 | 721975 | 1027468 |
| 1950-51 | 80 | 10 | -9 | 80 | 41 | 5 | 2 | 49 | 129 |
| 1955-56 | 177 | 5 | -30 | 153 | 275 | 22 | 33 | 331 | 483 |
| 1960-61 | 302 | -38 | 44 | 307 | 319 | 211 | 25 | 555 | 862 |
| 1965-66 | 549 | 1 | -30 | 520 | 739 | 493 | 53 | 1285 | 1805 |
| 1970-71 | 485 | 8 | 26 | 519 | 740 | 531 | 98 | 1369 | 1889 |
| 1975-76 | 950 | 18 | 237 | 1204 | 1433 | 1838 | 187 | 3459 | 4663 |
| 1976-77 | 1090 | -30 | 53 | 1112 | 1524 | 2183 | 172 | 3879 | 4991 |
| 1977-78 | 1119 | -11 | na | 1107 | 2221 | 2156 | 203 | 4580 | 5688 |
| 1978-79 | 1242 | 59 | na | 1301 | 3302 | 2105 | 205 | 5612 | 6913 |
| 1979-80 | 1443 | 84 | na | 1528 | 3244 | 2235 | 223 | 5701 | 7229 |
| 1980-81 | 1751 | 156 | na | 1908 | 3666 | 3166 | 273 | 7105 | 9012 |
| 1981-82 | 2411 | 141 | na | 2552 | 3928 | 3881 | 439 | 8247 | 10799 |
| 1982-83 | 2814 | 71 | na | 2884 | 4931 | 4074 | 514 | 9520 | 12404 |
| 1983-84 | 3219 | 137 | na | 3356 | 5974 | 4679 | 694 | 11346 | 14702 |
| 1984-85 | 3953 | 171 | na | 4123 | 7195 | 5489 | 744 | 13428 | 17551 |
| 1985-86 | 4452 | 106 | na | 4558 | 10054 | 6082 | 784 | 16920 | 21477 |
| 1986-87 | 5817 | 88 | na | 5905 | 10800 | 6523 | 1091 | 18415 | 24320 |
| 1987-88 | 5683 | 278 | na | 5961 | 12723 | 5667 | 1419 | 19810 | 25770 |
| 1988-89 | 6977 | 80 | na | 7056 | 13956 | 6317 | 1648 | 21921 | 28977 |
| 1989-90 | 7800 | 337 | na | 8137 | 13935 | 7054 | 3887 | 24876 | 33013 |
| 1990-91 | 8193 | 409 | na | 8602 | 20009 | 5541 | 905 | 26456 | 35057 |
| 1991-92 | 9056 | 203 | na | 9259 | 19377 | 4764 | 1765 | 25906 | 35165 |
| 1992-93 | 11643 | 232 | na | 11875 | 19651 | 4730 | 1392 | 25774 | 37649 |
| 1993-94[c] | 13106 | -341 | na | 12765 | 23196 | 6632 | 2457 | 32285 | 45051 |
| 1994-95 | 14804 | -476 | na | 14328 | 27416 | 7191 | 5265 | 39872 | 54200 |
| 1995-96 | 16858 | -173 | na | 16685 | 27571 | 4222 | 6798 | 38591 | 55276 |
| 1996-97 | 17632 | 315 | na | 17946 | 32945 | 4174 | 5884 | 43004 | 60950 |
| 1997-98[d] | 18693 | 262 | na | 18955 | 23578 | 5849 | 6433 | 35860 | 54815 |
| 1998-99 | 20324 | 323 | na | 20647 | 25613 | 6401 | 5147 | 37160 | 57807 |
| 1999-2000 | 24983 | 1092 | na | 26075 | 29077 | 6944 | 5507 | 41527 | 67602 |
| 2000-01 | 20953 | 1305 | na | 22258 | 30653 | 7297 | 6752 | 44702 | 66959 |
| 2001-02 | 10982 | 1652 | na | 12634 | 34531 | 17014 | 12709 | 64254 | 76888 |
| 2002-03 | 20963 | 734 | na | 21697 | 37254 | 4686 | 13146 | 55085 | 76782 |
| 2003-04 | 22828 | 1169 | na | 23997 | 40908 | 4581 | 13074 | 58564 | 82561 |
| 2004-05 | 26508 | 888 | na | 27396 | 43320 | 7720 | 14419 | 65459 | 92855 |
| 2005-06 | 33182 | 1268 | na | 34450 | 27206 | 5304 | 17797 | 50307 | 84757 |
| 2006-07 | 34897 | 1589 | na | 36487 | 31469 | 3764 | 16164 | 51398 | 87885 |
| 2007-08 | 42381 | 1270 | na | 43651 | 43029 | 41825 | 15386 | 100240 | 143891 |
| 2008-09 | 50069 | 1396 | na | 51465 | 51697 | 10298 | 23477 | 85472 | 136937 |
| 2009-10 | 56410 | 2589 | na | 58999 | 53483 | 9698 | 62322 | 125502 | 184501 |
| 2010-11(RE) | 66194 | 2253 | na | 68447 | 72724 | 33058 | 100594 | 206376 | 274823 |
| **2011-12(BE)** | **80481** | **2450** | **na** | **82931** | **86123** | **15673** | **102590** | **204385** | **287316** |

Source : Ministry of Finance, Economic & Functional Classification of the Central Governmet Budget-various issues.

na Not available

[a] Includes loans and grants to local authorities for capital formation.

[b] Public undertakings operated by autonomous corporations and companies.

[c] From 1993-94 onwards, Delhi is not included.

[d] From 1997-98 onwards loans to States/UTs are exclusive of loans against States/UT's share in small saving collections.

## 2.2 : BUDGETARY TRANSACTIONS OF THE CENTRAL AND STATE GOVERNMENTS AND UNION TERRITORIES (Including internal and extra-budgetary resources of public sector undertakings for their plans)

(₹ crore)

| | 1980-81 | 1990-91 | 2000-01 | 2006-07 | 2007-08 | 2008-09 | 2009-10 (BE) | 2009-10 (RE) | 2010-11 (BE) |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| I. TOTAL OUTLAY | 36845 | 176548 | 615658 | 1225149 | 1431960 | 1221651 | 2066512 | 2085303 | **2292510** |
| A. DEVELOPMENT[1] | 24426 | 105922 | 317464 | 679472 | 830644 | 999140 | 1183036 | 1194853 | **1339678** |
| B. NON-DEVELOPMENT | 12419 | 70626 | 298194 | 545677 | 601316 | 722511 | 883476 | 890450 | **952832** |
| 1. Defence (net) | 3600 | 15427 | 49622 | 85510 | 91681 | 114223 | 141703 | 136264 | **147344** |
| 2. Interest payments | 2957 | 25006 | 122792 | 233020 | 249195 | 277637 | 322356 | 318492 | **359988** |
| 3. Tax collection charges | 504 | 1973 | 6570 | 10490 | 11895 | 14858 | 19093 | 19893 | **20946** |
| 4. Police | 1163 | 5657 | 21343 | 37465 | 39743 | 51399 | 64217 | 64501 | **68033** |
| 5. Others[2] | 4195 | 22563 | 97867 | 179192 | 208802 | 264394 | 336107 | 351300 | **356521** |
| II. CURRENT REVENUE | 24563 | 110607 | 393284 | 962919 | 1130158 | 1205679 | 1346508 | 1310687 | **1576678** |
| A. TAX REVENUE | 19844 | 87723 | 305320 | 736708 | 870329 | 915450 | 996884 | 987510 | **1160267** |
| 1. Income and corporation tax | 2817 | 10712 | 67460 | 224727 | 304732 | 319470 | 363527 | 380068 | **421900** |
| 2. Customs | 3409 | 20644 | 47542 | 86327 | 104119 | 99879 | 98000 | 84477 | **115000** |
| 3. Union excise duties | 6500 | 24514 | 68526 | 117613 | 123611 | 108613 | 106477 | 102000 | **132000** |
| 4. Sales tax | 4018 | 18228 | 72874 | 162297 | 167731 | 189754 | 208740 | 208947 | **246878** |
| 5. Others | 3100 | 13625 | 48918 | 145744 | 170136 | 197735 | 220141 | 212018 | **244490** |
| B. NON-TAX REVENUE[3] | 4719 | 22884 | 87964 | 226211 | 259829 | 290229 | 349624 | 323178 | **416411** |
| (Internal resources of public sector undertakings for the Plan) | (1374) | (11183) | (39415) | (100407) | (116265) | (150463) | (174087) | (160538) | **(209759)** |
| III. GAP (I-II) | 12282 | 65941 | 222374 | 262230 | 301802 | 515972 | 720004 | 774616 | **715832** |
| Financed by: | | | | | | | | | |
| IV NET CAPITAL RECEIPTS (A+B) | 8831 | 54455 | 223283 | 179722 | 314232 | 368624 | 694317 | 744886 | **697498** |
| A. INTERNAL (net) | 7161 | 50192 | 214965 | 173663 | 307574 | 360403 | 680404 | 731428 | **677093** |
| 1. Net market loans[4] | 3163 | 11308 | 85341 | 127529 | 199708 | 319330 | 534658 | 531480 | **491271** |
| 2. Net small savings | 1121 | 8309 | 8192 | -13833 | -174 | -4065 | 14455 | 17752 | **17152** |
| 3. Net State and public provident funds | 558 | 3887 | 23661 | 171862 | 31565 | 137027 | 33982 | 41127 | **33425** |
| 4. Special deposits of non-Government provident funds | 604 | 6721 | 7177 | -559 | -1246 | -2333 | 0 | 0 | **0** |
| 5. Special borrowings from RBI against compulsory deposits | -70 | -105 | na | na | na | na | na | na | **na** |
| 6. Net misc.capital receipts[5] | 1785 | 20072 | 90594 | -111336 | 77721 | -89556 | 97309 | 141070 | **135246** |
| B. EXTERNAL[6] | 1670 | 4263 | 8318 | 6059 | 6658 | 8221 | 13912 | 13458 | **20405** |
| 1. Net loans | 749 | 3181 | 7505 | 8472 | 9316 | 11015 | 16047 | 16535 | **22465** |
| (i) Gross | 1141 | 5339 | 17328 | 16358 | 16809 | 21022 | 27080 | 27766 | **34735** |
| (ii) Less repayments | 392 | 2158 | 9823 | 7886 | 7493 | 10007 | 11034 | 11230 | **12271** |
| 2. Grants | 436 | 586 | 813 | -2413 | -2658 | -2794 | -2134 | -3078 | **-2060** |
| 3. Net special credit | -53 | -76 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| V. OVERALL BUDGETARY DEFICIT | 3451 | 11486 | (-)909 | 82508 | (-)12430 | 147348 | 25687 | 29730 | **18335** |

Source : Economic Division, Department of Economic Affairs, Ministry of Finance.

na Not available

Notes: 1. Includes plan expenditure of Railways, Communications and non-departmental commercial undertakings financed out of their internal and extra budgetary resources, market borrowings and term loans from financial institutions to State Government public enterprises. Also includes developmental loans given by the Central and State Governments to non-departmental undertakings, local bodies and other parties. However, it excludes a notional amount of ₹45 crore in 1980-81 on account of conversion of loan capital given to non-departmental commercial undertakings into equity capital.

2. Includes general administration, pensions and ex-gratia payments to famine relief (only non-plan portion), subsidies on food and controlled cloth, grants and loans to foreign countries and loans for non-developmental purpose to other parties, but excludes Contingency Fund transactions. It also excludes notional transactions in respect of subscriptions to International Monetary Fund of ₹ 559 crore in 1980-81, ₹ 550 crore in 1990-1991, ₹ 629 crore in 2000-2001, ₹ 595 crore in 2005-06, ₹ 40 crore in 2006-07, nil in 2007-08, ₹1444 crore in 2008-09, ₹12836 crore in 2009-10 (RE) and ₹ 0.01 crore in 2010-11(BE).

3. Includes internal resources of Railways, Communications and non-departmental commercial undertakings for the plan.

4. Includes market borrowings of State Government public enterprises.

5. Excludes the notional receipts on account of repayments of loans by non-departmental commercial undertakings due to their conversion into equity capital. It also excludes notional transactions in respect of International Monetary Fund and Contingency Fund transactions.

6. ₹ 538 crores for loans from IMF Trust Fund are included in 1980-81 under external loans and an amount of ₹ 572 crores for revolving fund is included in External loans for 1990-91.

## 2.3 : TOTAL EXPENDITURE OF THE CENTRAL GOVERNMENT

(₹ crore)

| | Final outlays | | | Transfer payments to the rest of the economy | | | Financial investments & loans to the rest of the economy (gross) | Total expen-diture (4+7+8) |
|---|---|---|---|---|---|---|---|---|
| | Government consumption expenditure | Gross capital formation | Total (2+3) | Current | Capital | Total (5+6) | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| First Plan (1951-52 to 1955-56) | 1241 | 612 | 1854 | 809 | 123 | 932 | 966 | 3751 |
| Second Plan (1956-57 to 1960-61) | 1962 | 1445 | 3406 | 1567 | 249 | 1816 | 2600 | 7823 |
| Third Plan (1960-61 to 1965-66) | 4256 | 2445 | 6701 | 2983 | 501 | 3484 | 5076 | 15261 |
| Annual Plan (1966-67 to 1968-69) | 3878 | 1243 | 5121 | 3214 | 407 | 3621 | 4740 | 13481 |
| Fourth Plan (1969-70 to 1973-74) | 9775 | 2969 | 12745 | 8036 | 1454 | 9490 | 10760 | 32994 |
| Fifth Plan (1974-75 to 1978-79) | 17576 | 5951 | 23527 | 19773 | 3230 | 23003 | 21145 | 67674 |
| Sixth Plan (1980-81 to 1984-85) | 35885 | 14823 | 50708 | 50604 | 9910 | 60514 | 47034 | 158256 |
| Seventh Plan (1985-86 to 1989-90) | 81974 | 31616 | 113590 | 134246 | 26292 | 160538 | 89764 | 363892 |
| Eighth Plan(1992-93 to 1996-97) | 179676 | 73599 | 253275 | 387746 | 66433 | 454179 | 127752 | 835206 |
| Ninth Plan (1997-98 to 2001-02) | 331143 | 100568 | 431711 | 795621 | 106925 | 902546 | 150754 | 1485011 |
| Tenth Plan (2002-03 to 2006-07) | 516165 | 144027 | 660192 | 1390293 | 185704 | 1575997 | 123921 | 2360109 |
| Eleventh Plan (2007-08 to 2011-12) | 999307 | 305493 | 1304800 | 2859506 | 585896 | 3445402 | 208133 | 4958335 |
| 1950-51 | 235 | 80 | 315 | 111 | 6 | 117 | 72 | 504 |
| 1955-56 | 269 | 153 | 422 | 203 | 49 | 251 | 301 | 975 |
| 1960-61 | 433 | 307 | 740 | 427 | 69 | 495 | 570 | 1806 |
| 1965-66 | 1109 | 520 | 1630 | 754 | 132 | 886 | 1425[a] | 3940[a] |
| 1970-71 | 1669 | 519 | 2189 | 1239 | 193 | 1432 | 1956 | 5577 |
| 1975-76 | 3449 | 1204 | 4654 | 3018 | 536 | 3553 | 3830 | 12037 |
| 1976-77 | 3606 | 1112 | 4718 | 3945 | 502 | 4447 | 3986 | 13150 |
| 1977-78 | 3678 | 1107 | 4785 | 4678 | 755 | 5433 | 4768 | 14986 |
| 1978-79 | 3975 | 1301 | 5277 | 5683 | 1063 | 6745 | 5696 | 17717 |
| 1979-80 | 4502 | 1528 | 6030 | 6064 | 1220 | 7283 | 5191 | 18504 |
| 1980-81 | 5174 | 1908 | 7082 | 6912 | 1302 | 8214 | 7200 | 22495 |
| 1981-82 | 6096 | 2552 | 8648 | 7728 | 1525 | 9253 | 7500 | 25401 |
| 1982-83 | 7057 | 2884 | 9941 | 9590 | 1788 | 11378 | 9175 | 30494 |
| 1983-84 | 8130 | 3356 | 11486 | 11436 | 2337 | 13773 | 10729 | 35988 |
| 1984-85 | 9428 | 4123 | 13552 | 14938 | 2958 | 17896 | 12432 | 43879 |
| 1985-86 | 11210 | 4558 | 15768 | 18347 | 3825 | 22173 | 15172 | 53112 |
| 1986-87 | 14665 | 5905 | 20570 | 21243 | 4408 | 25651 | 17803 | 64023 |
| 1987-88 | 16551 | 5961 | 22512 | 25380 | 5474 | 30854 | 16938 | 70305 |
| 1988-89 | 18764 | 7056 | 25820 | 31399 | 5750 | 37148 | 18434 | 81402 |
| 1989-90 | 20784 | 8137 | 28920 | 37877 | 6835 | 44712 | 21417 | 95049 |
| 1990-91 | 22359 | 8602 | 30961 | 45134 | 7117 | 52251 | 21760 | 104973 |
| 1991-92 | 24466 | 9259 | 33725 | 51378 | 8449 | 59827 | 19179 | 112731 |
| 1992-93 | 26865 | 11875 | 38739 | 58518 | 9092 | 67610 | 19578 | 125927 |
| 1993-94[b] | 31815 | 12765 | 44580 | 66750 | 11811 | 78560 | 22648 | 145788 |
| 1994-95 | 34878 | 14328 | 49206 | 76368 | 13974 | 90342 | 27450 | 166998 |
| 1995-96 | 41881 | 16685 | 58566 | 85304 | 15263 | 100566 | 26101 | 185233 |
| 1996-97 | 44238 | 17946 | 62184 | 100807 | 16294 | 117101 | 31975 | 211260 |
| 1997-98[c] | 53090 | 18955 | 72046 | 111577 | 17360 | 128937 | 23884 | 224866 |
| 1998-99 | 59920 | 20647 | 80567 | 137611 | 18671 | 156282 | 26907 | 263755 |
| 1999-2000 | 68831 | 26075 | 94906 | 161549 | 20482 | 182031 | 30572 | 307509 |
| 2000-01 | 71977 | 22258 | 94235 | 183696 | 22404 | 206100 | 27929 | 328265 |
| 2001-02 | 77324 | 12634 | 89958 | 201188 | 28009 | 229197 | 41462 | 360616 |
| 2002-03 | 85389 | 21697 | 107086 | 228501 | 29406 | 257907 | 33886 | 398879 |
| 2003-04 | 87170 | 23997 | 111167 | 248436 | 32038 | 280474 | 34491 | 426132 |
| 2004-05 | 105692 | 27396 | 133088 | 259529 | 36822 | 296351 | 34393 | 463831 |
| 2005-06 | 116305 | 34450 | 150755 | 297267 | 41681 | 338948 | 11380 | 501083 |
| 2006-07 | 121609 | 36487 | 158095 | 356560 | 45758 | 402318 | 9771 | 570185 |
| 2007-08 | 131396 | 43652 | 175048 | 408676 | 53758 | 462434 | 51427 | 688909 |
| 2008-09 | 174345 | 51464 | 225809 | 543347 | 70287 | 613634 | 25087 | 864530 |
| 2009-10 | 210625 | 58999 | 269623 | 580898 | 113345 | 694243 | 28575 | 992440 |
| 2010-11(RE) | 234395 | 68447 | 302842 | 652873 | 161616 | 814489 | 61685 | 1179016 |
| **2011-12(BE)** | **248546** | **82931** | **331477** | **673712** | **186890** | **860602** | **41359** | **1233437** |

Source : Ministry of Finance, Economic & Functional Classification of the Central Governmet Budget-various issues.
na Not available
a For 1965-66, includes ₹ 53 crore as additional payments to IMF, IBRD, IDA & ADB following the change in the par value of the rupee. This is a nominal outlay as it is met by the issue of non-negotiable Government of India securities.
b From 1993-94 onwards, Delhi is not included.
c From 1997-98 onwards loans to States/UTs are exclusive of loans against States/UTs shares in small saving collections.

## 2.4 : PLAN OUTLAY BY HEADS OF DEVELOPMENT : CENTRE, STATES AND UNION TERRITORIES, 1961-80

| Head of development | Amount (₹ crore) | | | | | Percentage distribution | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Third Plan 1961-66 | Annual Plans 1966-69 | Fourth Plan 1969-74 | Fifth Plan 1974-79 | Annual Plan 1979-80 | Third Plan 1961-66 | Annual Plans 1966-69 | Fourth Plan 1969-74 | Fifth Plan 1974-79 | Annual Plan 1979-80 |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
| 1. Agriculture and allied sectors | 1088.9 | 1107.1[a] | 2320.4[a] | 4864.9 | 1996.5 | 12.7 | 16.7 | 14.7 | 12.3 | 16.4 |
| 2. Irrigation and flood control | 664.7 | 471.0 | 1354.1 | 3876.5 | 1287.9 | 7.8 | 7.1 | 8.6 | 9.8 | 10.6 |
| 3. Power | 1252.3 | 1212.5 | 2931.7 | 7399.5 | 2240.5 | 14.6 | 18.3 | 18.6 | 18.8 | 18.4 |
| 4. Village and small scale industries | 240.8 | 126.1 | 242.6 | 592.5 | 255.7 | 2.8 | 1.9 | 1.5 | 1.5 | 2.1 |
| 5. Industry and minerals | 1726.3 | 1510.4 | 2864.4 | 8988.6 | 2383.5 | 20.1 | 22.8 | 18.2 | 22.8 | 19.6 |
| 6. Transport and communications | 2111.7 | 1222.4 | 3080.4 | 6870.3 | 2044.9 | 24.6 | 18.5 | 19.5 | 17.4 | 16.8 |
| 7. Education | 588.7 | 306.8 | 774.3 | 1710.3 | 263.0 | 6.9 | 4.6 | 4.9 | 4.3 | 2.2 |
| 8. Scientific research | 71.6 | 47.1 | 130.8 | | 91.4[c] | 0.8 | 0.7 | 0.8 | | 0.8 |
| 9. Health | 225.9 | 140.2 | 335.5 | 760.8 | 223.1 | 2.6 | 2.1 | 2.1 | 1.9 | 1.8 |
| 10. Family planning | 24.9 | 70.4 | 278.0 | 491.8 | 118.5 | 0.3 | 1.1 | 1.8 | 1.2 | 1.0 |
| 11. Water supply and sanitation | 105.7 | 102.7 | 458.9 | 1091.6 | 387.6 | 1.2 | 1.6 | 2.9 | 2.8 | 3.2 |
| 12. Housing, urban and regional development | 127.6 | 73.3 | 270.2 | 1150.0 | 368.8 | 1.5 | 1.1 | 1.7 | 2.9 | 3.0 |
| 13. Welfare of backward classes | 99.1 | 73.6 | 164.6 | 724.0[b] | 247.9[b] | 1.2 | 1.1 | 1.0 | 1.8 | 2.0 |
| 14. Social welfare | 19.4 | 11.2 | 64.4 | 88.2 | 30.7 | 0.2 | 0.2 | 0.4 | 0.2 | 0.3 |
| 15. Labour welfare and craftsman training[d] | 55.8 | 34.8 | 31.1 | 817.2 | 236.5 | 0.7 | 0.5 | 0.2 | 2.1 | 1.9 |
| 16. Other programmes[d] | 173.1 | 115.8 | 179.8 | | | 2.0 | 1.7 | 1.1 | | |
| 17. Special schemes | | | | | | | | | | |
| (i) Welfare programme | na | na | 123.6 | na | na | na | na | 0.8 | na | na |
| (ii) Crash scheme for educated unemployed | na | na | 54.0 | na | na | na | na | 0.3 | na | na |
| (iii) Advance action for Fifth Plan | na | na | 120.0 | na | na | na | na | 0.8 | na | na |
| TOTAL | 8576.5 | 6625.4 | 15778.8 | 39426.2 | 12176.5 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

Source : Planning Commission

na Not available

[a] Includes buffer stocks: ₹ 140 crore for 1968-69, ₹ 25 crore for 1969-70, ₹ 50 crore for 1971-72, ₹ 25 crore for 1972-73 and ₹ 24 crore for 1973-74. Thus the figure for the buffer stocks during the Fourth Plan works out to ₹ 124 crore against the original plan provision of ₹ 255 crore.

[b] Includes Hill and Tribal Areas.

[c] Includes new and renewable sources of energy.

[d] For the Fifth Plan and Annual Plan break up of labour welfare and craftsman training and other programmes is not available.

## 2.5 : SIXTH PLAN OUTLAY BY HEADS OF DEVELOPMENT : CENTRE, STATES AND UNION TERRITORIES, 1980-85

| | Head of development | Amount (₹ crore) | | Percentage distribution | |
|---|---|---|---|---|---|
| | | Sixth Plan outlay 1980-85 | Sixth Plan (Actual) 1980-85 | Sixth Plan outlay 1980-85 | Sixth Plan (Actual) 1980-85 |
| | 1 | 2 | 3 | 4 | 5 |
| I. | Agriculture | 5695.1 | 6623.5 | 5.8 | 6.1 |
| II. | Rural development | 5363.7 | 6996.8 | 5.5 | 6.4 |
| III. | Special area programmes | 1480.0 | 1580.3 | 1.5 | 1.4 |
| IV. | Irrigation and flood control | 12160.0 | 10929.9 | 12.5 | 10.0 |
| V. | Energy | 26535.4 | 30751.3 | 27.2 | 28.1 |
| | 1. Power | 19265.4 | 18298.6 | 19.8 | 16.7 |
| | 2. New and renewable sources of energy | 100.0 | 163.1 | 0.1 | 0.1 |
| | 3. Petroleum | 4300.0 | 8482.1 | 4.4 | 7.8 |
| | 4. Coal | 2870.0 | 3807.5 | 2.9 | 3.5 |
| VI. | Industry and minerals | 15017.6 | 16947.5[a] | 15.4 | 15.5 |
| | 1. Village and small scale industries | 1780.5 | 1945.1 | 1.8 | 1.8 |
| | 2. Large and medium industries | 13237.1 | 14790.4[a] | 13.6 | 13.5 |
| | 3. Others | ... | 212 | ... | 0.2 |
| VII. | Transport | 12412.0 | 14208.4 | 12.7 | 13.0 |
| | 1. Railways | 5100.0 | 6586.7 | 5.2 | 6.1 |
| | 2. Others | 7312.0 | 7612.7 | 7.5 | 6.9 |
| VIII. | Communications and information & broadcasting | 3134.3 | 3469.5 | 3.2 | 3.2 |
| IX. | Science & Technology | 865.2 | 1020.4[b] | 0.9 | 0.9 |
| X. | Social services | 14035.2 | 15916.6 | 14.4 | 14.5 |
| | 1. Education | 2523.7 | 2976.6 | 2.6 | 2.7 |
| | 2. Health and family welfare | 2831 | 3412.2 | 2.9 | 3.1 |
| | 3. Housing and urban development | 2488.4 | 2839.1 | 2.6 | 2.6 |
| | 4. Other social services | 6192.1 | 6688.7 | 6.3 | 6.1 |
| XI. | Others | 801.5 | 847.5 | 0.9 | 0.8 |
| XII. | Total (I to XI) | 97500.0 | 109291.7 (110467.3) | 100.0 | 100.0 |
| | (a) Central Plans | 47250.0 | 57825.2 | 48.5 | 52.9 |
| | (b) State Plans | 48600.0 | 49458.2 (50633.8) | 49.8 | 45.3 |
| | (c) Union Territory Plans | 1650.0 | 2008.3 | 1.7 | 1.8 |

Source : Planning Commission

[a] Excludes ₹ 2.85 crore for National Test Houses.

[b] Includes ₹ 2.85 crore for National Test Houses.

Note : Figures in brackets are inclusive of expenditure (₹ 191 crore in 1980-81, ₹ 162 crore in 1981-82, ₹ 442 crore in 1982-83, ₹ 226 crore in 1983-84 and ₹ 154.5 crore in 1984-85) on works financed by central assistance for natural calamities' relief .

## 2.6 : PLAN OUTLAY BY HEADS OF DEVELOPMENT : CENTRE, STATES & UNION TERRITORIES, 1985-92

| Head of development | Amount (₹ crore) | | | Percentage distribution | | |
|---|---|---|---|---|---|---|
| | Seventh Plan 1985-90 (Actual) | Annual Plan 1990-91 (Actual) | Annual Plan 1991-92 (Actual) | Seventh Plan 1985-90 (Actual) | Annual Plan 1990-91 (Actual) | Annual Plan 1991-92 (Actual) |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| I. Agriculture & allied activities | 12792.6 | 3405.4 | 3850.5 | 5.8 | 5.8 | 5.9 |
| II. Rural development | 15246.5 | 4149.9 | 4141.6 | 7.0 | 7.1 | 6.4 |
| III. Special area programmes | 3470.3 | 986.3 | 1067.3 | 1.6 | 1.7 | 1.6 |
| IV. Irrigation & flood control | 16589.9 | 3974.1 | 4231.9 | 7.6 | 6.8 | 6.5 |
| V. Energy | 61689.3 | 17101.1 | 19733.6 | 28.2 | 29.3 | 30.5 |
| a. Power | 37895.3 | 11387.8 | 14517.9 | 17.3 | 19.5 | 22.4 |
| b. Petroleum | 16008.8 | 3592.1 | 3339.8 | 7.3 | 6.2 | 5.2 |
| c. Coal & lignite | 7122.3 | 1984.8 | 1709.6 | 3.3 | 3.4 | 2.6 |
| d. Non-conventional sources of energy | 662.9 | 136.4 | 166.3 | 0.3 | 0.2 | 0.3 |
| VI. Industry & minerals | 29220.3 | 6374.3 | 6564.5 | 13.4 | 10.9 | 10.1 |
| a. Village & small scale industries | 3249.3 | 877.9 | 941.2 | 1.5 | 1.5 | 1.5 |
| b. Other industries | 25971.1 | 5496.4 | 5623.3 | 11.9 | 9.4 | 8.7 |
| VII. Transport | 29548.1 | 8074.3 | 9314.0 | 13.5 | 13.8 | 14.4 |
| a. Railways | 16549.2 | 4892.8 | 5393.3 | 7.6 | 8.4 | 8.3 |
| b. Others | 12998.9 | 3181.5 | 3920.7 | 5.9 | 5.5 | 6.1 |
| VIII. Communications | 8425.5 | 2948.3 | 3613.7 | 3.9 | 5.1 | 5.6 |
| IX. Science, technology & environment | 3023.9 | 758.7 | 861.7 | 1.4 | 1.3 | 1.3 |
| X. General economic services | 2249.6 | 754.7 | 843.0 | 1.0 | 1.3 | 1.3 |
| XI. Social services | 34959.7 | 9606.6 | 10298.7 | 16.0 | 16.5 | 15.9 |
| a. Education | 7685.5 | 2316.5 | 2599.0 | 3.5 | 4.0 | 4.0 |
| b. Medical & public health | 3688.6 | 1040.8 | 924.8 | 1.7 | 1.8 | 1.4 |
| c. Family welfare | 3120.8 | 782.2 | 1023.3 | 1.4 | 1.3 | 1.6 |
| d. Housing | 2722.8 | 939.8 | 603.9 | 1.2 | 1.6 | 0.9 |
| e. Urban development | 2113.4 | 740.2 | 748.4 | 1.0 | 1.3 | 1.2 |
| f. Other social services | 15628.5 | 3787.1 | 4399.3 | 7.1 | 6.5 | 6.8 |
| XII. General services | 1513.8 | 235.6 | 230.7 | 0.7 | 0.4 | 0.4 |
| XIII. Total (I to XII) | 218729.6 (221435.4) | 58369.3 | 64751.2 | 100.0 | 100.0 | 100.0 |
| (a) Central Plan | 127519.6 | 34254.7 | 37846.5 | 58.3 | 58.7 | 58.4 |
| (b) State Plans | 87492.4 (90198.2) | 23116.9 | 25739.3 | 40.0 | 39.6 | 39.8 |
| (c) Union Territory Plans | 3717.7 | 997.7 | 1165.4 | 1.7 | 1.7 | 1.8 |

Source: Planning Commission.

Notes:
1. As per revised budget classification.
2. Figures in brackets are inclusive of expenditure on works financed by central assistance for natural calamities' relief.
3. Annual Plan expenditure in respect of some erstwhile Union Territories have been included in State Plans' figures consequent on their attaining Statehood.
4. Totals may not add up because of rounding.
5. Expenditure for petrochemical and engineering units under the Ministry of Petroleum and Natural Gas has been excluded from Energy and included under Industry and Minerals.

## 2.7 : EIGHTH PLAN OUTLAY BY HEADS OF DEVELOPMENT : CENTRE, STATES AND UNION TERRITORIES, 1992-97

| Head of development | Amount (₹ crore) | | | | | | Percentage distribution | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Eighth Plan Outlay 1992-97 | Annual Plan 1992-93 (Actual) | Annual Plan 1993-94 (Actual) | Annual Plan 1994-95 (Actual) | Annual Plan 1995-96 (Actual) | Annual Plan 1996-97 (Actual) | Eighth Plan Outlay 1992-97 | Annual Plan 1992-93 (Actual) | Annual Plan 1993-94 (Actual) | Annual Plan 1994-95 (Actual) | Annual Plan 1995-96 (Actual) | Annual Plan 1996-97 (Actual) |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 |
| I. Agriculture & allied activities | 22467.2 | 4215.6 | 4263.5 | 5350.2 | 5082.0 | 5984.4 | 5.2 | 5.8 | 4.8 | 5.5 | 4.7 | 5.0 |
| II. Rural development | 34425.4 | 5091.4 | 7033.3 | 8717.1 | 9967.2 | 9563.1 | 7.9 | 7.0 | 8.0 | 8.9 | 9.3 | 8.0 |
| III. Special area programmes | 6750.1 | 1283.8 | 1363.6 | 1428.2 | 407.8 | 449.1 | 1.6 | 1.8 | 1.5 | 1.5 | 0.4 | 0.4 |
| IV. Irrigation & flood control | 32525.3 | 4705.2 | 5370.5 | 6104.1 | 7245.1 | 7974.0 | 7.5 | 6.5 | 6.1 | 6.2 | 6.7 | 6.7 |
| V. Energy | 115561.1 | 20289.8 | 26909.0 | 27482.0 | 26893.3 | 27330.4 | 26.6 | 27.9 | 30.6 | 28.0 | 25.0 | 23.0 |
| a. Power | 79588.7 | 12157.4 | 14773.1 | 16346.4 | 16511.4 | 16937.5 | 18.3 | 16.7 | 16.8 | 16.7 | 15.4 | 14.2 |
| b. Petroleum | 24000.0 | 5698.5 | 9589.3 | 8643.6 | 8123.5 | 8007.6 | 5.5 | 7.8 | 10.9 | 8.8 | 7.6 | 6.7 |
| c. Coal & lignite | 10507.0 | 2276.5 | 2293.1 | 2238.7 | 1948.3 | 1958.6 | 2.4 | 3.1 | 2.6 | 2.3 | 1.8 | 1.6 |
| d. Non-conventional sources of energy | 1465.4 | 157.4 | 253.5 | 253.3 | 310.2 | 426.7 | 0.3 | 0.2 | 0.3 | 0.3 | 0.3 | 0.4 |
| VI. Industry & minerals | 46921.7 | 7444.2 | 8481.1 | 9088.0 | 10808.1 | 12067.4 | 10.8 | 10.2 | 9.6 | 9.3 | 10.1 | 10.1 |
| a. Village & small scale industries | 6334.2 | 995.3 | 1152.2 | 1512.4 | 1794.4 | 1811.4 | 1.5 | 1.4 | 1.3 | 1.5 | 1.7 | 1.5 |
| b. Other industries | 40587.5 | 6448.9 | 7328.9 | 7575.6 | 9013.7 | 10256.0 | 9.3 | 8.9 | 8.3 | 7.7 | 8.4 | 8.6 |
| VII. Transport | 55925.6 | 10662.7 | 11976.7 | 12096.6 | 13766.9 | 16670.1 | 12.9 | 14.6 | 13.6 | 12.3 | 12.8 | 14.0 |
| a. Railways | 27202.0 | 6162.0 | 5901.0 | 5472.0 | 6335.0 | 8310.0 | 6.3 | 8.5 | 6.7 | 5.6 | 5.9 | 7.0 |
| b. Others | 28723.6 | 4500.7 | 6075.7 | 6624.6 | 7431.9 | 8360.1 | 6.6 | 6.2 | 6.9 | 6.7 | 6.9 | 7.0 |
| VIII. Communications | 25110.0 | 5150.9 | 6201.6 | 7273.8 | 8626.2 | 9122.4 | 5.8 | 7.1 | 7.0 | 7.4 | 8.0 | 7.7 |
| IX. Science, technology & environment | 9041.7 | 929.9 | 1153.4 | 1407.4 | 1764.8 | 1854.0 | 2.1 | 1.3 | 1.3 | 1.4 | 1.6 | 1.6 |
| X. General economic services | 4549.5 | 1490.1 | 848.8 | 1159.6 | 1104.0 | 1579.2 | 1.0 | 2.0 | 1.0 | 1.2 | 1.0 | 1.3 |
| XI. Social services | 79011.9 | 11322.8 | 14016.6 | 17409.2 | 20848.4 | 25209.6 | 18.2 | 15.5 | 15.9 | 17.7 | 19.4 | 21.2 |
| a. Education | 19599.7 | 2619.4 | 3147.3 | 3940.0 | 5355.7 | 6536.3 | 4.5 | 3.6 | 3.6 | 4.0 | 5.0 | 5.5 |
| b. Medical & public health | 7575.9 | 1213.9 | 1300.4 | 1625.9 | 1929.1 | 2068.3 | 1.7 | 1.7 | 1.5 | 1.7 | 1.8 | 1.7 |
| c. Family welfare | 6500.0 | 1008.1 | 1312.6 | 1684.9 | 1743.5 | 223.7 | 1.5 | 1.4 | 1.5 | 1.7 | 1.6 | 0.2 |
| d. Housing | 5273.0 | 650.6 | 1291.5 | 1055.6 | 1356.6 | 3177.5 | 1.2 | 0.9 | 1.5 | 1.1 | 1.3 | 2.7 |
| e. Urban development | 5277.0 | 791.3 | 855.8 | 1025.2 | 1535.6 | 2064.6 | 1.2 | 1.1 | 1.0 | 1.0 | 1.4 | 1.7 |
| f. Other social services | 34786.3 | 5039.5 | 6109.0 | 8077.6 | 8928.0 | 11139.3 | 8.0 | 6.9 | 6.9 | 8.2 | 8.3 | 9.4 |
| XII. General services | 1810.5 | 266.0 | 462.6 | 651.1 | 866.7 | 1172.5 | 0.4 | 0.4 | 0.5 | 0.7 | 0.8 | 1.0 |
| XIII. Total (I to XII) | 434100.0 | 72852.4 | 88080.7 | 98167.3 | 107380.4 | 118976.4 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| (a) Central Plans | 247865.0 | 43693.8 | 55215.9 | 59053.8 | 63493.7 | 67472.9 | 57.1 | 60.0 | 62.7 | 60.1 | 59.1 | 56.7 |
| (b) State Plans | 179985.0 | 27916.7 | 31500.6 | 37459.1 | 42044.3 | 49016.8 | 41.5 | 38.3 | 35.8 | 38.2 | 39.2 | 41.2 |
| (c) Union Territory Plans | 6250.0 | 1241.9 | 1364.2 | 1654.4 | 1842.5 | 2486.7 | 1.4 | 1.7 | 1.5 | 1.7 | 1.7 | 2.1 |

Source : Planning Commission.

Note : Figures may not add upto total because of rounding.

## 2.8 : NINTH PLAN OUTLAY BY HEADS OF DEVELOPMENT : CENTRE, STATES AND UNION TERRITORIES (1997-98 to 2001-02)

| Head of development | Amount (₹ crore) | | | | | | Percentage distribution | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Ninth Plan 1997-2002 (Actual) | Annual Plan 1997-98 (Actual) | Annual Plan 1998-99 (Actual) | Annual Plan 1999-2000 (Actual) | Annual Plan 2000-2001 (Actual) | Annual Plan 2001-2002 (Actual) | Ninth Plan 1997-2002 (Actual) | Annual Plan 1997-98 (Actual) | Annual Plan 1998-99 (Actual) | Annual Plan 1999-2000 (Actual) | Annual Plan 2000-01 (Actual) | Annual Plan 2001-2002 (Actual) |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 |
| I. Agricultural & allied activities | 42462.0 | 5929.3 | 7698.2 | 7365.4 | 7576.9 | 8248.3 | 4.9 | 4.6 | 5.1 | 4.6 | 4.1 | 4.4 |
| II. Rural development | 74686.0 | 10074.3 | 10985.5 | 11280.5 | 9852.4 | 14234.8 | 8.7 | 7.8 | 7.2 | 7.0 | 5.3 | 7.6 |
| III. Special area programmes | 3649.0 | 874.0 | 1183.8 | 1513.9 | 1045.5 | 919.1 | 0.4 | 0.7 | 0.8 | 0.9 | 0.6 | 0.5 |
| IV. Irrigation and flood control | 55420.0 | 9905.0 | 10813.7 | 14209.7 | 13529.1 | 14552.0 | 6.5 | 7.6 | 7.1 | 8.8 | 7.3 | 7.8 |
| V. Energy | 222375.0 | 31792.7 | 35572.4 | 35809.6 | 40893.4 | 37145.4 | 25.9 | 24.5 | 23.5 | 22.3 | 22.0 | 19.9 |
| a. Power | a | 19396.3 | 21159.0 | 21327.4 | 28015.4 | 25180.0 | a | 14.9 | 14.0 | 13.3 | 15.1 | 13.5 |
| b. Petroleum | a | 9682.7 | 11213.6 | 9953.2 | 9867.2 | 8702.1 | a | 7.5 | 7.4 | 6.2 | 5.3 | 4.7 |
| c. Coal & lignite | a | 2212.7 | 2540.2 | 3719.1 | 2093.5 | 2106.8 | a | 1.7 | 1.7 | 2.3 | 1.1 | 1.1 |
| d. Non-conventional sources of energy | a | 501.0 | 659.5 | 809.9 | 917.3 | 1156.5 | a | 0.4 | 0.4 | 0.5 | 0.5 | 0.6 |
| VI. Industry and minerals | 65148.0 | 10306.1 | 7978.9 | 7247.8 | 6866.0 | 7942.0 | 7.6 | 7.9 | 5.3 | 4.5 | 3.7 | 4.3 |
| a. Village and small scale industries | a | 1813.9 | 1776.7 | 1746.6 | 909.5 | 1842.0 | a | 1.4 | 1.2 | 1.1 | 0.5 | 1.0 |
| b. Other industries | a | 8492.2 | 6202.3 | 5501.2 | 5956.6 | 6100.0 | a | 6.5 | 4.1 | 3.4 | 3.2 | 3.3 |
| VII. Transport | 119373.0 | 18101.1 | 20347.0 | 23462.6 | 25733.8 | 29918.3 | 13.9 | 13.9 | 13.4 | 14.6 | 13.9 | 16.1 |
| a. Railways | a | 8239.0 | 8857.0 | 9057.0 | 9395.0 | 10177.0 | a | 6.3 | 5.8 | 5.6 | 5.1 | 5.5 |
| b. Others | a | 9862.1 | 11490.0 | 14405.6 | 16338.8 | 19741.3 | a | 7.6 | 7.6 | 9.0 | 8.8 | 10.6 |
| VIII. Communications | 47280.0 | 10131.5 | 11375.6 | 14038.6 | 31880.9 | 18083.0 | 5.5 | 7.8 | 7.5 | 8.7 | 17.2 | 9.7 |
| IX. Science, technology & environment | 18458.0 | 2004.0 | 2442.5 | 2941.7 | 3248.5 | 3669.7 | 2.1 | 1.5 | 1.6 | 1.8 | 1.7 | 2.0 |
| X. General economic services | 14580.0 | 1811.0 | 3071.3 | 2451.6 | 2537.6 | 2948.0 | 1.7 | 1.4 | 2.0 | 1.5 | 1.4 | 1.6 |
| XI. Social services | 183273.0 | 26867.1 | 38737.9 | 38439.4 | 40919.5 | 46474.0 | 21.3 | 20.7 | 25.6 | 23.9 | 22.0 | 24.9 |
| a. Education | a | 7656.6 | 9684.1 | 9999.6 | 11690.5 | 10807.7 | a | 5.9 | 6.4 | 6.2 | 6.3 | 5.8 |
| b. Medical & public health | a | 2641.5 | 5411.9 | 3568.7 | 4055.3 | 4408.5 | a | 2.0 | 3.6 | 2.2 | 2.2 | 2.4 |
| c. Family welfare | a | 1822.2 | 2342.7 | 2969.1 | 3200.0 | 3613.9 | a | 1.4 | 1.5 | 1.8 | 1.7 | 1.9 |
| d. Housing | a | 2117.5 | 3143.4 | 3516.4 | 3588.4 | 6674.5 | a | 1.6 | 2.1 | 2.2 | 1.9 | 3.6 |
| e. Urban development | a | 2944.4 | 2820.6 | 2823.2 | 3143.1 | 5260.1 | a | 2.3 | 1.9 | 1.8 | 1.7 | 2.8 |
| f. Other social services | a | 9685.0 | 15335.1 | 15562.5 | 15242.2 | 15709.3 | a | 7.5 | 10.1 | 9.7 | 8.2 | 8.4 |
| XII. General services | 12496.0 | 1961.2 | 1373.6 | 1847.4 | 1653.2 | 2180.6 | 1.5 | 1.5 | 0.9 | 1.2 | 0.9 | 1.2 |
| XIII. Total ( I to XII ) | 859200.0 | 129757.3 | 151580.4 | 160608.2 | 185736.8 | 186315.2 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| (a) Central Plan | 489361.0 | 70861.4 | 85901.4 | 87297.4 | 109119.3 | 104403.8 | 57.0 | 54.6 | 56.7 | 54.4 | 58.7 | 56.0 |
| (b) State Plans | 369839.0 | 56223.9 | 62786.6 | 70027.0 | 72428.6 | 76838.7 | 43.0 | 43.3 | 41.4 | 43.6 | 39.0 | 41.2 |
| (c) Union Territory Plans | na | 2671.9 | 2892.3 | 3283.9 | 4188.9 | 5072.7 | na | 2.1 | 2.0 | 2.0 | 2.3 | 2.7 |

Source : Planning Commission.
na : Not available
a : Ninth Plan allocations were made broad sector-wise.
Notes : 1. Figures may not add upto total because of rounding.
2. For 1999-2000, anticipated expenditure has been taken into account for Centre, for some of the sub-heads included in other social services and general service as actual expenditure figures are not available.
3. For 2000-01 anticipated expenditure has been taken into account for Centre for some of heads like social services, industry & minerals, general economic services and General services.
4. For actual expenditure Annual Plan 2001-02, the Revised Estimate have been taken into account for Central Sector for some of the sub-heads included in agriculture and social services and others, as actual expenditure figures are not available.
5. The Ninth Plan figures are at 1996-97 prices and the Annual Plan figures are at current prices.
6. State Plan figures for the Ninth Plan (1997-2002) include allocation for Union Territory Plans also.

## 2. 9 : TENTH PLAN OUTLAY BY HEADS OF DEVELOPMENT : CENTRE, STATES AND UNION TERRITORIES 2002-07 AND ANNUAL PLANS 2002-03 TO 2006-07

| Head of development | Amount ( ₹ crore) | | | | | | Percentage distribution | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Tenth Plan 2002-07 (Actual) | Annual Plan 2002-03 (Actual) | Annual Plan 2003-04 (Actual) | Annual Plan 2004-05 (Actual) | Annual Plan 2005-06 (Actual) | Annual Plan 2006-07 (Actual) | Tenth Plan 2002-07 (Actual) | Annual Plan 2002-03 (Actual) | Annual Plan 2003-04 (Actual) | Annual Plan 2004-05 (Actual) | Annual Plan 2005-06 (Actual) | Annual Plan 2006-07 (Actual) |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 |
| I Agriculture & allied activities | 58933 | 7655 | 8776 | 10963 | 12554 | 16573 | 3.9 | 3.6 | 3.9 | 4.2 | 5.1 | 5.3 |
| II Rural development | 121928 | 19753 | 20729 | 18584 | 25717 | 30154 | 8.0 | 9.4 | 9.2 | 7.0 | 10.4 | 9.7 |
| III Special area programmes | 20879 | 1066 | 1540 | 2385 | 4234 | 5603 | 1.4 | 0.5 | 0.7 | 0.9 | 1.7 | 1.8 |
| IV Irrigation & flood control | 103315 | 11965 | 12900 | 19024 | 26332 | 31803 | 6.8 | 5.7 | 5.7 | 7.2 | 10.7 | 10.3 |
| V Energy | 403927 | 44710 | 50199 | 60729 | 22043 | 29450 | 26.5 | 21.3 | 22.3 | 23.0 | 8.9 | 9.5 |
| a. Power | a | 25281 | 30785 | 34315 | na | na | a | 12.0 | 13.7 | na | na | na |
| b. Petroleum | a | 15806 | 16626 | 22999 | na | na | a | 7.5 | 7.4 | na | na | na |
| c. Coal & Lignite | a | 1911 | 1583 | 2518 | na | na | a | 0.9 | 0.7 | na | na | na |
| d. Non-conventional sources of energy | a | 1712 | 1205 | 896 | na | na | a | 0.8 | 0.5 | na | na | na |
| VI Industry & Minerals | 58939 | 8776 | 7703 | 10113 | 7898 | 10344 | 3.9 | 4.2 | 3.4 | 3.8 | 3.2 | 3.3 |
| a. Village & small scale Industries | a | 2083 | 2186 | na | na | na | a | 1.0 | 1.0 | na | na | na |
| b. Other industries | a | 6692 | 5517 | na | na | na | a | 3.2 | 2.5 | na | na | na |
| VII Transport | 225977 | 35244 | 35267 | 38772 | 38766 | 52520 | 14.8 | 16.8 | 15.7 | 14.7 | 15.7 | 16.9 |
| a. Railways | a | 11108 | 13044 | na | na | na | a | 5.3 | 5.8 | na | na | na |
| b. Others | a | 24136 | 22223 | na | na | na | a | 11.5 | 9.9 | na | na | na |
| VIII Communications | 98968 | 13057 | 12875 | 9281 | 494 | 749 | 6.5 | 6.2 | 5.7 | 3.5 | 0.2 | 0.2 |
| IX Science, Technology &Environment | 30424 | 4160 | 4356 | 5521 | 6608 | 6994 | 2.0 | 2.0 | 1.9 | 2.1 | 2.7 | 2.3 |
| X General economic services | 38630 | 4995 | 5955 | 5245 | 6084 | 9053 | 2.5 | 2.4 | 2.6 | 2.0 | 2.5 | 2.9 |
| XI Social services | 347391 | 56954 | 62726 | 79734 | 92350 | 110735 | 22.8 | 27.1 | 27.9 | 30.2 | 37.4 | 35.7 |
| a. Education | a | 11603 | 13069 | na | na | na | a | 5.5 | 5.8 | na | na | na |
| b. Medical & public health | a | 4340 | 4649 | na | na | na | a | 2.1 | 2.1 | na | na | na |
| c. Family welfare | a | 3735 | 4230 | na | na | na | a | 1.8 | 1.9 | na | na | na |
| d. Housing | a | 7685 | 8476 | na | na | na | a | 3.7 | 3.8 | na | na | na |
| e. Urban development | a | 6524 | 6704 | na | na | na | a | 3.1 | 3.0 | na | na | na |
| f . Other social services | a | 23066 | 25597 | na | na | na | a | 11.0 | 11.4 | na | na | na |
| XII General services | 16328 | 1868 | 1801 | 3312 | 4098 | 5934 | 1.1 | 0.9 | 0.8 | 1.3 | 1.7 | 1.9 |
| XIII Total (I to XII) | 1525639 | 210203 | 224827 | 263665 | 247177 | 309912 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| a. Central Plans | 893183 | 126247 | 132262 | 150818 | 104658 | 124342 | 58.5 | 60.1 | 58.8 | 57.2 | 42.3 | 40.1 |
| b. State Plans | 632456 | 78430 | 86756 | 107206 | 142519 | 185570 | 41.5 | 37.3 | 38.6 | 40.7 | 57.7 | 59.9 |
| c. Union Territory Plans[b] | na | 5526 | 5809 | 5641 | na | na | na | 2.6 | 2.6 | 2.1 | na | na |

Source : Planning Commission.

na Not Available

[a] Tenth Plan allocations have been made broad sector-wise

[b] Some UT outlays included in State outlays

## 2.10 : ELEVENTH PLAN (2007-2012) OUTLAY BY HEADS OF DEVELOPMENT : CENTRE, STATES AND UNION TERRITORIES

| | Head of development | Amount (₹ crore) | | | | | | Percentage distribution | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Eleventh Plan 2007-12 Projected (At 2006-07 prices) | Annual Plan 2007-08 (Actual) | Annual Plan 2008-09 (Actual) | Annual Plan 2009-10 (Actual) | Annual Plan 2010-11 (RE) | Annual Plan 2011-12 (BE) | Eleventh Plan 2007-12 Projected (At 2006-07 prices) | Annual Plan 2007-08 (Actual) | Annual Plan 2008-09 (Actual) | Annual Plan 2009-10 (Actual) | Annual Plan 2010-11 (RE) | Annual Plan 2011-12 (BE) |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 |
| I | Agriculture & allied activities | 136381 | 20092 | 27093 | 29454 | 39618 | 46082 | 3.7 | 5.4 | 5.7 | 5.6 | 5.8 | 5.6 |
| II | Rural development | 301069 | 34406 | 59088 | 58615 | 71331 | 75561 | 8.3 | 9.3 | 12.4 | 11.1 | 10.4 | 9.2 |
| III | Special area programmes | 26329 | 6578 | 6999 | 7875 | 9638 | 12414 | 0.7 | 1.8 | 1.5 | 1.5 | 1.4 | 1.5 |
| IV | Irrigation & flood control | 210326 | 38332 | 41160 | 42853 | 48515 | 63899 | 5.8 | 10.3 | 8.6 | 8.1 | 7.0 | 7.8 |
| V | Energy | 854123 | 33676 | 39916 | 43338 | 53849 | 61986 | 23.4 | 9.1 | 8.4 | 8.2 | 7.8 | 7.5 |
| VI | Industry & Minerals | 153600 | 11377 | 13343 | 17973 | 23073 | 25588 | 4.2 | 3.1 | 2.8 | 3.4 | 3.3 | 3.1 |
| VII | Transport | 572443 | 60275 | 67874 | 85535 | 102936 | 109717 | 15.7 | 16.2 | 14.2 | 16.2 | 14.9 | 13.3 |
| VIII | Communications | 95380 | 794 | 981 | 845 | 705 | 3792 | 2.6 | 0.2 | 0.2 | 0.2 | 0.1 | 0.5 |
| IX | Science, Technology & Environment | 87933 | 9903 | 11861 | 13267 | 17462 | 21955 | 2.4 | 2.7 | 2.5 | 2.5 | 2.5 | 2.7 |
| X | General economic services | 62523 | 9943 | 11108 | 11482 | 23864 | 35051 | 1.7 | 2.7 | 2.3 | 2.2 | 3.5 | 4.3 |
| XI | Social services | 1102327 | 141267 | 190821 | 209814 | 286160 | 338279 | 30.2 | 38.0 | 40.0 | 39.7 | 41.5 | 41.2 |
| XII | General services | 42283 | 4926 | 6990 | 7973 | 11663 | 27683 | 1.2 | 1.3 | 1.5 | 1.5 | 1.7 | 3.4 |
| XIII | Total (I to XII) | 3644718 | 371569 | 477236 | 529024 | 688816 | 822009 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

Source : Planning Commission.
BE Budget Estimates
RE Revised Estimates

## 2.11 : FINANCING FOR CENTRAL AND STATE ANNUAL PLANS : 2010-11 (RE/LE) AND 2011-12 (BE/AP)

(₹ crore)

| Items | 2010-11 | | | 2011-12 | | |
|---|---|---|---|---|---|---|
| | States and UTs (LE) | Centre (RE) | Total (2 + 3) | States and UTs (AP) | Centre (BE) | Total (5 + 6) |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| **I Domestic non-debt resources** | **79701** | **-3191** | **76510** | **130542** | **32692** | **163234** |
| a BCR | 67628 | -6506 | 61122 | 109443 | -15038 | 94405 |
| b MCR (excluding deductions for repayment of loans) | -4153 | 3315 | -838 | -9453 | 47730 | 38277 |
| c Plan grants from GOI (TFC) | 5757 | 0 | 5757 | 12491 | 0 | 12491 |
| d ARM | 1333 | 0 | 1333 | 7776 | 0 | 7776 |
| e Adjustment of opening balance | 9136 | 0 | 9136 | 10285 | 0 | 10285 |
| **II Domestic Debt Resources** | | | | | | |
| **(Net Borrowings (i) - (ii))** | **176972** | **373195** | **550167** | **195993** | **392182** | **588175** |
| (i) Gross Borrowings (a to e) | 226092 | 373195 | 599287 | 251961 | 392182 | 644143 |
| a State Provident Fund (Net) | 22604 | 10000 | 32604 | 29096 | 10000 | 39096 |
| b Small Savings (Net) | 53350 | 17781 | 71131 | 34372 | 24182 | 58554 |
| c Negotiated Loans | 17423 | 0 | 17423 | 18447 | 0 | 18447 |
| d Government of India Loans(EAPs) | 12695 | 0 | 12695 | 16780 | 0 | 16780 |
| e Market Borrowings (Net) | 120019 | 345414 | 465433 | 153266 | 358000 | 511266 |
| (ii) Repayments | 49120 | 0 | 49120 | 55968 | 0 | 55968 |
| Own Resources (incl. Borrowings) I+II | 256673 | 370004 | 626677 | 326534 | 424874 | 751408 |
| **III Central Assistance( Grants) (1+2+3)** | **90449** | **-96412** | **-5963** | **103830** | **-106026** | **-2196** |
| 1 Normal Central Assistance[a] | 21162 | -21128 | 34 | 22947 | -23263 | -316 |
| 2 ACA for EAPs[b] | 4833 | -13000 | -8167 | 4688 | -11000 | -6312 |
| 3 Others | 64455 | -62284 | 2170 | 76195 | -71763 | 4432 |
| A Government Resources (I+II+III) | 347122 | 273591 | 620714 | 430364 | 318848 | 749212 |
| B Contribution of Public Sector Enterprises (PSEs) | 34163 | 203638 | 237802 | 49523 | 256936 | 306459 |
| C Local Bodies | 4965 | 0 | 4965 | 5831 | 0 | 5831 |
| D Net Inflow from Abroad | 0 | 25019 | 25019 | 0 | 16673 | 16673 |
| **Aggregate Plan Resources (A+B+C+D)** | **386250** | **502249** | **888499** | **485717** | **592457** | **1078174** |

Source :Planning Commission.

LE Latest Estimates
AP Annual Plan
RE Revised Estimates
BE Budget Estimates
BCR Balance from current revenues
MCR Miscellaneous capital receipts
ARM Additional resource mobilisation
ACA Additional Central assistance
EAPs Externally aided projects

[a] NCA (Grants) and Other (Grants) under Central Assistance in the States and UTs columns include the allocation for Delhi & Puducherry in both the year 2009-10 (LE) and 2010-11 (AP).

[b] ACA for EAPs (Grants) includes ₹ 10413.44 crore loan amount in the Centre's column for 2010-11 (RE) and ₹ 9000 crore for 2011-12 (BE).

Note: UTs includes only UTs with legislature, namely, Delhi & Puducherry

## 2.12 : OVERALL FINANCING PATTERN OF THE PUBLIC SECTOR PLAN OUTLAY DURING THE NINTH PLAN : 1997-2002

(₹ crore at 1996-97 prices)

| Resource | Centre (Including UTs without Legislature) | States and UTs with Legislature | Total |
|---|---|---|---|
| 1 | 2 | 3 | 4 |
| 1. Balance from current revenues (BCR) | –2778 | 1372 | –1406 |
| 2. Resources of PSEs | 285379 | 55030[a] | 340409 |
| 3. Borrowings (including net MCR & other liabilities) | 316760 | 143419 | 460179 |
| 4. Net inflow from abroad [b] | 60018 | ... | 60018 |
| 5. Aggregate resources (1 to 4) | 659379 | 199821 | 859200 |
| 6. Assistance for plans of States and UTs with Legislature | –167158 | 167158 | ... |
| 7. Resources for the Public Sector (5+6) | 492221 | 366979 | 859200 |

Source : Planning Commission.

MCR - Miscellaneous capital receipts.

[a] For States and UTs: Resources of PSEs are inclusive of 3/4th of total LIC/GIC loans, and the full amount of loan from Rural Electrification Corporation (REC), Industrial Development Bank of India (IDBI) and “others” under negotiated loans; Bonds and debentures are also included under this item. Accordingly, item 3 i.e. Borrowings of States/UTs is exclusive of the items which are already included in item 2 i.e. Resources of PSEs.

[b] Consists of external loans amounting to ₹ 49,956 crore and external grants of ₹ 10,062 crore.

## 2.13 : OVERALL FINANCING PATTERN OF THE PUBLIC SECTOR PLAN OUTLAY DURING THE TENTH PLAN : 2002-2007

(₹ crore at 2001-02 prices)

| Resource | Centre (Including UTs without Legislature) | States and UTs with Legislature | Total |
|---|---|---|---|
| 1 | 2 | 3 | 4 |
| 1 Balance from current revenues (BCR ) | -6385 | 26578 | 20193 |
| 2 Borrowings(including net MCR & other liabilities) | 685185 | 261482 | 946667 |
| 3 Net inflow from abroad | 27200 | ... | 27200 |
| 4 Centre’s GBS (1+2+3) | 706000 | ... | 706000 |
| 5 Resources of PSEs | 515556 | 82684 | 598240 |
| 6 State’s Own Resources (1+2+5) | ... | 370744 | 370744 |
| 7 Central Assistance States & UTs | -300265 | 300265 | ... |
| 8 Resources of the Public Sector Plan (1+2+3+5+7) | 921291 | 671009 | 1592300 |

Source : Planning Commission.
GBS: Gross Budgetary Support.

## 2.14 : OVERALL FINANCING PATTERN OF THE PUBLIC SECTOR PLAN OUTLAY DURING THE ELEVENTH PLAN : 2007-2012

(₹ crore at 2006-07 prices)

| | Resource | Centre (Including UTs without Legislature) | States and UTs with Legislature | Total |
|---|---|---|---|---|
| | 1 | 2 | 3 | 4 |
| 1 | Balance from current revenues (BCR ) | 653989 | 385050 | 1039039 |
| 2 | Borrowings(including net MCR & other liabilities) | 767722 | 649423 | 1417145 |
| 3 | Net inflow from abroad | … | … | … |
| 4 | Centre's GBS (1+2+3) | 1421711 | … | 2456184 |
| 5 | Resources of PSEs | 1059711 | 128824 | 1188535 |
| 6 | State's Own Resources (1+2+5) | … | 1163296 | 1163296 |
| 7 | Central Assistance States & UTs | -324851 | 324851 | … |
| 8 | Resources of the Public Sector Plan (1+2+3+5+7) | 2156571 | 1488147 | 3644718 |

Source : Eleventh Plan Document, Planning Commission.

## 2.15 : FINANCIAL PERFORMANCE OF INDIAN RAILWAYS

(₹ crore)

| | 1980-81 | 1990-91 | 2001-02 | 2007-08 | 2008-09 | 2009-10 | 2010-11 (P) | 2011-12 (BE) |
|---|---|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 1. Gross traffic receipts | 2624 | 12096 | 37837 | 71720 | 79862 | 86964 | 94536 | **106239** |
| (i) Passenger coaching | 827 | 3147 | 11197 | 19844 | 21931 | 23488 | 25793 | **30456** |
| (ii) Other coaching | 116 | 336 | 872 | 1800 | 1972 | 2235 | 2470 | **2903** |
| (iii) Goods | 1618 | 8408 | 24845 | 47435 | 53433 | 58502 | 62845 | **68620** |
| (iv) Other earnings | 82 | 242 | 944 | 2565 | 2501 | 2880 | 3418 | **4060** |
| (v) Suspense account | -19 | -37 | -21 | 76 | 25 | -141 | 10 | **200** |
| 2. Working expenses | 2537 | 11154 | 36293 | 54462 | 71839 | 82915 | 89474 | **96450** |
| (i) Ordinary working expenses | 2233 | 8234 | 28703 | 41033 | 54349 | 65810 | 68139 | **73650** |
| (ii) Appropriations to depreciation reserve fund | 220 | 1950 | 2000 | 5450 | 10490 | 2187 | 5515 | **7000** |
| (iii) Appropriation to pension fund | 84 | 970 | 5590 | 7979 | 7000 | 14918 | 15820 | **15800** |
| 3. Net traffic receipts (1-2) | 87 | 942 | 1544 | 17258 | 8023 | 4049 | 5061 | **9789** |
| 4. Net miscellaneous receipts | 40 | 171 | 793 | 1076 | 1152 | 1495 | 1285 | **2304** |
| 5. Net revenues (3+4) | 127 | 1113 | 2337 | 18334 | 9175 | 5544 | 6346 | **12093** |
| 6. Dividend | | | | | | | | |
| (i) Payable to general revenues | 325 | 938 | 2337 | 4239 | 4718 | 5543 | 4941 | **6735** |
| (ii) Payment of deferred dividend | … | … | … | 664 | … | … | … | … |
| (iii) Net dividend payable[(i)+(ii)] | 325 | 938 | 2337 | 4903 | 4718 | 5543 | 4941 | **6735** |
| 7. Surplus (+) or deficit (-) | -198 | 175 | 1000 | 13431 | 4457 | 1 | 1405 | **5358** |
| 8. (i) Capital at charge | 6096 | 16126 | 37757 | 63981 | 72238 | 87655 | 130540 | **116134** |
| (ii) Investment from capital fund | 0 | 0 | 10390 | 24540 | 32063 | 35346 | 38676 | **42394** |
| (iii) Total[(i)+(ii)] | 6096 | 16126 | 48147 | 88521 | 104301 | 123001 | 169216 | **158528** |
| 9. Item 5 as % of item 8(iii) | 2.1 | 6.9 | 4.9 | 20.7 | 8.8 | 4.5 | 3.8 | **7.6** |
| 10. Item 7 as % of item 8(iii) | -3.2 | 1.1 | 2.1 | 15.2 | 4.3 | 0.0 | 0.8 | **3.4** |

Source : Ministry of Railways.

## 2.16 : FINANCIAL PERFORMANCE OF THE DEPARTMENT OF POSTS

(₹ crore)

| | 1980-81 | 1990-91 | 2000-01 | 2007-08 | 2008-09 | 2009-10 | 2010-11 | 2011-12 (BE) |
|---|---|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 1. Gross receipts | 278 | 840 | 3298 | 5495 | 5862 | 6267 | 6962 | **7518** |
| 2. Net working expenses | 346 | 1033 | 4848 | 7006 | 9455 | 12908 | 13308 | **12827** |
| 3. Net receipts (1-2) | -68 | -193 | -1550 | -1511 | -3593 | -6641 | -6346 | **-5310** |
| 4. Dividend to general revenues | 4 | 0 | 0 | 0 | 0 | 0 | 0 | **0** |
| 5. Surplus(+)/deficit (-) (3-4) | -72 | -193 | -1550 | -1511 | -3593 | -6641 | -6346 | **-5310** |

Source : Department of Posts, Ministry of Communications & Information Technology.

## 2.17 : FINANCIAL PERFORMANCE OF THE DEPARTMENT OF TELECOMMUNICATIONS

(₹ crore)

| | 1980-81 | 1990-91 | 1996-97 | 1998-99 | 1999-2000 | 2000-01[b] | 2001-02[d] | 2002-03[d] |
|---|---|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 1. Gross receipts | 632 | 3405 | 12266 | 17744 | 18257 | 10175 | 4274 | 5911 |
| 2. Net working expenses[a] | 475 | 1857 | 6089 | 9846 | 10763 | 4798[c] | 2427 | 3371 |
| 3. Net receipts (1-2) | 157 | 1548 | 6177 | 7898 | 7494 | 5377 | 1847 | 2540 |
| 4. Dividend to general revenue | 32 | 220 | 292 | 252 | 172 | 112 | … | … |
| 5. Surplus (+) / Deficit (-) (3-4) | 125 | 1328 | 5885 | 7646 | 7322 | 5265 | … | … |

Source : Department of Telecommunications, Ministry of Communications & Information Technology.

[a] Includes ₹ 753 crore in 1996-97, ₹ 761 crore in 1997-98, ₹ 2376 crore in 1998-99, ₹ 3334 crore in 1999-2000 and ₹ 15 crore in 2000-01 towards redemption of bonds and other short term loan.

[b] Department of Telecom Services/Department of Telcom Operations were corporatised from 1.10.2000.

[c] Includes amount of ₹ 110.66 crore for Centre for Development of Telematics(C-DOT).

[d] These relate only to Department of Telecom (DOT)

## 3.1 : EMPLOYMENT IN ORGANISED SECTORS—PUBLIC AND PRIVATE

(Lakh persons as on 31 March)

| | 1991 | 1995 | 2000 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **PUBLIC SECTOR** | | | | | | | | | | | |
| **A By branch** | | | | | | | | | | | |
| 1 Central Government | 34.11 | 33.95 | 32.73 | 31.33 | 30.27 | 29.38 | 28.60 | 28.00 | 27.39 | 26.60 | 25.52 |
| 2 State Governments | 71.12 | 73.55 | 74.60 | 73.67 | 72.22 | 72.02 | 73.00 | 72.09 | 71.71 | 72.38 | 73.53 |
| 3 Quasi-Governments | 62.22 | 65.20 | 63.26 | 59.01 | 58.22 | 57.48 | 59.09 | 58.61 | 57.96 | 58.44 | 58.68 |
| 4 Local bodies | 23.13 | 21.97 | 22.55 | 21.79 | 21.26 | 21.18 | 21.18 | 21.32 | 19.68 | 20.73 | 20.89 |
| **Total** | **190.58** | **194.66** | **193.14** | **185.8** | **181.97** | **180.07** | **181.88** | **180.02** | **176.74** | **177.95** | **178.62** |
| **B. By industry** | | | | | | | | | | | |
| 1 Agriculture, hunting etc. | 5.56 | 5.39 | 5.14 | 5.06 | 4.93 | 4.96 | 4.69 | 4.75 | 4.71 | 4.77 | 4.78 |
| 2 Mining and quarrying | 9.99 | 10.16 | 9.24 | 8.47 | 10.30 | 10.14 | 11.46 | 11.37 | 11.21 | 11.12 | 11.03 |
| 3 Manufacturing | 18.52 | 17.56 | 15.31 | 12.60 | 11.89 | 11.30 | 10.92 | 10.87 | 10.44 | 10.60 | 10.66 |
| 4 Electricity, gas and water | 9.05 | 9.35 | 9.46 | 9.13 | 8.74 | 8.60 | 8.49 | 8.49 | 7.96 | 8.39 | 8.35 |
| 5 Construction | 11.49 | 11.64 | 10.92 | 9.48 | 9.32 | 9.11 | 8.94 | 8.66 | 8.52 | 8.45 | 8.59 |
| 6 Wholesale and retail trade | 1.50 | 1.62 | 1.63 | 1.82 | 1.81 | 1.84 | 1.82 | 1.78 | 1.65 | 1.74 | 1.71 |
| 7 Transport, storage & communications | 30.26 | 31.06 | 30.77 | 29.39 | 28.15 | 27.51 | 26.75 | 26.37 | 26.34 | 26.01 | 25.29 |
| 8 Finance, insurance, real estate etc. | 11.94 | 12.83 | 12.96 | 13.77 | 14.08 | 14.08 | 13.90 | 13.69 | 13.47 | 13.56 | 14.13 |
| 9 Community, Social & personal services | 92.27 | 95.04 | 97.71 | 96.09 | 92.76 | 92.52 | 91.76 | 90.90 | 88.54 | 90.11 | 90.51 |
| **Total** | **190.58** | **194.66** | **193.14** | **185.80** | **181.97** | **180.07** | **178.73** | **176.88** | **172.84** | **174.75** | **175.05** |
| **PRIVATE SECTOR** | | | | | | | | | | | |
| 1 Argiculture, hunting etc. | 8.91 | 8.94 | 9.04 | 8.95 | 9.17 | 9.83 | 10.28 | 9.50 | 9.92 | 8.96 | 9.23 |
| 2 Mining and quarrying | 1.00 | 1.03 | 0.81 | 0.66 | 0.65 | 0.79 | 0.95 | 1.00 | 1.11 | 1.15 | 1.61 |
| 3 Manufacturing | 44.81 | 47.06 | 50.85 | 47.44 | 44.89 | 44.89 | 45.49 | 47.50 | 49.7 | 51.98 | 51.84 |
| 4 Electricity, gas and water | 0.40 | 0.40 | 0.41 | 0.50 | 0.47 | 0.49 | 0.40 | 0.50 | 0.51 | 0.64 | 0.64 |
| 5 Construction | 0.73 | 0.53 | 0.57 | 0.44 | 0.45 | 0.49 | 0.55 | 0.70 | 0.69 | 0.80 | 0.91 |
| 6 Wholesale and retail trade | 3.00 | 3.08 | 3.30 | 3.60 | 3.51 | 3.75 | 3.87 | 4.10 | 2.72 | 4.72 | 5.06 |
| 7 Transport, storgage & communications | 0.53 | 0.58 | 0.70 | 0.79 | 0.81 | 0.85 | 0.87 | 1.00 | 1.04 | 1.32 | 1.66 |
| 8 Finance, insurance,real estate etc. | 2.54 | 2.93 | 3.58 | 4.26 | 4.58 | 5.23 | 6.52 | 8.80 | 10.96 | 13.11 | 15.52 |
| 9 Community, social & personal services | 14.85 | 16.03 | 17.23 | 17.56 | 17.92 | 18.20 | 18.78 | 19.50 | 21.73 | 20.23 | 21.4 |
| **Total** | **76.77** | **80.59** | **86.46** | **84.21** | **82.46** | **84.52** | **87.71** | **92.40** | **98.38** | **102.91** | **107.87** |
| **BY SEX** | | | | | | | | | | | |
| **PUBLIC SECTOR** | | | | | | | | | | | |
| Male | 167.10 | 168.66 | 164.57 | 156.75 | 153.07 | 150.86 | 151.85 | 149.84 | 146.34 | 147.04 | 146.66 |
| Female | 23.47 | 26.00 | 28.57 | 29.05 | 28.90 | 29.21 | 30.03 | 30.18 | 30.4 | 30.91 | 31.96 |
| Total | 190.57 | 194.66 | 193.14 | 185.80 | 181.97 | 180.07 | 181.88 | 180.02 | 176.74 | 177.95 | 178.62 |
| PRIVATE SECTOR | | | | | | | | | | | |
| Male | 62.42 | 64.31 | 65.80 | 63.57 | 62.02 | 63.57 | 66.87 | 69.80 | 74.03 | 78.88 | 81.83 |
| Female | 14.34 | 16.28 | 20.66 | 20.64 | 20.44 | 20.95 | 21.18 | 22.94 | 24.72 | 24.98 | 26.63 |
| **Total** | **76.76** | **80.59** | **86.46** | **84.21** | **82.46** | **84.52** | **88.05** | **92.74** | **98.75** | **103.77** | **108.46** |
| **PUBLIC AND PRIVATE SECTOR** | | | | | | | | | | | |
| Male | 229.52 | 232.97 | 230.37 | 220.32 | 215.09 | 214.42 | 218.72 | 219.64 | 220.37 | 225.92 | 228.49 |
| Female | 37.81 | 42.28 | 49.23 | 49.68 | 49.34 | 50.16 | 51.21 | 53.12 | 55.12 | 55.80 | 58.59 |
| **Total** | **267.33** | **275.25** | **279.60** | **270.00** | **264.43** | **264.58** | **269.93** | **272.76** | **275.49** | **281.72** | **287.08** |

Source : Ministry of Labour & Employment, Director General of Employment and Training.

Note : 1. Coverage in construction, particularly on private account, is known to be inadequate.

2. Employment in private sector relates to non-agriculture establishments in private sector employing 10 or more persons. Employment in public sector relate to all estalishments irrespective of size.

3. Excludes Sikkim, Arunachal Pradesh, Dadra & Nagar Haveli and Lakshadweep as these are not yet covered under the programme.

4. Due to non-availability of data as per NIC 1998, information in respect of J&K , Manipur, puducherry, Mizoram, Daman & Diu not included in totals.

**3.2 : PER CAPITA EMOLUMENTS OF CENTRAL PUBLIC SECTOR ENTERPRISES EMPLOYEES IN RELATION TO INCREASE IN AVERAGE ALL-INDIA CONSUMER PRICE INDEX (1960=100)**

| Year | Employee (in lakh) (Excl. casual & Daily rated workers) | Emoluments (₹ crore) | Per capita emoluments (₹) | Increase over 1971-72 in per capita (per cent) | Average index | Increase over 1971-72 (per cent) |
|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 1971-72 | 7.01 | 415 | 5920 | - | 192 | - |
| 1972-73 | 9.32 | 541 | 5805 | 1.94 | 207 | 7.81 |
| 1973-74 | 13.44 | 749 | 5573 | 5.86 | 250 | 30.21 |
| 1974-75 | 14.32 | 1060 | 7402 | 25.03 | 317 | 65.10 |
| 1975-76 | 15.04 | 1352 | 8983 | 51.74 | 313 | 63.02 |
| 1976-77 | 15.75 | 1408 | 8940 | 51.01 | 301 | 56.77 |
| 1977-78 | 16.38 | 1646 | 10048 | 69.73 | 324 | 68.75 |
| 1978-79 | 17.03 | 1908 | 11210 | 89.36 | 331 | 72.40 |
| 1979-80 | 17.75 | 2213 | 12468 | 110.61 | 360 | 87.50 |
| 1980-81 | 18.39 | 2619 | 14239 | 140.52 | 401 | 108.85 |
| 1981-82 | 19.39 | 3133 | 16158 | 172.94 | 451 | 134.90 |
| 1982-83 | 20.24 | 3649 | 18029 | 204.5 | 486 | 153.13 |
| 1983-84 | 20.72 | 4485 | 21549 | 264.00 | 547 | 184.92 |
| 1984-85 | 21.07 | 5126 | 24328 | 310.95 | 582 | 203.13 |
| 1985-86 | 21.54 | 5576 | 25887 | 337.28 | 620 | 222.92 |
| 1986-87 | 22.11 | 6371 | 28820 | 386.82 | 674 | 251.04 |
| 1987-88 | 22.14 | 7193 | 32537 | 449.61 | 736 | 283.23 |
| 1988-89 | 22.09 | 8683 | 39415 | 565.79 | 803 | 318.23 |
| 1989-90 | 22.36 | 9742 | 43665 | 637.58 | 855 | 345.31 |
| 1990-91 | 22.19 | 10912 | 49179 | 730.73 | 951 | 395.31 |
| 1991-92 | 21.79 | 12311 | 56508 | 854.52 | 1079 | 461.98 |
| 1992-93 | 21.52 | 13983 | 64983 | 997.69 | 1185 | 517.10 |
| 1993-94 | 20.70 | 14913 | 72043 | 1116.94 | 1272 | 562.50 |
| 1994-95 | 20.62 | 17015 | 82517 | 1293.87 | 1402 | 630.21 |
| 1995-96 | 20.52 | 21931 | 106876 | 1705.34 | 1542 | 703.13 |
| 1996-97 | 20.08 | 22219 | 110662 | 1769.29 | 1687 | 778.65 |
| 1997-98 | 19.52 | 25385 | 129582 | 2088.89 | 1803 | 839.06 |
| 1998-99 | 19.00 | 26254 | 138179 | 2234.10 | 2039 | 961.98 |
| 1999-00 | 18.06 | 30402 | 168339 | 2743.56 | 2109 | 998.44 |
| 2000-01 | 17.40 | 38223 | 219672 | 3610.67 | 2190 | 1440.62 |
| 2001-02 | 19.92 | 38556 | 193554 | 3169.49 | 2284 | 1089.58 |
| 2002-03 | 18.66 | 42169 | 225986 | 3717.33 | 2375 | 1136.98 |
| 2003-04 | 17.62 | 43919 | 248481 | 4097.31 | 2467 | 1184.89 |
| 2004-05 | 17.00 | 48629 | 286053 | 4731.97 | 2561 | 1236.98 |
| 2005-06 | 16.49 | 46841 | 284057 | 4698.26 | 2674 | 1292.71 |
| 2006-07 | 16.14 | 52586 | 325869 | 5404.54 | 2853 | 1385.94 |
| 2007-08 | 15.65 | 64306 | 410898 | 6840.84 | 3030 | 1478.12 |
| 2008-09 | 15.33 | 83045 | 541716 | 9050.61 | 3306 | 1621.88 |
| 2009-10 | 14.90 | 87792 | 589210 | 9852.87 | 3715 | 1834.89 |
| 2010-11 | 14.44 | 96210 | 666276 | 11154.66 | 4103 | 2036.77 |

Source : Department of Public Enterprises.

## 4.1 : SOURCES OF CHANGE IN MONEY STOCK ($M_3$)

(₹ crore)

| Items | Outstanding balances as on | | | Variations during | | | | |
|---|---|---|---|---|---|---|---|---|
| | March 31, 2009 | March 31, 2010 | March 31, 2011 | 2009-10 31-Mar to 31-Mar | 2010-11 31-Mar to 31-Mar | 2010-11 31-Mar to Dec 03 | 2011-12 31-Mar to Dec 02 | Outstanding as on 02-Dec 2011 |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| **I. $M_1$ (Narrow Money){II(i)+II(ii)+II(iv)}** | 1259707 | 1489301 | 1635569 | 229594 | 146268 | 59301 | -8978 | 1626591 |
| **II. $M_3$(Broad Money) (I+iii)** | 4794812 | 5602731 | 6499548 | 807919 | 896817 | 477118 | 573712 | 7073261 |
| (i) Currency with the public | 665450 | 767493 | 914197 | 102043 | 146704 | 100092 | 58262 | 972459 |
| (ii) Demand deposits with banks | 588688 | 717970 | 717660 | 129282 | -310 | -41234 | -66139 | 651520 |
| (iii) Time deposits with banks | 3535105 | 4113430 | 4863979 | 578326 | 750549 | 417817 | 582690 | 5446670 |
| (iv) Other deposits with RBI | 5570 | 3839 | 3713 | -1731 | -126 | 444 | -1101 | 2612 |
| **III. Sources of change in MoneyStock ($M_3$) (1+2+3+4-5)** | **4794812** | **5602731** | **6499548** | **807919** | **896817** | **477118** | **573712** | **7073261** |
| 1. Net bank credit to Government (A+B) | 1277333 | 1669186 | 1982771 | 391853 | 313585 | 155854 | 248864 | 2231635 |
| A) RBI's net credit to Government (i+ii) | 61580 | 211586 | 396555 | 150006 | 184969 | 44432 | 10688 | 407242 |
| i) Central Government | 61761 | 211581 | 394035 | 149820 | 182454 | 44478 | 12019 | 406053 |
| ii) State Governments | -181 | 5 | 2520 | 186 | 2515 | -46 | -1331 | 1189 |
| B) Other bank's credit to Government | 1215753 | 1457600 | 1586216 | 241847 | 128616 | 111422 | 238176 | 1824392 |
| 2. Bank credit to commercial sector (A+B) | 3014893 | 3491409 | 4235407 | 476516 | 743997 | 384195 | 298582 | 4533989 |
| A) RBI's credit to commercial sector | 13820 | 1328 | 2164 | -12492 | 836 | 298 | -427 | 1737 |
| B) Other bank's credit to commercial sector | 3001073 | 3490081 | 4233242 | 489008 | 743161 | 383897 | 299009 | 4532252 |
| **3. Net foreign exchange assets of banking sector*** | 1352184 | 1281469 | 1393327 | -70715 | 111858 | 89857 | 191450 | 1584776 |
| **4. Government's currency liabilities to the public** | 10054 | 11270 | 12724 | 1215 | 1455 | 984 | 587 | 13312 |
| **5. Banking sector's net non-monetary liabilities** | 859652 | 850602 | 1124680 | -9050 | 274079 | 153772 | 165770 | 1290450 |

Source : Reserve Bank of India.

Note : 1. Data are provisional.
2. RBI data relate to end March after closure of Government accounts.
3. *Includes investments in foreign currency denominated bonds issued by IIFC(UK) since March 20, 2009.
4. Totals may not tally due to rounding offs.

## 4.2 : SCHEDULED COMMERCIAL BANKS: SEASONAL FLOW OF FUNDS

(₹ crore)

| Items | 2006-07 Slack Season | 2006-07 Busy Season | 2007-08 Slack Season | 2007-08 Busy Season | 2008-09 Slack Season | 2008-09 Busy Season | 2009-10 Slack Season | 2009-10 Busy Season | 2010-11 Slack Season | 2010-11 Busy Season | 2011-12 Slack Season | 2011-12 Busy Season (From Oct. 21 to Dec 02) | Outstanding as on Dec. 02, 2011P |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 |
| **Sources** | | | | | | | | | | | | | |
| 1. Increase in aggregate deposits | 152160 | 306267 | 286999 | 321209 | 287754 | 430545 | 235734 | 355444 | 366743 | 445987 | 299587 | 86896 | 5710061 |
| 2. Increase in borrowings from RBI | 1128 | 2878 | -4078 | 474 | 211 | 2216 | -2902 | 0 | 4094 | -2989 | -37 | 1205 | 2273 |
| 3. Increase in other borrowings@ | 5829 | 1991 | 1831 | 11962 | 12799 | -9820 | -3375 | 15094 | -1605 | 17547 | 41426 | -3867 | 169332 |
| 4. Increase in other demand and time liabilities | 22187 | 17673 | 28115 | 30222 | 13953 | -4542 | 11372 | 3209 | 60814 | -12461 | -11160 | 9766 | 360360 |
| 5. Residual (Net) | -9865 | 23049 | 2009 | 35795 | -25514 | -96809 | -8677 | 125159 | -98962 | 114716 | 85981 | 2405 | 121890 |
| **TOTAL** | **171438** | **351858** | **314877** | **399663** | **289202** | **321589** | **232152** | **498907** | **331083** | **562800** | **415797** | **96405** | **6363916** |
| **Uses** | | | | | | | | | | | | | |
| 1. Increase in bank credit | 168311 | 233748 | 138872 | 298425 | 290847 | 128509 | 123776 | 347014 | 264220 | 445948 | 226105 | 83869 | 4235421 |
| 2. Increase in investments | 10677 | 49958 | 139671 | 70966 | 37495 | 180494 | 119308 | 84458 | 63855 | 51601 | 151062 | 37337 | 1743713 |
| 3. Increase in cash in hand | 4159 | -789 | 2602 | 655 | 5485 | -342 | 2949 | -191 | 4870 | -4 | 8193 | -2406 | 36748 |
| 4. Increase in balances with RBI | -11709 | 68941 | 33732 | 29616 | -44624 | 12929 | -13881 | 67627 | -1862 | 65255 | 30438 | -22395 | 348035 |
| **TOTAL** | **171438** | **351858** | **314877** | **399663** | **289202** | **321589** | **232152** | **498907** | **331083** | **562800** | **415797** | **96405** | **6363916** |

Source : Reserve Bank of India.

P : Provisional

@ Excludes borrowings from RBI, IDBI, EXIM BANK and NABARD

Notes :
1. Data on aggregate deposits also reflect redemption of Resurgent India Bonds (RIBs) of ₹ 22,693 crore, since October 1, 2003.
2. Residual (net) is the balance of Uses of Funds over Sources of Funds and includes borrowings from RBI, IDBI, EXIM Bank and NABARD.
3. The slack season is from May to October and the busy season is from November to April.
4. The data relate to last reporting Fridays.
5. Figures may not add up to totals due to rounding off.

## 4.3 : SCHEDULED COMMERCIAL BANKS: VARIATIONS IN SELECTED ITEMS

(₹ crore)

| Items | Outstanding as on March 23, 2001 | Variations during | | | | | | | | | | | Outstand-ing as on Dec. 02 2011 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | March 23, 2001 to March 22 2002 | March 22, 2002 to March 21 2003 | March 21, 2003 to March 19 2004 | March 19, 2004 to March 18 2005 | April 01, 2005 to March 31 2006 | March 31, 2006 to March 30 2007 | March 30, 2007 to March 28 2008 | March 28, 2008 to March 27 2009 | March 27, 2009 to March 26 2010 | March 26, 2010 to March 25 2011 | March 25, 2011 to Dec 02$^P$ 2011 | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 |
| 1. Demand deposits | 142552 | 10496 | 17241 | 54733 | 23005 | 78623 | 65091 | 94579 | -1225 | 122525 | -3904 | -69187 | 572518 |
| 2. Time deposits* @ | 820066 | 130246 | 160252 (130581) | 168830 | 172777 [169264] | 245291 | 437794 | 490427 | 638395 | 536191 | 719048 | 571279 | 5137543 |
| 3. Aggregate deposits @ | 962618 | 140742 | 177493 (147822) | 223563 | 195782 [192269] | 323913 | 502885 | 585006 | 637170 | 658716 | 715143 | 502092 | 5710061 |
| 4. Borrowings from RBI | 3896 | -280 | -3537 | -79 | 50 | 1393 | 4757 | -2245 | 7728 | -11686 | 4989 | -2758 | 2273 |
| 5. Cash in hand & balances with RBI | 65202 | 3446 | -2745 | 10993 | 19682 | 36974 | 56254 | 78805 | -16690 | 48492 | 42541 | 35274 | 384782 |
| 6. Investments in Govt.securities | 340035 | 71142 | 112241 | 131341 | 64224 [52031] | -19514 | 75316 | 182603 | 197124 | 222609 | 118753 | 241088 | 1738236 |
| 7. Bank credit | 511434 | 78289 | 139493 (94949) | 111570 | 259643 [226761] | 354868 | 424112 | 430724 | 413636 | 469239 | 697295 | 293338 | 4235421 |

Source : Reserve Bank of India.

P Provisional.

* Revised in line with the new accounting standards and are consistent with the methodology suggested by the Working Group on Money Supply: Analytics and Methodology of Compilation (June 1998) from 1998-99 onwards. The revision is in respect of pension and provident funds with commercial banks which are classified as other demand and time liabilities and includes those banks which have reported such changes so far.

@ Data also reflect redemption of Resurgent India Bonds of ₹ 22,693 crore since October 2003.

**Notes:** 1. Figures in ( ) exclude the impact of mergers since May 3, 2003.
2. Figures in [ ] exclude the impact of conversion of a non-banking entity into banking entity from October 11, 2004.

## 4.4 : SCHEDULED COMMERCIAL BANKS' OUTSTANDING ADVANCES AGAINST SENSITIVE COMMODITIES

(₹ crore)

| Commodities | | As on last Friday of | | | | | | | | | | | | Variations during | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | March 2002 | March 2003 | March 2004 | March 2005 | March 2006 | March 2007 | March 2008 | March 2009 | March 2010 | March 2011 | October 2010 | October 2011 | April-October 2010-11 | April-October 2011-12* |
| 1 | | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 |
| 1. | Paddy and rice | 3455 | 4209 | 3636 | 4309 | 4961 | 6967 | 10213 | 11183 | 11099 | 14324 | 10189 | 13298 | -910 | -1026 |
| 2. | Wheat | 356 | 484 | 689 | 601 | 1401 | 881 | 1518 | 1530 | 2370 | 2187 | 1901 | 2326 | -469 | 139 |
| 3. | Pulses | 314 | 253 | 465 | 443 | 498 | 632 | 1730 | 1127 | 1443 | 1594 | 1144 | 1424 | -299 | -170 |
| 4. | Other food grains | 939 | 1029 | 1030 | 994 | 1110 | 827 | 1247 | 1068 | 1318 | 1563 | 1361 | 1604 | 43 | 41 |
| 5. | Sugar | 3346 | 3549 | 4255 | 3754 | 4364 | 6130 | 8468 | 9251 | 9219 | 10123 | 7696 | 8369 | -1523 | -1754 |
| 6. | Khandsari | 498 | 42 | 29 | 207 | 58 | 56 | 87 | 175 | 163 | 167 | 147 | 135 | -16 | -32 |
| 7. | Gur | 19 | 27 | 11 | 15 | 85 | 140 | 199 | 193 | 299 | 108 | 55 | 51 | -244 | -57 |
| 8. | Groundnut | 416 | 214 | 246 | 275 | 326 | 369 | 401 | 480 | 437 | 527 | 456 | 429 | 19 | -98 |
| 9. | Rapeseed/Mustardseed | 439 | 99 | 43 | 68 | 718 | 675 | 437 | 257 | 514 | 328 | 444 | 390 | -70 | 62 |
| 10. | Linseed | 25 | 12 | 12 | 9 | 58 | 5 | 9 | 9 | 10 | 25 | 20 | 23 | 10 | -2 |
| 11. | Castorseed | 3 | 8 | 4 | 30 | 54 | 85 | 75 | 42 | 118 | 118 | 84 | 130 | -34 | 12 |
| 12. | Cottonseed | 46 | 50 | 76 | 62 | 186 | 114 | 213 | 196 | 205 | 242 | 94 | 106 | -111 | -136 |
| 13. | Soyabean | 611 | 470 | 590 | 495 | 819 | 958 | 1324 | 761 | 736 | 1115 | 542 | 783 | -194 | -332 |
| 14. | Other oilseeds | 474 | 57 | 84 | 204 | 104 | 106 | 127 | 215 | 325 | 317 | 356 | 511 | 31 | 194 |
| 15. | Groundnut oil | 75 | 77 | 104 | 67 | 98 | 129 | 117 | 131 | 141 | 314 | 274 | 351 | 133 | 37 |
| 16. | Rapeseed/Mustard | 132 | 133 | 139 | 108 | 260 | 338 | 276 | 280 | 242 | 312 | 271 | 272 | 29 | -40 |
| 17. | Castor oil | 106 | 161 | 236 | 227 | 107 | 261 | 335 | 145 | 328 | 322 | 320 | 360 | -8 | 38 |
| 18. | Linseed oil | 11 | 10 | 15 | 9 | 9 | 5 | 16 | 7 | 5 | 9 | 6 | 7 | 1 | -2 |
| 19. | Cottonseed oil | 75 | 67 | 35 | 76 | 112 | 106 | 105 | 150 | 218 | 300 | 177 | 225 | -41 | -75 |
| 20. | Soyabean oil | 236 | 235 | 254 | 181 | 321 | 696 | 635 | 570 | 788 | 839 | 679 | 727 | -109 | -112 |
| 21. | Other Veg. oil | 452 | 539 | 609 | 603 | 1066 | 727 | 948 | 1370 | 987 | 1083 | 903 | 910 | -84 | -173 |
| 22. | 'Vanaspati | 224 | 203 | 200 | 162 | 198 | 211 | 886 | 223 | 178 | 418 | 301 | 412 | 123 | -6 |
| 23. | Cotton & Kapas | 2008 | 2213 | 2839 | 2446 | 4153 | 4817 | 5487 | 6061 | 6655 | 8636 | 5604 | 5915 | -1051 | -2721 |
| 24. | Raw Jute | 156 | 170 | 237 | 279 | 209 | 293 | 373 | 352 | 1380 | 426 | 360 | 459 | -1020 | 33 |
| | **Total** | **14416** | **14311** | **15838** | **15624** | **21274** | **25528** | **35226** | **35776** | **39178** | **45397** | **33384** | **39217** | **-5794** | **-6180** |

Source : Reserve Bank of India.
*Data are provisional
Note : Effective from October 10, 2000 all commodities except unreleased stocks of levy sugar stand exempted from selective credit controls.
Figures may not add up to total due to rounding.

## 4.5 : BRANCH EXPANSION OF PUBLIC SECTOR BANKS AND OTHER COMMERCIAL BANKS

| Bank Groups | All Branches 30-06-2005 | 30-06-2006 | 30-06-2007 | 30-06-2008 | 30-06-2009 | 30-06-2010 | 30-06-2011 | Rural Branches 30-06-2011 | % of Rural Branches as on 30-06-2011 |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| **A. SBI AND ITS ASSOCIATES** | **13759** | **13916** | **14152** | **15391** | **16343** | **17382** | **17976** | **6230** | **34.7** |
| **B. NATIONALISED BANKS (including IDBI Ltd.) (i) + (ii)** | **33993** | **34728** | **36573** | **38093** | **39853** | **42202** | **44862** | **14325** | **31.9** |
| (i) NATIONALISED BANKS | 33834 | 34547 | 36137 | 37591 | 39287 | 41485 | 43986 | 14239 | 32.4 |
| (ii) OTHER PUBLIC SECTOR BANKS | 159 | 181 | 436 | 502 | 566 | 717 | 876 | 86 | 9.8 |
| **C. REGIONAL RURAL BANKS (RRBs)** | **14492** | **14534** | **14573** | **14869** | **15242** | **15511** | **15777** | **11876** | **75.3** |
| **Total of Public Sector Banks (including RRBs)** | **62244** | **63178** | **65298** | **68353** | **71438** | **75095** | **78615** | **32431** | **41.3** |
| **D. OTHER SCHEDULED COMMERCIAL BANKS (a) + (b)** | **6195** | **6674** | **7227** | **8320** | **8990** | **10481** | **11842** | **1341** | **11.3** |
| (a) OLD PRIVATE SECTOR BANKS | 4496 | 4673 | 4402 | 4526 | 4714 | 5042 | 4843 | 768 | 15.9 |
| (b) NEW PRIVATE SECTOR BANKS | 1699 | 2001 | 2825 | 3794 | 4276 | 5439 | 6999 | 573 | 8.2 |
| **E. FOREIGN BANKS** | **250** | **261** | **271** | **279** | **295** | **310** | **318** | **7** | **2.2** |
| **ALL SCHEDULED COMMERCIAL BANKS (A to E)** | **68689** | **70113** | **72796** | **76952** | **80723** | **85886** | **90775** | **33779** | **37.2** |
| **F. NON-SCHEDULED COMMERCIAL BANKS (i)** | **35** | **40** | **46** | **46** | **46** | **47** | **55** | **16** | **29.1** |
| (i) LOCAL AREA BANKS | 35 | 40 | 46 | 46 | 46 | 47 | 55 | 16 | 29.1 |
| **All Commercial Banks** | **68724** | **70153** | **72842** | **76998** | **80769** | **85933** | **90830** | **33795** | **37.2** |

Source : Department of Statistics and Information Management, RBI

Note:
1. Nationalised banks includes IDBI Bank Ltd. from 2005 onwards.
2. Population group classification is based on 2001 census.
   The population group 'Rural' includes centres with population of less than 10,000.
3. Data for 2005 to 2010 are revised and for 2011 are provisional.
4. Data on number of branches exclude administrative offices.

## 4.6 : ADVANCES TO AGRICULTURE AND OTHER PRIORITY SECTORS BY PUBLIC SECTOR BANKS

| SECTORS | NUMBER OF ACCOUNTS (in thousand) | | AMOUNT OUTSTANDING (₹ in crore) | |
|---|---|---|---|---|
| | March 2010 | March 2011 | March 2010 | March 2011 |
| 1 | 2 | 3 | 4 | 5 |
| 1. Agriculture | 31616 | 33910 | 372463 | 414973 |
| (a) Direct Finance[a] | 31015 | 33214 | 265826 | 300190 |
| (b) Indirect Finance[a] | 600 | 696 | 106637 | 114783 |
| 2. Small Scale Industries[b] | | | | |
| 3 Micro & Small Enterprises | 7217 | 7398 | 276319 | 369430 |
| 4. Setting up of Industrial Estates | | | | |
| 5. Small road & water transport operators | | | | |
| 6. Retail Trade | | | | |
| 7. Small Business | | | | |
| 8. Professional &self employed persons | | | | |
| 9. Micro Credit | 1354 | 864 | 5916 | 7243 |
| 10. Education | 1911 | 2211 | 35855 | 41341 |
| 11. Consumption | | | | |
| 12. State sponsored corpns/Organisations for on lending to Other Priority Sectors | | | | |
| 13. State sponsored organisation for SC/ST purchase &supply of inputs &marketing of outputs | 14 | 9 | 41 | 36 |
| 14. Housing Loans | 3671 | 3945 | 173184 | 188472 |
| 15. Funds provided to RRBs | | | | |
| 16. Advances to Self Help Groups | | | | |
| 17. Advances to Software Industries | | | | |
| 18. Advances to Food & Agro Processing Sector | | | | |
| 19. Investment in Venture Capital | | | | |
| 20. Total Priority Sector Advances[c] | 45783 | 48339 | 863778 | 1021495 |
| 21. ANBC[d] | | | 2078397 | 2493499 |
| **Percentage to ANBC** | | | | |
| 1. Agriculture | | | 17.92 | 16.64 |
| (a) Direct Finance[a] | | | 12.78 | 12.03 |
| (b) Indirect Finance[a] | | | 5.13 | 4.6 |
| 2. Small Scale Industries[b] | | | | |
| 3. Micro & Small Enterprises | | | 13.29 | 14.81 |
| 4. Setting up of Industrial Estates | | | | |
| 5. Small road & water transport Operators | | | | |
| 6. Retail Trade | | | | |
| 7. Small Business | | | | |
| 8. Professional &self employed persons | | | | |
| 9. Micro Credit | | | 0.28 | 0.29 |
| 10. Education | | | 1.72 | 1.65 |
| 11. Consumption | | | | |
| 12. State sponsored corpns/Organisations for on lending to Other Priority Sector | | | | |
| 13. State sponsored organisation for SC/ST purchase &supply of inputs &marketing of outputs | | | | |
| 14. Housing Loans | | | 8.33 | 7.55 |
| 15. Funds provided to RRBs | | | | |
| 16. Advances to Self Help Groups | | | | |
| 17. Advances to Software Industries | | | | |
| 18. Advances to Food & Agro Processing Sector | | | | |
| 19. Investment in Venture Capital | | | | |
| 20. Total Priority Sector Advances | | | 41.55 | 40.96 |

[a] Excludes advances to plantations other than development finance.
[b] Includes small business.
[c] Total priority sector advances is the total of items 1 to 12 & 14 to 17 and one half of item 13.
[d] ANBC stands for Adjusted Net Bank Credit.

## 4.7 : STATE-WISE DISTRIBUTION OF BANK OFFICES, AGGREGATE DEPOSITS AND TOTAL CREDIT OF PUBLIC SECTOR BANKS[a] AND PERCENTAGE SHARE OF ADVANCES TO PRIORITY SECTORS

(₹ crore)

| State/Union Territory | No of offices at the end of | | Deposits (Rs. crore) End | | Bank credit (Rs. crore) End | | Share of priority sectors in total bank credit (per cent) | |
|---|---|---|---|---|---|---|---|---|
| | June 1969 | June 2011 | June 1969 | June 2011 | June 1969 | June 2011 | June 1969 | March 2011 |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 1. Andaman & Nicobar Islands | 1 | 41 | … | 1677 | … | 668 | … | 51.33 |
| 2. Andhra Pradesh | 567 | 5251 | 121 | 230449 | 122 | 264748 | 24.4 | 40.53 |
| 3. Arunachal Pradesh | … | 65 | … | 4838 | … | 1174 | … | 27.80 |
| 4. Assam | 74 | 1012 | 33 | 51095 | 13 | 17352 | 10.3 | 45.93 |
| 5. Bihar | 273 | 2628 | 169 | 100349 | 53 | 26990 | 9.1 | 60.99 |
| 6. Chandigarh | 20 | 228 | 35 | 29681 | 64 | 48309 | 4.2 | 27.00 |
| 7. Chhattisgarh | … | 859 | … | 48871 | … | 24811 | … | 54.23 |
| 8. Dadra & Nagar Haveli | … | 21 | … | 1007 | … | 253 | … | 72.91 |
| 9. Daman & Diu | … | 18 | … | 1414 | … | 288 | … | 68.99 |
| 10. Delhi | 274 | 1887 | 360 | 478132 | 245 | 377803 | 10.2 | 12.91 |
| 11. Goa | 85 | 368 | 49 | 27226 | 20 | 7021 | 12.6 | 50.49 |
| 12. Gujarat | 752 | 3881 | 401 | 215358 | 195 | 138429 | 15.9 | 41.39 |
| 13. Haryana | 172 | 1905 | 49 | 89285 | 23 | 74296 | 28.2 | 49.26 |
| 14. Himachal Pradesh | 42 | 867 | 12 | 29796 | 3 | 11927 | 2.7 | 64.25 |
| 15. Jammu & Kashmir | 35 | 342 | 18 | 12193 | 1 | 3381 | 30.3 | 66.18 |
| 16. Jharkhand | … | 1442 | … | 67843 | … | 22792 | … | 52.58 |
| 17. Karnataka | 756 | 4165 | 188 | 246840 | 143 | 184120 | 24.8 | 39.90 |
| 18. Kerala | 601 | 2611 | 117 | 105657 | 77 | 80141 | 27.6 | 60.70 |
| 19. Lakshadweep | … | 12 | … | 470 | … | 45 | … | 39.97 |
| 20. Madhya Pradesh | 343 | 3016 | 107 | 122035 | 63 | 72363 | 22.3 | 52.37 |
| 21. Maharashtra | 1118 | 6413 | 903 | 925728 | 912 | 805525 | 12.4 | 19.78 |
| 22. Manipur | 2 | 52 | 1 | 2850 | … | 1123 | … | 55.64 |
| 23. Meghalaya | 7 | 147 | 9 | 8485 | 3 | 2022 | 50 | 48.37 |
| 24. Mizoram | … | 35 | … | 2031 | … | 830 | … | 82.29 |
| 25. Nagaland | 2 | 76 | 1 | 4279 | … | 1270 | 40 | 35.56 |
| 26. Odisha | 100 | 1960 | 29 | 85665 | 15 | 42993 | 11.2 | 55.49 |
| 27. Puducherry | 12 | 102 | 5 | 5585 | 5 | 3185 | 12.9 | 50.35 |
| 28. Punjab | 346 | 3142 | 185 | 134505 | 50 | 103498 | 27.9 | 50.36 |
| 29. Rajasthan | 364 | 2799 | 74 | 99778 | 38 | 96206 | 16.8 | 41.40 |
| 30. Sikkim | … | 73 | … | 2961 | … | 1135 | … | 55.77 |
| 31. Tamil Nadu | 1060 | 4700 | 233 | 234155 | 311 | 274421 | 25.5 | 39.61 |
| 32. Tripura | 5 | 117 | 4 | 6402 | … | 1573 | 9.5 | 55.70 |
| 33. Uttar Pradesh | 747 | 7217 | 337 | 317369 | 154 | 133102 | 16.9 | 59.68 |
| 34. Uttarakhand | … | 952 | … | 43957 | … | 14458 | … | 68.29 |
| 35. West Bengal | 504 | 4203 | 456 | 276778 | 526 | 158404 | 4.4 | 34.78 |
| **All India** | **8262** | **62607** | **3896** | **4014743** | **3036** | **2996655** | **14.9** | **34.09** |

Source : Reserve Bank of India. ... : Nil

[a] Includes State Bank of India and its Associates, Nationalised Banks and IDBI Bank Limited.

Notes:
1. Deposits exclude inter-bank deposits.
2. Bank credit excludes dues from banks but includes amount of bills rediscounted with RBI/financial institutions.
3. The data relating to deposits and bank credit relate to the last Friday of the month and are based on quarterly return on aggregate deposits and gross bank credit.
4. State-wise and all India percentages have been worked out with reference to gross bank credit (inclusive of food credit).
5. Figures may not add up to totals because of rounding.
6. The targets under priority sector are monitored vis-à-vis ANBC. For the purpose of this statement share of priority sector advances is worked out vis-à-vis Bank Credit.

## 4.8 : FINANCIAL ASSISTANCE SANCTIONED AND DISBURSED BY ALL INDIA FINANCIAL INSTITUTIONS

(₹ crore)

| | 2007-08 | 2008-09 | 2009-10 | 2010-11P |
|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 |
| **1. Industrial Finance Corporation of India Ltd** | | | | |
| (i) Sanctioned | 2550.5 | 4014.9 | 7007.2 | 13208.5 |
| (ii) Disbursed | 2280.1 | 3311.5 | 6045.4 | 8399.4 |
| **2. Industrial Development Bank of India** | | | | |
| (i) Sanctioned | na | na | na | na |
| (ii) Disbursed | na | na | na | na |
| **3. Industrial Investment Bank of India Ltd.** | | | | |
| (i) Sanctioned | na | na | na | na |
| (ii) Disbursed | na | na | na | na |
| **4. State Financial Corporations** | | | | |
| (i) Sanctioned | na | na | na | na |
| (ii) Disbursed | na | na | na | na |
| **5. State Industrial Development Corporations** | | | | |
| (i) Sanctioned | na | na | na | na |
| (ii) Disbursed | na | na | na | na |
| **6. Unit Trust of India** | | | | |
| (i) Sanctioned | na | na | na | na |
| (ii) Disbursed | na | na | na | na |
| **7. Life Insurance Corporation of India** | | | | |
| (i) Sanctioned | 38454.5 | 70854.9 | 63006.9 | 43897.5 |
| (ii) Disbursed | 27264.2 | 61812.2 | 53149.3 | 38993.8 |
| **8. General Insurance Corporation of India** | | | | |
| (i) Sanctioned | 1175.3 | 545.0 | 610.6 | 1237.3 |
| (ii) Disbursed | 1176.3 | 545.0 | 610.6 | 1237.3 |
| **9. Small Industries Development Bank of India** | | | | |
| (i) Sanctioned | 16146.3 | 29216.7 | 35545.2 | 42223.3 |
| (ii) Disbursed | 15099.3 | 28317.8 | 31941.9 | 38824.4 |
| **10. Infrastructure Development Finance Corporation** | | | | |
| (i) Sanctioned | 20364 | 10317.0 | 30442.0 | 42716.0 |
| (ii) Disbursed | 12006 | 8084.0 | 12962.0 | 26702.0 |
| **11. EXIM Bank** | | | | |
| (i) Sanctioned | 35006.4 | 35246.9 | 40193.8 | 51014.8 |
| (ii) Disbursed | 29199.7 | 29964.2 | 33636.1 | 35576.8 |
| **12. National Bank for Agriculture and Rural Development** | | | | |
| (i) Sanctioned | 44572.3 | 54218.8 | 53566.9 | 67081.9 |
| (ii) Disbursed | 38244.7 | 49965.7 | 49132.5 | 59949.0 |
| **13. New India Assurance Company Ltd.** | | | | |
| (i) Sanctioned | 20 | 20.0 | 20.0 | 20.0 |
| (ii) Disbursed | … | … | 1.9 | 0.0 |
| **14. National Insurance Company Ltd.** | | | | |
| (i) Sanctioned | na | na | … | … |
| (ii) Disbursed | na | na | … | … |
| **15. Oriental Insurance Company Ltd.** | | | | |
| (i) Sanctioned | … | … | … | … |
| (ii) Disbursed | 0.1 | … | … | … |
| **16. United India Insurance Company Ltd.** | | | | |
| (i) Sanctioned | 20 | … | … | … |
| (ii) Disbursed | 20 | … | … | … |
| **17. Industrial Credit and Investment Corporation of India Ltd.** | | | | |
| (i) Sanctioned | na | na | na | na |
| (ii) Disbursed | na | na | na | na |

Source : Reserve Bank of India & Previous Economic Surveys.

na : Not available. P : Provisional. … :NIL

## 5.1 : INDEX NUMBERS OF WHOLESALE PRICES

(Base : 2004-05 = 100)

| | Primary articles | | | | | Fuel | Manufactured products | | | | | | All |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Total | Food articles | | Non-food articles | Minerals | power, light & lubricants | Total | Food products | Textiles | Chemicals & chemical products | Basic metals, alloys & metal products | Machinery & machine tools | commodities |
| | | Total | Foodgrains | | | | | | | | | | |
| **Weight-Base (1993-94)=100** | **22.03** | **15.40** | **5.01** | **6.14** | **0.49** | **14.23** | **63.75** | **11.54** | **9.80** | **11.93** | **8.34** | **8.36** | **100.00** |
| **Weight-Base (2004-05)=100** | **20.12** | **14.34** | **4.09** | **4.26** | **1.52** | **14.91** | **64.97** | **9.97** | **7.33** | **12.02** | **10.75** | **8.93** | **100.00** |
| **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** | **9** | **10** | **11** | **12** | **13** | **14** |
| **Last week of (1993-94 = 100)** | | | | | | | | | | | | | |
| 1995-96 | 125 | 124 | 127 | 129 | 93 | 115 | 123 | 118 | 126 | 130 | 123 | 113 | 122.2 |
| 1996-97 | 136 | 138 | 144 | 133 | 109 | 130 | 126 | 130 | 115 | 136 | 128 | 117 | 128.8 |
| 1997-98 | 142 | 144 | 139 | 142 | 100 | 148 | 129 | 137 | 117 | 137 | 132 | 115 | 134.6 |
| 1998-99 | 153 | 157 | 167 | 146 | 118 | 153 | 135 | 150 | 114 | 152 | 133 | 116 | 141.7 |
| 1999-00 | 159 | 168 | 176 | 141 | 104 | 193 | 139 | 150 | 116 | 160 | 137 | 116 | 150.9 |
| 2000-01 | 162 | 168 | 170 | 149 | 118 | 223 | 144 | 145 | 122 | 167 | 142 | 127 | 159.2 |
| 2001-02 | 168 | 177 | 170 | 150 | 120 | 231 | 144 | 145 | 116 | 171 | 140 | 130 | 161.8 |
| 2002-03 | 178 | 178 | 176 | 183 | 118 | 256 | 152 | 158 | 128 | 178 | 150 | 130 | 172.3 |
| 2003-04 | 181 | 178 | 175 | 191 | 148 | 263 | 162 | 174 | 139 | 179 | 183 | 134 | 180.3 |
| 2004-05 | 183 | 184 | 179 | 177 | 249 | 290 | 169 | 174 | 131 | 186 | 214 | 144 | 189.5 |
| **Last month of (2004-05 = 100)** | | | | | | | | | | | | | |
| 2005-06 | 104 | 105 | 113 | 97 | 119 | 117 | 104 | 102 | 100 | 105 | 103 | 105 | 105.7 |
| 2006-07 | 118 | 119 | 126 | 107 | 135 | 119 | 110 | 107 | 101 | 110 | 116 | 112 | 112.8 |
| 2007-08 | 129 | 126 | 137 | 124 | 173 | 127 | 118 | 116 | 101 | 116 | 138 | 115 | 121.5 |
| 2008-09 | 136 | 136 | 152 | 125 | 168 | 123 | 120 | 123 | 103 | 116 | 130 | 118 | 123.5 |
| 2009-10 | 166 | 164 | 172 | 150 | 232 | 140 | 126 | 142 | 112 | 120 | 133 | 120 | 136.3 |
| 2010-11 | 188 | 179 | 176 | 191 | 267 | 158 | 136 | 145 | 132 | 129 | 148 | 123 | 149.5 |
| **Average of weeks (1993-94 = 100)** | | | | | | | | | | | | | |
| 1995-96 | 125 | 122 | 122 | 135 | 95 | 115 | 122 | 118 | 129 | 127 | 120 | 112 | 121.6 |
| 1996-97 | 136 | 137 | 138 | 134 | 107 | 126 | 124 | 125 | 119 | 131 | 126 | 116 | 127.2 |
| 1997-98 | 139 | 141 | 139 | 138 | 100 | 144 | 128 | 135 | 115 | 137 | 131 | 115 | 132.8 |
| 1998-99 | 156 | 159 | 152 | 152 | 111 | 148 | 134 | 150 | 114 | 146 | 133 | 116 | 140.7 |
| 1999-00 | 158 | 165 | 176 | 143 | 110 | 162 | 137 | 151 | 115 | 155 | 135 | 116 | 145.3 |
| 2000-01 | 163 | 170 | 174 | 147 | 113 | 208 | 142 | 146 | 120 | 164 | 140 | 123 | 155.7 |
| 2001-02 | 168 | 176 | 172 | 153 | 119 | 227 | 144 | 146 | 119 | 169 | 141 | 129 | 161.3 |
| 2002-03 | 174 | 179 | 174 | 165 | 119 | 239 | 148 | 153 | 122 | 174 | 145 | 130 | 166.8 |
| 2003-04 | 181 | 181 | 176 | 186 | 122 | 255 | 156 | 167 | 132 | 177 | 168 | 133 | 175.9 |
| 2004-05 | 188 | 186 | 177 | 188 | 255 | 280 | 166 | 175 | 136 | 182 | 203 | 140 | 187.2 |
| **Average of months (2004-05 = 100)** | | | | | | | | | | | | | |
| 2005-06 | 104 | 105 | 107 | 97 | 115 | 114 | 102 | 101 | 99 | 104 | 102 | 104 | 104.5 |
| 2006-07 | 114 | 116 | 122 | 102 | 137 | 121 | 108 | 107 | 101 | 109 | 112 | 110 | 111.4 |
| 2007-08 | 124 | 124 | 131 | 114 | 153 | 121 | 113 | 110 | 102 | 113 | 123 | 114 | 116.6 |
| 2008-09 | 138 | 135 | 145 | 129 | 187 | 135 | 120 | 120 | 103 | 118 | 138 | 117 | 125.0 |
| 2009-10 | 155 | 155 | 166 | 136 | 203 | 132 | 123 | 136 | 107 | 118 | 130 | 118 | 130.8 |
| 2010-11 | 182 | 180 | 174 | 167 | 253 | 148 | 130 | 141 | 120 | 124 | 141 | 121 | 143.3 |
| **2010-11** | | | | | | | | | | | | | |
| April | 171 | 169 | 172 | 152 | 246 | 141 | 128 | 138 | 115 | 123 | 139 | 121 | 138.6 |
| May | 173 | 172 | 172 | 151 | 238 | 143 | 128 | 138 | 115 | 123 | 139 | 120 | 139.1 |
| June | 176 | 175 | 173 | 153 | 246 | 143 | 128 | 137 | 116 | 122 | 138 | 120 | 139.8 |
| July | 178 | 178 | 174 | 152 | 246 | 148 | 128 | 139 | 116 | 122 | 137 | 121 | 141.0 |
| August | 177 | 177 | 174 | 154 | 248 | 148 | 128 | 139 | 116 | 123 | 138 | 121 | 141.1 |
| September | 181 | 180 | 174 | 161 | 245 | 148 | 129 | 140 | 116 | 123 | 139 | 121 | 142.0 |
| October | 183 | 181 | 173 | 166 | 255 | 148 | 129 | 141 | 117 | 123 | 140 | 121 | 142.9 |
| November | 185 | 181 | 174 | 171 | 263 | 149 | 130 | 142 | 119 | 123 | 140 | 121 | 143.8 |
| December | 192 | 189 | 175 | 176 | 261 | 150 | 131 | 144 | 121 | 124 | 141 | 122 | 146.0 |
| January | 195 | 192 | 176 | 182 | 260 | 151 | 133 | 145 | 125 | 126 | 144 | 122 | 148.0 |
| February | 190 | 181 | 178 | 192 | 263 | 154 | 134 | 145 | 128 | 128 | 147 | 123 | 148.1 |
| March | 188 | 179 | 176 | 191 | 267 | 158 | 136 | 145 | 132 | 129 | 148 | 123 | 149.5 |
| **2011-12** | | | | | | | | | | | | | |
| April | 197 | 187 | 176 | 192 | 304 | 160 | 137 | 146 | 134 | 131 | 149 | 124 | 152.1 |
| May | 195 | 186 | 177 | 183 | 309 | 160 | 137 | 148 | 134 | 132 | 150 | 124 | 152.4 |
| June | 196 | 189 | 177 | 181 | 304 | 162 | 138 | 149 | 132 | 132 | 152 | 124 | 153.1 |
| July | 198 | 193 | 179 | 176 | 310 | 166 | 138 | 150 | 129 | 133 | 152 | 124 | 154.2 |
| August | 199 | 194 | 180 | 182 | 302 | 167 | 138 | 151 | 127 | 133 | 154 | 125 | 154.9 |
| September | 203 | 197 | 181 | 184 | 309 | 168 | 139 | 152 | 126 | 134 | 156 | 125 | 156.2 |
| October | 204 | 199 | 183 | 178 | 313 | 170 | 140 | 152 | 126 | 135 | 157 | 125 | 157.0 |
| November | 202 | 197 | 182 | 177 | 323 | 172 | 140 | 153 | 126 | 136 | 159 | 126 | 157.4 |
| December[P] | 198 | 191 | 182 | 179 | 319 | 173 | 141 | 153 | 126 | 136 | 160 | 125 | 156.9 |
| January[P] | 200 | 191 | 184 | 183 | 325 | 173 | 141 | 153 | 127 | 137 | 161 | 126 | 157.7 |

Source : Office of the Economic Adviser, Ministry of Commerce & Industry.

**P** Provisional

## 5.2 : INDEX NUMBERS OF WHOLESALE PRICES – SELECTED COMMODITIES AND COMMODITY GROUPS

(Base: 2004-05=100)

| | Rice | Wheat | Pulses | Tea | Raw cotton | Raw jute | Ground-nut seed | Coal mining | Mineral oils | Sugar, khandsari & gur | Edible oils | Cotton yarn | Cotton cloth (Mills) | Jute,hemp & mesta textiles | Fertili-zers | Cement | Iron,steel & ferro alloys[a] |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Weight-Base : (1993-94=100)** | **2.45** | **1.38** | **0.60** | **0.16** | **1.36** | **0.11** | **1.03** | **1.75** | **6.99** | **3.93** | **2.76** | **3.31** | **0.90** | **0.38** | **3.69** | **1.73** | **3.72** |
| **Weight-Base : (2004-05=100)** | **1.79** | **1.12** | **0.72** | **0.11** | **0.70** | **0.06** | **0.40** | **2.09** | **9.36** | **2.09** | **3.04** | **1.38** | **1.23** | **0.26** | **2.66** | **1.39** | **6.88** |
| **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** | **9** | **10** | **11** | **12** | **13** | **14** | **15** | **16** | **17** | **18** |
| Last week of (Base:1993-94=100) | | | | | | | | | | | | | | | | | |
| 1995-96 | 120 | 119 | 147 | 93 | 131 | 261 | 130 | 107 | 106 | 114 | 111 | 141 | 141 | 164 | 130 | 140 | 119 |
| 1996-97 | 130 | 156 | 145 | 113 | 136 | na | 130 | 125 | 129 | 126 | 112 | 135 | 148 | 150 | 137 | 130 | 126 |
| 1997-98 | 135 | 137 | 152 | 162 | 166 | 117 | 138 | 144 | 146 | 134 | 120 | 143 | 150 | 152 | 137 | 121 | 133 |
| 1998-99 | 161 | 171 | 152 | 123 | 155 | 108 | 148 | 144 | 144 | 154 | 135 | 143 | 155 | 160 | 142 | 128 | 134 |
| 1999-00 | 166 | 180 | 169 | 104 | 145 | 156 | 139 | 156 | 204 | 158 | 111 | 140 | 155 | 170 | 155 | 127 | 136 |
| 2000-01 | 165 | 172 | 182 | 116 | 156 | 171 | 140 | 185 | 240 | 149 | 105 | 153 | 157 | 169 | 160 | 153 | 137 |
| 2001-02 | 162 | 177 | 176 | 91 | 123 | 187 | 145 | 181 | 243 | 145 | 119 | 139 | 161 | 184 | 166 | 146 | 137 |
| 2002-03 | 168 | 178 | 177 | 104 | 165 | 131 | 199 | 181 | 287 | 129 | 151 | 153 | 162 | 165 | 169 | 147 | 150 |
| 2003-04 | 165 | 188 | 172 | 101 | 185 | 141 | 180 | 198 | 287 | 148 | 161 | 183 | 168 | 175 | 169 | 149 | 201 |
| 2004-05 | 170 | 186 | 168 | 114 | 141 | 191 | 167 | 232 | 333 | 174 | 147 | 153 | 172 | 199 | 175 | 164 | 244 |
| Last month of (Base:2004-05=100) | | | | | | | | | | | | | | | | | |
| 2005-06 | 105 | 117 | 126 | 92 | 91 | 159 | 94 | 118 | 122 | 112 | 93 | 98 | 98 | 114 | 103 | 106 | 97 |
| 2006-07 | 115 | 129 | 147 | 97 | 99 | 118 | 132 | 118 | 123 | 97 | 107 | 98 | 97 | 120 | 105 | 130 | 111 |
| 2007-08 | 131 | 140 | 148 | 110 | 122 | 130 | 147 | 136 | 133 | 93 | 127 | 100 | 98 | 110 | 107 | 138 | 138 |
| 2008-09 | 151 | 151 | 159 | 156 | 124 | 142 | 141 | 151 | 124 | 126 | 114 | 102 | 105 | 125 | 108 | 148 | 126 |
| 2009-10 | 163 | 173 | 199 | 129 | 149 | 173 | 153 | 163 | 147 | 178 | 114 | 123 | 109 | 157 | 110 | 151 | 127 |
| 2010-11 | 167 | 173 | 191 | 138 | 303 | 240 | 171 | 185 | 168 | 164 | 129 | 179 | 128 | 182 | 121 | 154 | 143 |
| Average of weeks (Base:1993-94=100) | | | | | | | | | | | | | | | | | |
| 1995-96 | 117 | 112 | 135 | 103 | 159 | 189 | 135 | 106 | 106 | 113 | 117 | 147 | 139 | 148 | 129 | 130 | 117 |
| 1996-97 | 129 | 137 | 151 | 105 | 133 | 189 | 135 | 118 | 123 | 119 | 115 | 137 | 146 | 153 | 129 | 134 | 124 |
| 1997-98 | 134 | 138 | 146 | 160 | 155 | 102 | 134 | 140 | 139 | 134 | 114 | 141 | 149 | 136 | 136 | 129 | 130 |
| 1998-99 | 146 | 152 | 160 | 150 | 167 | 108 | 151 | 144 | 143 | 154 | 139 | 142 | 156 | 151 | 138 | 131 | 133 |
| 1999-00 | 171 | 175 | 166 | 152 | 147 | 113 | 140 | 149 | 160 | 156 | 122 | 141 | 155 | 161 | 143 | 128 | 134 |
| 2000-01 | 168 | 177 | 180 | 128 | 157 | 150 | 140 | 161 | 226 | 153 | 103 | 150 | 156 | 163 | 158 | 137 | 137 |
| 2001-02 | 167 | 175 | 190 | 117 | 149 | 182 | 144 | 182 | 240 | 146 | 113 | 148 | 159 | 181 | 161 | 149 | 137 |
| 2002-03 | 166 | 176 | 181 | 118 | 142 | 154 | 169 | 181 | 255 | 135 | 138 | 145 | 162 | 169 | 168 | 145 | 143 |
| 2003-04 | 169 | 181 | 177 | 109 | 181 | 137 | 181 | 194 | 274 | 139 | 158 | 166 | 166 | 160 | 169 | 147 | 180 |
| 2004-05 | 168 | 184 | 174 | 131 | 166 | 160 | 182 | 223 | 315 | 163 | 156 | 167 | 173 | 181 | 171 | 153 | 232 |
| Average of months (Base:2004-05=100) | | | | | | | | | | | | | | | | | |
| 2005-06 | 105 | 105 | 113 | 89 | 90 | 135 | 97 | 118 | 117 | 109 | 94 | 95 | 99 | 112 | 102 | 102 | 100 |
| 2006-07 | 110 | 125 | 149 | 104 | 97 | 136 | 110 | 118 | 127 | 107 | 102 | 98 | 97 | 115 | 104 | 119 | 105 |
| 2007-08 | 122 | 134 | 145 | 104 | 112 | 122 | 140 | 122 | 126 | 91 | 116 | 101 | 99 | 111 | 106 | 138 | 119 |
| 2008-09 | 141 | 148 | 156 | 153 | 141 | 138 | 144 | 151 | 142 | 107 | 122 | 103 | 103 | 117 | 107 | 139 | 137 |
| 2009-10 | 158 | 166 | 191 | 174 | 139 | 160 | 148 | 156 | 136 | 162 | 114 | 111 | 107 | 146 | 108 | 149 | 124 |
| 2010-11 | 167 | 171 | 197 | 148 | 199 | 211 | 165 | 165 | 157 | 161 | 121 | 142 | 115 | 165 | 117 | 151 | 136 |

Contd....

## 5.2 : INDEX NUMBERS OF WHOLESALE PRICES – SELECTED COMMODITIES AND COMMODITY GROUPS

(Base: 2004-05 = 100)

| | Rice | Wheat | Pulses | Tea | Raw cotton | Raw jute | Ground-nut seed | Coal mining | Mineral oils | Sugar, khandsari & gur | Edible oils | Cotton yarn | Cotton cloth (Mills) | Jute,hemp & mesta textiles | Fertili-zers | Cement | Iron, steel & ferro alloys[a] |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Weight-Base:(2004-05=100)** | **1.79** | **1.12** | **0.72** | **0.11** | **0.70** | **0.06** | **0.40** | **2.09** | **9.36** | **2.09** | **3.04** | **1.38** | **1.23** | **0.26** | **2.66** | **1.39** | **6.88** |
| **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** | **9** | **10** | **11** | **12** | **13** | **14** | **15** | **16** | **17** | **18** |
| **2010-11** | | | | | | | | | | | | | | | | | |
| April | 164 | 169 | 203 | 139 | 151 | 172 | 162 | 163 | 148 | 162 | 114 | 129 | 110 | 157 | 115 | 152 | 136 |
| May | 164 | 168 | 206 | 146 | 152 | 175 | 163 | 163 | 149 | 159 | 114 | 130 | 112 | 158 | 115 | 152 | 135 |
| June | 164 | 169 | 207 | 141 | 156 | 178 | 163 | 163 | 150 | 153 | 115 | 130 | 112 | 158 | 115 | 150 | 134 |
| July | 166 | 168 | 206 | 146 | 153 | 190 | 166 | 163 | 157 | 160 | 117 | 130 | 112 | 156 | 115 | 153 | 132 |
| August | 164 | 173 | 202 | 147 | 153 | 187 | 174 | 163 | 157 | 157 | 118 | 130 | 112 | 156 | 117 | 151 | 133 |
| September | 167 | 172 | 197 | 155 | 180 | 218 | 178 | 163 | 157 | 156 | 120 | 132 | 113 | 159 | 117 | 150 | 133 |
| October | 169 | 168 | 194 | 157 | 190 | 239 | 172 | 163 | 157 | 158 | 120 | 134 | 113 | 161 | 116 | 151 | 134 |
| November | 170 | 173 | 187 | 157 | 204 | 235 | 159 | 163 | 158 | 162 | 121 | 140 | 113 | 162 | 117 | 148 | 134 |
| December | 171 | 173 | 187 | 155 | 220 | 234 | 158 | 163 | 161 | 167 | 122 | 148 | 114 | 168 | 117 | 148 | 135 |
| January | 171 | 175 | 190 | 153 | 237 | 228 | 154 | 163 | 163 | 167 | 127 | 156 | 120 | 180 | 118 | 148 | 138 |
| February | 170 | 177 | 193 | 144 | 294 | 232 | 157 | 169 | 165 | 163 | 129 | 165 | 124 | 182 | 120 | 151 | 142 |
| March | 167 | 173 | 191 | 138 | 303 | 240 | 171 | 185 | 168 | 164 | 129 | 179 | 128 | 182 | 121 | 154 | 143 |
| **2011-12** | | | | | | | | | | | | | | | | | |
| April | 167 | 169 | 190 | 154 | 306 | 240 | 184 | 185 | 171 | 165 | 130 | 181 | 131 | 184 | 123 | 154 | 144 |
| May | 170 | 167 | 187 | 156 | 251 | 257 | 189 | 185 | 173 | 164 | 132 | 177 | 134 | 184 | 125 | 155 | 145 |
| June | 169 | 169 | 188 | 154 | 236 | 245 | 192 | 185 | 175 | 162 | 133 | 168 | 134 | 184 | 126 | 154 | 146 |
| July | 170 | 171 | 190 | 154 | 207 | 223 | 194 | 185 | 181 | 166 | 134 | 155 | 132 | 183 | 127 | 153 | 147 |
| August | 173 | 169 | 193 | 148 | 221 | 222 | 203 | 185 | 183 | 166 | 136 | 147 | 131 | 177 | 128 | 152 | 148 |
| September | 173 | 167 | 202 | 151 | 235 | 224 | 205 | 185 | 184 | 167 | 136 | 144 | 131 | 175 | 130 | 153 | 149 |
| October | 176 | 165 | 214 | 158 | 222 | 210 | 197 | 185 | 186 | 168 | 135 | 145 | 131 | 173 | 135 | 158 | 150 |
| November | 175 | 164 | 215 | 151 | 216 | 200 | 191 | 185 | 189 | 171 | 135 | 147 | 131 | 172 | 138 | 161 | 153 |
| December[P] | 174 | 167 | 213 | 154 | 210 | 194 | 193 | 185 | 190 | 173 | 137 | 146 | 131 | 172 | 139 | 161 | 153 |
| January[P] | 173 | 169 | 212 | 147 | 204 | 206 | 207 | 185 | 191 | 171 | 139 | 147 | 131 | 171 | 139 | 161 | 155 |

Source : Office of the Economic Adviser, Ministry of Commerce & Industry.

P : Provisional

na: Not available

a Composite Index of Iron &Steel and Ferro Alloy for base 1993-94 and Iron & semis, steel long, steel flat, stainless steel & alloys and ferro alloys for base 2004-05

## 5.3 : ALL INDIA CONSUMER PRICE INDEX NUMBERS

| | Industrial workers (Base : 2001 = 100) | | Urban non-manual employees (Base : 1984-85 = 100) | Agricultural labourers (Base : 1986-87=100) |
|---|---|---|---|---|
| | Food index | General | General index | General index |
| 1 | 2 | 3 | 4 | 5 |
| Average of Months | | | | |
| 1995-96 | 337 | 313 | 259 | 237 |
| 1996-97 | 369 | 342 | 283 | 256 |
| 1997-98 | 388 | 366 | 302 | 264 |
| 1998-99 | 445 | 414 | 337 | 293 |
| 1999-00 | 446 | 428 | 352 | 306 |
| 2000-01 | 453 | 444 | 371 | 305 |
| 2001-02 | 466 | 463 | 390 | 309 |
| 2002-03 | 477 | 482 | 405 | 319 |
| 2003-04 | 495 | 500 | 420 | 331 |
| 2004-05 | 506 | 520 | 436 | 340 |
| 2005-06 | 527[a] | 542[a] | 456 | 353 |
| 2006-07 | 126 | 125 | 486 | 380 |
| 2007-08 | 136 | 133 | 515 | 409 |
| 2008-09 | 153 | 145 | 561 | 450 |
| 2009-10 | 176 | 163 | 634 | 513 |
| 2010-11 | 194 | 180 | 694 | 564 |
| Last Month of | | | | |
| 1995-96 | 339 | 319 | 264 | 237 |
| 1996-97 | 373 | 351 | 291 | 262 |
| 1997-98 | 401 | 380 | 312 | 272 |
| 1998-99 | 431 | 414 | 340 | 296 |
| 1999-00 | 446 | 434 | 357 | 306 |
| 2000-01 | 446 | 445 | 377 | 300 |
| 2001-02 | 462 | 468 | 395 | 309 |
| 2002-03 | 479 | 487 | 410 | 324 |
| 2003-04 | 494 | 504 | 424 | 332 |
| 2004-05 | 502 | 525 | 441 | 340 |
| 2005-06 | 527[a] | 551[a] | 463 | 358 |
| 2006-07 | 129 | 127 | 498 | 392 |
| 2007-08 | 141 | 137 | 528 | 423 |
| 2008-09 | 156 | 148 | 577[b] | 463 |
| 2009-10 | 181 | 170 | 663[b] | 536 |
| 2010-11 | 196 | 185 | na | 585 |
| **2010-11** | | | | |
| April | 182 | 170 | 667 | 538 |
| May | 184 | 172 | 672 | 540 |
| June | 188 | 174 | 679 | 547 |
| July | 192 | 178 | 696 | 554 |
| August | 191 | 178 | 696 | 557 |
| September | 193 | 179 | 701 | 562 |
| October | 195 | 181 | 705 | 566 |
| November | 197 | 182 | 710 | 570 |
| December | 203 | 185 | 719 | 581 |
| January | 205 | 188 | na | 589 |
| February | 197 | 185 | na | 584 |
| March | 196 | 185 | na | 585 |
| **2011-12** | | | | |
| April | 197 | 186 | na | 587 |
| May | 198 | 187 | na | 592 |
| June | 201 | 189 | na | 598 |
| July | 204 | 193 | na | 604 |
| August | 205 | 194 | na | 610 |
| September | 209 | 197 | na | 615 |
| October | 212 | 198 | na | 619 |
| November | 212 | 199 | na | 621 |
| December | 207 | 197 | na | 618 |
| January | na | na | na | 618 |

Sources : 1. Labour Bureau, Shimla for consumer price indices for industrial workers and agricultural labourers.
2. C.S.O. for consumer price indices for urban non-manual employees.

na : Not available

[a] The current series of CPI for Industrial Workers with 2001 base was introduced w.e.f. January, 2006. The earlier series on base 1982=100 was simultaneously discontinued. The conversion factor from the current to the old series is 4.63 in case of the General Index, and 4.58 for Food Index.

[b] Price collection for the CPI (UNME) for base 1984-85=100 has been discontinued due to outdated base year with effect from April 2008 and from then onward uptill December 2010 the series is linked series using prices of CPI-IW. In January 2011, the CSO has introduced new series on CPI-urban, CPI-rural and CPI (urban+ rural) combined, therefore the CPI-UNME has since then totally discontinued.

Note : Annual figures are yearly averages of months.

## 5.4 : INDEX NUMBERS OF WHOLESALE PRICES – RELATIVE PRICES OF MANUFACTURED AND AGRICULTURAL PRODUCTS

| Year | General Index of Wholesale Price | Price Index of Manufactured Products | Price Index of Agricultural Products[a] | Manufactured Price Index as per cent of Agricultural Price Index |
|---|---|---|---|---|
| **Weight (Base: 1993-94)** | **100.00** | **63.75** | **21.54** | **(Col 3/Col 4)x100** |
| **Weight (Base: 2004-05)** | **100.00** | **64.97** | **18.59** | |
| 1 | 2 | 3 | 4 | 5 |
| **(Base : 1993-94 = 100)** | | | | |
| 1994-95 | 112.6 | 112.3 | 116.0 | 96.8 |
| 1995-96 | 121.6 | 121.9 | 126.0 | 96.8 |
| 1996-97 | 127.2 | 124.4 | 136.4 | 91.2 |
| 1997-98 | 132.8 | 128.0 | 140.3 | 91.2 |
| 1998-99 | 140.7 | 133.6 | 157.2 | 85.0 |
| 1999-00 | 145.3 | 137.2 | 159.1 | 86.2 |
| 2000-01 | 155.7 | 141.7 | 163.7 | 86.6 |
| 2001-02 | 161.3 | 144.3 | 169.5 | 85.1 |
| 2002-03 | 166.8 | 148.1 | 175.3 | 84.5 |
| 2003-04 | 175.9 | 156.5 | 182.9 | 85.6 |
| 2004-05 | 187.3 | 166.3 | 186.7 | 89.1 |
| **(Base : 2004-05 = 100)** | | | | |
| 2005-06 | 104.5 | 102.4 | 103.4 | 99.1 |
| 2006-07 | 111.4 | 108.2 | 112.5 | 96.3 |
| 2007-08 | 116.6 | 113.4 | 121.5 | 93.4 |
| 2008-09 | 126.0 | 120.4 | 133.5 | 90.2 |
| 2009-10 | 130.8 | 123.1 | 151.0 | 81.7 |
| 2010-11 | 143.3 | 130.1 | 176.6 | 73.7 |
| **2010-11** | | | | |
| April | 138.6 | 127.9 | 164.8 | 77.6 |
| May | 139.1 | 127.9 | 167.2 | 76.5 |
| June | 139.8 | 127.8 | 170.2 | 75.1 |
| July | 141.0 | 128.1 | 172.2 | 74.4 |
| August | 141.1 | 128.3 | 171.5 | 74.8 |
| September | 142.0 | 128.7 | 175.5 | 73.3 |
| October | 142.9 | 129.2 | 177.5 | 72.8 |
| November | 143.8 | 129.8 | 179.0 | 72.5 |
| December | 146.0 | 130.9 | 186.3 | 70.3 |
| January | 148.0 | 132.6 | 190.0 | 69.8 |
| February | 148.1 | 134.0 | 183.7 | 73.0 |
| March | 149.5 | 135.6 | 181.8 | 74.6 |
| **2011-12** | | | | |
| April | 152.1 | 136.6 | 188.0 | 72.6 |
| May | 152.4 | 137.4 | 185.6 | 74.0 |
| June | 153.1 | 137.9 | 187.0 | 73.7 |
| July | 154.2 | 138.0 | 189.0 | 73.0 |
| August | 154.9 | 138.4 | 191.0 | 72.5 |
| September | 156.2 | 139.0 | 194.2 | 71.6 |
| October | 157.0 | 139.6 | 194.5 | 71.8 |
| November | 157.4 | 140.4 | 191.9 | 73.1 |
| December [P] | 156.9 | 140.6 | 188.0 | 74.8 |
| January [P] | 157.7 | 141.2 | 189.4 | 74.5 |

Source : Office of the Economic Adviser, Ministry of Commerce & Industry.

[a] Composite Index of the sub-groups - (Food Articles and Non-food Articles).

[P] Provisional

Note : Monthly figures are average of weeks.

## 5.5 : MINIMUM SUPPORT PRICE/PROCUREMENT PRICE FOR CROPS (CROP YEAR BASIS)

(₹/quintal)

| Commodities | 1990-91 | 1999-00 | 2002-03 | SDR-P[b] 2002-03 | 2004-05 | 2005-06 | 2006-07 | 2007-08 | 2008-09 | 2009-10 | 2010-11 | 2011-12 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Paddy (Procurement price)** | | | | | | | | | | | | |
| Common | 205 | 490 | 530 | 20 | 560 | 570 | 580[c] | 645[h] | 850[k] | 950[k] | 1000 | 1080 |
| Fine | 215 | … | … | … | … | … | … | … | … | … | … | |
| Super fine | 225 | … | … | … | … | … | … | … | … | … | … | |
| Grade 'A' | … | 520 | 560 | 20 | 590 | 600 | 610[c] | 675[h] | 880[k] | 980[k] | 1030 | 1110 |
| Wheat (Procurement price) | 225 | 580 | 620 | 10 | 640 | 650[g] | 750[h] | 1000 | 1080 | 1100 | 1120 | 1285 |
| **Coarse cereals** | | | | | | | | | | | | |
| Jowar | 180 | 415 | 485 | 5 | 515 | 525 | 540 | 600 | 840 | 840 | 880 | 980 |
| Bajra | 180 | 415 | 485 | 5 | 515 | 525 | 540 | 600 | 840 | 840 | 880 | 980 |
| Ragi | 180 | 415 | 485 | 5 | 515 | 525 | 540 | 600 | 915 | 915 | 965 | 1050 |
| Maize | 180 | 415 | 485 | 5 | 525 | 540 | 540 | 620 | 840 | 840 | 880 | 980 |
| Barley | 200 | 430 | 500 | 5 | 540 | 550 | 565 | 650 | 680 | 750 | 780 | 980 |
| Gram | 450 | 1015 | 1220 | 5 | 1425 | 1435 | 1445 | 1600 | 1730 | 1760 | 2100 | 2800 |
| Arhar | 480 | 1105 | 1320 | 5 | 1390 | 1400 | 1410 | 1550[d] | 2000 | 2300 | 3000[l] | 3200[l] |
| Moong | 480 | 1105 | 1330 | 5 | 1410 | 1520 | 1520 | 1700[d] | 2520 | 2760 | 3170[l] | 3500[l] |
| Urad | 480 | 1105 | 1330 | 5 | 1410 | 1520 | 1520 | 1700[d] | 2520 | 2520 | 2900[l] | 3300[l] |
| Sugarcane | | | | | | | | | | | | |
| (Statutory minimum price)[a] | 23.00 | 56.10 | 69.50 | 5 | 74.50 | 79.50 | 80.25 | 81.18 | 81.18 | 129.84 | 139.12 | 145.00[m] |
| **Cotton** | | | | | | | | | | | | |
| F-414/H-777 | 620 | 1575 | 1675 | 20 | 1760 | 1760 | 1770[e] | 1800[e] | 2500[i] | 2500[i] | 2500[i] | 2800[i] |
| H-4 750 | 750 | 1775 | 1875 | 20 | 1960 | 1980 | 1990[f] | 2030[f] | 3000[j] | 3000[j] | 3000[j] | 3300[j] |
| Groundnut | 580 | 1155 | 1355 | 20 | 1500 | 1520 | 1520 | 1550 | 2100 | 2100 | 2300 | 2700 |
| Jute(TD-5) | 320 | 750 | 850 | … | 890 | 910 | 1000 | 1055 | 1250 | 1375 | 1575 | 1675 |
| Rapeseed/ mustard | 810 | 1100 | 1330 | 10 | 1700 | 1715 | 1715 | 1800 | 1830 | 1830 | 1850 | 2500 |
| Sunflower | 600 | 1155 | 1195 | 15 | 1340 | 1500 | 1500 | 1510 | 2215 | 2215 | 2350 | 2800 |
| **Soyabean** | | | | | | | | | | | | |
| Black | 350 | 755 | 795 | 10 | 900 | 900 | 900 | 910 | 1350 | 1350 | 1400 | 1650 |
| Yellow | 400 | 845 | 885 | 10 | 1000 | 1010 | 1020 | 1050 | 1390 | 1390 | 1440 | 1690 |
| Safflower | 760 | 1100 | 1300 | 5 | 1550 | 1565 | 1565 | 1650 | 1650 | 1680 | 1800 | 2500 |
| Toria | 780 | 1065 | 1265 | 10 | 1665 | 1680 | 1680 | 1735 | 1735 | 1735 | 1780 | 2425 |
| **Tobacco (per kg.)** | | | | | | | | | | | | |
| VFC F-2 (Black soil) | 13.25 | 25.00 | 28.00 | … | 32.00 | 32.00 | 32.00 | 32.00 | … | … | … | … |
| L-2 (Light soil) | 14.25 | 27.00 | 30.00 | … | 34.00 | 34.00 | 34.00 | 34.00 | … | … | … | … |
| Copra (milling) | 1600 | 3100 | 3300 | … | 3500 | 3570 | 3590 | 3620 | 3660 | 4450 | 4450 | 4525 |
| Copra balls | … | 3325 | 3550 | … | 3750 | 3820 | 3840 | 3870 | 3910 | 4700 | 4700 | 4775 |
| Sesamum | … | 1205 | 1450 | 5 | 1500 | 1550 | 1560 | 1580 | 2750 | 2850 | 2900 | 3400 |
| Niger seed | … | 915 | 1120 | … | 1180 | 1200 | 1220 | 1240 | 2405 | 2405 | 2450 | 2900 |

a Statutory Minimum Price (SMP) upto 2008-09. Fair and Remunerative Price (FRP) from 2009-10 onwards.
b Special onetime drought relief (SDR) price announced for 2002-03.
c An additional incentive bonus of ₹ 40 per quintal was payable on procurement between January 10, 2006 to March 31, 2007.
d A bonus of ₹ 40 per quintal was payable over and above the MSP.
e Medium staple.
f Long staple.
g An incentive bonus of ₹ 50 per quintal is payable on wheat over the MSP.
h An additional incentive bonus of ₹ 100 per quintal was payable over the MSP.
i Staple length (mm) of 24.5-25.5 and micronaire value of 4.3-5.1
j Staple length (mm) of 29.5-30.5 and micronaire value of 3.5-4.3
k An additional incentive bonus of ₹ 50 per quintal was payble over the MSP.
l Additional incentive at the rate of ₹ 500 per quintal of tur, urad and moong sold to procurement agencies
m At 9.5 percent recovery, subject to a premium of ₹ 1.53 for every 0.1 percent increase in the recovery above 9.5 percent.

## 6.1 (A) : FOREIGN EXCHANGE RESERVES

(₹ crore)

| End of | Reserves | | | | | | | Transactions with IMF | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Gold | | RTP ₹ crore | SDRs | | Foreign Currency Assets ₹ crore | Total ₹ crore (3+4+6+7) | Drawals | Repur-chases[g] | Outstanding repurchase obligations |
| | Tonnes | ₹ crore | | Million | ₹ crore | | | | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
| 1950-51 | 220 | 118 | … | … | … | 911 | 1029 | … | … | 48 |
| 1951-52 | 220 | 118 | … | … | … | 747 | 865 | … | … | 48 |
| 1952-53 | 220 | 118 | … | … | … | 763 | 881 | … | … | 48 |
| 1953-54 | 220 | 118 | … | … | … | 792 | 910 | … | 17 | 30 |
| 1954-55 | 220 | 118 | … | … | … | 774 | 892 | … | 17 | 13 |
| 1955-56 | 220 | 118 | … | … | … | 785 | 903 | … | 7 | 6 |
| 1956-57 | 220 | 118 | … | … | … | 563 | 681 | 61 | 6 | 61 |
| 1957-58 | 220 | 118 | … | … | … | 303 | 421 | 35 | … | 95 |
| 1958-59 | 220 | 118 | … | … | … | 261 | 379 | … | … | 95 |
| 1959-60 | 220 | 118 | … | … | … | 245 | 363 | … | 24 | 71 |
| 1960-61 | 220 | 118 | … | … | … | 186 | 304 | … | 11 | 61 |
| 1961-62 | 220 | 118 | … | … | … | 180 | 298 | 119 | 61 | 119 |
| 1962-63 | 220 | 118 | … | … | … | 177 | 295 | 12 | … | 131 |
| 1963-64 | 220 | 118 | … | … | … | 188 | 306 | … | 24 | 107 |
| 1964-65 | 250 | 134 | … | … | … | 116 | 250 | 48 | 48 | 107 |
| 1965-66 | 216 | 116 | … | … | … | 182 | 298 | 65 | 36 | 137 |
| 1966-67 | 216 | 183 | … | … | … | 296 | 479 | 89 | 43 | 313 |
| 1967-68 | 216 | 183 | … | … | … | 356 | 539 | 68 | 43 | 338 |
| 1968-69 | 216 | 183 | … | … | … | 391 | 574 | … | 59 | 279 |
| 1969-70 | 217 | 183 | … | 123 | 92 | 546 | 821 | … | 125 | 154 |
| 1970-71 | 216 | 183 | … | 149 | 112 | 438 | 733 | … | 154 | … |
| 1971-72 | 216 | 183 | … | 248 | 194 | 480 | 857 | … | … | … |
| 1972-73 | 216 | 183 | … | 247 | 226 | 479 | 888 | … | … | … |
| 1973-74 | 216 | 183 | … | 245 | 230 | 581 | 994 | 62 | … | 59 |
| 1974-75 | 216 | 183 | … | 235 | 229 | 611 | 1023 | 485 | … | 557 |
| 1975-76 | 216 | 183 | … | 203 | 211 | 1492 | 1886 | 207 | … | 804 |
| 1976-77 | 223 | 188 | … | 187 | 192 | 2863 | 3243 | … | 303 | 492 |
| 1977-78 | 229 | 193 | … | 162 | 170 | 4500 | 4863 | … | 249 | 210 |
| 1978-79 | 260 | 220 | … | 365 | 381 | 5220 | 5821 | … | 207 | … |
| 1979-80 | 266 | 225 | … | 529 | 545 | 5164 | 5934 | … | 55 [e] | … |
| 1980-81 | 267 | 226 | … | 491 | 497 | 4822 | 5545 | 274 [a] | 5 [f] | 268 |
| 1981-82 | 267 | 226 | … | 425 | 444 | 3355 | 4025 | 637 [b] | … | 901 |
| 1982-83 | 267 | 226 | … | 270 | 291 | 4265 | 4782 | 1893 [b] | … | 2867 |
| 1983-84 | 267 | 226 | … | 216 | 248 | 5498 | 5972 | 1414 [b] | 72 [h] | 4444 |
| 1984-85 | 291 | 246 | … | 147 | 181 | 6817 | 7244 | 219 [b] | 156 [i] | 4888 |
| 1985-86 | 325 | 274 | … | 115 | 161 | 7384 | 7819 | … | 253 [j] | 5285 |
| 1986-87 | 325 | 274 | … | 139 | 232 | 7645 | 8151 | … | 672 [k] | 5548 |
| 1987-88 | 325 | 274 | … | 70 | 125 | 7287 | 7686 | … | 1209 [l] | 4732 |
| 1988-89 | 325 | 274 | … | 80 | 161 | 6605 | 7040 | … | 1547 [m] | 3696 |
| 1989-90 | 333 | 281 | … | 82 | 184 | 5787 | 6252 | 3334 [c] | 1460 [n] | 2572 |
| 1990-91 | 333 | 6828 | … | 76 | 200 | 4388 | 11416 | 3205 [d] | 1156 [o] | 5132 |
| 1991-92 | 351 | 9039 | … | 66 | 233 | 14578 | 23850 | 4231 | 1127 [p] | 8934 |
| 1992-93 | 354 | 10549 | … | 13 | 55 | 20140 | 30744 | 1007 | 868 [q] | 14986 |
| 1993-94 | 367 | 12794 | … | 77 | 339 | 47287 | 60420 | … | 420 [r] | 15812 |
| 1994-95 | 396 | 13752 | … | 5 | 23 | 66006 | 79781 | … | 3585 [s] | 13545 |
| 1995-96 | 398 | 15658 | … | 56 | 280 | 58446 | 74384 | … | 5749 [t] | 8152 |
| 1996-97 | 398 | 14557 | … | 1 | 7 | 80368 | 94932 | … | 3461 [u] | 4714 |
| 1997-98 | 396 | 13394 | … | 1 | 4 | 102507 | 115905 | … | 2286 [v] | 2624 |
| 1998-99 | 357 | 12559 | … | 6 | 34 | 125412 | 138005 | … | 1652 [w] | 1220 |
| 1999-00 | 358 | 12973 | … | 3 | 16 | 152924 | 165913 | … | … | … |

Contd...

## 6.1 (A) : FOREIGN EXCHANGE RESERVES

(₹ crore)

| End of | Reserves | | | | | | | Transactions with IMF | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Gold | | RTP | SDRs | | Foreign Currency Assets | Total | Drawals | Repur-chases[g] | Outstanding repurchase obligations |
| | Tonnes | ₹ crore | ₹ crore | Million | ₹ crore | ₹ crore | ₹ crore (3+4+6+7) | | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
| 2000-01 | 358 | 12711 | … | 2 | 11 | 184482 | 197204 | … | … | … |
| 2001-02 | 358 | 14868 | … | 8 | 50 | 249118 | 264036 | … | … | … |
| 2002-03 | 358 | 16785 | 3190 | 3 | 19 | 341476 | 361470 | … | … | … |
| 2003-04 | 358 | 18216 | 5688 | 2 | 10 | 466215 | 490129 | … | 2598.2 | … |
| 2004-05 | 358 | 19686 | 6289 | 3 | 20 | 593121 | 619116 | … | 414.9 | … |
| 2005-06 | 358 | 25674 | 3374 | 2 | 12 | 647327 | 676387 | 3024.6 | 220.5 | … |
| 2006-07 | 358 | 29573 | 2044 | 1 | 8 | 836597 | 868222 | 1360.3 | … | … |
| 2007-08 | 358 | 40124 | 1744 | 11 | 74 | 1196023 | 1237965 | 301.5 | … | … |
| 2008-09 | 358 | 48793 | 5000 | 1 | 6 | 1230066 | 1283865 | 371.1 | 2940.1 | … |
| 2009-10 | 358 | 81188 | 6231 | 3297 | 22596 | 1149650 | 1259665 | … | 10090.4 | … |
| 2010-11 | 558 | 102572 | 13158 | 2882 | 20401 | 1224883 | 1361013 | 161.3 | 1594.0 | … |
| **2011-12** | | | | | | | | | | |
| April | 558 | 105582 | 13371 | 2882 | 20731 | 1251681 | 1391364 | … | … | … |
| May | 558 | 109832 | 13398 | 2882 | 20772 | 1258756 | 1402758 | … | … | … |
| June | 558 | 110317 | 13303 | 2883 | 20632 | 1267626 | 1411878 | … | … | … |
| July | 558 | 111940 | 13124 | 2883 | 20355 | 1263683 | 1409102 | … | … | … |
| August | 558 | 130323 | 13766 | 2884 | 21346 | 1316328 | 1481762 | … | … | … |
| September | 558 | 140266 | 12783 | 2884 | 22036 | 1348996 | 1524081 | … | 254.2 | … |
| October | 558 | 131442 | 12966 | 2884 | 22352 | 1378560 | 1545319 | … | … | … |
| November | 558 | 146289 | 13542 | 2885 | 23351 | 1423046 | 1606229 | … | … | … |
| December | 558 | 141806 | 14415 | 2885 | 23593 | 1400645 | 1580460 | … | 644.9 | … |

Source : Reserve Bank of India.
SDRs : Special Drawing Rights, RTP : Reserve Tranche Position in IMF, ... : Nil or Negligible

[a] Excludes ₹ 544.53 crore drawn under Trust Fund.
[b] Drawals under Extended Fund Facility (EFF).
[c] Drawals of ₹1883.6 crore under Compensatory and Contingency Financing Facility and ₹1450.2 crore under First Credit Tranche of Stand-by Arrangement.
[d] Drawals of ₹ 2217.2 crore under Compensatory and Contingency Financing Facility and ₹ 987.5 crore under First Credit Tranche of Stand-by Arrangement.
[e] Includes voluntary repurchases of Rupees (₹199 crore) and sales of Rupees (₹ 35.2 crore) by the IMF under its General Resources Account.
[f] Sales of Rupees by the IMF.
[g] Additionally, SDR 59.9 million in May 1979, SDR 7.3 million in July 1980 and SDR 34.5 million in March 1982 were used for voluntary repurchases of Rupees.
[h] SDR 66.50 million were used for repurchases of drawals under Compensatory Financing Facility.
[i] SDR 33.25 million and ₹ 117.85 crore in foreign currencies were used for repurchases of drawals under CFF.
[j] SDR 66.5 million and SDRs 131.25 million were used for repurchases of drawals under CFF and EFF, respectively.
[k] SDR 431.25 million were used for repurchases of drawals under EFF.
[l] SDR 704.17 million were used for repurchases of drawals under EFF.
[m] SDR 804.18 million were used for repurchases of drawals under EFF.
[n] SDR 681.25 million were used for repurchases of drawals under EFF.
[o] SDR 468.75 million were used for repurchases of drawals under EFF
[p] SDR 337.49 million were used for repurchases of drawals under EFF.
[q] SDR 237.49 million were used for repurchases of drawals under EFF.
[r] SDR 95.84 million were used for repurchases of drawals under EFF.
[s] SDR 812.77 million were used for repurchases of drawals under EFF.
[t] SDR 1130.48 million were used for repurchases of drawals under EFF.
[u] SDR 678.38 million were used for repurchases of drawals under EFF.
[v] SDR 449.29 million were used for repurchases of drawals under EFF.
[w] SDR 212.46 million were used for repurchases of drawals under EFF.

Note :
1. Figures after 1965-66 are not comparable with those of the earlier years owing to devaluation of the Rupee in June 1966.
2. Also figures for July 1991 onwards are not comparable with those of earlier periods due to the downward adjustment of the Rupee effected on July 1,1991 and July 3, 1991.
3. Drawals, Repurchase and outstanding repurchase obligations are calculated at the ruling rates of exchange.
4. Gold is valued at ₹ 53.58 per 10 grams up to May 1966 and at ₹ 84.39 per 10 grams up to September 1990 and closer to international market price w.e.f. October 17,1990.
5. Foreign exchange includes (a) foreign assets of the Reserve Bank of India and (b) Government balances held abroad up to 1955-56.
6. While reserves pertain to end period, repurchases are for the relevant periods.
7. FCA excludes of US$ 250.00 million (as also its equivalent value in Indian Rupee) invested in foreign currency denominated bonds issued by IIFC (UK) since March 20, 2009.
8. Includes ₹ 31463 crore (US$ 6699 million) reflecting the purchase of 200 metric tonnes of gold from IMF on November 3, 2009.
9. Includes SDRs 3082.5 million allocated under general allocation and SDRs 214.6 million allocated under special allocation by the IMF done on August 28, 2009 and September 9, 2009 respectively.
10. Totals may not tally due to rounding off.

## 6.1 (B) : FOREIGN EXCHANGE RESERVES

(US$ million)

| End of | Reserves | | | | | Transactions with IMF | | |
|---|---|---|---|---|---|---|---|---|
| | Gold | RTP | SDRs | Foreign Currency Assets | Total (2+3+4+5) | Drawals | Repurchases | Outstanding repurchase obligations |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 1950-51 | 247 | ... | ... | 1914 | 2161 | ... | ... | 100 |
| 1951-52 | 247 | ... | ... | 1568 | 1815 | ... | ... | 100 |
| 1952-53 | 247 | ... | ... | 1603 | 1850 | ... | ... | 100 |
| 1953-54 | 247 | ... | ... | 1664 | 1911 | ... | 36 | 64 |
| 1954-55 | 247 | ... | ... | 1626 | 1873 | ... | 36 | 28 |
| 1955-56 | 247 | ... | ... | 1648 | 1895 | ... | 15 | 13 |
| 1956-57 | 247 | ... | ... | 1184 | 1431 | 126 | 12 | 128 |
| 1957-58 | 247 | ... | ... | 637 | 884 | 72 | ... | 200 |
| 1958-59 | 247 | ... | ... | 548 | 795 | ... | ... | 200 |
| 1959-60 | 247 | ... | ... | 515 | 762 | ... | 50 | 150 |
| 1960-61 | 247 | ... | ... | 390 | 637 | ... | 23 | 128 |
| 1961-62 | 247 | ... | ... | 377 | 624 | 249 | 127 | 250 |
| 1962-63 | 247 | ... | ... | 372 | 619 | 25 | ... | 275 |
| 1963-64 | 247 | ... | ... | 395 | 642 | ... | 50 | 225 |
| 1964-65 | 281 | ... | ... | 243 | 524 | 99 | 100 | 225 |
| 1965-66 | 243 | ... | ... | 383 | 626 | 137 | 75 | 288 |
| 1966-67 | 243 | ... | ... | 395 | 638 | 126 | 57 | 418 |
| 1967-68 | 243 | ... | ... | 475 | 718 | 89 | 58 | 450 |
| 1968-69 | 243 | ... | ... | 526 | 769 | ... | 78 | 372 |
| 1969-70 | 243 | ... | 123 | 728 | 1094 | ... | 167 | 205 |
| 1970-71 | 243 | ... | 148 | 584 | 975 | ... | 205 | ... |
| 1971-72 | 264 | ... | 269 | 661 | 1194 | ... | ... | ... |
| 1972-73 | 293 | ... | 297 | 629 | 1219 | ... | ... | ... |
| 1973-74 | 293 | ... | 296 | 736 | 1325 | 79 | ... | 75 |
| 1974-75 | 304 | ... | 293 | 782 | 1379 | 608 | ... | 715 |
| 1975-76 | 281 | ... | 234 | 1657 | 2172 | 239 | ... | 896 |
| 1976-77 | 290 | ... | 217 | 3240 | 3747 | ... | 336 | 559 |
| 1977-78 | 319 | ... | 200 | 5305 | 5824 | ... | 333 | 249 |
| 1978-79 | 377 | ... | 470 | 6421 | 7268 | ... | 256 | ... |
| 1979-80 | 375 | ... | 662 | 6324 | 7361 | ... | 145 | ... |
| 1980-81 | 370 | ... | 603 | 5850 | 6823 | 342 | 16 | 327 |
| 1981-82 | 335 | ... | 473 | 3582 | 4390 | 692 | 40 | 964 |
| 1982-83 | 324 | ... | 291 | 4281 | 4896 | 1968 | ... | 2876 |
| 1983-84 | 320 | ... | 230 | 5099 | 5649 | 1376 | 70 | 4150 |
| 1984-85 | 325 | ... | 145 | 5482 | 5952 | 201 | 134 | 3932 |
| 1985-86 | 417 | ... | 131 | 5972 | 6520 | ... | 209 | 4290 |
| 1986-87 | 471 | ... | 179 | 5924 | 6574 | ... | 521 | 4291 |
| 1987-88 | 508 | ... | 97 | 5618 | 6223 | ... | 930 | 3653 |
| 1988-89 | 473 | ... | 103 | 4226 | 4802 | ... | 1070 | 2365 |
| 1989-90 | 487 | ... | 107 | 3368 | 3962 | ... | 873 | 1493 |
| 1990-91 | 3496 | ... | 102 | 2236 | 5834 | 1858 | 644 | 2623 |
| 1991-92 | 3499 | ... | 90 | 5631 | 9220 | 1240 | 460 | 3451 |
| 1992-93 | 3380 | ... | 18 | 6434 | 9832 | 1623 | 335 | 4799 |
| 1993-94 | 4078 | ... | 108 | 15068 | 19254 | 325 | 134 | 5040 |
| 1994-95 | 4370 | ... | 7 | 20809 | 25186 | ... | 1146 | 4300 |

Contd...

## 6.1 (B) : FOREIGN EXCHANGE RESERVES

(US$ million)

| End of | Reserves | | | | | Transactions with IMF | | |
|---|---|---|---|---|---|---|---|---|
| | Gold | RTP | SDRs | Foreign Currency Assets | Total (2+3+4+5) | Drawals | Repurchases | Outstanding repurchase obligations |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 1995-96 | 4561 | … | 82 | 17044 | 21687 | … | 1710 | 2374 |
| 1996-97 | 4054 | … | 2 | 22367 | 26423 | … | 977 | 1313 |
| 1997-98 | 3391 | … | 1 | 25975 | 29367 | … | 615 | 664 |
| 1998-99 | 2960 | … | 8 | 29522 | 32490 | … | 102 | 287 |
| 1999-00 | 2974 | … | 4 | 35058 | 38036 | … | … | … |
| 2000-01 | 2725 | … | 2 | 39554 | 42281 | … | … | … |
| 2001-02 | 3047 | … | 10 | 51049 | 54106 | … | … | … |
| 2002-03 | 3534 | 672 | 4 | 71890 | 75428 | … | … | … |
| 2003-04 | 4198 | 1311 | 2 | 107448 | 112959 | … | 561.3 | … |
| 2004-05 | 4500 | 1438 | 5 | 135571 | 141514 | … | 93.5 | … |
| 2005-06 | 5755 | 756 | 3 | 145108 | 151622 | 670.0 | 50.7 | … |
| 2006-07 | 6784 | 469 | 2 | 191924 | 199179 | 302.7 | … | … |
| 2007-08 | 10039 | 436 | 18 | 299230 | 309723 | 74.2 | … | … |
| 2008-09 | 9577 | 981 | 1 | 241426 | 251985 | 86.3 | 611.9 | … |
| 2009-10 | 17986 | 1380 | 5006 | 254685 | 279057 | … | 461.3 | … |
| 2010-11 | 22972 | 2947 | 4569 | 274330 | 304818 | 36.2 | 353.2 | … |
| **2011-12** | | | | | | | | |
| April | 23790 | 3013 | 4671 | 282037 | 313512 | … | … | … |
| May | 24391 | 2975 | 4613 | 279537 | 311516 | … | … | … |
| June | 24668 | 2975 | 4614 | 283458 | 315715 | … | … | … |
| July | 25349 | 2972 | 4609 | 286160 | 319090 | … | … | … |
| August | 28319 | 2991 | 4638 | 286034 | 321982 | … | … | … |
| September | 28667 | 2613 | 4504 | 275699 | 311482 | … | 54.1 | … |
| October | 26896 | 2653 | 4574 | 282087 | 316210 | … | … | … |
| November | 28041 | 2596 | 4476 | 272771 | 307884 | … | … | … |
| December | 26620 | 2706 | 4429 | 262933 | 296689 | … | 121.0 | … |

Source : Reserve Bank of India.

SDRs : Special Drawing Rights, RTP : Reserve Tranche Position in IMF, ... : Nil or Negligible

Notes :
1. For compiling figures in US dollars, gold is valued at SDR 35 per troy ounce as in the International Financial Statistics of the IMF upto October 16, 1990. Thereafter gold has been valued close to international market price.
2. Conversion of foreign currency assets and SDR in US dollars is done at exchange rates supplied by the IMF.
3. Transactions with IMF are converted at respective SDR/$ rate.
4. While reserves pertain to end period, repurchases are for the relevant periods.
5. FCA excludes US$ 250.00 million (as also its equivalent value in Indian Rupees) invested in foreign currency denominated bonds issued by IIFC (UK) since March 20, 2009.
6. Includes ₹ 31463 crore (US$ 6699 million) reflecting the purchase of 200 metric tonnes of gold from IMF on November 3, 2009.
7. Includes SDRs 3082.5 million allocated under general allocation and SDRs 214.6 million allocated under special allocation by the IMF done on August 28, 2009 and September 9, 2009 respectively.
8. Totals may not tally due to rounding off.

## 6.2 : BALANCE OF PAYMENTS

| Item | 1990-91 | | 2000-01 | | 2006-07 | | 2007-08 | |
|---|---|---|---|---|---|---|---|---|
| | ₹ crore | US$ million | ₹ crore | US$ million | ₹ crore | US$ million | ₹ crore | US$ million |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 1 Imports (c.i.f.) | 50086 | 27915 | 264589 | 57912 | 862833 | 190670 | 1035672 | 257629 |
| 2 Exports (f.o.b.) | 33153 | 18477 | 207852 | 45452 | 582871 | 128888 | 668008 | 166162 |
| 3 Trade balance (2-1) | -16934 | -9438 | -56737 | -12460 | -279962 | -61782 | -367664 | -91467 |
| 4 Invisibles | | | | | | | | |
| (a) Receipts | 13396 | 7464 | 147778 | 32267 | 517146 | 114558 | 598088 | 148875 |
| (b) Payments | 13829 | 7706 | 102639 | 22473 | 281567 | 62341 | 293902 | 73144 |
| (of which: Interest & Service payments on loans and credits) | (4958) | (2763) | (21948) | (4801) | (24742) | (5468) | (26568) | (6599) |
| (c) Net | -433 | -242 | 45139 | 9794 | 235579 | 52217 | 304185 | 75731 |
| 5 Current account (net) | -17366 | -9680 | -11598 | -2666 | -44383 | -9565 | -63479 | -15737 |
| 6 Capital Account[a] | | | | | | | | |
| I Foreign Investment[b] | 183 | 103 | 26744 | 5862 | 66791 | 14753 | 174395 | 43326 |
| (a) Inflow | 202 | 113 | 80824 | 17720 | 600951 | 133210 | 1086530 | 271122 |
| (b) Out flow | 19 | 10 | 54080 | 11858 | 534160 | 118457 | 912135 | 227796 |
| (c) Net | 183 | 103 | 26744 | 5862 | 66791 | 14753 | 174395 | 43326 |
| II Loans[b] | 9929 | 5533 | 24459 | 5264 | 110434 | 24490 | 163491 | 40653 |
| (i) External Assistance | | | | | | | | |
| (a) Inflow | 6095 | 3397 | 13521 | 2941 | 16978 | 3767 | 17019 | 4241 |
| (b) Out flow | 2140 | 1193 | 11519 | 2531 | 9005 | 1992 | 8553 | 2126 |
| (c) Net | 3955 | 2204 | 2002 | 410 | 7973 | 1775 | 8466 | 2114 |
| (ii) Commercial Borrowings[c] | | | | | | | | |
| (a) Inflow | 10829 | 6035 | 95750 | 20865 | 229547 | 50875 | 313312 | 77951 |
| (b) Out flow | 4855 | 2706 | 73293 | 16011 | 127086 | 28160 | 158287 | 39413 |
| (c) Net | 5974 | 3329 | 22457 | 4854 | 102461 | 22715 | 155025 | 38538 |
| III Banking | | | | | | | | |
| (a) Receipts | 18133 | 10106 | 44448 | 9744 | 167494 | 37209 | 223979 | 55814 |
| (b) Payments | 16908 | 9424 | 53592 | 11705 | 159017 | 35296 | 176824 | 44055 |
| (c) Net | 1225 | 682 | -9144 | -1961 | 8477 | 1913 | 47155 | 11759 |
| IV Rupee Debt Service | -2140 | -1193 | -2760 | -617 | -725 | -162 | -492 | -122 |
| V Other Capital | | | | | | | | |
| (a) Receipts | 5593 | 3117 | 12948 | 2856 | 36797 | 8230 | 117094 | 29229 |
| (b) Payments | 2129 | 1186 | 11637 | 2564 | 18101 | 4021 | 73716 | 18261 |
| (c) Net | 3464 | 1931 | 1311 | 292 | 18696 | 4209 | 43377 | 10968 |
| VI Errors & omissions | 234 | 132 | -1369 | -305 | 4344 | 968 | 5241 | 1316 |
| 7 Total Capital (I to VI of 6) | 12895 | 7188 | 39241 | 8535 | 208017 | 46171 | 433167 | 107901 |
| 8 Overall Balance (5 + 7) | -4471 | -2492 | 27643 | 5868 | 163634 | 36606 | 369689 | 92164 |
| 9 Monetary Movement | | | | | | | | |
| (a) IMF Transactions | | | | | | | | |
| (i) Purchases | 3334 | 1858 | ... | ... | ... | ... | ... | ... |
| (ii) Repurchases | 1156 | 644 | 115 | 26 | ... | ... | ... | ... |
| (iii) Net | 2178 | 1214 | -115 | -26 | ... | ... | ... | ... |
| (b) Increase (-)/decrease (+) in Reserves | 2293 | 1278 | -27528 | -5868 | -163634 | -36606 | -369689 | -92164 |
| 10 Total Reserve movement (9a(iii)+9b) [(-) Increase/ (+) decrease] | 4471 | 2492 | -27643 | -5842 | -163634 | -36606 | -369689 | -92164 |

Source : Reserve Bank of India. ... : Nil or Negligible

a For further details of capital account transactions see table 6.4.
b Amounts are net of foreign investments and loan operations by Indians abroad.
c Commercial borrowings includes short term credit.

Note : 1. Data from 1990-91 onwards are based on the revised format as adopted by the RBI.
2. Totals may not tally due to rounding off.

Contd....

## 6.2 : BALANCE OF PAYMENTS

| Item | 2008-09 | | 2009-10 | | 2010-11 PR | | 2011-12 (Apr.-Sep.)P | |
|---|---|---|---|---|---|---|---|---|
| | ₹ crore | US$ million | ₹ crore | US$ million | ₹ crore | US$ million | ₹ crore | US$ million |
| 1 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 |
| 1 Imports (c.i.f.) | 1405400 | 308520 | 1423200 | 300644 | 1735100 | 381061 | 1071000 | 236674 |
| 2 Exports (f.o.b.) | 858000 | 189001 | 863300 | 182442 | 1139500 | 250468 | 682900 | 150909 |
| 3 Trade balance (2-1) | -547400 | -119519 | -559900 | -118202 | -595600 | -130593 | -388100 | -85765 |
| 4 Invisibles | | | | | | | | |
| (a) Receipts | 770400 | 167819 | 774600 | 163430 | 902500 | 198248 | 479500 | 105960 |
| (b) Payments | 350600 | 76214 | 394400 | 83408 | 517000 | 113600 | 240000 | 53037 |
| (of which: Interest & Service ( payments on loans and credits) | (29992) | (6521) | (27133) | (5719) | (27670) | (6073) | (15052) | (3327) |
| (c) Net | 419800 | 91605 | 380200 | 80022 | 385500 | 84648 | 239500 | 52923 |
| 5 Current account (net) | -127600 | -27914 | -179700 | -38181 | -210100 | -45945 | -148600 | -32842 |
| 6 Capital Account[a] | | | | | | | | |
| I Foreign Investment[b] | 35000 | 8342 | 240000 | 50362 | 182300 | 39653 | 61400 | 13657 |
| (a) Inflow | 775500 | 171660 | 943400 | 198653 | 1315900 | 289416 | 542200 | 120007 |
| (b) Out flow | 740500 | 163318 | 703400 | 148291 | 1133600 | 249763 | 480800 | 106350 |
| (c) Net | 35000 | 8342 | 240000 | 50362 | 182300 | 39653 | 61400 | 13657 |
| II Loans[b] | 34800 | 8314 | 58000 | 12447 | 129600 | 28437 | 78200 | 17237 |
| (i) External Assistance | | | | | | | | |
| (a) Inflow | 24400 | 5230 | 27900 | 5897 | 35900 | 7882 | 10500 | 2318 |
| (b) Out flow | 12900 | 2792 | 14300 | 3007 | 13400 | 2941 | 7300 | 1612 |
| (c) Net | 11500 | 2438 | 13600 | 2890 | 22500 | 4941 | 3200 | 706 |
| (ii) Commercial Borrowings[c] | | | | | | | | |
| (a) Inflow | 260900 | 56987 | 322100 | 68267 | 454800 | 99845 | 314400 | 69412 |
| (b) Out flow | 237700 | 51111 | 277700 | 58709 | 347700 | 76348 | 239400 | 52881 |
| (c) Net | 23200 | 5876 | 44400 | 9558 | 107100 | 23497 | 75000 | 16531 |
| III Banking | | | | | | | | |
| (a) Receipts | 295400 | 65207 | 292100 | 61499 | 419300 | 92323 | 220800 | 48912 |
| (b) Payments | 314600 | 68453 | 282300 | 59416 | 397300 | 87361 | 133600 | 29568 |
| (c) Net | -19200 | -3246 | 9800 | 2083 | 22000 | 4962 | 87200 | 19344 |
| IV Rupee Debt Service | -500 | -100 | -500 | -97 | -300 | -68 | -100 | -32 |
| V Other Capital | | | | | | | | |
| (a) Receipts | 76100 | 16685 | 54600 | 11451 | 44700 | 9890 | 16300 | 3560 |
| (b) Payments | 97300 | 22602 | 117800 | 24613 | 95000 | 20885 | 57300 | 12705 |
| (c) Net | -21200 | -5917 | -63200 | -13162 | -50300 | -10995 | -41000 | -9145 |
| VI Errors & Omissions | 1500 | 440 | -100 | -12 | -13700 | -2993 | -11300 | -2500 |
| 7 Total Capital (I to VI of 6) | 30500 | 7834 | 243900 | 51622 | 269600 | 58995 | 174200 | 38561 |
| 8 Overall Balance (5 + 7) | -97100 | -20080 | 64200 | 13441 | 59500 | 13050 | 25600 | 5719 |
| 9 Monetary Movement | | | | | | | | |
| (a) IMF Transactions | | | | | | | | |
| (i) Purchases | ... | ... | ... | ... | ... | ... | ... | ... |
| (ii) Repurchases | ... | ... | ... | ... | ... | ... | ... | ... |
| (iii) Net | ... | ... | ... | ... | ... | ... | ... | ... |
| (b) Increase (-)/decrease (+) in Reserves | 97100 | 20080 | -64200 | -13441 | -59500 | -13050 | -25600 | -5719 |
| 10 Total Reserve movement (9a(iii)+9b) [(-) Increase/ (+) decrease] | 97100 | 20080 | -64200 | -13441 | -59500 | -13050 | -25600 | -5719 |

Source : Reserve Bank of India.
PR Partially Revised. P Preliminary ... : Nil or Negligible

Note :
1. The rupee equivalent of all foreign currency transactions has been arrived at by applying the par/central rates upto June 1972 and thereafter on the basis of the average of RBI's spot buying and selling rate for sterling and the monthly averages of cross-rates based on London market for non-sterling currencies. Effective March 1993, conversion is made by crossing average spot buying and selling rate for US Dollar in the forex market and the monthly averages of cross rates of non-dollar currencies based on London market.
2. Grants received are covered under item 4(a).
3. Estimated interest accrued and credited to NRI deposits during the year has been treated as notional outflow under invisible payments and added as reinvestment in NRI deposits under banking capital.
4. Balance of payments data from the year 1990-91 are presented in a format in which in the year of imports, the value of defence-related imports are recorded under imports with credits financing such imports shown in the capital account. Interest payments on defence debt owed to the General Currency Area (GCA) (as and when they are made) are recorded under investment income payments in the invisible account and principal repayments under commercial borrowings (as outflows) in the capital account. In the case of the Rupee Payment Area (RPA), interest payment on and principal repayment of debt is clubbed together and shown separately under the item 'Rupee Debt Service' in the capital account. This is in line with the recommendation of the High Level Committee on Balance of Payments (Chairman : Dr. C. Rangarajan).
5. In accordance with the recommendations of Report of the Technical Group on Reconciling of Balance of Payments and DGCI&S Data on Merchandise data on gold brought out by the Indians returning from abroad have been included under Import payments with contra entry under Private Transfer Receipts. Data has, therefore, been revised from 1992-93 i.e. since the inception of the scheme.
6. In accordance with the provision of IMF's Balance of Payments Manual (5th Edition), gold purchased from the Government of India by the RBI has been excluded from the BOP statistics. Data for the earlier years has, therefore, been amended by making suitable adjustments in "Other Capital-Receipts and Foreign Exchange Reserves". Similarly, item "SDR Allocation" has been deleted from the table.
7. With effect from 1996-97, private transfer receipts include redemption in rupees of both principal and interest under Non-Resident External (Rupee) Account [NRE(R)A] and Non-Resident Non-Repatriable Rupee Deposit [NR(NR)RD] schemes. This marks an improvement in data reporting.
8. The presentation of balance of payments statistics in the above table differs from the adjusted balance of payments statistics published in the previous issues of the Economic Survey.
9. Totals may not tally due to rounding off.

## 6.3(A) : BALANCE OF PAYMENTS - INVISIBLES ON CURRENT ACCOUNT

(₹ crore)

| Item | 1990-91 | 2000-01 | 2006-07 | 2007-08 | 2008-09 | 2009-10 | 2010-11[PR] | 2011-12[P] (Apr.-Sep.) |
|---|---|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 1 Foreign travel | | | | | | | | |
| Receipts | 2613 | 16064 | 41127 | 45526 | 50200 | 56000 | 69500 | 39700 |
| Payments | 703 | 12741 | 30249 | 37191 | 43300 | 44200 | 50600 | 31900 |
| Net | 1910 | 3323 | 10878 | 8335 | 6900 | 11800 | 18900 | 7800 |
| 2 Transportation | | | | | | | | |
| Receipts | 1765 | 9364 | 36049 | 40199 | 52100 | 52900 | 65000 | 39500 |
| Payments | 1961 | 16172 | 36504 | 46278 | 58500 | 56400 | 63200 | 34500 |
| Net | -196 | -6808 | -455 | -6079 | -6400 | -3500 | 1800 | 5000 |
| 3 Insurance | | | | | | | | |
| Receipts | 199 | 1234 | 5403 | 6586 | 6500 | 7600 | 8900 | 5300 |
| Payments | 159 | 1004 | 2903 | 4192 | 5200 | 6100 | 6400 | 3300 |
| Net | 40 | 230 | 2500 | 2394 | 1300 | 1500 | 2500 | 2100 |
| 4 Investment income[a] | | | | | | | | |
| Receipts | 660 | 12275 | 42016 | 57300 | 65500 | 62000 | 41500 | 24900 |
| Payments | 7393 | 35008 | 75250 | 77811 | 98400 | 100000 | 120300 | 65700 |
| Net | -6733 | -22733 | -33234 | -20511 | -32900 | -38000 | -78900 | -40900 |
| 5 Government not included elsewhere: ( G. n. i. e.) | | | | | | | | |
| Receipts | 27 | 2986 | 1143 | 1331 | 1800 | 2100 | 2400 | 1300 |
| Payments | 310 | 1460 | 1825 | 1518 | 3800 | 2500 | 3700 | 1700 |
| Net | -283 | 1526 | -682 | -187 | -2000 | -400 | -1300 | -400 |
| 6 Miscellaneous | | | | | | | | |
| Receipts | 3565 | 44907 | 249371 | 269400 | 377400 | 334700 | 459000 | 221700 |
| Payments | 3275 | 35273 | 128548 | 117618 | 128700 | 174200 | 258600 | 95700 |
| Net | 290 | 9634 | 120823 | 151782 | 248700 | 160500 | 200400 | 126100 |
| 7 Transfers | | | | | | | | |
| (a) Official | | | | | | | | |
| Receipts | 830 | 1156 | 2864 | 3024 | 3000 | 3400 | 2900 | 800 |
| Payments | 3 | … | 1723 | 2073 | 1900 | 2200 | 2900 | 1300 |
| Net | 827 | 1156 | 1141 | 951 | 1100 | 1200 | 1 | -500 |
| (b) Private | | | | | | | | |
| Receipts | 3737 | 59792 | 139173 | 174721 | 213900 | 254600 | 253300 | 146300 |
| Payments | 25 | 981 | 4565 | 7220 | 10700 | 8700 | 11300 | 5900 |
| Net | 3712 | 58811 | 134608 | 167501 | 203200 | 245900 | 242000 | 140300 |
| **Total receipts** | **13396** | **147778** | **517146** | **598087** | **770400** | **774600** | **902500** | **479500** |
| **Total payments** | **13829** | **102639** | **281567** | **293901** | **350600** | **394400** | **517000** | **240000** |
| **Net receipts** | **-433** | **45139** | **235579** | **304186** | **419800** | **380300** | **385500** | **239500** |

Source : Reserve Bank of India.

PR Partially Revised.

P Preliminary

a Since 1997-98 "Compensation of employees" is included under investment income, net.

... : Nil or Negligible

Note :
1. This table is a breakup of item 4 in Table 6.2.
2. Receipts include U.S. Embassy expenditures in India out of PL-480 counter part funds.
3. Totals may not tally due to rounding off.

## 6.3(B) : BALANCE OF PAYMENTS - INVISIBLES ON CURRENT ACCOUNT

(US$ million)

| Item | 1990-91 | 2000-01 | 2006-07 | 2007-08 | 2008-09 | 2009-10 | 2010-11PR | 2011-12P (Apr.-Sep.) |
|---|---|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 1 Foreign travel | | | | | | | | |
| Receipts | 1456 | 3497 | 9123 | 11349 | 10894 | 11859 | 15275 | 8775 |
| Payments | 392 | 2804 | 6684 | 9258 | 9425 | 9343 | 11108 | 7060 |
| Net | 1064 | 693 | 2439 | 2091 | 1469 | 2516 | 4167 | 1715 |
| 2 Transportation | | | | | | | | |
| Receipts | 983 | 2046 | 7974 | 10014 | 11310 | 11178 | 14271 | 8725 |
| Payments | 1093 | 3558 | 8068 | 11514 | 12820 | 11933 | 13880 | 7626 |
| Net | -110 | -1512 | -94 | -1500 | -1510 | -755 | 391 | 1099 |
| 3 Insurance | | | | | | | | |
| Receipts | 111 | 270 | 1195 | 1639 | 1422 | 1591 | 1948 | 1181 |
| Payments | 88 | 223 | 642 | 1044 | 1130 | 1285 | 1400 | 721 |
| Net | 23 | 47 | 553 | 595 | 292 | 306 | 548 | 460 |
| 4 Investment income[a] | | | | | | | | |
| Receipts | 368 | 2682 | 9308 | 14272 | 14309 | 13022 | 9102 | 5488 |
| Payments | 4120 | 7686 | 16639 | 19339 | 21419 | 21061 | 26412 | 14514 |
| Net | -3752 | -5004 | -7331 | -5067 | -7110 | -8039 | -17310 | -9025 |
| 5 Government not included elsewhere: ( G. n. i. e.) | | | | | | | | |
| Receipts | 15 | 651 | 253 | 331 | 389 | 441 | 535 | 285 |
| Payments | 173 | 319 | 403 | 376 | 793 | 525 | 820 | 380 |
| Net | -158 | 332 | -150 | -45 | -404 | -84 | -285 | -95 |
| 6 Miscellaneous | | | | | | | | |
| Receipts | 1986 | 9804 | 55235 | 67010 | 81947 | 70977 | 100851 | 49013 |
| Payments | 1825 | 7672 | 28514 | 29298 | 27879 | 36944 | 56856 | 21132 |
| Net | 161 | 2132 | 26721 | 37712 | 54068 | 34033 | 43995 | 27881 |
| 7 Transfers | | | | | | | | |
| (a) Official | | | | | | | | |
| Receipts | 462 | 252 | 635 | 753 | 645 | 727 | 647 | 183 |
| Payments | 1 | ... | 381 | 514 | 413 | 473 | 631 | 298 |
| Net | 461 | 252 | 254 | 239 | 232 | 254 | 16 | -115 |
| (b) Private | | | | | | | | |
| Receipts | 2083 | 13065 | 30835 | 43508 | 46903 | 53636 | 55618 | 32310 |
| Payments | 14 | 211 | 1010 | 1802 | 2336 | 1845 | 2494 | 1307 |
| Net | 2069 | 12854 | 29825 | 41706 | 44567 | 51791 | 53124 | 31003 |
| **Total receipts** | **7464** | **32267** | **114558** | **148876** | **167819** | **163431** | **198248** | **105960** |
| **Total payments** | **7706** | **22473** | **62341** | **73145** | **76215** | **83409** | **113600** | **53037** |
| **Net receipts** | **-242** | **9794** | **52217** | **75731** | **91604** | **80022** | **84648** | **52923** |

Source : Reserve Bank of India.
PR Partially Revised.
P Preliminary
a : Since 1997-98 “Compensation of employees” is included under investment income, net.
... : Nil or Negligible

Note : 1. This table is breakdown of item 4 in table 6.2.
2. Totals may not tally due to rounding off.

## 6.4(A) : BALANCE OF PAYMENTS — SELECTED ITEMS OF CAPITAL ACCOUNT

(₹ crore)

| Item | 1990-91 | 2000-01 | 2006-07 | 2007-08 | 2008-09 | 2009-10 | 2010-11[PR] | 2011-12[P] (Apr.-Sep.) |
|---|---|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| **I. Foreign Investments** | | | | | | | | |
| **Total I (A+B)** | | | | | | | | |
| (a) Receipts | 202 | 80824 | 600951 | 1086530 | 775500 | 943400 | 1315900 | 542200 |
| (b) Payments | 19 | 54080 | 534160 | 912134 | 740400 | 703400 | 1133600 | 480800 |
| (c) Net | 183 | 26744 | 66791 | 174396 | 35100 | 240000 | 182300 | 61400 |
| **A In India (i+ii)** | | | | | | | | |
| (a) Receipts | 202 | 80501 | 597139 | 1075568 | 769700 | 938600 | 1300800 | 536200 |
| (b) Payments | 19 | 49485 | 462857 | 826180 | 643300 | 626900 | 1038000 | 437300 |
| (c) Net | 183 | 31016 | 134282 | 249388 | 126400 | 311700 | 262800 | 98900 |
| **i) Direct** | | | | | | | | |
| (a) Receipts | 192 | 18404 | 103037 | 139885 | 191400 | 179600 | 150000 | 123100 |
| (b) Payments | 19 | ... | 385 | 465 | 800 | 21800 | 31900 | 30200 |
| (c) Net | 173 | 18404 | 102652 | 139420 | 190600 | 157800 | 118100 | 92900 |
| **ii) Portfolio** | | | | | | | | |
| (a) Receipts | 10 | 62097 | 494102 | 935683 | 578300 | 759000 | 1150800 | 413100 |
| (b) Payments | ... | 49485 | 462472 | 825715 | 642500 | 605100 | 1006100 | 407100 |
| (c) Net | 10 | 12612 | 31630 | 109968 | -64200 | 153900 | 144700 | 6000 |
| **B By India** | | | | | | | | |
| (a) Receipts | ... | 323 | 3812 | 10962 | 5800 | 4800 | 15100 | 6000 |
| (b) Payments | ... | 4595 | 71303 | 85954 | 97100 | 76500 | 95600 | 43500 |
| (c) Net | ... | -4272 | -67491 | -74992 | -91300 | -71700 | -80500 | -37500 |
| **II. Loans** | | | | | | | | |
| **Total II (A+B)** | | | | | | | | |
| (a) Receipts | 16924 | 109271 | 246525 | 330330 | 285300 | 349900 | 490700 | 324900 |
| (b) Payments | 6995 | 84812 | 136091 | 166840 | 250600 | 292000 | 361100 | 246700 |
| (c) Net | 9929 | 24459 | 110434 | 163490 | 34700 | 58000 | 129600 | 78200 |
| **A To India (i to iii)** | | | | | | | | |
| (a) Disbursements | 16868 | 109271 | 243598 | 323824 | 275800 | 345100 | 481900 | 318100 |
| (b) Repayments | 6940 | 84711 | 131586 | 160190 | 245100 | 282900 | 353700 | 242900 |
| (c) Net | 9928 | 24560 | 112012 | 163634 | 30700 | 62200 | 128200 | 75200 |
| **i External Assistance** | | | | | | | | |
| (a) Disbursements | 6095 | 13521 | 16888 | 16925 | 24100 | 27600 | 35500 | 10300 |
| (b) Repayments | 2129 | 11441 | 8861 | 8441 | 11000 | 12300 | 12900 | 7100 |
| (c) Net | 3966 | 2080 | 8027 | 8484 | 13100 | 15300 | 22600 | 3200 |
| **ii Commercial Borrowings** | | | | | | | | |
| (a) Disbursements | 7630 | 44455 | 91095 | 115529 | 61600 | 66000 | 101400 | 78900 |
| (b) Repayments | 3595 | 24261 | 17206 | 24317 | 30700 | 54000 | 45900 | 33800 |
| (c) Net | 4035 | 20194 | 73889 | 91212 | 30900 | 12000 | 55500 | 45000 |
| **iii Short Term** | | | | | | | | |
| (a) Disbursements | 3145 | 51295 | 135615 | 191370 | 190100 | 251500 | 345000 | 228900 |
| (b) Repayments | 1216 | 49009 | 105519 | 127432 | 203400 | 216600 | 294900 | 202000 |
| (c) Net | 1929 | 2286 | 30096 | 63938 | -13300 | 34900 | 50100 | 26900 |
| **B By India (i+ii)** | | | | | | | | |
| (a) Disbursements | 54 | ... | 2927 | 6506 | 9500 | 4800 | 8700 | 6800 |
| (b) Repayments | 55 | 101 | 4505 | 6650 | 5500 | 9100 | 7400 | 3800 |
| (c) Net | -1 | -101 | -1578 | -144 | 4000 | -4300 | 1300 | 3000 |
| **i External Assistance** | | | | | | | | |
| (a) Disbursements | ... | 0 | 90 | 94 | 300 | 200 | 300 | 200 |
| (b) Repayments | 11 | 78 | 144 | 112 | 1900 | 2000 | 500 | 200 |
| (c) Net | -11 | -78 | -54 | -18 | -1600 | -1800 | -200 | -1 |
| **ii Commercial Borrowings** | | | | | | | | |
| (a) Disbursements | 54 | ... | 2837 | 6412 | 9200 | 4600 | 8400 | 6600 |
| (b) Repayments | 44 | 23 | 4361 | 6538 | 3600 | 7100 | 6900 | 3600 |
| (c) Net | 10 | -23 | -1524 | -126 | 5600 | -2500 | 1400 | 3100 |
| **III Banking** | | | | | | | | |
| **Total III (i to iv)** | | | | | | | | |
| (a) Receipts | 18133 | 44448 | 167494 | 223979 | 295500 | 292100 | 419300 | 220800 |
| (b) Payments | 16908 | 53592 | 159017 | 176825 | 314600 | 282300 | 397300 | 133600 |
| (c) Net | 1225 | -9144 | 8477 | 47154 | -19200 | 9800 | 22000 | 87200 |
| **i Assets** | | | | | | | | |
| (a) Receipts | 763 | 954 | 64972 | 78366 | 114800 | 81500 | 159900 | 58700 |
| (b) Payments | 1415 | 20137 | 80726 | 50734 | 130600 | 72600 | 175500 | 25100 |
| (c) Net | -652 | -19183 | -15754 | 27632 | -15800 | 8900 | -15600 | 33600 |
| **ii Liabilities** | | | | | | | | |
| (a) Receipts | 335 | 1044 | 10734 | 27221 | 9100 | 11400 | 27300 | 37100 |
| (b) Payments | 817 | 1155 | 7558 | 7007 | 30700 | 25300 | 6900 | 1200 |
| (c) Net | -482 | -111 | 3176 | 20214 | -21600 | -13900 | 20500 | 35900 |
| **iii Non-Resident Deposits** | | | | | | | | |
| (a) Receipts | 13184 | 41022 | 89950 | 118077 | 171000 | 196400 | 224300 | 124900 |
| (b) Payments | 10427 | 30461 | 70376 | 117372 | 150600 | 182200 | 209500 | 107000 |
| (c) Net | 2757 | 10561 | 19574 | 705 | 20400 | 14200 | 14800 | 17900 |
| **iv Others** | | | | | | | | |
| (a) Receipts | 3851 | 1428 | 1838 | 315 | 600 | 2800 | 7700 | 100 |
| (b) Payments | 4249 | 1839 | 357 | 1712 | 2700 | 2200 | 5400 | 200 |
| (c) Net | -398 | -411 | 1481 | -1397 | -2200 | 700 | 2300 | -100 |
| **Total (I to III)** | | | | | | | | |
| (a) Receipts | **35259** | **234543** | **1014970** | **1640839** | 1356300 | 1585400 | 2225700 | 1087900 |
| (b) Payments | **23922** | **192484** | **829268** | **1255799** | 1305600 | 1277700 | 1892000 | 861100 |
| (c) Net | **11337** | **42059** | **185702** | **385040** | 50700 | 307700 | 333700 | 226800 |

Source : Reserve Bank of India. [PR] Partially Revised. [P] Preliminary ... : Nil or Negligible

Note : 1. This table is a breakdown of items 6(I), 6(II) and 6(III) of table 6.2. 2. Totals may not tally due to rounding off.

## 6.4(B) : BALANCE OF PAYMENTS — SELECTED ITEMS OF CAPITAL ACCOUNT

(US$ million)

| Item | 1990-91 | 2000-01 | 2006-07 | 2007-08 | 2008-09 | 2009-10 | 2010-11[PR] | 2011-12[P] (Apr.-Sep.) |
|---|---|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| **I. Foreign Investments** | | | | | | | | |
| **Total I (A+B)** | | | | | | | | |
| (a) Receipts | 113 | 17720 | 133210 | 271122 | 171660 | 198653 | 289416 | 120007 |
| (b) Payments | 10 | 11858 | 118457 | 227796 | 163318 | 148291 | 249763 | 106350 |
| (c) Net | 103 | 5862 | 14753 | 43326 | 8342 | 50362 | 39653 | 13657 |
| **A In India (i+ii)** | | | | | | | | |
| (a) Receipts | 113 | 17650 | 132360 | 268408 | 170415 | 197643 | 286077 | 118684 |
| (b) Payments | 10 | 10859 | 102617 | 206410 | 142531 | 132158 | 228722 | 96705 |
| (c) Net | 103 | 6791 | 29743 | 61998 | 27884 | 65485 | 57355 | 21979 |
| **i) Direct** | | | | | | | | |
| (a) Receipts | 107 | 4031 | 22826 | 34844 | 41903 | 37746 | 32902 | 27309 |
| (b) Payments | 10 | … | 87 | 116 | 166 | 4637 | 7018 | 6696 |
| (c) Net | 97 | 4031 | 22739 | 34728 | 41738 | 33109 | 25884 | 20613 |
| **ii) Portfolio** | | | | | | | | |
| (a) Receipts | 6 | 13619 | 109534 | 233564 | 128512 | 159897 | 253175 | 91375 |
| (b) Payments | … | 10859 | 102530 | 206294 | 142365 | 127521 | 221704 | 90009 |
| (c) Net | 6 | 2760 | 7004 | 27270 | -13853 | 32376 | 31471 | 1366 |
| **B By India** | | | | | | | | |
| (a) Receipts | … | 70 | 850 | 2713 | 1245 | 1010 | 3339 | 1322 |
| (b) Payments | … | 999 | 15840 | 21385 | 20787 | 16133 | 12493 | 9645 |
| (c) Net | … | -929 | -14990 | -18672 | -19542 | -15123 | -9154 | -8323 |
| **II. Loans** | | | | | | | | |
| **Total II (A+B)** | | | | | | | | |
| (a) Receipts | 9432 | 23806 | 54642 | 82191 | 62293 | 74163 | 107726 | 71731 |
| (b) Payments | 3899 | 18542 | 30152 | 41539 | 53902 | 61716 | 79289 | 54493 |
| (c) Net | 5533 | 5264 | 24490 | 40652 | 8391 | 12447 | 28437 | 17237 |
| **A To India (i to iii)** | | | | | | | | |
| (a) Disbursements | 9402 | 23806 | 53996 | 80575 | 60225 | 73139 | 105810 | 70237 |
| (b) Repayments | 3869 | 18520 | 29154 | 39887 | 52702 | 59789 | 77676 | 53658 |
| (c) Net | 5533 | 5286 | 24842 | 40688 | 7523 | 13350 | 28134 | 16579 |
| **i External Assistance** | | | | | | | | |
| (a) Disbursements | 3397 | 2941 | 3747 | 4217 | 5159 | 5846 | 7806 | 2282 |
| (b) Repayments | 1187 | 2514 | 1960 | 2098 | 2374 | 2585 | 2840 | 1564 |
| (c) Net | 2210 | 427 | 1787 | 2119 | 2785 | 3261 | 4967 | 718 |
| **ii Commercial Borrowings** | | | | | | | | |
| (a) Disbursements | 4252 | 9621 | 20257 | 28700 | 13225 | 14029 | 22272 | 17386 |
| (b) Repayments | 2004 | 5313 | 3814 | 6060 | 6578 | 11498 | 10094 | 7464 |
| (c) Net | 2248 | 4308 | 16443 | 22640 | 6647 | 2531 | 12179 | 9922 |
| **iii Short Term** | | | | | | | | |
| (a) Disbursements | 1753 | 11244 | 29992 | 47658 | 41841 | 53264 | 75732 | 50569 |
| (b) Repayments | 678 | 10693 | 23380 | 31729 | 43750 | 45706 | 64742 | 44630 |
| (c) Net | 1075 | 551 | 6612 | 15929 | -1909 | 7558 | 10990 | 5939 |
| **B By India (i+ii)** | | | | | | | | |
| (a) Disbursements | 30 | … | 646 | 1616 | 2068 | 1024 | 1916 | 1492 |
| (b) Repayments | 30 | 22 | 998 | 1652 | 1200 | 1927 | 1615 | 836 |
| (c) Net | … | -22 | -352 | -36 | 868 | -903 | 301 | 656 |
| **i External Assistance** | | | | | | | | |
| (a) Disbursements | … | 0 | 20 | 23 | 71 | 51 | 76 | 35 |
| (b) Repayments | 6 | 17 | 32 | 28 | 417 | 422 | 102 | 48 |
| (c) Net | -6 | -17 | -12 | -5 | -346 | -371 | -26 | -13 |
| **ii Commercial Borrowings** | | | | | | | | |
| (a) Disbursements | 30 | … | 626 | 1593 | 1997 | 973 | 1840 | 1457 |
| (b) Repayments | 24 | 5 | 966 | 1624 | 783 | 1505 | 1513 | 788 |
| (c) Net | 6 | -5 | -340 | -31 | 1214 | -531 | 328 | 669 |
| **III Banking** | | | | | | | | |
| **Total III (i to iv)** | | | | | | | | |
| (a) Receipts | 10106 | 9744 | 37209 | 55814 | 65207 | 39324 | 80867 | 48912 |
| (b) Payments | 9424 | 11705 | 35296 | 44055 | 68452 | 37725 | 83545 | 29568 |
| (c) Net | 682 | -1961 | 1913 | 11759 | -3245 | 1599 | -2678 | 19344 |
| **i Assets** | | | | | | | | |
| (a) Receipts | 425 | 206 | 14466 | 19562 | 25823 | 17097 | 35369 | 13081 |
| (b) Payments | 789 | 4380 | 17960 | 12668 | 28725 | 15259 | 38666 | 5601 |
| (c) Net | -364 | -4174 | -3494 | 6894 | -2902 | 1838 | -3297 | 7480 |
| **ii Liabilities** | | | | | | | | |
| (a) Receipts | 187 | 229 | 2419 | 6773 | 2123 | 108 | 2441 | 8222 |
| (b) Payments | 456 | 253 | 1665 | 1733 | 6284 | 3368 | 5274 | 275 |
| (c) Net | -269 | -24 | 754 | 5040 | -4161 | -3260 | -2833 | 7947 |
| **iii Non-Resident Deposits** | | | | | | | | |
| (a) Receipts | 7348 | 8988 | 19914 | 29400 | 37147 | 21513 | 41355 | 27577 |
| (b) Payments | 5811 | 6672 | 15593 | 29222 | 32858 | 18649 | 38433 | 23640 |
| (c) Net | 1537 | 2316 | 4321 | 178 | 4289 | 2864 | 2922 | 3937 |
| **iv Others** | | | | | | | | |
| (a) Receipts | 2146 | 321 | 410 | 79 | 114 | 606 | 1702 | 32 |
| (b) Payments | 2368 | 400 | 78 | 432 | 585 | 449 | 1172 | 53 |
| (c) Net | -222 | -79 | 332 | -353 | -471 | 157 | 529 | -21 |
| **Total (I to III)** | | | | | | | | |
| (a) Receipts | **19651** | **51270** | **225061** | **409127** | **299160** | **312140** | **478009** | **240650** |
| (b) Payments | **13333** | **42105** | **183905** | **313390** | **285672** | **247732** | **412597** | **190411** |
| (c) Net | **6318** | **9165** | **41156** | **95737** | **13488** | **64408** | **65412** | **50239** |

Source : Reserve Bank of India. [PR] Partially Revised. [P] Preliminary ... : Nil or Negligible

Note : 1. This table is a breakdown of items 6(I), 6(II) and 6(III) of table 6.2. 2. Totals may not tally due to rounding off.

## 6.5 : EXCHANGE RATE OF RUPEE vis-a-vis SELECTED CURRENCIES OF THE WORLD

(Rupee per unit of foreign currency)

| Year / Month | US dollar | Pound sterling | Euro[a] | Yen | Canadian dollar | Turkish lira | Indonesian rupiah | Brazilian real | Mexican pesos | Korean won | Pakistan rupee | Thailand baht | SDR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 |
| 1991-92 | 24.474 | 42.515 | … | 0.185 | 21.267 | 0.005 | 0.012 | 0.05 | 0.008 | 0.033 | 1.021 | 0.977 | 33.433 |
| | | | | | | **(Official Rate)** | | | | | | | |
| Mar-1992 | 25.89 | 44.677 | … | 0.194 | 21.709 | 0.004 | 0.013 | 0.015 | 0.009 | 0.034 | 1.05 | 1.015 | 35.347 |
| 1992-93 | | | | | | | | | | | | | |
| April | 25.89 | 45.461 | … | 0.194 | 21.8 | 0.004 | 0.013 | 0.012 | 0.009 | 0.033 | 1.049 | 1.021 | 35.485 |
| May | 25.89 | 46.838 | … | 0.198 | 21.586 | 0.004 | 0.013 | 0.01 | 0.009 | 0.033 | 1.056 | 1.014 | 35.931 |
| June | 25.89 | 47.788 | … | 0.204 | 21.651 | 0.004 | 0.013 | 0.008 | 0.009 | 0.033 | 1.085 | 1.02 | 36.551 |
| July | 25.89 | 49.721 | … | 0.206 | 21.764 | 0.004 | 0.013 | 0.007 | 0.009 | 0.033 | 1.119 | 1.025 | 37.385 |
| August | 25.89 | 50.384 | … | 0.205 | 21.734 | 0.004 | 0.013 | 0.006 | 0.009 | 0.033 | 1.035 | 1.027 | 37.709 |
| September | 25.89 | 47.567 | … | 0.211 | 21.161 | 0.004 | 0.013 | 0.005 | 0.009 | 0.034 | 1.035 | 1.028 | 37.695 |
| October | 25.89 | 42.862 | … | 0.214 | 20.805 | 0.003 | 0.013 | 0.004 | 0.009 | 0.033 | 1.054 | 1.026 | 37.162 |
| November | 25.89 | 39.535 | … | 0.209 | 20.413 | 0.003 | 0.013 | 0.003 | 0.008 | 0.033 | 1.021 | 1.019 | 35.91 |
| December | 26.154 | 40.578 | … | 0.211 | 20.574 | 0.003 | 0.013 | 0.002 | 0.008 | 0.033 | 1.028 | 1.026 | 36.329 |
| January 1993 | 26.199 | 40.141 | … | 0.21 | 20.5 | 0.003 | 0.013 | 0.002 | 8.435 [b] | 0.033 | 1.025 | 1.028 | 36.082 |
| February | 26.199 | 37.704 | … | 0.217 | 20.788 | 0.003 | 0.013 | 0.002 | 8.46 | 0.033 | 1.01 | 1.029 | 35.939 |
| | | | | | | **(Market Rate)[c]** | | | | | | | |
| Mar-1992 | 29.455 | 51.959 | … | 0.227 | 24.698 | 0.005 | 0.015 | 0.017 | 0.01 | 0.383 | 1.195 | 1.155 | 35.347 |
| 1992-93 | 30.649 | 51.686 | … | 0.246 | 24.937 | 0.004 | 0.015 | 0.001 | 2.565 | 0.039 | 1.229 | 1.208 | 37.142 |
| 1993-94 | 31.366 | 47.206 | … | 0.291 | 23.956 | 0.002 | 0.015 | 0.122 [d] | 10.009 | 0.039 | 1.083 | 1.24 | 43.886 |
| 1994-95 | 31.399 | 48.821 | … | 0.316 | 22.725 | 0.001 | 0.014 | 42.398 [e] | 8.145 | 0.039 | 1.024 | 1.254 | 45.791 |
| 1995-96 | 33.45 | 52.353 | … | 0.348 | 24.541 | 0.001 | 0.015 | 35.279 | 4.953 | 0.043 | 1.03 | 1.338 | 50.477 |
| 1996-97 | 35.50 | 56.365 | … | 0.316 | 26.087 | 0.038 [f] | 0.015 | 34.725 | 4.616 | 0.043 | 0.95 | 1.391 | 50.886 |
| 1997-98 | 37.165 | 61.024 | … | 0.303 | 26.491 | 0.021 [f] | 0.01 | 33.856 | 4.613 | 0.035 | 0.884 | 1.067 | 50.674 |
| 1998-99 | 42.071 | 69.551 | … | 0.331 | 27.986 | 0.015 [f] | 0.004 | 32.759 | 4.421 | 0.033 | 0.871 | 1.085 | 57.513 |
| 1999-00 | 43.333 | 69.851 | 44.791 | 0.391 | 29.458 | 0.009 [f] | 0.006 | 23.938 | 4.599 | 0.037 | 0.841 | 1.14 | 58.934 |
| 2000-01 | 45.684 | 67.552 | 41.483 | 0.414 | 30.383 | 0.007 [f] | 0.005 | 24.153 | 4.788 | 0.039 | 0.82 | 1.1 | 59.546 |
| 2001-02 | 47.692 | 68.319 | 42.181 | 0.382 | 30.473 | 0.004 [f] | 0.005 | 19.549 | 5.183 | 0.037 | 0.772 | 1.069 | 60.215 |
| 2002-03 | 48.395 | 74.819 | 48.09 | 0.397 | 31.253 | 0.003 [f] | 0.005 | 15.489 | 4.806 | 0.04 | 0.819 | 1.132 | 64.126 |
| 2003-04 | 45.952 | 77.739 | 53.99 | 0.407 | 33.991 | 0.003 [f] | 0.005 | 15.713 | 4.248 | 0.039 | 0.798 | 1.132 | 65.684 |
| 2004-05 | 44.932 | 82.864 | 56.513 | 0.418 | 35.205 | 8.269 [g] | 0.005 | 15.707 | 3.964 | 0.041 | 0.763 | 1.121 | 66.928 |
| 2005-06 | 44.273 | 79.047 | 53.912 | 0.391 | 37.137 | 32.843 [g] | 0.045 | 19.17 | 4.122 | 0.044 | 0.741 | 1.096 | 64.49 |
| 2006-07 | 42.25 | 85.643 | 58.051 | 0.387 | 39.765 | 31.156 | 0.005 | 21.044 | 4.113 | 0.048 | 0.748 | 1.236 | 67.254 |
| 2007-08 | 40.261 | 80.841 | 57.31 | 0.354 | 39.042 | 32.155 | 0.004 | 21.762 | 3.703 | 0.043 | 0.658 | 1.194 | 62.651 |
| 2008-09 | 45.993 | 78.316 | 65.058 | 0.462 | 40.875 | 32.678 | 0.005 | 23.569 | 3.853 | 0.038 | 0.614 | 1.346 | 71.277 |
| 2009-10 | 47.417 | 75.886 | 67.084 | 0.511 | 43.488 | 31.266 | 0.005 | 25.351 | 3.618 | 0.039 | 0.572 | 1.406 | 73.733 |
| 2010-11 | 45.577 | 70.885 | 60.218 | 0.533 | | 30.24 | 26.43 | 3.66 | 0.04 | 0.53 | 1.47 | | |
| **2011-12** | | | | | | | | | | | | | |
| April,2011 | 44.370 | 72.724 | 64.250 | 0.533 | 46.301 | 28.22 | 0.005 | 27.86 | 3.79 | 0.04 | 0.52 | 1.48 | 71.119 |
| May | 44.905 | 73.434 | 64.483 | 0.553 | 46.265 | 28.41 | 0.005 | 27.85 | 3.85 | 0.04 | 0.53 | 1.48 | 71.741 |
| June | 44.854 | 72.788 | 64.538 | 0.557 | 46.944 | 28.09 | 0.005 | 28.26 | 3.80 | 0.04 | 0.52 | 1.47 | 71.721 |
| July | 44.417 | 71.649 | 63.460 | 0.559 | 46.488 | 26.99 | 0.005 | 28.40 | 3.80 | 0.04 | 0.52 | 1.48 | 70.826 |
| August | 45.279 | 74.108 | 64.938 | 0.587 | 46.088 | 25.65 | 0.005 | 28.38 | 3.70 | 0.04 | 0.52 | 1.52 | 72.711 |
| September | 47.632 | 75.137 | 65.499 | 0.621 | 47.497 | 26.39 | 0.005 | 27.37 | 3.64 | 0.04 | 0.54 | 1.56 | 75.117 |
| October | 49.258 | 77.490 | 67.474 | 0.641 | 48.338 | 27.94 | 0.006 | 27.75 | 3.67 | 0.04 | 0.57 | 1.59 | 77.414 |
| November | 50.856 | 80.277 | 68.906 | 0.656 | 49.688 | 28.02 | 0.006 | 28.57 | 3.71 | 0.04 | 0.58 | 1.64 | 79.371 |
| December | 52.677 | 82.138 | 69.337 | 0.677 | 51.435 | 28.01 | 0.006 | 28.53 | 3.80 | 0.05 | 0.59 | 1.68 | 81.366 |

Source : Reserve Bank of India. ... : Nil or Negligible

[a] The Euro came into existence on Jan/01/1999 [b] Peso revalued in January 1993; 1000 old Peso = 1 New Peso. [c] Indicative rates announced by Foreign Exchange Dealers Association of India (FEDAI)

[d] On February 28, 1986 the cruzado, equal to 1000 cruzerios, was introduced. On January 15, 1989, the new cruzado, equal to 1000 old cruzados was introduced. Currency renamed Cruzerio Real on 1.8.93; Cruzerio Real 1 equals 1000 Cruzeiro.

[e] New currency Real introduced in July 1994. 2750 old Cruzeiro Real = 1Real. [f] 100 Turkish Lira. [g] Turkish Lira has been replaced by New Lira w.e.f. 1.1.2005

Note: 1. Annual/ monthly averages. During March 1992 to February 1993, a dual exchange rate system was prevalent, in which the official rate was fixed by the RBI and the market rate was determined in the Inter-Bank market for the US dollar.

2. The data for 2001-02 in respect of Deutsche Mark, French Franc and Italian Lira pertain to 11 months only as Germany, France and Italy accepted the Euro as their national currency w.e.f. March 1, 2002.

## 6.6 : TRENDS IN NOMINAL AND REAL EFFECTIVE EXCHANGE RATE OF RUPEE

(Trade Based Weights)

| Year/month (Average) | Nominal effective exchange rate (NEER) 6-currency index | Real effective exchange rate (REER) 6-currency index | Nominal effective exchange rate (NEER) 36-currency index | Real effective exchange rate (REER) 36-currency index |
|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 |
| | | (Base : 1993-94=100) | | |
| 1994-95 | 96.96 | 105.82 | 98.91 | 104.32 |
| 1995-96 | 88.56 | 101.27 | 91.54 | 98.19 |
| 1996-97 | 86.85 | 101.11 | 89.27 | 96.83 |
| 1997-98 | 87.94 | 104.41 | 92.04 | 100.77 |
| 1998-99 | 77.49 | 96.14 | 89.05 | 93.04 |
| 1999-00 | 77.16 | 97.69 | 91.02 | 95.99 |
| 2000-01 | 77.43 | 102.82 | 92.12 | 100.09 |
| 2001-02 | 76.04 | 102.71 | 91.58 | 100.86 |
| 2002-03 | 71.27 | 97.68 | 89.12 | 98.18 |
| 2003-04 | 69.97 | 99.17 | 87.14 | 99.56 |
| 2004-05 | 69.58 | 101.78 | 87.31 | 100.09 |
| | | (Base : 2004-05=100) | | |
| 2005-06 | 103.04 | 105.17 | 102.24 | 103.10 |
| 2006-07 | 98.09 | 104.30 | 97.63 | 101.29 |
| 2007-08 | 104.62 | 112.76 | 104.75 | 108.52 |
| 2008-09 | 90.42 | 102.32 | 93.34 | 97.80 |
| 2009-10(P) | 87.07 | 101.97 | 90.93 | 94.73 |
| 2010-11(P) | 91.83 | 114.91 | 93.66 | 102.34 |
| **2011-12(P)** | | | | |
| April | 90.43 | 117.43 | 93.06 | 104.44 |
| May | 89.33 | 116.46 | 92.00 | 102.97 |
| June | 89.32 | 116.13 | 92.00 | 103.26 |
| July | 90.34 | 117.72 | 92.62 | 104.39 |
| August | 88.13 | 115.68 | 90.64 | 102.37 |
| September | 85.08 | 112.46 | 87.89 | 99.40 |
| October | 82.35 | 108.92 | 85.50 | 96.79 |
| November | 80.00 | 105.92 | 82.99 | 94.06 |
| December | 78.06 | 103.46 | 81.10 | 91.82 |

Source : Reserve Bank of India.
P Provisional

## 7.1 (A) : EXPORTS, IMPORTS AND TRADE BALANCE

(₹ crore)

| Year | Exports (including re-exports) | Imports | Trade Balance | Rate of Change (per cent) Export | Rate of Change (per cent) Import |
|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 |
| 1949-50 | 485 | 617 | -132 | na | na |
| 1950-51 | 606 | 608 | -2 | 24.9 | -1.5 |
| 1951-52 | 716 | 890 | -174 | 18.2 | 46.4 |
| 1952-53 | 578 | 702 | -124 | -19.3 | -21.1 |
| 1953-54 | 531 | 610 | -79 | -8.1 | -13.1 |
| 1954-55 | 593 | 700 | -107 | 11.7 | 14.8 |
| 1955-56 | 609 | 774 | -165 | 2.7 | 10.6 |
| 1956-57 | 605 | 841 | -236 | -0.7 | 8.7 |
| 1957-58 | 561 | 1035 | -474 | -7.3 | 23.1 |
| 1958-59 | 581 | 906 | -325 | 3.6 | -12.5 |
| 1959-60 | 640 | 961 | -321 | 10.2 | 6.1 |
| 1960-61 | 642 | 1122 | -480 | 0.3 | 16.8 |
| 1961-62 | 660 | 1090 | -430 | 2.8 | -2.9 |
| 1962-63 | 685 | 1131 | -446 | 3.8 | 3.8 |
| 1963-64 | 793 | 1223 | -430 | 15.8 | 8.1 |
| 1964-65 | 816 | 1349 | -533 | 2.9 | 10.3 |
| 1965-66 | 810 | 1409 | -599 | -0.7 | 4.4 |
| 1966-67 | 1157 | 2078 | -921 | 42.8 | 47.5 |
| 1967-68 | 1199 | 2008 | -809 | 3.6 | -3.4 |
| 1968-69 | 1358 | 1909 | -551 | 13.3 | -4.9 |
| 1969-70 | 1413 | 1582 | -169 | 4.1 | -17.1 |
| 1970-71 | 1535 | 1634 | -99 | 8.6 | 3.3 |
| 1971-72 | 1608 | 1825 | -217 | 4.8 | 11.7 |
| 1972-73 | 1971 | 1867 | 104 | 22.6 | 2.3 |
| 1973-74 | 2523 | 2955 | -432 | 28.0 | 58.3 |
| 1974-75 | 3329 | 4519 | -1190 | 31.9 | 52.9 |
| 1975-76 | 4036 | 5265 | -1229 | 21.2 | 16.5 |
| 1976-77 | 5142 | 5074 | 68 | 27.4 | -3.6 |
| 1977-78 | 5408 | 6020 | -612 | 5.2 | 18.6 |
| 1978-79 | 5726 | 6811 | -1085 | 5.9 | 13.1 |
| 1979-80 | 6418 | 9143 | -2725 | 12.1 | 34.2 |
| 1980-81 | 6711 | 12549 | -5838 | 4.6 | 37.3 |
| 1981-82 | 7806 | 13608 | -5802 | 16.3 | 8.4 |
| 1982-83 | 8803 | 14293 | -5490 | 12.8 | 5.0 |
| 1983-84 | 9771 | 15831 | -6060 | 11.0 | 10.8 |
| 1984-85 | 11744 | 17134 | -5390 | 20.2 | 8.2 |
| 1985-86 | 10895 | 19658 | -8763 | -7.2 | 14.7 |
| 1986-87 | 12452 | 20096 | -7644 | 14.3 | 2.2 |
| 1987-88 | 15674 | 22244 | -6570 | 25.9 | 10.7 |
| 1988-89 | 20232 | 28235 | -8003 | 29.1 | 26.9 |
| 1989-90 | 27658 | 35328 | -7670 | 36.7 | 25.1 |
| 1990-91 | 32553 | 43198 | -10645 | 17.7 | 22.3 |
| 1991-92 | 44041 | 47851 | -3810 | 35.3 | 10.8 |
| 1992-93 | 53688 | 63375 | -9687 | 21.9 | 32.4 |
| 1993-94 | 69751 | 73101 | -3350 | 29.9 | 15.3 |
| 1994-95 | 82674 | 89971 | -7297 | 18.5 | 23.1 |
| 1995-96 | 106353 | 122678 | -16325 | 28.6 | 36.4 |
| 1996-97 | 118817 | 138920 | -20103 | 11.7 | 13.2 |
| 1997-98 | 130100 | 154176 | -24076 | 9.5 | 11.0 |
| 1998-99 | 139752 | 178332 | -38580 | 7.4 | 15.7 |
| 1999-2000 | 159561 | 215236 | -55675 | 14.2 | 20.7 |
| 2000-01 | 203571 | 230873 | -27302 | 27.6 | 7.3 |
| 2001-02 | 209018 | 245200 | -36182 | 2.7 | 6.2 |
| 2002-03 | 255137 | 297206 | -42069 | 22.1 | 21.2 |
| 2003-04 | 293367 | 359108 | -65741 | 15.0 | 20.8 |
| 2004-05 | 375340 | 501065 | -125725 | 27.9 | 39.5 |
| 2005-06 | 456418 | 660409 | -203991 | 21.6 | 31.8 |
| 2006-07 | 571779 | 840506 | -268727 | 25.3 | 27.3 |
| 2007-08 | 655864 | 1012312 | -356448 | 14.7 | 20.4 |
| 2008-09 | 840755 | 1374436 | -533681 | 28.2 | 35.8 |
| 2009-10 | 845534 | 1363736 | -518202 | 0.6 | -0.8 |
| 2010-11 | 1142649 | 1683467 | -540818 | 35.1 | 23.4 |
| **2011-12 (P)[a] (April-Dec.)** | **1024707** | **1651240** | **-626533** | **29.9** | **34.5** |

Source : Directorate General of Commercial Intelligence & Statistics (DGCI&S), Kolkata

[a] Growth rate on provisional over revised basis.

Note : For the years 1956-57, 1957-58, 1958-59 and 1959-60, the data are as per the Fourteenth Report of the Estimates Committee (1971-72) of the erstwhile Ministry of Foreign Trade.

## 7.1 (B) : EXPORTS, IMPORTS AND TRADE BALANCE

(US$ million)

| Year | Exports (including re-exports) | Imports | Trade Balance | Rate of Change Export (per cent) | Rate of Change Import (per cent) |
|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 |
| 1949-50 | 1016 | 1292 | -276 | na | na |
| 1950-51 | 1269 | 1273 | -4 | 24.9 | -1.5 |
| 1951-52 | 1490 | 1852 | -362 | 17.4 | 45.5 |
| 1952-53 | 1212 | 1472 | -260 | -18.7 | -20.5 |
| 1953-54 | 1114 | 1279 | -165 | -8.1 | -13.1 |
| 1954-55 | 1233 | 1456 | -223 | 10.7 | 13.8 |
| 1955-56 | 1275 | 1620 | -345 | 3.4 | 11.3 |
| 1956-57 | 1259 | 1750 | -491 | -1.3 | 8.0 |
| 1957-58 | 1171 | 2160 | -989 | -7.0 | 23.4 |
| 1958-59 | 1219 | 1901 | -682 | 4.1 | -12.0 |
| 1959-60 | 1343 | 2016 | -673 | 10.2 | 6.0 |
| 1960-61 | 1346 | 2353 | -1007 | 0.2 | 16.7 |
| 1961-62 | 1381 | 2281 | -900 | 2.6 | -3.1 |
| 1962-63 | 1437 | 2372 | -935 | 4.1 | 4.0 |
| 1963-64 | 1659 | 2558 | -899 | 15.4 | 7.8 |
| 1964-65 | 1701 | 2813 | -1112 | 2.5 | 10.0 |
| 1965-66 | 1693 | 2944 | -1251 | -0.5 | 4.7 |
| 1966-67 | 1628 | 2923 | -1295 | -3.8 | -0.7 |
| 1967-68 | 1586 | 2656 | -1070 | -2.6 | -9.1 |
| 1968-69 | 1788 | 2513 | -725 | 12.7 | -5.4 |
| 1969-70 | 1866 | 2089 | -223 | 4.4 | -16.9 |
| 1970-71 | 2031 | 2162 | -131 | 8.8 | 3.5 |
| 1971-72 | 2153 | 2443 | -290 | 6.0 | 13.0 |
| 1972-73 | 2550 | 2415 | 135 | 18.4 | -1.1 |
| 1973-74 | 3209 | 3759 | -550 | 25.8 | 55.7 |
| 1974-75 | 4174 | 5666 | -1492 | 30.1 | 50.7 |
| 1975-76 | 4665 | 6084 | -1419 | 11.8 | 7.4 |
| 1976-77 | 5753 | 5677 | 76 | 23.3 | -6.7 |
| 1977-78 | 6316 | 7031 | -715 | 9.8 | 23.9 |
| 1978-79 | 6978 | 8300 | -1322 | 10.5 | 18.0 |
| 1979-80 | 7947 | 11321 | -3374 | 13.9 | 36.4 |
| 1980-81 | 8486 | 15869 | -7383 | 6.8 | 40.2 |
| 1981-82 | 8704 | 15174 | -6470 | 2.6 | -4.4 |
| 1982-83 | 9107 | 14787 | -5680 | 4.6 | -2.6 |
| 1983-84 | 9449 | 15311 | -5862 | 3.8 | 3.5 |
| 1984-85 | 9878 | 14412 | -4534 | 4.5 | -5.9 |
| 1985-86 | 8904 | 16067 | -7163 | -9.9 | 11.5 |
| 1986-87 | 9745 | 15727 | -5982 | 9.4 | -2.1 |
| 1987-88 | 12089 | 17156 | -5067 | 24.1 | 9.1 |
| 1988-89 | 13970 | 19497 | -5527 | 15.6 | 13.6 |
| 1989-90 | 16612 | 21219 | -4607 | 18.9 | 8.8 |
| 1990-91 | 18143 | 24075 | -5932 | 9.2 | 13.5 |
| 1991-92 | 17865 | 19411 | -1546 | -1.5 | -19.4 |
| 1992-93 | 18537 | 21882 | -3345 | 3.8 | 12.7 |
| 1993-94 | 22238 | 23306 | -1068 | 20.0 | 6.5 |
| 1994-95 | 26330 | 28654 | -2324 | 18.4 | 22.9 |
| 1995-96 | 31797 | 36678 | -4881 | 20.8 | 28.0 |
| 1996-97 | 33470 | 39133 | -5663 | 5.3 | 6.7 |
| 1997-98 | 35006 | 41484 | -6478 | 4.6 | 6.0 |
| 1998-99 | 33218 | 42389 | -9171 | -5.1 | 2.2 |
| 1999-2000 | 36822 | 49671 | -12849 | 10.8 | 17.2 |
| 2000-01 | 44560 | 50536 | -5976 | 21.0 | 1.7 |
| 2001-02 | 43827 | 51413 | -7587 | -1.6 | 1.7 |
| 2002-03 | 52719 | 61412 | -8693 | 20.3 | 19.4 |
| 2003-04 | 63843 | 78149 | -14307 | 21.1 | 27.3 |
| 2004-05 | 83536 | 111517 | -27981 | 30.8 | 42.7 |
| 2005-06 | 103091 | 149166 | -46075 | 23.4 | 33.8 |
| 2006-07 | 126414 | 185735 | -59321 | 22.6 | 24.5 |
| 2007-08 | 163132 | 251654 | -88522 | 29.0 | 35.5 |
| 2008-09 | 185295 | 303696 | -118401 | 13.6 | 20.7 |
| 2009-10 | 178751 | 288373 | -109621 | -3.5 | -5.0 |
| 2010-11 | 251136 | 369769 | -118633 | 40.5 | 28.2 |
| **2011-12 (P)[a] (April-Dec.)** | **217664** | **350936** | **-133272** | **25.8** | **30.4** |

Source : DGCI&S, Kolkata.

[a] Growth rate on provisional over revised basis.

Note : For the years 1956-57, 1957-58, 1958-59 and 1959-60, the data are as per the Fourteenth Report of the Estimates Committee (1971-72) of the erstwhile Ministry of Foreign Trade.

## 7.2 (A) : PRINCIPAL IMPORTS

Quantity : Thousand tonnes
Value : ₹ crore & US$ million

| | | 1960-61 | | | 1970-71 | | | 1980-81 | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Qty. | ₹ cr | $ million | Qty. | ₹ cr | $ million | Qty. | ₹ cr | $ million |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
| **I.** | **Food and live animals chiefly for food (excl. cashew raw) of which:** | **...** | **214** | **449** | **...** | **242** | **321** | **...** | **380** | **481** |
| I.1 | Cereals and cereal preparations | 3747.7 | 181 | 380 | 3343.2 | 213 | 282 | 400.8 | 100 | 127 |
| **II.** | **Raw materials and intermediate manufactures** | **...** | **527** | **1105** | **...** | **889** | **1176** | **...** | **9760** | **12341** |
| II.1 | Cashewnuts (unprocessed) | na | ... | ... | 169.4 | 29 | 39 | 25 | 9 | 11 |
| II.2 | Crude rubber (including synthetic and reclaimed) | 36.2 | 11 | 23 | 7.8 | 4 | 5 | 26.2 | 32 | 40 |
| II.3 | Fibres of which: | ... | 101 | 212 | ... | 127 | 168 | ... | 164 | 208 |
| II.3.1 | Synthetic and regenerated fibres (man-made fibres) | 0.2 | ... | ... | 15.8 | 9 | 12 | 68.8 | 97 | 122 |
| II.3.2 | Raw wool | 1.9 | 1 | 2 | 19 | 15 | 20 | 18.8 | 43 | 55 |
| II.3.3 | Raw cotton | 237.1 | 82 | 172 | 139.1 | 99 | 131 | na | ... | ... |
| II.3.4 | Raw jute | 100.4 | 8 | 17 | 0.7 | ... | 0 | 8 | 1 | 1 |
| II.4 | Petroleum, oil and lubricants | 800 | 69 | 145 | 12767 | 136 | 180 | 23537 | 5264 | 6656 |
| II.5 | Animal and vegetable oils and fats of which: | ... | 5 | 10 | ... | 39 | 51 | ... | 709 | 896 |
| II.5.1 | Edible oils | 31.1 | 4 | 8 | 84.7 | 23 | 31 | 1633.3 | 677 | 857 |
| II.6 | Fertilizers and chemical products of which: | ... | 88 | 185 | ... | 217 | 286 | ... | 1490 | 1884 |
| II.6.1 | Fertilizers and fertilizer mfg | 307 | 13 | 27 | 2392.7 | 86 | 113 | 5560.2 | 818 | 1034 |
| II.6.2 | Chemical elements and compounds | ... | 39 | 82 | ... | 68 | 90 | ... | 358 | 453 |
| II.6.3 | Dyeing, tanning and colouring material | ... | 1 | 2 | ... | 9 | 12 | ... | 21 | 26 |
| II.6.4 | Medicinal and pharmaceutical products | ... | 10 | 21 | ... | 24 | 32 | ... | 85 | 107 |
| II.6.5 | Plastic material, regenerated cellulose and artificial resins | ... | 9 | 19 | ... | 8 | 11 | ... | 121 | 154 |
| II.7 | Pulp and waste paper | 80.3 | 7 | 15 | 71.7 | 12 | 16 | 36.9 | 18 | 23 |
| II.8 | Paper, paper board and manufactures thereof | 55.6 | 12 | 25 | 159 | 25 | 33 | 371.4 | 187 | 236 |
| II.9 | Non-metallic mineral manufactures of which: | ... | 6 | 13 | ... | 33 | 44 | ... | 555 | 702 |
| II.9.1 | Pearls, precious and semiprecious stones, unworked or worked | ... | 1 | 2 | ... | 25 | 33 | ... | 417 | 527 |
| II.10 | Iron and steel | 1325.2 | 123 | 258 | 683.4 | 147 | 194 | 2031.1 | 852 | 1078 |
| II.11 | Non-ferrous metals | ... | 47 | 99 | ... | 119 | 158 | ... | 477 | 604 |
| **III.** | **Capital goods[a]** | **...** | **356** | **747** | **...** | **404** | **534** | **...** | **1910** | **2416** |
| III.1 | Manufactures of metals | ... | 23 | 48 | ... | 9 | 12 | ... | 90 | 113 |
| III.2 | Non-electrical machinery apparatus and appliances including machine tools [b] | ... | 203 | 426 | ... | 258 | 341 | ... | 1089 | 1377 |
| III.3 | Electrical machinery, apparatus and appliances[b] | ... | 57 | 120 | ... | 70 | 93 | ... | 260 | 328 |
| III.4 | Transport equipment | ... | 72 | 151 | ... | 67 | 88 | ... | 472 | 597 |
| | **Total Imports** | **...** | **1122** | **2353** | **...** | **1634** | **2162** | **...** | **12549** | **15869** |

Contd...

## 7.2 (A) : PRINCIPAL IMPORTS

Quantity : Thousand tonnes
Value : ₹ crore & US$ million

| | | 1990-91 | | | 2000-01 | | | 2009-10 | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Qty. | ₹ cr | $ million | Qty. | ₹ cr | $ million | Qty. | ₹ cr | $ million |
| 1 | 2 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
| **I.** | **Food and live animals chiefly for food (excl. cashew raw) of which:** | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| I.1 | Cereals and cereal preparations | 308.3 | 182 | 102 | 69.9 | 90 | 20 | 239.0 | 497 | 107 |
| **II.** | **Raw materials and intermediate manufactures** | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| II.1 | Cashewnuts (unprocessed) | 82.6 | 134 | 75 | 249.7 | 962 | 211 | 756.0 | 3048 | 640 |
| II.2 | Crude rubber (including synthetic and reclaimed) | 105.1 | 226 | 126 | 119.1 | 695 | 152 | 508.3 | 4813 | 1017 |
| II.3 | Fibres of which: | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| II.3.1 | Synthetic and regenerated fibres (man-made fibres) | 21.2 | 56 | 31 | 42.6 | 275 | 60 | 60.5 | 703 | 148 |
| II.3.2 | Raw wool | 29.4 | 182 | 102 | 53.7 | 458 | 100 | 68.3 | 1001 | 212 |
| II.3.3 | Raw cotton | 0.2 | 1 | 0 | 212.3 | 1185 | 259 | 171.4 | 1241 | 263 |
| II.3.4 | Raw jute | 32.1 | 20 | 11 | 67.3 | 84 | 18 | 62.7 | 149 | 31 |
| II.4 | Petroleum, oil and lubricants | 29359 | 10816 | 6028 | ... | 71497 | 15650 | ... | 411649 | 87136 |
| II.5 | Animal and vegetable oils and fats of which: | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| II.5.1 | Edible oils | 525.8 | 326 | 182 | 4267.9 | 6093 | 1334 | 8033.9 | 26483 | 5600 |
| II.6 | Fertilizers and chemical products of which: | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| II.6.1 | Fertilizers and fertilizer mfg | 7560.3 | 1766 | 984 | 7423.4 | 3034 | 664 | 21613.5 | 31755 | 6884 |
| II.6.2 | Chemical elements and compounds | ... | 2289 | 1276 | ... | 1542 | 338 | ... | 67347 | 2296 |
| II.6.3 | Dyeing, tanning and colouring material | ... | 168 | 94 | ... | 874 | 191 | ... | 4284 | 904 |
| II.6.4 | Medicinal and pharmaceutical products | ... | 468 | 261 | ... | 1723 | 377 | ... | 9959 | 2103 |
| II.6.5 | Plastic material, regenerated cellulose and artificial resins | ... | 1095 | 610 | ... | 2551 | 558 | ... | 23675 | 4998 |
| II.7 | Pulp and waste paper | 678.2 | 458 | 255 | 1050.9 | 1290 | 282 | 2853.7 | 4178 | 884 |
| II.8 | Paper, paper board and manufactures thereof | 286.4 | 456 | 254 | 585.6 | 2005 | 439 | 1635.3 | 7136 | 1508 |
| II.9 | Non-metallic mineral manufactures of which: | ... | ... | ... | ... | 797 | 174 | ... | ... | ... |
| II.9.1 | Pearls, precious and semiprecious stones, unworked or worked | ... | 3738 | 2083 | ... | 22101 | 4838 | ... | 76678 | 16299 |
| II.10 | Iron and steel | 1920.5 | 2113 | 1178 | 1613.6 | 3569 | 781 | 9294.7 | 39098 | 8259 |
| II.11 | Non-ferrous metals | ... | 1102 | 614 | ... | 2462 | 539 | ... | 154704 | 32792 |
| **III.** | **Capital goods[a]** | **...** | **10466** | **5833** | **...** | **25281** | **5534** | **...** | **205094** | **41643** |
| III.1 | Manufactures of metals | ... | 302 | 168 | ... | 1786 | 391 | ... | 11396 | 2406 |
| III.2 | Non-electrical machinery[b] apparatus and appliances including machine tools | ... | 4240 | 2363 | ... | 16915 | 3703 | ... | 101238 | 21370 |
| III.3 | Electrical machinery, apparatus and appliances[b] | ... | 1702 | 949 | ... | 2227 | 487 | ... | 14771 | 3115 |
| III.4 | Transport equipment | ... | 1670 | 931 | ... | 4353 | 953 | ... | 55472 | 11708 |
| | **Total Imports** | **...** | **43198** | **24075** | **...** | **230872** | **50537** | **...** | **1363736** | **288373** |

## 7.2 (A) : PRINCIPAL IMPORTS

Quantity : Thousand tonnes
Value : ₹ crore & US$ million

| | | 2010-11 | | | 2010(April-Sep.) | | | 2011(April-Sep.) | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Qty. | ₹ cr | $ million | Qty. | ₹ cr | $ million | Qty. | ₹ cr | $ million |
| 1 | 2 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 |
| **I.** | **Food and live animals chiefly for food (excl. cashew raw) of which:** | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| I.1 | Cereals and cereal preparations | 251.5 | 545 | 119 | 198.0 | 356 | 77 | 32.9 | 159 | 35 |
| **II.** | **Raw materials and intermediate manufactures** | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| II.1 | Cashewnuts (unprocessed) | 501.0 | 2650 | 578 | 387.1 | 1617 | 349 | 542.5 | 3476 | 768 |
| II.2 | Crude rubber (including synthetic and reclaimed) | 587.7 | 8074 | 1771 | 309.3 | 4198 | 910 | 319.9 | 5945 | 1315 |
| II.3 | Fibres of which: | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| II.3.1 | Synthetic and regenerated fibres (man-made fibres) | 81.5 | 957 | 210 | 36.8 | 451 | 98 | 59.9 | 736 | 163 |
| II.3.2 | Raw wool | 94.4 | 1435 | 315 | 51.0 | 770 | 167 | 42.3 | 992 | 220 |
| II.3.3 | Raw cotton | 56.5 | 624 | 137 | 34.4 | 315 | 68 | 28.8 | 509 | 114 |
| II.3.4 | Raw jute | 83.1 | 302 | 67 | 14.3 | 41 | 9 | 88.7 | 244 | 54 |
| II.4 | Petroleum, oil and lubricants | | 482282 | 105964 | | 229238 | 49829 | | 332594 | 73734 |
| II.5 | Animal and vegetable oils and fats of which: | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| II.5.1 | Edible oils | 6677.6 | 29860 | 6551 | 3730.9 | 14237 | 3085 | 4006.5 | 21826 | 4826 |
| II.6 | Fertilizers and chemical products of which: | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| II.6.1 | Fertilizers and fertilizer mfg | 20658.9 | 31533 | 6885 | 12524.8 | 20278 | 4381 | 10410.7 | 17568 | 3880 |
| II.6.2 | Chemical elements and compounds | ... | 13278 | 2914 | ... | 6975 | 1515 | ... | 8680 | 1916 |
| II.6.3 | Dyeing, tanning and colouring material | ... | 5368 | 1178 | ... | 2742 | 595 | ... | 3369 | 743 |
| II.6.4 | Medicinal and pharmaceutical products | ... | 11114 | 2436 | ... | 5741 | 1245 | ... | 6161 | 1361 |
| II.6.5 | Plastic material, regenerated cellulose and artificial resins | ... | 31304 | 6874 | ... | 16144 | 3508 | ... | 16124 | 3559 |
| II.7 | Pulp and waste paper | 2634.5 | 5208 | 1145 | 1361.3 | 2617 | 569 | 1409.7 | 2974 | 659 |
| II.8 | Paper, paper board and manufactures thereof | 2145.0 | 9614 | 2111 | 1068.4 | 4651 | 1010 | 1284.4 | 5800 | 1282 |
| II.9 | Non-metallic mineral manufactures of which: | | | | | | | | | |
| II.9.1 | Pearls, precious and semiprecious stones, unworked or worked | ... | 157596 | 34620 | ... | 68733 | 14921 | ... | 63575 | 14010 |
| II.10 | Iron and steel | 9843.9 | 47275 | 10376 | 5747.3 | 25254 | 5489 | 4597.2 | 25192 | 5564 |
| II.11 | Non-ferrous metals | ... | 212153 | 46677 | ... | 92623 | 20155 | ... | 153587 | 33968 |
| **III.** | **Capital goods[a]** | ... | **221437** | **48649** | ... | **103728** | **22531** | ... | **123233** | **27258** |
| III.1 | Manufactures of metals | ... | 15167 | 3332 | ... | 6620 | 1437 | ... | 8606 | 1904 |
| III.2 | Non-electrical machinery[b] apparatus and appliances including machine tools | ... | 118928 | 26111 | ... | 57112 | 12398 | ... | 74047 | 16379 |
| III.3 | Electrical machinery, apparatus and appliances[b] | ... | 17510 | 3845 | ... | 8361 | 1814 | ... | 10633 | 2349 |
| III.4 | Transport equipment | ... | 52112 | 11467 | ... | 22357 | 4862 | ... | 19147 | 4235 |
| | **Total Imports** | ... | **1683467** | **369769** | ... | **811773** | **176360** | ... | **1058151** | **234094** |

Source : DGCI&S, Kolkata.
... Not available.
a From the year 1987-88 onwards, Capital goods include Project goods.
b From the year 1991-92 onwards, Items III.2 & III.3 exclude electronic goods.

## 7.2 (B) : SHARE AND PERCENTAGE GROWTH/CHANGE OF MAJOR IMPORTS

| Commodity Group | (Percentage share) | | | | (Percentage change)[a] | | | |
|---|---|---|---|---|---|---|---|---|
| | 2009-10 | 2010-11 | 2010-11 (Apr.-Sep.) | 2011-12 (Apr.-Sep.) | 2009-10 | 2010-11 | 2010-11 (Apr.-Sep.) | 2011-12 (Apr.-Sep.) |
| **I.Food and allied products, of which** | **3.7** | **2.9** | **3.1** | **3.1** | **69.0** | **0.8** | **19.7** | **35.0** |
| 1. Cereals | 0.0 | 0.0 | 0.0 | 0.0 | 123.0 | 14.3 | 253.1 | -54.5 |
| 2.Pulses | 0.7 | 0.4 | 0.5 | 0.3 | 58.8 | -24.1 | 6.3 | -2.6 |
| 3. Cashew Nuts | 0.2 | 0.2 | 0.2 | 0.3 | 10.6 | -9.5 | -13.7 | 118.8 |
| 4. Edible Oils | 1.9 | 1.8 | 1.8 | 2.1 | 62.3 | 17.4 | 25.0 | 56.1 |
| **II. Fuel, of which** | **33.2** | **31.3** | **31.6** | **35.1** | **-5.5** | **20.8** | **33.7** | **47.6** |
| 5. Coal | 3.1 | 2.7 | 3.3 | 3.7 | -10.3 | 9.4 | 39.7 | 46.6 |
| 6. POL | 30.1 | 28.6 | 28.2 | 31.4 | -5.0 | 22.0 | 33.0 | 47.7 |
| **III. Fertilizers** | **2.3** | **1.9** | **2.5** | **1.7** | **-48.3** | **3.4** | **30.4** | **-11.8** |
| **IV. Paper board manufactures & newsprint** | **0.5** | **0.6** | **0.6** | **0.5** | **-15.0** | **40.3** | **44.8** | **26.9** |
| **V. Capital goods, of which** | **15.0** | **13.1** | **12.8** | **11.6** | **-8.2** | **12.4** | **10.8** | **20.9** |
| 7. Machinery except elec & machine tool | 7.4 | 6.4 | 6.5 | 6.3 | -10.2 | 11.7 | 12.0 | 30.2 |
| 8. Electrical machinery | 1.1 | 1.0 | 1.0 | 1.0 | -15.1 | 23.4 | 19.3 | 29.5 |
| 9. Transport equipment | 4.1 | 3.1 | 2.8 | 1.8 | -11.6 | -2.2 | -10.3 | -12.8 |
| 10. Project goods | 1.6 | 1.7 | 1.7 | 1.7 | 46.8 | 31.2 | 45.9 | 29.7 |
| **VI. Others, of which** | **42.6** | **47.7** | **46.8** | **45.7** | **1.3** | **43.5** | **51.6** | **29.6** |
| 11. Chemicals | 5.2 | 5.2 | 5.5 | 5.1 | 0.0 | 27.9 | 34.0 | 23.8 |
| 12. Pearls precious semi precious stones | 5.6 | 9.4 | 8.5 | 6.0 | -2.4 | 114.0 | 173.4 | -5.8 |
| 13. Iron & steel | 2.9 | 2.8 | 3.1 | 2.4 | -12.9 | 25.9 | 41.2 | 1.6 |
| 14. Non-ferrous metals | 1.0 | 1.1 | 1.2 | 1.2 | -47.2 | 35.7 | 35.1 | 33.3 |
| 15. Gold & Silver | 10.3 | 11.5 | 10.3 | 13.3 | 35.5 | 43.5 | 55.5 | 72.8 |
| 16. Professional instruments, optical goods, etc. | 1.3 | 1.1 | 1.2 | 1.1 | -17.7 | 16.5 | 21.1 | 17.2 |
| 17. Electronic Goods | 7.3 | 7.2 | 7.6 | 7.2 | -10.0 | 26.7 | 25.4 | 26.2 |
| **Total Imports** | **100.0** | **100.0** | **100.0** | **100.0** | **-5.0** | **28.2** | **37.6** | **32.7** |

Source : DGCI&S, Kolkata.

[a] In US dollar.

I. Including tea, sugar, milk and cream, spices, fruits & nuts, rice, wheat.

I. (1) Including wheat, rice, creals preparations.

II. (5) Includes coke and briquettes.

III. Includes fertilizers crude; fertilizers manufactured.

V. Including manufactures of metals.

VI. (11) Including organic chemical, inorganic chemical, che. materials & products and dyeing, tanning & colouring material.

(13) Including primary steel, pig iron based items.

(14) Excluding gold and silver.

## 7.3 (A) : PRINCIPAL EXPORTS

Quantity : Thousand tonnes
Value : ₹ crore & US$ million

| | | 1960-61 | | | 1970-71 | | | 1980-81 | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Qty. | ₹ cr | $ million | Qty. | ₹ cr | $ million | Qty. | ₹ cr | $ million |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
| **I.** | **Agricultural and allied products: of which** | **...** | **284** | **596** | **...** | **487** | **644** | **...** | **2057** | **2601** |
| I.1 | Coffee | 19.7 | 7 | 15 | 32.2 | 25 | 33 | 87.3 | 214 | 271 |
| I.2 | Tea and mate | 199.2 | 124 | 260 | 199.1 | 148 | 196 | 229.2 | 426 | 538 |
| I.3 | Oil cakes | 433.8 | 14 | 29 | 878.5 | 55 | 73 | 886.0 | 125 | 158 |
| I.4 | Tobacco | 47.5 | 16 | 34 | 49.8 | 33 | 43 | 91.3 | 141 | 178 |
| I.5 | Cashew kernels | 43.6 | 19 | 40 | 60.6 | 57 | 76 | 32.3 | 140 | 177 |
| I.6 | Spices | 47.2 | 17 | 36 | 46.9 | 39 | 51 | 84.2 | 11 | 14 |
| I.7 | Sugar and molasses | 99.6 | 30 | 60 | 473.0 | 29 | 39 | 97.0 | 40 | 50 |
| I.8 | Raw cotton | 32.6 | 12 | 25 | 32.1 | 14 | 19 | 131.6 | 165 | 209 |
| I.9 | Rice | ... | ... | ... | 32.8 | 5 | 7 | 726.7 | 224 | 283 |
| I.10 | Fish and fish preparations | 19.9 | 5 | 10 | 32.6 | 31 | 40 | 69.4 | 217 | 274 |
| I.11 | Meat and meat preparations | ... | 1 | 2 | ... | 3 | 4 | ... | 56 | 70 |
| I.12 | Fruits, vegetables and pulses (excl. cashew kernels, processed fruits & juices) | ... | 6 | 13 | ... | 12 | 16 | ... | 80 | 101 |
| I.13 | Miscellaneous processed foods (incl. processed fruits and juices) | ... | 1 | 2 | ... | 4 | 6 | ... | 36 | 45 |
| **II.** | **Ores and minerals (excl. coal) of which** | **...** | **52** | **109** | **...** | **164** | **217** | **...** | **414** | **523** |
| II.1 | Mica | 28.4 | ... | ... | 26.7 | 16 | 21 | 16.7 | 18 | 22 |
| II.2 | Iron ore (million tonne) | 3.2 | 17 | 36 | 21.2 | 117 | 155 | 22.4 | 303 | 384 |
| **III.** | **Manufactured goods of which** | **...** | **291** | **610** | **...** | **772** | **1021** | **...** | **3747** | **4738** |
| III.1 | Textile fabrics & manufactures (excl. carpets hand-made) of which | ... | 73 | 153 | ... | 145 | 192 | ... | 933 | 1179 |
| III.1.1 | Cotton yarn,fabrics, made-ups etc. | ... | 65 | 136 | ... | 142 | 188 | ... | 408 | 516 |
| III.1.2 | Readymade garments of all textile materials | ... | 1 | 2 | ... | 29 | 39 | ... | 550 | 696 |
| III.2 | Coir yarn and manufactures | ... | 6 | 13 | ... | 13 | 17 | ... | 17 | 22 |
| III.3 | Jute manufactures incl.twist & yarn | 790.0 | 135 | 283 | 560.0 | 190 | 252 | 660.0 | 330 | 417 |
| III.4 | Leather & leather manufactures incl. leather footwear,leather travel goods & leather garments | ... | 28 | 59 | ... | 80 | 106 | ... | 390 | 493 |
| III.5 | Handicrafts (incl. carpets hand-made)[c] of which: | ... | 11 | 23 | ... | 73 | 96 | ... | 952 | 1204 |
| III.5.1 | Gems and jewellery | ... | 1 | 2 | ... | 45 | 59 | ... | 618 | 782 |
| III.6 | Chemicals and allied products[a] | ... | 7 | 15 | ... | 29 | 39 | ... | 225 | 284 |
| III.7 | Machinery, transport & metal manufactures including iron and steel[b] | ... | 22 | 46 | ... | 198 | 261 | ... | 827 | 1045 |
| **IV.** | **Mineral fuels and lubricants (incl.coal)[d]** | **...** | **7** | **15** | **...** | **13** | **17** | **...** | **28** | **35** |
| | **Total Exports** | **...** | **642** | **1346** | **...** | **1535** | **2031** | **...** | **6711** | **8486** |

Contd...

## 7.3 (A) : PRINCIPAL EXPORTS

Quantity : Thousand tonnes
Value : ₹ crore & US$ million

| | | 1990-91 | | | 2000-01 | | | 2009-10 | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Qty. | ₹ cr | $ million | Qty. | ₹ cr | $ million | Qty. | ₹ cr | $ million |
| 1 | 2 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
| **I.** | **Agricultural and allied products: of which** | **...** | **6317** | **3521** | **...** | **28582** | **6256** | **...** | **85211** | **17962.65** |
| I. 1 | Coffee | 86.5 | 252 | 141 | 184.9 | 1185 | 259 | 157.4 | 2032 | 428 |
| I. 2 | Tea and mate | 199.1 | 1070 | 596 | 202.4 | 1976 | 433 | 207.5 | 2944 | 621 |
| I. 3 | Oil cakes | 2447.8 | 609 | 339 | 2417.8 | 2045 | 448 | 4671.0 | 7832 | 1651 |
| I. 4 | Tobacco | 87.1 | 263 | 147 | 108.3 | 871 | 191 | 230.8 | 4344 | 916 |
| I. 5 | Cashew kernels | 55.5 | 447 | 249 | 83.8 | 1883 | 412 | 129.2 | 2829 | 596 |
| I. 6 | Spices | 103.3 | 239 | 133 | 244.9 | 1619 | 354 | 663.2 | 6157 | 1298 |
| I. 7 | Sugar and molasses | 191.0 | 38 | 21 | 769.0 | 511 | 112 | 75.8 | 130 | 27 |
| I. 8 | Raw cotton | 374.4 | 846 | 471 | 30.2 | 224 | 49 | 1358.0 | 9537 | 2010 |
| I. 9 | Rice | 505.0 | 462 | 257 | 1534.4 | 2943 | 644 | 2156.3 | 11255 | 2373 |
| I. 10 | Fish and fish preparations | 158.9 | 960 | 535 | 502.6 | 6367 | 1394 | ... | 9900 | 2087 |
| I. 11 | Meat and meat preparations | ... | 140 | 78 | ... | 1470 | 322 | ... | 6286 | 1325 |
| I. 12 | Fruits, vegetables and pulses (excl.cashew kernels, processed fruits & juices) | ... | 216 | 120 | ... | 1609 | 352 | ... | 6370 | 1343 |
| I. 13 | Miscellaneous processed foods (incl. processed fruits and juices) | ... | 213 | 119 | ... | 1094 | 239 | ... | 3255 | 686 |
| **II.** | **Ores and minerals (excl. coal) of which** | **...** | **1497** | **834** | **...** | **4139** | **906** | **...** | **41265** | **8699** |
| II.1 | Mica | 42.0 | 35 | 19 | 63.2 | 64 | 14 | ... | 132 | 28 |
| II.2 | Iron ore (million tonne) | 32.5 | 1049 | 585 | 20161.4 | 1634 | 358 | ... | 28366 | 5980 |
| **III.** | **Manufactured goods of which** | **...** | **23736** | **13229** | **...** | **160723** | **35181** | **...** | **570046** | **120167** |
| III. 1 | Textile fabrics & manufactures (excl. carpets hand-made) of which | ... | 6832 | 3807 | ... | ... | ... | | | |
| III.1.1 | Cotton yarn,fabrics, made-ups etc. | ... | 2100 | 1170 | ... | 16030 | 3509 | ... | 17479 | 3685 |
| III.1.2 | Readymade garments of all textile materials | ... | 4012 | 2236 | ... | 25478 | 5577 | ... | 50791 | 10707 |
| III. 2 | Coir yarn and manufactures | ... | 48 | 27 | ... | 221 | 48 | ... | 760 | 160 |
| III. 3 | Jute manufactures incl.twist & yarn | 220.0 | 298 | 166 | ... | 932 | 204 | ... | 1033 | 218 |
| III. 4 | Leather & leather manufactures incl. leather footwear,leather travel goods & leather garments | ... | 2600 | 1449 | ... | 8914 | 1951 | ... | 15946 | 3361 |
| III. 5 | Handicrafts (incl. carpets hand-made) [c] of which | ... | 6167 | 3437 | ... | 5097 | 1116 | ... | 4508 | 950 |
| III. 5.1 | Gems and jewellery | ... | 5247 | 2924 | ... | 33734 | 7384 | ... | 137568 | 29000 |
| III. 6 | Chemicals and allied products[a] | ... | 2111 | 1176 | ... | 22851 | 5002 | ... | 108687 | 22911 |
| III. 7 | Machinery, transport & metal manufactures including iron and steel[b] | ... | 3872 | 2158 | ... | 31870 | 6976 | ... | 181073 | 38171 |
| **IV.** | **Mineral fuels and lubricants (incl.coal)[d]** | **...** | **948** | **528** | **...** | **8822** | **1931** | **...** | **136623** | **28800** |
| | **Total Exports** | **...** | **32553** | **18143** | **...** | **203571** | **44560** | **...** | **845534** | **178751** |

Contd...

## 7.3 (A) : PRINCIPAL EXPORTS

Quantity : Thousand tonnes
Value : ₹ crore & US$ million

| | | 2010-11 | | | 2010-11 (April-Sept.) | | | 2011-12 (April-Sept.) | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Qty. | ₹ cr | $ million | Qty. | ₹ cr | $ million | Qty. | ₹ cr | $ million |
| 1 | 2 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 |
| **I.** | **Agricultural and allied products: of which** | **...** | **113116** | **24827** | **...** | **40880** | **8877** | **...** | **66216** | **14638** |
| I. 1 | Coffee | 222.2 | 2908 | 638 | 113.4 | 1272 | 276 | 152.4 | 2297 | 508 |
| I. 2 | Tea and mate | 233.3 | 3247 | 713 | 107.3 | 1480 | 321 | 259.3 | 1662 | 367 |
| I. 3 | Oil cakes | 677.1 | 10811 | 2373 | 2287.6 | 3359 | 729 | 2613.2 | 4450 | 984 |
| I. 4 | Tobacco | 207.1 | 3821 | 839 | 110 | 1988 | 432 | 85.9 | 1621 | 358 |
| I. 5 | Cashew kernels | 203.4 | 2627 | 577 | 51.8 | 1282 | 278 | 72.7 | 2016 | 446 |
| I. 6 | Spices | 748.2 | 7865 | 1726 | 386.5 | 3545 | 770 | 512.3 | 5967 | 1319 |
| I. 7 | Sugar and molasses | 4914.9 | 11018 | 2418 | 364.7 | 685 | 149 | 1475.5 | 4303 | 951 |
| I. 8 | Raw cotton | 1258 | 12980 | 2849 | 224.3 | 1727 | 375 | 329.5 | 3660 | 809 |
| I. 9 | Rice | 2282.7 | 10801 | 2371 | 1095.9 | 5103 | 1108 | 1689.9 | 7912 | 1749 |
| I. 10 | Fish and fish preparations | ... | 11530 | 2531 | ... | 4951 | 1075 | ... | 7150 | 1581 |
| I. 11 | Meat and meat preparations | ... | 8762 | 1923 | ... | 3606 | 783 | ... | 5340 | 1181 |
| I. 12 | Fruits, vegetables and pulses (excl.cashew kernels, processed fruits & juices) | ... | 6240 | 1370 | ... | 3221 | 699 | ... | 3156 | 698 |
| I. 13 | Miscellaneous processed foods (incl. processed fruits and juices) | ... | 3580 | 786 | ... | 1673 | 363 | ... | 2274 | 503 |
| **II.** | **Ores and minerals (excl. coal) of which** | **...** | **46152** | **10130** | **...** | **21036** | **4568** | **...** | **18542** | **4099** |
| II.1 | Mica | ... | 187 | 41 | ... | 95 | 21 | ... | 101 | 22 |
| II.2 | Iron ore (million tonne) | ... | 21416 | 4701 | ... | 13543 | 2941 | ... | 9214 | 2037 |
| **III.** | **Manufactured goods of which** | **...** | **777424** | **170634** | **...** | **333621** | **72448** | **...** | **440634** | **97410** |
| III. 1 | Textile fabrics & manufactures (excl. carpets hand-made) of which | | | | | | | | | |
| III.1.1 | Cotton yarn,fabrics, made-ups etc. | ... | 25086 | 5506 | ... | 12166 | 2642 | ... | 14648 | 3238 |
| III.1.2 | Readymade garments of all textile materials | ... | 51010 | 11196 | ... | 23464 | 5095 | ... | 29758 | 6579 |
| III. 2 | Coir yarn and manufactures | ... | 694 | 152 | ... | 342 | 74 | ... | 441 | 97 |
| III. 3 | Jute manufactures incl.twist & yarn | ... | 2086 | 458 | ... | 1092 | 237 | ... | 1025 | 227 |
| III. 4 | Leather & leather manufactures incl. leather footwear,leather travel goods & leather garments | ... | 17168 | 3768 | ... | 8437 | 1832 | ... | 10552 | 2333 |
| III. 5 | Handicrafts (incl. carpets hand-made) [c] of which | ... | 5947 | 1305 | ... | 2503 | 544 | ... | 2044 | 452 |
| III. 5.1 | Gems and jewellery | ... | 167846 | 36840 | ... | 69226 | 15033 | ... | 107744 | 23819 |
| III. 6 | Chemicals and allied products[a] | ... | 132054 | 28984 | ... | 59128 | 12840 | ... | 77952 | 17233 |
| III. 7 | Machinery, transport & metal manufactures including iron and steel[b] | ... | 313382 | 68783 | ... | 121296 | 26340 | ... | 168344 | 37216 |
| **IV.** | **Mineral fuels and lubricants (incl.coal)[d]** | **...** | **192282** | **42203** | **...** | **82605** | **17938** | **...** | **140096** | **30971** |
| | **Total Exports** | **...** | **1142649** | **251136** | **...** | **484687** | **105241** | **...** | **669120** | **147949** |

Source : DGCI&S, Kolkata

[a] Chemicals and allied products figures relate to "Basic Chemicals" and "Plastic Linoleum Products".
[b] Also includes electronic goods and computer software.
[c] Gems and Jewellery excluded from Handicrafts and reported as individual item since 1997-98.
[d] During 1990-91 and 2000-01 crude oil exports amount to Nil.

## 7.3 (B) : SHARE AND PERCENTAGE GROWTH/CHANGE OF MAJOR EXPORTS

| Commodity Group | (Percentage share) | | | | (Percentage change)[a] | | | |
|---|---|---|---|---|---|---|---|---|
| | 2009-10 | 2010-11 | 2010-11 (Apr.-Sep.) | 2011-12 (Apr.-Sep.) | 2009-10 | 2010-11 | 2010-11 (Apr.-Sep.) | 2011-12 (Apr.-Sep.) |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| **I. Agricullture & allied, of which** | **10.0** | **9.9** | **8.4** | **9.9** | **1.1** | **38.2** | **18.1** | **64.9** |
| 1 Tea | 0.3 | 0.3 | 0.3 | 0.2 | 6.1 | 14.8 | 22.6 | 14.3 |
| 2 Coffee | 0.2 | 0.3 | 0.3 | 0.3 | -12.7 | 49.0 | 42.6 | 83.8 |
| 3 Cereals | 1.7 | 1.3 | 1.3 | 1.5 | -8.6 | 5.4 | -21.1 | 61.6 |
| 4 Unmfg. Tobacco | 0.4 | 0.3 | 0.3 | 0.2 | 26.9 | -13.7 | -10.5 | -25.8 |
| 5 Spices | 0.7 | 0.7 | 0.7 | 0.9 | -5.8 | 33.0 | 32.7 | 71.4 |
| 6 Cashewnuts | 0.3 | 0.2 | 0.3 | 0.3 | -6.4 | -3.3 | -0.6 | 60.1 |
| 7 Oil Meals | 0.9 | 0.9 | 0.7 | 0.7 | -26.1 | 43.7 | 9.1 | 34.9 |
| 8 Fruits & Vegetables | 0.7 | 0.5 | 0.6 | 0.4 | 13.1 | -5.9 | 3.5 | -7.2 |
| 9 Marine Products | 1.2 | 1.0 | 1.0 | 1.1 | 35.8 | 21.3 | 25.1 | 47.0 |
| 10 Raw Cotton | 1.1 | 1.1 | 0.4 | 0.5 | 222.6 | 41.7 | 33.9 | 115.7 |
| **II. Ores and Minerals, of which (Excl. Coal)** | **4.9** | **4.0** | **4.3** | **2.8** | **9.9** | **16.5** | **37.9** | **-10.3** |
| 11 Iron Ore | 3.4 | 1.9 | 2.8 | 1.4 | 26.6 | -21.4 | 45.3 | -30.7 |
| 12 Processed minerals | 0.7 | 1.3 | 0.9 | 0.6 | -9.4 | 169.5 | 59.2 | -8.2 |
| 13 Other ores & minerals | 0.7 | 0.7 | 0.6 | 0.7 | -18.2 | 41.0 | -3.3 | 87.1 |
| **III. Manufactured goods, of which** | **67.4** | **68.0** | **68.6** | **65.8** | **-5.9** | **42.0** | **25.5** | **34.9** |
| 14 Leather & Manufactures | 1.2 | 0.9 | 1.1 | 1.0 | -40.8 | 10.4 | 14.0 | 30.9 |
| 15 Leather footwear | 0.7 | 0.6 | 0.7 | 0.6 | 0.8 | 14.9 | 13.8 | 21.3 |
| 16 Gems & Jewellerly | 16.3 | 14.7 | 14.3 | 16.1 | 3.7 | 27.0 | 9.4 | 58.4 |
| 17 Drugs,Pharmaceuticals & fine chemicals | 5.0 | 4.2 | 4.6 | 3.9 | 1.8 | 16.6 | 18.0 | 19.4 |
| 18 Dyes/intmdts. & Coaltar chemicals | 1.3 | 1.3 | 1.2 | 1.4 | -2.6 | 35.6 | 15.7 | 73.7 |
| 19 Manufactures of metals | 3.1 | 3.8 | 3.7 | 2.9 | -26.8 | 70.3 | 42.4 | 10.4 |
| 20 Machinery & instruments | 5.4 | 4.8 | 4.9 | 4.6 | -12.9 | 25.1 | 11.3 | 31.4 |
| 21 Transport equipments | 5.5 | 7.3 | 8.1 | 8.4 | -11.9 | 86.1 | 57.8 | 44.9 |
| 22 Primary & semi-finished Iron & Steel | 1.6 | 2.2 | 1.9 | 1.7 | -39.0 | 88.4 | 65.5 | 27.1 |
| 23 Electronic Goods | 3.1 | 3.5 | 3.3 | 2.9 | -23.6 | 62.7 | 13.7 | 26.9 |
| 24 Cotton yarn,fabs,made-ups etc. | 2.1 | 2.2 | 2.5 | 2.2 | -10.5 | 49.4 | 66.7 | 22.6 |
| 25 Readymade Garments | 6.0 | 4.5 | 4.8 | 4.4 | -2.1 | 4.6 | -5.5 | 29.1 |
| 26 Handicrafts | 0.1 | 0.1 | 0.1 | 0.1 | -25.3 | 46.8 | 7.6 | -21.6 |
| **IV Crude & Petroleum Products (incl Coal)** | **16.2** | **16.8** | **17.0** | **20.9** | **4.6** | **46.5** | **62.6** | **72.7** |
| **V Other & unclassified items** | **1.5** | **1.2** | **1.6** | **0.5** | **32.9** | **14.9** | **7.5** | **-51.0** |
| **Total Exports** | **100.0** | **100.0** | **100.0** | **100.0** | **-3.5** | **40.5** | **30.0** | **40.6** |

Source : DGCI&S, Kolkata.

[a] In terms of US dollar.

## 7.4 (A) : DIRECTION OF IMPORTS : IMPORTS BY REGIONS AND COUNTRIES

| COUNTRIES/REGIONS | 2009-2010 (US$ million) | 2009-2010 (₹ crore) | 2010-2011 (US$ million) | 2010-2011 (₹ crore) | Change (4) over (2) (Per cent) | Share (Per cent) | April-Sep. 2010 (US$ million) | April-Sep. 2010 (₹ crore) | April-Sep. 2011 (US$ million) | April-Sep. 2011 (₹ crore) | Change (10) over (8) (Per cent) | Share (Per cent) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 |
| **I Europe** | **55713** | **263471** | **71181** | **323857** | **27.8** | **19.3** | **31273** | **144023** | **43563** | **196870** | **39.3** | **18.6** |
| **(a) EU Countries (27)** | **38433** | **181937** | **44540** | **202779** | **15.9** | **12.0** | **20827** | **95919** | **27190** | **122881** | **30.6** | **11.6** |
| 1) GERMANY | 10318 | 48886 | 11891 | 54136 | 15.2 | 3.2 | 5603 | 25807 | 7644 | 34569 | 36.4 | 3.3 |
| 2) BELGIUM | 6019 | 28466 | 8610 | 39179 | 43.0 | 2.3 | 3925 | 18051 | 4272 | 19300 | 8.8 | 1.8 |
| 3) FRANCE | 4192 | 19829 | 3705 | 16867 | -11.6 | 1.0 | 1844 | 8486 | 1827 | 8260 | -0.9 | 0.8 |
| 4) U K | 4462 | 21125 | 5397 | 24562 | 21.0 | 1.5 | 2410 | 11102 | 3695 | 16673 | 53.3 | 1.6 |
| 5) ITALY | 3862 | 18274 | 4256 | 19395 | 10.2 | 1.2 | 2089 | 9628 | 2798 | 12650 | 33.9 | 1.2 |
| 6) SWEDEN | 1590 | 7531 | 1619 | 7368 | 1.8 | 0.4 | 692 | 3184 | 1137 | 5126 | 64.4 | 0.5 |
| 7) NETHERLAND | 2130 | 10049 | 1853 | 8422 | -13.0 | 0.5 | 815 | 3752 | 1061 | 4801 | 30.2 | 0.5 |
| 8) FINLAND | 1011 | 4788 | 1653 | 7528 | 63.6 | 0.4 | 696 | 3217 | 981 | 4438 | 40.9 | 0.4 |
| 9) SPAIN | 1096 | 5196 | 1488 | 6776 | 35.8 | 0.4 | 744 | 3426 | 898 | 4065 | 20.8 | 0.4 |
| 10) DENMARK | 592 | 2829 | 473 | 2154 | -20.2 | 0.1 | 225 | 1038 | 332 | 1498 | 47.5 | 0.1 |
| 11) AUSTRIA | 789 | 3727 | 817 | 3718 | 3.5 | 0.2 | 371 | 1708 | 531 | 2398 | 43.2 | 0.2 |
| 12) ROMANIA | 225 | 1073 | 237 | 1081 | 5.4 | 0.1 | 97 | 448 | 184 | 826 | 89.5 | 0.1 |
| 13) CZECH REPUBLIC | 562 | 2659 | 677 | 3079 | 20.3 | 0.2 | 303 | 1396 | 368 | 1662 | 21.3 | 0.2 |
| 14) IRELAND | 265 | 1258 | 259 | 1181 | -2.1 | 0.1 | 126 | 581 | 193 | 876 | 53.0 | 0.1 |
| 15) POLAND | 387 | 1828 | 386 | 1765 | -0.3 | 0.1 | 223 | 1032 | 316 | 1424 | 41.5 | 0.1 |
| 16) GREECE | 154 | 740 | 93 | 424 | -39.4 | 0.0 | 38 | 173 | 68 | 310 | 81.4 | 0.0 |
| 17) SLOVAK REP | 40 | 191 | 88 | 400 | 118.4 | 0.0 | 33 | 153 | 46 | 209 | 39.3 | 0.0 |
| 18) HUNGARY | 195 | 920 | 343 | 1566 | 75.9 | 0.1 | 191 | 879 | 236 | 1067 | 24.0 | 0.1 |
| 19) PORTUGAL | 71 | 336 | 85 | 389 | 20.1 | 0.0 | 42 | 193 | 143 | 652 | 241.9 | 0.1 |
| 20) LITHUANIA | 73 | 350 | 125 | 580 | 72.6 | 0.0 | 118 | 549 | 94 | 431 | -20.3 | 0.0 |
| 21) CYPRUS | 14 | 67 | 20 | 93 | 44.7 | 0.0 | 10 | 46 | 11 | 52 | 13.9 | 0.0 |
| 22) BULGARIA | 33 | 155 | 58 | 263 | 76.5 | 0.0 | 29 | 132 | 73 | 328 | 154.8 | 0.0 |
| 23) SLOVENIA | 118 | 558 | 92 | 420 | -22.1 | 0.0 | 51 | 236 | 66 | 298 | 28.1 | 0.0 |
| 24) LUXEMBOURG | 34 | 160 | 37 | 167 | 8.2 | 0.0 | 18 | 84 | 33 | 148 | 80.7 | 0.0 |
| 25) MALTA | 12 | 57 | 36 | 164 | 196.2 | 0.0 | 19 | 87 | 23 | 103 | 21.2 | 0.0 |
| 26) LATVIA | 155 | 730 | 196 | 900 | 26.7 | 0.1 | 106 | 493 | 89 | 400 | -15.6 | 0.0 |
| 27) ESTONIA | 33 | 158 | 45 | 203 | 36.3 | 0.0 | 9 | 40 | 70 | 317 | 711.7 | 0.0 |
| **(b) Other WE Countries** | **17219** | **81251** | **26589** | **120843** | **54.4** | **7.2** | **10422** | **47993** | **16248** | **73435** | **55.9** | **6.9** |
| 1) SWITZERLAND | 14698 | 69232 | 24802 | 112740 | 68.7 | 6.7 | 9716 | 44745 | 15559 | 70324 | 60.1 | 6.6 |
| 2) NORWAY | 907 | 4311 | 961 | 4339 | 6.0 | 0.3 | 283 | 1298 | 216 | 978 | -23.5 | 0.1 |
| 3) TURKEY | 1604 | 7659 | 821 | 3742 | -48.8 | 0.2 | 422 | 1940 | 470 | 2120 | 11.5 | 0.2 |
| 4) ICELAND | 10 | 48 | 5 | 21 | -53.6 | 0.0 | 2 | 10 | 3 | 12 | 27.1 | 0.0 |
| 5) LIECHTENSTEIN | 0 | 0 | 0 | 1 | 415.0 | 0.0 | 0 | 0 | 0 | 1 | 292.5 | 0.0 |
| **(c) East Europe** | **60** | **283** | **51** | **235** | **-14.5** | **0.0** | **24** | **111** | **124** | **554** | **421.1** | **0.1** |
| 1) CROATIA | 27 | 126 | 28 | 130 | 4.4 | 0.0 | 22 | 101 | 18 | 80 | -18.5 | 0.0 |
| 2) MACEDONIA | 27 | 126 | 1 | 5 | -96.2 | 0.0 | 0 | 0 | 1 | 6 | 1612.7 | 0.0 |
| 3) UNION OF SERBIA & MONTENEGRO | 6 | 27 | 3 | 14 | 46.6 | 0.0 | 2 | 7 | 0 | 1 | -88.7 | 0.0 |
| 4) BOSNIA-HRZGOVIN | 1 | 2 | 19 | 86 | 3687.0 | 0.0 | 1 | 2 | 13 | 57 | 2350.0 | 0.0 |
| 5) ALBANIA | 0 | 1 | 0 | 1 | -57.2 | 0.0 | 0 | 0 | 92 | 410 | 923,000.0 | 0.0 |
| **II Africa** | **20715** | **97871** | **26062** | **118612** | **25.8** | **7.0** | **12447** | **57290** | **18080** | **81597** | **45.3** | **7.7** |
| **(a) Southern Africa** | **10192** | **48211** | **12574** | **57265** | **23.4** | **3.4** | **5868** | **27031** | **8114** | **36675** | **38.3** | **3.5** |
| 1) SOUTH AFRICA | 5675 | 26900 | 7141 | 32525 | 25.8 | 1.9 | 3832 | 17614 | 5039 | 22829 | 31.5 | 2.2 |
| 2) MOZAMBIQUE | 69 | 320 | 103 | 468 | 50.5 | 0.0 | 20 | 91 | 52 | 232 | 159.7 | 0.0 |

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## 7.4 (A) : DIRECTION OF IMPORTS : IMPORTS BY REGIONS AND COUNTRIES (Contd.)

| COUNTRIES/REGIONS | 2009-2010 | | 2010-2011 | | Change (4) over (2) (Per cent) | Share (Per cent) | April-Sep. 2010 | | April-Sep. 2011 | | Change (10) over (8) (Per cent) | Share (Per cent) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | (US$ million) | (₹ crore) | (US$ million) | (₹ crore) | | | (US$ million) | (₹ crore) | (US$ million) | (₹ crore) | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 |
| 3) ZAMBIA | 102 | 481 | 32 | 145 | -68.6 | 0.0 | 14 | 63 | 44 | 202 | 223.1 | 0.0 |
| 4) ZIMBABWE | 21 | 99 | 12 | 53 | -44.9 | 0.0 | 4 | 18 | 2 | 7 | -57.5 | 0.0 |
| 5) SWAZILAND | 33 | 156 | 109 | 504 | 231.7 | 0.0 | 74 | 344 | 10 | 45 | -86.4 | 0.0 |
| 6) NAMIBIA | 42 | 202 | 37 | 170 | -12.2 | 0.0 | 30 | 140 | 6 | 28 | -79.4 | 0.0 |
| 7) ANGOLA | 4243 | 20018 | 5112 | 23273 | 20.5 | 1.4 | 1882 | 8705 | 2947 | 13268 | 56.6 | 1.3 |
| 8) BOTSWANA | 7 | 33 | 27 | 122 | 278.1 | 0.0 | 11 | 52 | 12 | 54 | 2.7 | 0.0 |
| 9) LESOTHO | 1 | 3 | 1 | 5 | 88.3 | 0.0 | 1 | 4 | 2 | 10 | 129.5 | 0.0 |
| **(b) West Africa** | **9864** | **46559** | **12863** | **58505** | **30.4** | **3.5** | **6358** | **29245** | **9730** | **43855** | **53.0** | 4.2 |
| 1) SENEGAL | 237 | 1126 | 206 | 940 | -13.2 | 0.1 | 95 | 442 | 196 | 888 | 106.2 | 0.1 |
| 2) COTE D' IVOIRE | 298 | 1425 | 251 | 1152 | -15.9 | 0.1 | 177 | 818 | 207 | 939 | 17.1 | 0.1 |
| 3) LIBERIA | 19 | 93 | 18 | 81 | -6.8 | 0.0 | 15 | 66 | 7 | 33 | -49.9 | 0.0 |
| 4) GUINEA BISSAU | 184 | 873 | 59 | 276 | -67.7 | 0.0 | 51 | 239 | 146 | 668 | 184.1 | 0.1 |
| 5) TOGO | 69 | 326 | 92 | 421 | 32.5 | 0.0 | 56 | 256 | 54 | 243 | -2.4 | 0.0 |
| 6) GHANA | 147 | 700 | 160 | 729 | 8.7 | 0.0 | 98 | 451 | 288 | 1294 | 193.6 | 0.1 |
| 7) BENIN | 124 | 597 | 153 | 700 | 23.9 | 0.0 | 99 | 454 | 239 | 1072 | 142.2 | 0.1 |
| 8) NIGERIA | 7288 | 34377 | 10788 | 49005 | 48.0 | 2.9 | 4944 | 22715 | 8058 | 36306 | 63.0 | 3.4 |
| 9) CONGO P REP | 545 | 2570 | 543 | 2480 | -0.3 | 0.1 | 447 | 2048 | 27 | 120 | -94.0 | 0.0 |
| 10) GABON | 181 | 864 | 308 | 1412 | 70.4 | 0.1 | 198 | 922 | 35 | 158 | -82.2 | 0.0 |
| 11) GUINEA | 320 | 1495 | 103 | 478 | -67.8 | 0.0 | 89 | 412 | 105 | 471 | 18.7 | 0.0 |
| 12) GAMBIA | 29 | 140 | 15 | 68 | -49.1 | 0.0 | 12 | 56 | 31 | 138 | 156.2 | 0.0 |
| 13) CAMEROON | 137 | 640 | 138 | 628 | 0.5 | 0.0 | 56 | 259 | 319 | 1443 | 467.1 | 0.1 |
| 14) SIERRA LEONE | 4 | 20 | 7 | 30 | 60.3 | 0.0 | 4 | 19 | 2 | 10 | -43.3 | 0.0 |
| 15) BURKINA FASO | 6 | 29 | 4 | 19 | -33.1 | 0.0 | 2 | 12 | 11 | 50 | 345.6 | 0.0 |
| 16) MALI | 4 | 18 | 3 | 15 | -14.0 | 0.0 | 3 | 13 | 2 | 9 | -25.5 | 0.0 |
| 17) MAURITANIA | 2 | 8 | 2 | 9 | 21.9 | 0.0 | 1 | 6 | 1 | 4 | -27.3 | 0.0 |
| 18) NIGER | 0 | 1 | 10 | 49 | 4,088.0 | 0.0 | 10 | 48 | 0 | 0 | -99.4 | 0.0 |
| 19) ST HELENA | 0 | 0 | 0 | 1 | 125.0 | 0.0 | 0 | 1 | 0 | 0 | -56.3 | 0.0 |
| 20) EQUTL GUINEA | 269 | 1258 | 0 | 1 | -100.0 | 0.0 | 0 | 0 | 0 | 1 | 340.0 | 0.0 |
| 21) SAO TOME | 0 | 0 | 0 | 1 | 120.0 | 0.0 | 0 | 0 | 0 | 0 | 0.0 | 0.0 |
| 22) CAPE VERDE IS | 0 | 1 | 2 | 10 | 1,790.9 | 0.0 | 1 | 7 | 1 | 6 | -6.1 | 0.0 |
| **(c) Central Africa** | **270** | **1267** | **46** | **207** | **-83.1** | **0.0** | **16** | **75** | **16** | **71** | **-4.4** | 0.0 |
| 1) CONGO D. REP. | 145 | 677 | 10 | 45 | -93.2 | 0.0 | 8 | 37 | 0.0 | 0.0 | 0.0 | 0.0 |
| 2) UGANDA | 13 | 63 | 14 | 62 | 1.9 | 0.0 | 6 | 26 | 7 | 30 | 21.1 | 0.0 |
| 3) MALAWI | 104 | 485 | 20 | 90 | -80.8 | 0.0 | 2 | 9 | 8 | 36 | 301.0 | 0.0 |
| 4) C AFRI REP | 1 | 3 | 2 | 7 | 131.3 | 0.0 | 0 | 1 | 1 | 3 | 173.1 | 0.0 |
| 5) CHAD | 7 | 33 | 1 | 3 | -91.8 | 0.0 | 0 | 2 | 0 | 1 | -61.5 | 0.0 |
| 6) RWANDA | 0 | 1 | 0 | 0 | -88.5 | 0.0 | 0 | 0 | 0 | 0 | 400.0 | 0.0 |
| 7) BURUNDI | 1 | 4 | 0 | 1 | -67.1 | 0.0 | 0 | 1 | 0 | 1 | 58.3 | 0.0 |
| **(d) East Africa** | **388** | **1835** | **580** | **2635** | **49.2** | **0.2** | **204** | **938** | **220** | **996** | **8.1** | **0.1** |
| 1) TANZANIA REP | 238 | 1119 | 327 | 1481 | 37.2 | 0.1 | 78 | 359 | 67 | 301 | -14.3 | 0.0 |
| 2) KENYA | 79 | 376 | 124 | 566 | 57.1 | 0.0 | 64 | 294 | 65 | 294 | 1.1 | 0.0 |
| 3) MADAGASCAR | 19 | 91 | 32 | 146 | 68.6 | 0.0 | 10 | 48 | 32 | 144 | 206.3 | 0.0 |
| 4) SOMALIA | 4 | 19 | 9 | 42 | 127.6 | 0.0 | 5 | 21 | 2 | 8 | -62.0 | 0.0 |
| 5) ETHIOPIA | 19 | 88 | 33 | 149 | 76.1 | 0.0 | 18 | 81 | 14 | 62 | -20.7 | 0.0 |
| 6) MAURITIUS | 11 | 52 | 17 | 75 | 51.6 | 0.0 | 8 | 36 | 25 | 113 | 221.9 | 0.0 |

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## 7.4 (A) : DIRECTION OF IMPORTS : IMPORTS BY REGIONS AND COUNTRIES (Contd.)

| COUNTRIES/REGIONS | 2009-2010 (US$ million) | 2009-2010 (₹ crore) | 2010-2011 (US$ million) | 2010-2011 (₹ crore) | Change (4) over (2) (Per cent) | Share (Per cent) | April-Sep. 2010 (US$ million) | April-Sep. 2010 (₹ crore) | April-Sep. 2011 (US$ million) | April-Sep. 2011 (₹ crore) | Change (10) over (8) (Per cent) | Share (Per cent) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 |
| 7) COMOROS | 1 | 3 | 9 | 38 | 1,158.8 | 0.0 | 8 | 34 | 1 | 4 | -88.1 | 0.0 |
| 8) DJIBOUTI | 1 | 6 | 2 | 11 | 106.0 | 0.0 | 1 | 4 | 1 | 4 | -9.2 | 0.0 |
| 9) REUNION | 15 | 73 | 18 | 84 | 18.6 | 0.0 | 9 | 40 | 14 | 62 | 57.6 | 0.0 |
| 10) SEYCHELLES | 2 | 8 | 9 | 42 | 466.5 | 0.0 | 4 | 20 | 1 | 4 | -79.1 | 0.0 |
| **III America** | **29474** | **139480** | **36287** | **165178** | **23.1** | **9.8** | **18439** | **84756** | **20844** | **94144** | **13.0** | **8.9** |
| **(a) North America** | **19071** | **90538** | **22081** | **100602** | **15.8** | **6.0** | **11303** | **52059** | **11999** | **54185** | **6.2** | **5.1** |
| 1) U S A | 16974 | 80584 | 20051 | 91359 | 18.1 | 5.4 | 10215 | 47052 | 10977 | 49579 | 7.5 | 4.7 |
| 2) CANADA | 2097 | 9954 | 2030 | 9243 | -3.2 | 0.5 | 1089 | 5008 | 1022 | 4606 | -6.2 | 0.4 |
| **(b) Latin America** | **10403** | **48942** | **14206** | **64576** | **36.6** | **3.8** | **7136** | **32697** | **8846** | **39958** | **24.0** | **3.8** |
| 1) BRAZIL | 3438 | 16260 | 3549 | 16064 | 3.2 | 1.0 | 1708 | 7773 | 2133 | 9641 | 24.9 | 0.9 |
| 2) ARGENTINA | 672 | 3161 | 1023 | 4690 | 52.1 | 0.3 | 617 | 2862 | 585 | 2628 | -5.1 | 0.2 |
| 3) CHILE | 1119 | 5247 | 1550 | 7056 | 38.5 | 0.4 | 708 | 3258 | 908 | 4075 | 28.2 | 0.4 |
| 4) PANAMA REPUBLIC | 366 | 1730 | 188 | 863 | -48.6 | 0.1 | 166 | 759 | 148 | 671 | -10.3 | 0.1 |
| 5) MEXICO | 1049 | 4908 | 1163 | 5269 | 10.9 | 0.3 | 378 | 1721 | 1036 | 4644 | 174.1 | 0.4 |
| 6) ST VINCENT | 1 | 5 | 0 | 0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 7) COSTA RICA | 94 | 443 | 95 | 436 | 1.8 | 0.0 | 57 | 263 | 102 | 466 | 79.9 | 0.0 |
| 8) PERU | 137 | 641 | 187 | 853 | 37.1 | 0.1 | 52 | 243 | 296 | 1334 | 464.4 | 0.1 |
| 9) GUYANA | 8 | 39 | 9 | 42 | 11.1 | 0.0 | 4 | 18 | 4 | 20 | 15.0 | 0.0 |
| 10) ECUADOR | 67 | 322 | 169 | 755 | 152.3 | 0.0 | 154 | 689 | 12 | 55 | -92.2 | 0.0 |
| 11) VENEZUELA | 2886 | 13507 | 5210 | 23748 | 80.5 | 1.4 | 2600 | 11973 | 2975 | 13442 | 14.4 | 1.3 |
| 12) COLOMBIA | 424 | 2009 | 856 | 3866 | 101.9 | 0.2 | 537 | 2431 | 287 | 1331 | -46.5 | 0.1 |
| 13) SURINAME | 1 | 7 | 1 | 4 | -40.1 | 0.0 | 0 | 1 | 2 | 9 | 905.0 | 0.0 |
| 14) NICARAGUA | 0 | 2 | 1 | 4 | 160.0 | 0.0 | 0 | 2 | 0 | 2 | -2.3 | 0.0 |
| 15) DOMINIC REP | 10 | 45 | 16 | 72 | 66.0 | 0.0 | 10 | 46 | 3 | 15 | -66.4 | 0.0 |
| 16) PARAGUAY | 5 | 24 | 5 | 25 | 1.7 | 0.0 | 5 | 23 | 4 | 19 | -12.9 | 0.0 |
| 17) URUGUAY | 16 | 76 | 17 | 79 | 8.0 | 0.0 | 10 | 47 | 20 | 91 | 100.9 | 0.0 |
| 18) CUBA | 1 | 5 | 1 | 5 | 6.7 | 0.0 | 0 | 1 | 3 | 12 | 832.1 | 0.0 |
| 19) JAMAICA | 1 | 3 | 1 | 4 | 18.5 | 0.0 | 0 | 2 | 1 | 5 | 140.5 | 0.0 |
| 20) EL SALVADOR | 5 | 25 | 5 | 25 | 0.6 | 0.0 | 3 | 12 | 5 | 23 | 94.7 | 0.0 |
| 21) GUATEMALA | 6 | 27 | 40 | 180 | 600.0 | 0.0 | 37 | 164 | 5 | 22 | -86.6 | 0.0 |
| 22) TRINIDAD | 58 | 273 | 80 | 367 | 39.0 | 0.0 | 65 | 300 | 158 | 713 | 141.4 | 0.1 |
| 23) BOLIVIA | 3 | 16 | 7 | 30 | 99.1 | 0.0 | 3 | 14 | 2 | 10 | -29.7 | 0.0 |
| 24) FR GUIANA | 1 | 3 | 0 | 1 | -65.6 | 0.0 | 0 | 0 | 108 | 512 | 268,950.0 | 0.0 |
| 25) VIRGIN IS US | 2 | 12 | 0 | 2 | -86.2 | 0.0 | 0 | 1 | 0 | 0 | -59.1 | 0.0 |
| 26) HONDURAS | 25 | 116 | 1 | 7 | -94.4 | 0.0 | 1 | 6 | 1 | 4 | -29.3 | 0.0 |
| 27) HAITI | 1 | 7 | 1 | 6 | -2.9 | 0.0 | 1 | 3 | 0 | 2 | -35.3 | 0.0 |
| 28) GUADELOUPE | 0 | 0 | 0 | 0 | 66.7 | 0.0 | 0 | 0 | 1 | 5 | 11,800.0 | 0.0 |
| 29) BAHAMAS | 0 | 2 | 5 | 20 | 837.5 | 0.0 | 0 | 2 | 3 | 15 | 800.0 | 0.0 |
| 30) BR VIRGN IS | 0 | 1 | 1 | 4 | 411.8 | 0.0 | 1 | 3 | 0 | 1 | -79.7 | 0.0 |
| 31) DOMINICA | 0 | 2 | 0 | 2 | -29.2 | 0.0 | 0 | 1 | 0 | 0 | -54.5 | 0.0 |
| 32) GRENADA | 0 | 0 | 0 | 0 | -85.7 | 0.0 | 0 | 0 | 0 | 0 | 0.0 | 0.0 |
| 33) ANTIGUA | 0 | 0 | 16 | 73 | 156,200.0 | 0.0 | 16 | 72 | 0 | 0 | -99.6 | 0.0 |
| 34) MONTSERRAT | 0 | 0 | 0 | 0 | 0.0 | 0.0 | 0 | 0 | 0 | | 0.1 | 0.0 |
| 35) NETHERLANDANTIL | 1 | 5 | 3 | 16 | 254.1 | 0.0 | 0 | 2 | 38 | 174 | 9,280.5 | 0.0 |

Contd...

## 7.4 (A) : DIRECTION OF IMPORTS : IMPORTS BY REGIONS AND COUNTRIES (Contd.)

| COUNTRIES/REGIONS | 2009-2010 | | 2010-2011 | | Change (4) ove (2) (Per cent) | Share (Per cent) | April-Sep. 2010 | | April-Sep. 2011 | | Change (10) over (8) (Per cent) | Share (Per cent) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | (US$ million) | (₹ crore) | (US$ million) | (₹ crore) | | | (US$ million) | (₹ crore) | (US$ million) | (₹ crore) | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 |
| 36) BERMUDA | 0 | 1 | 0 | 0 | 0.0 | 0.0 | 0 | 0 | 0 | 0 | 0.1 | 0.1 |
| 37) MARTINIQUE | | | 0 | 0 | 0.0 | 0.0 | 0 | 0 | 0 | 0 | 0.1 | 0.1 |
| 38) BARBADOS | 0 | 1 | 0 | 1 | -25.0 | 0.0 | 0 | 0 | 1 | 3 | 1,700.0 | 0.0 |
| 39) BELIZE | 0 | 2 | 0 | 1 | -44.7 | 0.0 | 0 | 1 | 0 | 0 | -88.9 | 0.0 |
| 40) CAYMAN IS | 1 | 7 | 0 | 0 | -97.9 | 0.0 | 0 | 0 | 0 | 0 | 0.1 | 0.1 |
| 41) ST KITT N A | 0 | 0 | 0 | 0 | 0.1 | 0.1 | 0 | 0 | 0 | 0 | 0.1 | 0.1 |
| 42) ST LUCIA | 0 | 2 | 0 | 1 | -33.3 | 0.0 | 0 | 0 | 0 | 1 | 240.0 | 0.0 |
| 43) FALKLAND IS | 1 | 4 | 1 | 6 | 75.3 | 0.0 | 1 | 5 | 2 | 11 | 99.1 | 0.0 |
| **IV) Asia & ASEAN** | **175373** | **829224** | **226147** | **1029881** | **29.0** | **61.2** | **109546** | **504275** | **144138** | **650950** | **31.6** | **61.6** |
| **(a) East Asia** | **13025** | **61590** | **11639** | **53063** | **-10.6** | **3.1** | **6700** | **30798** | **7336** | **33078** | **9.5** | **3.1** |
| 1) AUSTRALIA | 12407 | 58662 | 10789 | 49188 | -13.0 | 2.9 | 6273 | 28829 | 6934 | 31269 | 10.5 | 3.0 |
| 2) NEW ZEALAND | 499 | 2364 | 625 | 2854 | 25.2 | 0.2 | 359 | 1656 | 360 | 1618 | 0.2 | 0.2 |
| 3) PAPUA N GNA | 101 | 477 | 217 | 985 | 115.7 | 0.1 | 62 | 288 | 28 | 128 | -54.5 | 0.0 |
| 4) VANUATU REP | | 0 | 0 | 0 | 0.3 | 0.0 | 0 | 0 | 0 | 0 | 0.1 | 0.1 |
| 5) SOLOMON IS | 1 | 6 | 0 | 0 | -96.5 | 0.0 | 0 | 0 | 8 | 37 | 0.1 | 0.0 |
| 6) FIJI IS | 1 | 6 | 3 | 14 | 123.1 | 0.0 | 1 | 4 | 1 | 4 | -6.8 | 0.0 |
| 7) NAURU RP | 16 | 74 | 4 | 19 | -74.2 | 0.0 | 4 | 18 | 5 | 22 | 26.6 | 0.0 |
| 8) TONGA | 0 | 0 | 0 | 1 | 0.3 | 0.0 | 0 | 0 | 0 | 0 | 0.1 | 0.1 |
| 9) SAMOA | 0 | 0 | 0 | 1 | 140.0 | 0.0 | 0 | 0 | 0 | 0 | -50.0 | 0.0 |
| 10) TUVALU | 0 | 0 | 0 | 0 | 0.3 | 0.3 | 0 | 0 | 0 | 0 | 0.1 | 0.1 |
| 11) KIRIBATI REP | 0 | 0 | 0 | 2 | 0.3 | 0.3 | 0 | 2 | 0 | 0 | 0.1 | 0.1 |
| **(b) ASEAN** | **25798** | **122220** | **30608** | **139439** | **18.6** | **8.3** | **15091** | **69509** | **21429** | **96689** | **42.0** | **9.2** |
| 1) SINGAPORE | 6455 | 30623 | 7139 | 32546 | 10.6 | 1.9 | 3876 | 17845 | 4748 | 21386 | 22.5 | 2.0 |
| 2) INDONESIA | 8657 | 41009 | 9919 | 45136 | 14.6 | 2.7 | 4512 | 20772 | 7245 | 32699 | 60.6 | 3.1 |
| 3) MALAYSIA | 5177 | 24494 | 6524 | 29746 | 26.0 | 1.8 | 3182 | 14670 | 4710 | 21255 | 48.0 | 2.0 |
| 4) THAILAND | 2932 | 13889 | 4272 | 19460 | 45.7 | 1.2 | 2078 | 9573 | 2616 | 11830 | 25.9 | 1.1 |
| 5) MYANMAR | 1290 | 6108 | 1018 | 4651 | -21.1 | 0.3 | 614 | 2830 | 633 | 2861 | 3.1 | 0.3 |
| 6) PHILIPPINES | 313 | 1493 | 429 | 1950 | 37.2 | 0.1 | 252 | 1151 | 203 | 916 | -19.6 | 0.1 |
| 7) VIETNAM SOC REP | 522 | 2459 | 1065 | 4848 | 104.1 | 0.3 | 489 | 2253 | 757 | 3429 | 55.0 | 0.3 |
| 8) BRUNEI | 429 | 2029 | 234 | 1065 | -45.4 | 0.1 | 86 | 398 | 487 | 2185 | 467.5 | 0.2 |
| 9) CAMBODIA | 5 | 24 | 8 | 36 | 58.6 | 0.0 | 3 | 15 | 4 | 19 | 25.4 | 0.0 |
| 10) LAO PD RP | 20 | 92 | 0 | 1 | -98.9 | 0.0 | 0 | 1 | 25 | 109 | 18,792.3 | 0.0 |
| **(c) WANA** | **81400** | **384348** | **105616** | **480859** | **29.7** | **28.6** | **50004** | **230094** | **66857** | **301708** | **33.7** | **28.6** |
| 1) U ARAB EMTS | 19499 | 91799 | 32753 | 149123 | 68.0 | 8.9 | 16260 | 74758 | 17666 | 79915 | 8.6 | 7.5 |
| 2) SAUDI ARAB | 17098 | 80664 | 20385 | 92855 | 19.2 | 5.5 | 9808 | 45191 | 13973 | 63045 | 42.5 | 6.0 |
| 3) ISRAEL | 1885 | 8928 | 2254 | 10263 | 19.5 | 0.6 | 1078 | 4963 | 1075 | 4857 | -0.3 | 0.5 |
| 4) QATAR | 4649 | 22010 | 6820 | 31036 | 46.7 | 1.8 | 3399 | 15608 | 6401 | 28921 | 88.3 | 2.7 |
| 5) IRAN | 11541 | 54636 | 10928 | 49725 | -5.3 | 3.0 | 5003 | 23005 | 5192 | 23268 | 3.8 | 2.2 |
| 6) KUWAIT | 8249 | 38988 | 10314 | 46976 | 25.0 | 2.8 | 4459 | 20548 | 6575 | 29684 | 47.5 | 2.8 |
| 7) MOROCCO | 862 | 4083 | 840 | 3842 | -2.5 | 0.2 | 555 | 2556 | 696 | 3141 | 25.5 | 0.3 |
| 8) JORDAN | 823 | 3924 | 819 | 3744 | -0.5 | 0.2 | 517 | 2381 | 556 | 2502 | 7.6 | 0.2 |
| 9) OMAN | 3500 | 16443 | 4002 | 18184 | 14.3 | 1.1 | 1510 | 6933 | 2089 | 9446 | 38.3 | 0.9 |
| 10) EGYPT A RP | 1692 | 8036 | 1355 | 6158 | -20.0 | 0.4 | 600 | 2750 | 1629 | 7372 | 171.7 | 0.7 |
| 11) BAHARAIN IS | 503 | 2385 | 641 | 2920 | 27.5 | 0.2 | 363 | 1667 | 439 | 1980 | 20.9 | 0.2 |
| 12) TUNISIA | 253 | 1205 | 301 | 1376 | 19.1 | 0.1 | 214 | 983 | 69 | 308 | -67.9 | 0.0 |

Contd...

## 7.4 (A) : DIRECTION OF IMPORTS : IMPORTS BY REGIONS AND COUNTRIES (Contd.)

| COUNTRIES/REGIONS | 2009-2010 (US$ million) | 2009-2010 (₹ crore) | 2010-2011 (US$ million) | 2010-2011 (₹ crore) | Change (4) over (Per cent) | Share (Per cent) | April-Sep. 2010 (US$ million) | April-Sep. 2010 (₹ crore) | April-Sep. 2011 (US$ million) | April-Sep. 2011 (₹ crore) | Change (10) over (Per cent) | Share (Per cent) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 |
| 13) SUDAN | 475 | 2245 | 614 | 2793 | 29.2 | 0.2 | 274 | 1261 | 284 | 1270 | 3.8 | 0.1 |
| 14) LEBANON | 7 | 32 | 18 | 84 | 170.1 | 0.0 | 12 | 57 | 10 | 46 | -17.6 | 0.0 |
| 15) ALGERIA | 995 | 4646 | 1816 | 8273 | 82.5 | 0.5 | 996 | 4589 | 792 | 3586 | -20.4 | 0.3 |
| 16) LIBYA | 623 | 2941 | 969 | 4402 | 55.6 | 0.3 | 447 | 2042 | 1 | 3 | -99.8 | 0.0 |
| 17) YEMEN REPUBLC | 1576 | 7423 | 1744 | 7966 | 10.7 | 0.5 | 1096 | 5052 | 192 | 867 | -82.4 | 0.1 |
| 18) SYRIA | 145 | 688 | 36 | 162 | -75.4 | 0.0 | 11 | 49 | 16 | 71 | 47.9 | 0.0 |
| 19) IRAQ | 7027 | 33273 | 9008 | 40977 | 28.2 | 2.4 | 3404 | 15702 | 9202 | 41423 | 170.3 | 3.9 |
| **(d) NE Asia** | **53492** | **253230** | **76110** | **346632** | **42.3** | **20.6** | **36805** | **169518** | **47319** | **214061** | **28.6** | **20.2** |
| 1) CHINA P RP | 30824 | 146049 | 43480 | 198079 | 41.1 | 11.8 | 21645 | 99700 | 27654 | 125069 | 27.8 | 11.8 |
| 2) KOREA RP | 8576 | 40551 | 10475 | 47712 | 22.1 | 2.8 | 5060 | 23309 | 5966 | 26977 | 17.9 | 2.5 |
| 3) JAPAN | 6734 | 31894 | 8632 | 39309 | 28.2 | 2.3 | 4205 | 19368 | 5557 | 25090 | 32.1 | 2.4 |
| 4) HONG KONG | 4734 | 22317 | 9415 | 42825 | 98.9 | 2.5 | 3913 | 18010 | 5294 | 24042 | 35.3 | 2.3 |
| 5) TAIWAN | 2613 | 12371 | 3961 | 18037 | 51.6 | 1.1 | 1838 | 8469 | 2847 | 12878 | 54.9 | 1.2 |
| 6) KOREA DP RP | 9 | 41 | 144 | 659 | 1,553.0 | 0.0 | 143 | 657 | 0 | 0 | -100.0 | 0.0 |
| 7) MONGOLIA | 1 | 6 | 2 | 9 | 56.3 | 0.0 | 1 | 5 | 1 | 4 | -23.7 | 0.0 |
| 8) MACAO | 0 | 2 | 0 | 1 | -44.4 | 0.0 | 0 | 1 | 0 | 1 | 25.0 | 0.0 |
| **(e) South Asia** | **1657** | **7837** | **2173** | **9888** | **31.1** | **0.6** | **946** | **4355** | **1198** | **5414** | **26.7** | **0.5** |
| 1) SRI LANKA DSR | 392 | 1850 | 502 | 2279 | 27.9 | 0.1 | 191 | 877 | 420 | 1900 | 120.4 | 0.2 |
| 2) NEPAL | 453 | 2146 | 513 | 2339 | 13.4 | 0.1 | 252 | 1161 | 157 | 705 | -37.8 | 0.1 |
| 3) PAKISTAN IR | 276 | 1305 | 333 | 1514 | 20.5 | 0.1 | 176 | 809 | 187 | 844 | 6.2 | 0.1 |
| 4) BANGLADESH PR | 255 | 1205 | 447 | 2031 | 75.4 | 0.1 | 157 | 727 | 291 | 1317 | 84.6 | 0.1 |
| 5) BHUTAN | 153 | 723 | 202 | 917 | 31.7 | 0.1 | 88 | 406 | 95 | 428 | 7.3 | 0.0 |
| 6) AFGHANISTAN TIS | 125 | 590 | 146 | 662 | 16.6 | 0.0 | 52 | 238 | 36 | 162 | -30.5 | 0.0 |
| 7) MALDIVES | 4 | 17 | 31 | 145 | 764.5 | 0.0 | 30 | 137 | 13 | 58 | -56.2 | 0.0 |
| **V CIS & Baltics** | **6104** | **28931** | **5664** | **25811** | **-7.2** | **1.5** | **3279** | **15060** | **3183** | **14347** | **-2.9** | **1.4** |
| **(a) CARs Countries** | **212** | **1008** | **193** | **879** | **-9.1** | **0.1** | **120** | **552** | **111** | **499** | **-7.8** | **0.0** |
| 1) KAZAKHSTAN | 155 | 736 | 138 | 630 | -10.6 | 0.0 | 93 | 426 | 67 | 302 | -28.3 | 0.0 |
| 2) UZBEKISTAN | 30 | 141 | 21 | 94 | -31.2 | 0.0 | 9 | 40 | 34 | 154 | 293.9 | 0.0 |
| 3) TURKMENISTAN | 10 | 47 | 10 | 45 | -2.7 | 0.0 | 7 | 34 | 8 | 36 | 8.6 | 0.0 |
| 4) TAJIKISTAN | 17 | 81 | 23 | 105 | 36.6 | 0.0 | 11 | 49 | 1 | 6 | -87.3 | 0.0 |
| 5) KYRGHYZSTAN | 1 | 3 | 1 | 5 | 87.5 | 0.0 | 0 | 2 | 0 | 1 | -34.1 | 0.0 |
| **(b) Other CIS Countries** | **5892** | **27923** | **5471** | **24932** | **-7.1** | **1.5** | **3159** | **14508** | **3072** | **13847** | **-2.8** | **1.3** |
| 1) RUSSIA | 3567 | 16924 | 3600 | 16417 | 0.9 | 1.0 | 2154 | 9902 | 1868 | 8440 | -13.3 | 0.8 |
| 2) UKRAINE | 1594 | 7529 | 1418 | 6459 | -11.0 | 0.4 | 739 | 3389 | 910 | 4097 | 23.1 | 0.4 |
| 3) BELARUS | 432 | 2066 | 204 | 940 | -52.7 | 0.1 | 152 | 705 | 18 | 81 | -88.2 | 0.0 |
| 4) GEORGIA | 10 | 49 | 38 | 172 | 267.3 | 0.0 | 18 | 81 | 36 | 161 | 103.6 | 0.0 |
| 5) AZERBAIJAN | 285 | 1336 | 203 | 911 | -28.6 | 0.1 | 94 | 417 | 237 | 1052 | 152.8 | 0.1 |
| 6) ARMENIA | 3 | 14 | 7 | 32 | 138.9 | 0.0 | 3 | 14 | 4 | 16 | 16.1 | 0.0 |
| 7) MOLDOVA | 1 | 5 | 0 | 1 | -89.0 | 0.0 | 0 | 0 | 0 | 1 | 242.9 | 0.0 |
| **VI Unspecified Region** | **994** | **4759** | **4429** | **20128** | **345.6** | **1.2** | **1377** | **6369** | **4286** | **20244** | **211.3** | **1.8** |
| **Total Imports** | **288373** | **1363736** | **369769** | **1683467** | **28.2** | **100.0** | **176360** | **811773** | **234094** | **1058151** | **32.7** | **100.0** |

## 7.4 (B) : DIRECTION OF EXPORTS : EXPORTS BY REGIONS AND COUNTRIES

| COUNTRIES/REGIONS | 2009-2010 (US$ million) | 2009-2010 (₹ crore) | 2010-11 (US$ million) | 2010-11 (₹ crore) | Change (4) over (2) (Per cent) | Share (Per cent) | April-Sep. 2010 (US$ million) | April-Sep. 2010 (₹ crore) | April-Sep. 2011 (US$ million) | April-Sep. 2011 (₹ crore) | Change (10) over (8) (Per cent) | Share (Per cent) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 |
| **I Europe** | **38523** | **182228** | **50697** | **230727** | **31.6** | **20.2** | **21248** | **97918** | **28923** | **130621** | **36.1** | **19.5** |
| **(a) EU Countries (27)** | **36028** | **170427** | **46857** | **213247** | **30.1** | **18.7** | **19609** | **90373** | **25953** | **117192** | **32.3** | **17.5** |
| 1) U K | 6221 | 29476 | 7166 | 32640 | 15.2 | 2.9 | 3270 | 15064 | 4183 | 18904 | 27.9 | 2.8 |
| 2) GERMANY | 5413 | 25633 | 6762 | 30770 | 24.9 | 2.7 | 2765 | 12738 | 3966 | 17910 | 43.4 | 2.7 |
| 3) ITALY | 3400 | 16072 | 4554 | 20700 | 33.9 | 1.8 | 1822 | 8388 | 2544 | 11481 | 39.6 | 1.7 |
| 4) BELGIUM | 3759 | 17757 | 6296 | 28668 | 67.5 | 2.5 | 2431 | 11220 | 3698 | 16717 | 52.1 | 2.5 |
| 5) NETHERLAND | 6398 | 30301 | 7756 | 35305 | 21.2 | 3.1 | 3268 | 15072 | 4644 | 20923 | 42.1 | 3.1 |
| 6) FRANCE | 3820 | 17999 | 5068 | 23051 | 32.7 | 2.0 | 2093 | 9651 | 1983 | 8988 | -5.2 | 1.3 |
| 7) SPAIN | 2029 | 9604 | 2558 | 11650 | 26.1 | 1.0 | 1161 | 5347 | 1436 | 6482 | 23.7 | 1.0 |
| 8) GREECE | 453 | 2150 | 359 | 1630 | -20.8 | 0.1 | 139 | 635 | 447 | 2003 | 222.4 | 0.3 |
| 9) DENMARK | 580 | 2750 | 694 | 3159 | 19.6 | 0.3 | 289 | 1332 | 377 | 1702 | 30.4 | 0.3 |
| 10) SWEDEN | 477 | 2252 | 616 | 2804 | 29.2 | 0.2 | 286 | 1315 | 400 | 1810 | 40.2 | 0.3 |
| 11) PORTUGAL | 375 | 1769 | 532 | 2419 | 42.1 | 0.2 | 222 | 1022 | 273 | 1236 | 23.1 | 0.2 |
| 12) POLAND | 421 | 1990 | 677 | 3077 | 60.7 | 0.3 | 277 | 1273 | 376 | 1699 | 35.9 | 0.3 |
| 13) IRELAND | 261 | 1236 | 279 | 1268 | 7.1 | 0.1 | 120 | 552 | 151 | 683 | 25.6 | 0.1 |
| 14) FINLAND | 208 | 984 | 249 | 1131 | 19.3 | 0.1 | 108 | 496 | 139 | 631 | 29.5 | 0.1 |
| 15) ROMANIA | 331 | 1575 | 418 | 1905 | 26.3 | 0.2 | 211 | 970 | 142 | 646 | -32.4 | 0.1 |
| 16) AUSTRIA | 253 | 1200 | 1087 | 4924 | 330.2 | 0.4 | 213 | 983 | 179 | 810 | -15.9 | 0.1 |
| 17) HUNGARY | 270 | 1282 | 218 | 990 | -19.3 | 0.1 | 82 | 380 | 149 | 674 | 81.1 | 0.1 |
| 18) CZECH REPUBLIC | 178 | 841 | 208 | 949 | 17.2 | 0.1 | 98 | 453 | 125 | 566 | 27.2 | 0.1 |
| 19) SLOVENIA | 193 | 917 | 184 | 837 | -4.4 | 0.1 | 74 | 339 | 112 | 505 | 51.8 | 0.1 |
| 20) MALTA | 709 | 3314 | 746 | 3408 | 5.2 | 0.3 | 467 | 2149 | 367 | 1646 | -21.3 | 0.2 |
| 21) LITHUANIA | 66 | 311 | 82 | 372 | 23.2 | 0.0 | 40 | 182 | 37 | 167 | -6.8 | 0.0 |
| 22) BULGARIA | 51 | 241 | 76 | 345 | 48.9 | 0.0 | 28 | 131 | 54 | 246 | 91.2 | 0.0 |
| 23) LATVIA | 47 | 222 | 104 | 473 | 119.8 | 0.0 | 62 | 286 | 47 | 213 | -23.8 | 0.0 |
| 24) SLOVAK REP | 36 | 169 | 57 | 259 | 58.8 | 0.0 | 26 | 121 | 43 | 192 | 62.5 | 0.0 |
| 25) CYPRUS | 47 | 222 | 42 | 193 | -9.5 | 0.0 | 21 | 95 | 25 | 114 | 22.4 | 0.0 |
| 26) ESTONIA | 29 | 136 | 52 | 235 | 78.1 | 0.0 | 24 | 113 | 49 | 221 | 99.7 | 0.0 |
| 27) LUXEMBOURG | 5 | 23 | 19 | 85 | 290.0 | 0.0 | 14 | 66 | 5 | 23 | -65.4 | 0.0 |
| **(b) Other WE Countries** | **2375** | **11231** | **3698** | **16828** | **55.7** | **1.5** | **1575** | **7255** | **2880** | **13024** | **82.8** | **1.9** |
| 1) TURKEY | 1539 | 7278 | 2758 | 12549 | 79.2 | 1.1 | 1134 | 5223 | 1851 | 8343 | 63.2 | 1.3 |
| 2) SWITZERLAND | 589 | 2784 | 678 | 3086 | 15.1 | 0.3 | 284 | 1309 | 796 | 3632 | 180.4 | 0.5 |
| 3) NORWAY | 229 | 1089 | 177 | 805 | -22.7 | 0.1 | 82 | 377 | 211 | 946 | 157.2 | 0.1 |
| 4) ICELAND | 17 | 80 | 84 | 386 | 393.6 | 0.0 | 75 | 345 | 23 | 102 | -70.0 | 0.0 |
| 5) LIECHTENSTEIN | 0 | 0 | 0 | 1 | 166.7 | 0.0 | 0 | 0 | 0 | 0 | 42.9 | 0.0 |
| **(c) East Europe** | **121** | **570** | **143** | **652** | **18.8** | **0.1** | **63** | **291** | **90** | **405** | **42.2** | **0.1** |
| 1) CROATIA | 90 | 424 | 98 | 445 | 9.1 | 0.0 | 45 | 205 | 55 | 246 | 22.4 | 0.0 |
| 2) UNION OF SERBIA & MONTENEGRO | 13 | 61 | 23 | 105 | 80.3 | 0.0 | 9 | 40 | 23 | 102 | 158.3 | 0.0 |
| 3) MACEDONIA | 7 | 33 | 8 | 37 | 16.4 | 0.0 | 5 | 21 | 4 | 19 | -10.8 | 0.0 |
| 4) ALBANIA | 9 | 40 | 12 | 53 | 36.1 | 0.0 | 4 | 18 | 6 | 27 | 51.0 | 0.0 |
| 5) BOSNIA-HRZGOVIN | 3 | 13 | 3 | 13 | 4.4 | 0.0 | 1 | 6 | 3 | 12 | 105.6 | 0.0 |
| **II Africa** | **10308** | **48832** | **16281** | **74114** | **58.0** | **6.5** | **6868** | **31675** | **8940** | **40404** | **30.2** | **6.0** |
| **(a) Southern Africa** | **3309** | **15666** | **5701** | **26010** | **72.3** | **2.3** | **2704** | **12507** | **2839** | **12838** | **5.0** | **1.9** |
| 1) SOUTH AFRICA | 2059 | 9751 | 3985 | 18215 | 93.6 | 1.6 | 2135 | 9881 | 2178 | 9852 | 2.0 | 1.5 |
| 2) ANGOLA | 635 | 3006 | 683 | 3095 | 7.5 | 0.3 | 168 | 775 | 165 | 745 | -1.8 | 0.1 |

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## 7.4 (B) : DIRECTION OF EXPORTS : EXPORTS BY REGIONS AND COUNTRIES (Contd.)

| COUNTRIES/REGIONS | 2009-2010 | | 2010-11 | | Change (4) over(2) | Share (Per cent) | April-Sep. 2010 | | April-Sep. 2011 | | Change (10) over (8) (Per cent) | Share (Per cent) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | (US$ million) | (₹ crore) | (US$ million) | (₹ crore) | (Per cent) | | (US$ million) | (₹ crore) | (US$ million) | (₹ crore) | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 |
| 3) MOZAMBIQUE | 358 | 1695 | 607 | 2768 | 69.4 | 0.2 | 262 | 1209 | 271 | 1220 | 3.5 | 0.2 |
| 4) ZAMBIA | 88 | 418 | 112 | 509 | 26.6 | 0.0 | 48 | 220 | 93 | 419 | 94.2 | 0.1 |
| 5) ZIMBABWE | 49 | 229 | 114 | 516 | 133.1 | 0.0 | 37 | 169 | 60 | 270 | 62.8 | 0.0 |
| 6) NAMIBIA | 63 | 301 | 61 | 279 | -2.9 | 0.0 | 23 | 108 | 30 | 136 | 27.6 | 0.0 |
| 7) BOTSWANA | 22 | 104 | 35 | 158 | 56.3 | 0.0 | 17 | 77 | 25 | 113 | 46.5 | 0.0 |
| 8) LESOTHO | 14 | 68 | 17 | 78 | 19.9 | 0.0 | 6 | 27 | 10 | 45 | 66.4 | 0.0 |
| 9) SWAZILAND | 20 | 94 | 87 | 392 | 328.8 | 0.0 | 9 | 40 | 8 | 38 | -3.9 | 0.0 |
| **(b) West Africa** | **3137** | **14852** | **4546** | **20669** | **44.9** | **1.8** | **1827** | **8407** | **2797** | **12642** | **53.1** | **1.9** |
| 1) NIGERIA | 1409 | 6681 | 2259 | 10267 | 60.4 | 0.9 | 881 | 4052 | 1101 | 4985 | 25.0 | 0.7 |
| 2) GHANA | 391 | 1844 | 658 | 2994 | 68.6 | 0.3 | 236 | 1088 | 360 | 1627 | 52.3 | 0.2 |
| 3) SENEGAL | 189 | 893 | 220 | 1001 | 16.5 | 0.1 | 97 | 448 | 112 | 508 | 15.6 | 0.1 |
| 4) BENIN | 222 | 1046 | 264 | 1203 | 19.2 | 0.1 | 126 | 578 | 400 | 1802 | 217.9 | 0.3 |
| 5) COTE D' IVOIRE | 122 | 578 | 94 | 429 | -22.9 | 0.0 | 52 | 237 | 66 | 302 | 28.4 | 0.0 |
| 6) CONGO P REP | 196 | 930 | 247 | 1123 | 25.9 | 0.1 | 100 | 462 | 211 | 950 | 110.3 | 0.1 |
| 7) TOGO | 164 | 772 | 204 | 928 | 24.8 | 0.1 | 87 | 402 | 121 | 544 | 38.4 | 0.1 |
| 8) CAMEROON | 77 | 364 | 118 | 538 | 52.9 | 0.0 | 63 | 288 | 72 | 327 | 15.4 | 0.0 |
| 9) GUINEA | 79 | 377 | 86 | 393 | 8.8 | 0.0 | 43 | 197 | 71 | 317 | 64.7 | 0.0 |
| 10) MALI | 42 | 200 | 74 | 333 | 74.3 | 0.0 | 16 | 75 | 42 | 192 | 158.4 | 0.0 |
| 11) GAMBIA | 37 | 175 | 44 | 199 | 18.6 | 0.0 | 16 | 74 | 28 | 127 | 74.5 | 0.0 |
| 12) LIBERIA | 30 | 140 | 43 | 196 | 45.0 | 0.0 | 22 | 102 | 32 | 145 | 45.6 | 0.0 |
| 13) MAURITANIA | 31 | 145 | 33 | 148 | 6.3 | 0.0 | 14 | 63 | 20 | 92 | 47.9 | 0.0 |
| 14) SIERRA LEONE | 37 | 177 | 55 | 250 | 48.1 | 0.0 | 20 | 91 | 36 | 161 | 80.2 | 0.0 |
| 15) GABON | 25 | 118 | 39 | 179 | 57.7 | 0.0 | 14 | 65 | 18 | 83 | 29.7 | 0.0 |
| 16) BURKINA FASO | 36 | 173 | 44 | 200 | 20.9 | 0.0 | 14 | 66 | 43 | 193 | 197.9 | 0.0 |
| 17) NIGER | 38 | 179 | 47 | 213 | 23.7 | 0.0 | 20 | 93 | 54 | 244 | 168.3 | 0.0 |
| 18) EQUTL GUINEA | 8 | 36 | 11 | 51 | 45.8 | 0.0 | 4 | 20 | 8 | 38 | 92.7 | 0.0 |
| 19) ST HELENA | 0 | 0 | 0 | 1 | 2700.0 | 0.0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 20) SAO TOME | 1 | 6 | 1 | 5 | -13.1 | 0.0 | 0 | 0 | 0 | 2 | 375.0 | 0.0 |
| 21) GUINEA BISSAU | 3 | 15 | 3 | 14 | -4.7 | 0.0 | 1 | 4 | 1 | 3 | -20.8 | 0.0 |
| 22) CAPE VERDE IS | 1 | 3 | 0 | 2 | -37.1 | 0.0 | 0 | 1 | 0 | 1 | 4.3 | 0.0 |
| 23) CANARY IS | 0 | 0 | 0 | 1 | 133.3 | 0.0 | 0 | 0 | 0 | 0 | -100.0 | 0.0 |
| **(c) Central Africa** | **350** | **1657** | **471** | **2142** | **34.6** | **0.2** | **207** | **955** | **332** | **1503** | **60.0** | **0.2** |
| 1) UGANDA | 207 | 981 | 298 | 1357 | 44.2 | 0.1 | 120 | 552 | 210 | 955 | 75.1 | 0.1 |
| 2) MALAWI | 81 | 387 | 98 | 447 | 20.5 | 0.0 | 53 | 247 | 73 | 330 | 37.0 | 0.0 |
| 3) CHAD | 7 | 33 | 12 | 54 | 72.0 | 0.0 | 4 | 20 | 16 | 72 | 268.1 | 0.0 |
| 4) RWANDA | 26 | 125 | 34 | 153 | 27.6 | 0.0 | 15 | 67 | 20 | 88 | 33.6 | 0.0 |
| 5) BURUNDI | 13 | 60 | 16 | 75 | 29.4 | 0.0 | 8 | 35 | 10 | 45 | 30.2 | 0.0 |
| 6) C AFRI REP | 5 | 24 | 4 | 18 | -22.3 | 0.0 | 1 | 5 | 2 | 9 | 82.7 | 0.0 |
| 7) CONGO D. REP. | 10 | 47 | 8 | 38 | -18.6 | 0.0 | 6 | 28 | 1 | 4 | -87.2 | 0.0 |
| **(d) East Africa** | **3512** | **16657** | **5564** | **25294** | **58.4** | **2.2** | **2129** | **9806** | **2972** | **13421** | **39.6** | **2.0** |
| 1) KENYA | 1452 | 6892 | 2288 | 10426 | 57.6 | 0.9 | 1147 | 5281 | 982 | 4444 | -14.4 | 0.7 |
| 2) MAURITIUS | 453 | 2136 | 802 | 3624 | 76.8 | 0.3 | 157 | 723 | 641 | 2887 | 307.2 | 0.4 |
| 3) DJIBOUTI | 266 | 1258 | 369 | 1673 | 38.7 | 0.1 | 119 | 548 | 196 | 887 | 64.3 | 0.1 |
| 4) TANZANIA REP | 920 | 4370 | 1497 | 6801 | 62.6 | 0.6 | 489 | 2256 | 824 | 3709 | 68.7 | 0.6 |
| 5) ETHIOPIA | 254 | 1206 | 275 | 1254 | 8.6 | 0.1 | 128 | 589 | 191 | 867 | 49.4 | 0.1 |

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## 7.4 (B) : DIRECTION OF EXPORTS : EXPORTS BY REGIONS AND COUNTRIES (Contd.)

| COUNTRIES/REGIONS | 2009-2010 (US$ million) | 2009-2010 (₹ crore) | 2010-11 (US$ million) | 2010-11 (₹ crore) | Change (4) over(2) (Per cent) | Share (Per cent) | April-Sep. 2010 (US$ million) | April-Sep. 2010 (₹ crore) | April-Sep. 2011 (US$ million) | April-Sep. 2011 (₹ crore) | Change (10) over (8) (Per cent) | Share (Per cent) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 |
| 6) SOMALIA | 17 | 83 | 172 | 782 | 892.1 | 0.1 | 26 | 121 | 49 | 223 | 84.8 | 0.0 |
| 7) MADAGASCAR | 86 | 411 | 84 | 380 | -2.3 | 0.0 | 27 | 125 | 48 | 216 | 76.6 | 0.0 |
| 8) REUNION | 34 | 162 | 37 | 170 | 9.2 | 0.0 | 19 | 89 | 22 | 98 | 12.6 | 0.0 |
| 9) COMOROS | 9 | 44 | 9 | 40 | -5.2 | 0.0 | 4 | 20 | 5 | 21 | 6.7 | 0.0 |
| 10) SEYCHELLES | 20 | 95 | 31 | 142 | 55.1 | 0.0 | 12 | 54 | 16 | 70 | 31.5 | 0.0 |
| **III America** | **26869** | **127006** | **37149** | **169232** | **38.3** | **14.8** | **17515** | **80696** | **24258** | **109491** | **38.5** | **16.4** |
| **(a) North America** | **20658** | **97737** | **26913** | **122576** | **30.3** | **10.7** | **12470** | **57448** | **17553** | **79288** | **40.8** | **11.9** |
| 1) U S A | 19535 | 92417 | 25552 | 116379 | 30.8 | 10.2 | 11875 | 54704 | 16679 | 75329 | 40.5 | 11.3 |
| 2) CANADA | 1123 | 5321 | 1361 | 6197 | 21.2 | 0.5 | 595 | 2744 | 874 | 3959 | 46.9 | 0.6 |
| **(b) Latin America** | **6210** | **29269** | **10235** | **46656** | **64.8** | **4.1** | **5045** | **23249** | **6704** | **30204** | **32.9** | **4.5** |
| 1) BRAZIL | 2414 | 11365 | 3971 | 18097 | 64.5 | 1.6 | 2007 | 9239 | 2831 | 12759 | 41.1 | 1.9 |
| 2) COLOMBIA | 389 | 1840 | 555 | 2526 | 42.6 | 0.2 | 256 | 1178 | 390 | 1765 | 52.7 | 0.3 |
| 3) MEXICO | 596 | 2811 | 914 | 4159 | 53.3 | 0.4 | 357 | 1645 | 607 | 2740 | 70.0 | 0.4 |
| 4) CHILE | 277 | 1319 | 550 | 2506 | 98.3 | 0.2 | 255 | 1172 | 227 | 1028 | -10.7 | 0.2 |
| 5) ARGENTINA | 270 | 1276 | 398 | 1815 | 47.5 | 0.2 | 193 | 889 | 218 | 987 | 13.3 | 0.1 |
| 6) PANAMA REPUBLIC | 78 | 371 | 118 | 537 | 50.9 | 0.0 | 51 | 237 | 103 | 468 | 101.2 | 0.1 |
| 7) VENEZUELA | 184 | 869 | 170 | 771 | -7.7 | 0.1 | 63 | 289 | 109 | 493 | 73.3 | 0.1 |
| 8) PERU | 274 | 1290 | 455 | 2072 | 66.0 | 0.2 | 192 | 884 | 243 | 1101 | 26.6 | 0.2 |
| 9) HONDURAS | 46 | 215 | 61 | 277 | 33.1 | 0.0 | 34 | 159 | 42 | 189 | 20.8 | 0.0 |
| 10) TRINIDAD | 149 | 728 | 60 | 275 | -59.6 | 0.0 | 29 | 135 | 41 | 184 | 39.0 | 0.0 |
| 11) GUATEMALA | 87 | 411 | 111 | 506 | 27.4 | 0.0 | 58 | 267 | 80 | 362 | 37.8 | 0.1 |
| 12) BAHAMAS | 884 | 4112 | 2173 | 9930 | 145.9 | 0.9 | 1219 | 5628 | 1376 | 6157 | 12.9 | 0.9 |
| 13) ECUADOR | 90 | 424 | 125 | 570 | 39.5 | 0.0 | 55 | 251 | 88 | 396 | 60.5 | 0.1 |
| 14) DOMINIC REP | 55 | 261 | 80 | 365 | 45.0 | 0.0 | 42 | 192 | 56 | 251 | 34.0 | 0.0 |
| 15) URUGUAY | 48 | 229 | 90 | 411 | 87.0 | 0.0 | 40 | 185 | 62 | 281 | 55.0 | 0.0 |
| 16) PARAGUAY | 37 | 175 | 42 | 192 | 14.1 | 0.0 | 19 | 88 | 29 | 130 | 49.7 | 0.0 |
| 17) CUBA | 23 | 108 | 27 | 121 | 16.9 | 0.0 | 12 | 53 | 22 | 98 | 87.1 | 0.0 |
| 18) HAITI | 33 | 157 | 60 | 274 | 82.3 | 0.0 | 31 | 142 | 24 | 108 | -22.4 | 0.0 |
| 19) COSTA RICA | 32 | 153 | 61 | 277 | 89.1 | 0.0 | 26 | 121 | 27 | 120 | 0.5 | 0.0 |
| 20) JAMAICA | 21 | 99 | 22 | 101 | 7.0 | 0.0 | 10 | 44 | 12 | 55 | 27.6 | 0.0 |
| 21) EL SALVADOR | 13 | 63 | 24 | 108 | 76.8 | 0.0 | 10 | 44 | 16 | 72 | 65.6 | 0.0 |
| 22) SURINAME | 16 | 78 | 13 | 58 | -21.8 | 0.0 | 5 | 23 | 4 | 19 | -18.7 | 0.0 |
| 23) NICARAGUA | 23 | 110 | 29 | 130 | 23.3 | 0.0 | 13 | 59 | 23 | 103 | 76.5 | 0.0 |
| 24) GUYANA | 16 | 77 | 15 | 70 | -6.0 | 0.0 | 9 | 41 | 12 | 55 | 35.6 | 0.0 |
| 25) NETHERLANDANTIL | 30 | 139 | 51 | 235 | 73.0 | 0.0 | 33 | 151 | 24 | 110 | -25.4 | 0.0 |
| 26) BOLIVIA | 10 | 46 | 16 | 71 | 60.2 | 0.0 | 6 | 28 | 8 | 38 | 36.6 | 0.0 |
| 27) DOMINICA | 3 | 14 | 2 | 11 | -17.2 | 0.0 | 2 | 7 | 1 | 5 | -35.0 | 0.0 |
| 28) BARBADOS | 4 | 20 | 5 | 25 | 27.4 | 0.0 | 3 | 14 | 4 | 17 | 18.6 | 0.0 |
| 29) MARTINIQUE | 6 | 26 | 5 | 23 | -9.4 | 0.0 | 2 | 8 | 4 | 17 | 128.3 | 0.0 |
| 30) GUADELOUPE | 4 | 17 | 7 | 30 | 82.1 | 0.0 | 3 | 13 | 4 | 18 | 46.4 | 0.0 |
| 31) VIRGIN IS US | 4 | 20 | 1 | 5 | -72.2 | 0.0 | 0 | 0 | 1 | 2 | 525.0 | 0.0 |
| 32) BELIZE | 2 | 12 | 13 | 58 | 412.9 | 0.0 | 6 | 27 | 12 | 53 | 98.6 | 0.0 |
| 33) ANTIGUA | 1 | 7 | 1 | 4 | -39.3 | 0.0 | 0 | 2 | 0 | 2 | 0.0 | 0.0 |
| 34) BR VIRGN IS | 82 | 390 | 0 | 1 | -99.8 | 0.0 | 0 | 1 | 1 | 3 | 457.1 | 0.0 |

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## 7.4 (B) : DIRECTION OF EXPORTS : EXPORTS BY REGIONS AND COUNTRIES (Contd.)

| COUNTRIES/REGIONS | 2009-2010 | | 2010-11 | | Change (4) over(2) | Share (Per cent) | April-Sep. 2010 | | April-Sep. 2011 | | Change (10) over (8) (Per cent) | Share (Per cent) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | (US$ million) | (₹ crore) | (US$ million) | (₹ crore) | (Per cent) | | (US$ million) | (₹ crore) | (US$ million) | (₹ crore) | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 |
| 35) GRENADA | 1 | 3 | 1 | 5 | 57.8 | 0.0 | 1 | 3 | 0 | 2 | -12.5 | 0.0 |
| 36) BERMUDA | 1 | 4 | 1 | 4 | 3.6 | 0.0 | 0 | 2 | 1 | 3 | 29.5 | 0.0 |
| 37) ST LUCIA | 1 | 6 | 3 | 12 | 116.4 | 0.0 | 2 | 9 | 0 | 2 | -76.7 | 0.0 |
| 38) ST KITT N A | 1 | 7 | 1 | 3 | -49.7 | 0.0 | 0 | 2 | 0 | 1 | -34.3 | 0.0 |
| 39) ST VINCENT | 0 | 2 | 0 | 2 | 13.9 | 0.0 | 0 | 1 | 0 | 1 | -39.1 | 0.0 |
| 40) CAYMAN IS | 1 | 4 | 0 | 1 | -64.6 | 0.0 | 0 | 0 | 1 | 4 | 766.7 | 0.0 |
| 41) FALKLAND IS | 0 | 0 | 0 | 0 | 0.0 | 0.0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 42) MONTSERRAT | 0 | 1 | 0 | 2 | 261.5 | 0.0 | 0 | 0 | 0 | 0 | -87.5 | 0.0 |
| 43) FR GUIANA | 2 | 11 | 4 | 16 | 53.9 | 0.0 | 3 | 12 | 1 | 5 | -60.1 | 0.0 |
| **IV Asia & ASEAN** | **96453** | **456178** | **141023** | **641241** | **46.2** | **56.2** | **56247** | **258888** | **75094** | **339543** | **33.5** | **50.8** |
| **(a) East Asia** | **1690** | **8009** | **1966** | **8953** | **16.3** | **0.8** | **900** | **4151** | **1134** | **5133** | **26.1** | **0.8** |
| 1) AUSTRALIA | 1385 | 6559 | 1717 | 7821 | 24.0 | 0.7 | 782 | 3610 | 981 | 4438 | 25.3 | 0.7 |
| 2) NEW ZEALAND | 255 | 1213 | 194 | 883 | -24.0 | 0.1 | 90 | 413 | 113 | 510 | 26.1 | 0.1 |
| 3) FIJI IS | 27 | 126 | 27 | 125 | 2.4 | 0.0 | 16 | 72 | 18 | 83 | 18.0 | 0.0 |
| 4) PAPUA N GNA | 18 | 84 | 21 | 97 | 21.2 | 0.0 | 10 | 45 | 19 | 87 | 95.2 | 0.0 |
| 5) KIRIBATI REP | 0 | 2 | 0 | 1 | -63.6 | 0.0 | 0 | 0 | 0 | 1 | 240.0 | 0.0 |
| 6) VANUATU REP | 2 | 11 | 2 | 11 | 4.0 | 0.0 | 1 | 5 | 1 | 6 | 19.4 | 0.0 |
| 7) TONGA | 0 | 2 | 1 | 3 | 46.9 | 0.0 | 0 | 1 | 0 | 1 | 154.5 | 0.0 |
| 8) SOLOMON IS | 1 | 4 | 1 | 4 | 4.3 | 0.0 | 0 | 2 | 0 | 2 | -4.5 | 0.0 |
| 9) SAMOA | 1 | 7 | 2 | 7 | 4.8 | 0.0 | 0 | 2 | 1 | 5 | 137.8 | 0.0 |
| 10) TUVALU | 0 | 1 | 0 | 1 | -42.9 | 0.0 | 0 | 1 | 0 | 0 | -100.0 | 0.0 |
| 11) NAURU RP | 0 | 0 | 0 | 1 | 37.5 | 0.0 | 0 | 1 | 0 | 0 | -54.5 | 0.0 |
| **(b) ASEAN** | **18114** | **85902** | **27278** | **124130** | **50.6** | **10.9** | **11430** | **52631** | **18620** | **84016** | **62.9** | **12.6** |
| 1) SINGAPORE | 7592 | 35948 | 10303 | 46906 | 35.7 | 4.1 | 4619 | 21244 | 9117 | 41056 | 97.4 | 6.2 |
| 2) INDONESIA | 3063 | 14605 | 6245 | 28388 | 103.9 | 2.5 | 2238 | 10311 | 3427 | 15489 | 53.1 | 2.3 |
| 3) THAILAND | 1740 | 8228 | 2793 | 12682 | 60.5 | 1.1 | 975 | 4490 | 1298 | 5874 | 33.1 | 0.9 |
| 4) MALAYSIA | 2835 | 13504 | 3957 | 18067 | 39.6 | 1.6 | 1957 | 9046 | 1846 | 8321 | -5.7 | 1.2 |
| 5) VIETNAM SOC REP | 1839 | 8674 | 2660 | 12082 | 44.6 | 1.1 | 1098 | 5041 | 1344 | 6092 | 22.3 | 0.9 |
| 6) PHILIPPINES | 749 | 3547 | 883 | 4012 | 17.9 | 0.4 | 370 | 1703 | 455 | 2058 | 23.0 | 0.3 |
| 7) MYANMAR | 208 | 985 | 334 | 1522 | 60.8 | 0.1 | 131 | 605 | 204 | 920 | 55.9 | 0.1 |
| 8) CAMBODIA | 46 | 216 | 64 | 291 | 40.3 | 0.0 | 28 | 130 | 46 | 206 | 62.5 | 0.0 |
| 9) BRUNEI | 24 | 116 | 25 | 115 | 3.5 | 0.0 | 11 | 49 | 880 | 3984 | 8132.8 | 0.6 |
| 10) LAO PD RP | 17 | 81 | 14 | 64 | -17.0 | 0.0 | 2 | 11 | 4 | 16 | 51.9 | 0.0 |
| **(c ) WANA** | **39354** | **186300** | **56758** | **258130** | **44.2** | **22.6** | **23412** | **107793** | **28850** | **130421** | **23.2** | **19.5** |
| 1) U ARAB EMTS | 23970 | 113348 | 34349 | 156257 | 43.3 | 13.7 | 14357 | 66104 | 17638 | 79780 | 22.9 | 11.9 |
| 2) SAUDI ARAB | 3907 | 18552 | 5227 | 23756 | 33.8 | 2.1 | 2222 | 10217 | 3025 | 13638 | 36.1 | 2.0 |
| 3) IRAN | 1853 | 8807 | 2743 | 12468 | 48.0 | 1.1 | 1040 | 4799 | 1259 | 5680 | 21.0 | 0.9 |
| 4) ISRAEL | 1969 | 9289 | 3030 | 13781 | 53.9 | 1.2 | 1316 | 6057 | 1955 | 8790 | 48.5 | 1.3 |
| 5) YEMEN REPUBLC | 727 | 3450 | 514 | 2353 | -29.3 | 0.2 | 285 | 1317 | 313 | 1408 | 9.9 | 0.2 |
| 6) EGYPT A RP | 1404 | 6638 | 2258 | 10279 | 60.8 | 0.9 | 996 | 4584 | 959 | 4343 | -3.7 | 0.6 |
| 7) OMAN | 1033 | 4902 | 1152 | 5239 | 11.5 | 0.5 | 370 | 1709 | 406 | 1834 | 9.8 | 0.3 |
| 8) KUWAIT | 782 | 3710 | 1959 | 8915 | 150.4 | 0.8 | 875 | 4038 | 570 | 2570 | -34.9 | 0.4 |
| 9) SYRIA | 345 | 1639 | 523 | 2374 | 51.4 | 0.2 | 196 | 900 | 254 | 1146 | 29.6 | 0.2 |
| 10) SUDAN | 461 | 2182 | 502 | 2288 | 9.0 | 0.2 | 230 | 1061 | 392 | 1777 | 70.3 | 0.3 |

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## 7.4 (B) : DIRECTION OF EXPORTS : EXPORTS BY REGIONS AND COUNTRIES (Contd.)

| COUNTRIES/REGIONS | 2009-2010 | | 2010-11 | | Change (4) over(2) | Share (Per cent) | April-Sep. 2010 | | April-Sep. 2011 | | Change (10) over (8) | Share (Per cent) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | (US$ million) | (₹ crore) | (US$ million) | (₹ crore) | (Per cent) | | (US$ million) | (₹ crore) | (US$ million) | (₹ crore) | (Per cent) | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 |
| 11) ALGERIA | 574 | 2737 | 1067 | 4850 | 85.8 | 0.4 | 344 | 1590 | 440 | 1985 | 27.8 | 0.3 |
| 12) QATAR | 537 | 2559 | 382 | 1738 | -28.9 | 0.2 | 171 | 785 | 331 | 1512 | 94.0 | 0.2 |
| 13) IRAQ | 477 | 2263 | 739 | 3349 | 54.8 | 0.3 | 232 | 1067 | 300 | 1360 | 29.4 | 0.2 |
| 14) BAHARAIN IS | 250 | 1185 | 912 | 4115 | 264.6 | 0.4 | 222 | 1005 | 213 | 958 | -4.3 | 0.1 |
| 15) JORDAN | 246 | 1164 | 484 | 2196 | 97.1 | 0.2 | 152 | 701 | 400 | 1849 | 162.7 | 0.3 |
| 16) MOROCCO | 250 | 1187 | 339 | 1543 | 35.5 | 0.1 | 131 | 603 | 159 | 719 | 21.7 | 0.1 |
| 17) TUNISIA | 214 | 1007 | 269 | 1222 | 26.0 | 0.1 | 120 | 550 | 129 | 582 | 7.9 | 0.1 |
| 18) LIBYA | 222 | 1055 | 136 | 620 | -38.7 | 0.1 | 69 | 316 | 12 | 56 | -82.1 | 0.0 |
| 19) LEBANON | 131 | 624 | 173 | 787 | 31.3 | 0.1 | 85 | 391 | 96 | 432 | 12.8 | 0.1 |
| **(d) NE Asia** | **28905** | **136321** | **42142** | **191504** | **45.8** | **16.8** | **15750** | **72422** | **21038** | **95358** | **33.6** | **14.2** |
| 1) CHINA P RP | 11618 | 54714 | 19651 | 89092 | 69.1 | 7.8 | 5752 | 26379 | 7718 | 35053 | 34.2 | 5.2 |
| 2) HONG KONG | 7888 | 37301 | 10330 | 47082 | 31.0 | 4.1 | 4829 | 22256 | 6672 | 30297 | 38.2 | 4.5 |
| 3) JAPAN | 3630 | 17143 | 5192 | 23635 | 43.1 | 2.1 | 2539 | 11663 | 2652 | 11973 | 4.5 | 1.8 |
| 4) KOREA RP | 3421 | 16127 | 4143 | 18838 | 21.1 | 1.6 | 1505 | 6935 | 2202 | 9923 | 46.3 | 1.5 |
| 5) TAIWAN | 1877 | 8813 | 2472 | 11253 | 31.7 | 1.0 | 977 | 4509 | 1694 | 7663 | 73.5 | 1.1 |
| 6) KOREA DP RP | 422 | 1993 | 334 | 1512 | -21.0 | 0.1 | 144 | 661 | 88 | 397 | -39.0 | 0.1 |
| 7) MONGOLIA | 8 | 37 | 19 | 87 | 139.8 | 0.0 | 4 | 17 | 11 | 50 | 202.7 | 0.0 |
| 8) MACAO | 41 | 194 | 1 | 6 | -96.5 | 0.0 | 0 | 2 | 0 | 2 | -13.3 | 0.0 |
| **(e) South Asia** | **8391** | **39646** | **12879** | **58525** | **53.5** | **5.1** | **4756** | **21891** | **5451** | **24614** | **14.6** | **3.7** |
| 1) SRI LANKA DSR | 2188 | 10290 | 4040 | 18362 | 84.6 | 1.6 | 1334 | 6147 | 2138 | 9650 | 60.3 | 1.4 |
| 2) BANGLADESH PR | 2434 | 11501 | 3606 | 16385 | 48.2 | 1.4 | 1365 | 6281 | 1376 | 6215 | 0.8 | 0.9 |
| 3) PAKISTAN IR | 1573 | 7461 | 2334 | 10583 | 48.3 | 0.9 | 786 | 3606 | 557 | 2522 | -29.1 | 0.4 |
| 4) NEPAL | 1533 | 7251 | 2204 | 10035 | 43.8 | 0.9 | 971 | 4476 | 954 | 4302 | -1.8 | 0.6 |
| 5) AFGHANISTAN TIS | 464 | 2204 | 412 | 1873 | -11.2 | 0.2 | 171 | 790 | 258 | 1163 | 50.6 | 0.2 |
| 6) MALDIVES | 80 | 378 | 107 | 485 | 33.6 | 0.0 | 48 | 222 | 57 | 258 | 18.3 | 0.0 |
| 7) BHUTAN | 119 | 561 | 176 | 801 | 48.1 | 0.1 | 80 | 369 | 111 | 505 | 39.1 | 0.1 |
| **V CIS & Baltics** | **1688** | **7978** | **2864** | **13037** | **69.7** | **1.1** | **1168** | **5388** | **1351** | **6113** | **15.7** | **0.9** |
| **(a) CARs Countries** | **269** | **1277** | **294** | **1337** | **9.0** | **0.1** | **132** | **606** | **195** | **882** | **48.1** | **0.1** |
| 1) KAZAKHSTAN | 137 | 648 | 168 | 765 | 23.0 | 0.1 | 75 | 347 | 111 | 500 | 46.9 | 0.1 |
| 2) KYRGHYZSTAN | 27 | 127 | 22 | 102 | -16.7 | 0.0 | 13 | 58 | 16 | 71 | 24.2 | 0.0 |
| 3) TURKMENISTAN | 36 | 171 | 26 | 119 | -27.7 | 0.0 | 11 | 53 | 18 | 83 | 59.7 | 0.0 |
| 4) UZBEKISTAN | 54 | 256 | 59 | 270 | 10.1 | 0.0 | 26 | 117 | 40 | 184 | 58.5 | 0.0 |
| 5) TAJIKISTAN | 16 | 75 | 18 | 81 | 13.1 | 0.0 | 7 | 30 | 10 | 44 | 47.7 | 0.0 |
| **(b) Other CIS Countries** | **1418** | **6701** | **2570** | **11700** | **81.2** | **1.0** | **1036** | **4782** | **1156** | **5231** | **11.6** | **0.8** |
| 1) RUSSIA | 981 | 4637 | 1580 | 7212 | 61.1 | 0.6 | 808 | 3732 | 822 | 3716 | 1.8 | 0.6 |
| 2) UKRAINE | 289 | 1361 | 824 | 3731 | 185.0 | 0.3 | 165 | 761 | 229 | 1039 | 38.5 | 0.2 |
| 3) GEORGIA | 56 | 263 | 68 | 311 | 22.2 | 0.0 | 29 | 134 | 47 | 212 | 60.4 | 0.0 |
| 4) AZERBAIJAN | 30 | 142 | 37 | 166 | 22.4 | 0.0 | 10 | 48 | 21 | 94 | 98.4 | 0.0 |
| 5) BELARUS | 38 | 180 | 34 | 156 | -9.3 | 0.0 | 12 | 57 | 17 | 76 | 35.5 | 0.0 |
| 6) ARMENIA | 18 | 88 | 20 | 89 | 6.2 | 0.0 | 8 | 35 | 17 | 77 | 118.4 | 0.0 |
| 7) MOLDOVA | 7 | 31 | 8 | 36 | 18.8 | 0.0 | 3 | 14 | 4 | 18 | 28.0 | 0.0 |
| **VI Unspecified Region** | **4911** | **23311** | **3122** | **14298** | **-36.4** | **1.2** | **2196** | **10121** | **9385** | **42948** | **327.4** | **6.3** |
| **Total Exports** | **178751** | **845534** | **251136** | **1142649** | **40.5** | **100.0** | **105241** | **484687** | **147949** | **669120** | **40.6** | **100.0** |

Source: Department of Commerce based on DGCI&S provisional data

## 7.5 : INDIA'S SHARE IN WORLD EXPORTS BY COMMODITY DIVISIONS AND GROUPS

(US $ million)

| Div. Sl. No. | Code Group | Commodity Division/Group | 1970 | | | 1975 | | |
|---|---|---|---|---|---|---|---|---|
| | | | World | India | India's share (%) | World | India | India's share (%) |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 01 | | Meat and meat preparations | 3584 | 4 | 0.1 | 7378 | 9 | 0.1 |
| 03 | | Fish, crustaceans and molluscs & preparations | … | … | … | … | … | … |
| 04 | | Cereals and cereal preparations | 6775 | 9 | 0.1 | 25133 | 16 | 0.1 |
| | 042 | Rice | 925 | 6 | 0.6 | 1984 | 12 | 0.6 |
| 05 | | Vegetables and fruits | 1471 | 17 | 1.2 | 10104 | 154 | 1.5 |
| 06 | | Sugar, sugar preparations and honey | 2700 | 26 | 1.0 | 11663 | 554 | 4.8 |
| 07 | | Coffee, tea, cocoa, spices and manufactures | 5437 | 280 | 5.1 | 9133 | 438 | 4.8 |
| | 071 | Coffee and coffee substitutes | 3205 | 31 | 1.0 | 4580 | 73 | 1.6 |
| | 074 | Tea and mate | 587 | 196 | 33.4 | 933 | 292 | 31.3 |
| | 075 | Spices | 255 | 52 | 20.5 | 548 | 73 | 13.3 |
| 08 | | Feeding stuff for animals | … | … | … | … | … | … |
| 12 | | Tobacco and tobacco manufactures | 1713 | 43 | 2.5 | 3827 | 124 | 3.2 |
| | 121 | Unmanufactured tobacco and refuse | 1058 | 42 | 4.0 | 2357 | 119 | 5.0 |
| | 122 | Manufactured tobacco | 655 | 1 | 0.2 | 1470 | 5 | 0.4 |
| 22 | | Oilseeds and oleaginous fruit | … | … | … | … | … | … |
| 28 | | Metalliferous ores and metal scrap | 7357 | 193 | 2.6 | 13446 | 253 | 1.9 |
| | 281 | Iron ore and concentrates | 2373 | 158 | 6.7 | 4601 | 247 | 5.4 |
| 51 | | Organic chemicals | 6648 | 9 | 0.1 | 20219 | 22 | 0.1 |
| 52 | | Inorganic chemicals | … | … | … | … | … | … |
| 53 | | Dyeing, tanning and colouring materials | 1615 | 8 | 0.5 | 3642 | 23 | 0.6 |
| 54 | 541 | Medicinal and pharmaceutical products | 2687 | 11 | 0.4 | 6503 | 29 | 0.4 |
| 55 | | Essential oils and perfume materials soap, cleansing etc. | 916 | 10 | 1.1 | 3059 | 18 | 0.6 |
| 58 | | Artificial resins, plastic materials, cellulose esters & ethers | … | … | … | … | … | … |
| 59 | | Chemical materials and products n.e.s. | … | … | … | … | … | … |
| 61 | | Leather, leather manufactures & dressed fur skins | 1047 | 95 | 9.1 | 2380 | 200 | 8.4 |
| | 611 | Leather | 701 | 94 | 13.4 | 1540 | 189 | 12.3 |
| | 612 | Manufactures of leather or of composition leather | 132 | 1 | 0.6 | 355 | 4 | 1.0 |
| | 613 | Fur skins,tanned or dressed etc. | 214 | … | … | 486 | 8 | 1.6 |
| 65 | | Textile yarn, fabrics, made-up articles | 11371 | 461 | 4.1 | 23798 | 599 | 2.5 |
| | 652 | Woven cotton fabrics | 1436 | 98 | 6.8 | 3149 | 161 | 5.1 |
| | 653 | Woven fabrics of man made fibres | 3967 | 189 | 4.8 | 8038 | 191 | 2.4 |
| | 654 | Woven fabrics other than of cotton or man-made fibres | 270 | 2 | 0.8 | 547 | 5 | 0.9 |
| 66 | 667 | Pearls, precious and semi-precious stones | 2431 | 53 | 2.2 | 5707 | 128 | 2.2 |
| 67 | | Iron and steel | 14540 | 132 | 0.9 | 40789 | 116 | 0.3 |
| 69 | | Manufactures of metals n.e.s. | 4328 | 27 | 0.6 | 12053 | 74 | 0.6 |
| 71 | | Power-generating machinery & equipment | 20884 | 25 | 0.1 | 54327 | 97 | 0.2 |
| 72 | | Machinery specialized for particular industries | 10670 | 17 | 0.2 | 67016 | 102 | 0.2 |
| 73 | | Metal-working machinery | … | … | … | … | … | … |
| 74 | | General industrial machinery & equipment & machine parts thereof | … | … | … | … | … | … |
| 75 | | Office machinery and ADP equipment | … | … | … | … | … | … |
| 76 | | Telecommunication and sound recording and reproducing apparatus and equipment | … | … | … | … | … | … |
| 77 | | Electrical machinery, apparatus and appliances | … | … | … | … | … | … |
| 78 | | Road vehicles (including air cushion vehicles) | … | … | … | … | … | … |
| 79 | | Other transport equipment | … | … | … | … | … | … |
| 84 | | Articles of apparel and clothing accessories | 109 | … | … | 308 | … | … |
| | | **Total Exports** | **313804** | **2031** | **0.6** | **876094** | **4665** | **0.5** |

Contd...

## 7.5 : INDIA'S SHARE IN WORLD EXPORTS BY COMMODITY DIVISIONS AND GROUPS

(US$ million)

| Div. Sl. No. | Code Group | Commodity Division/Group | 1980 | | | 1985 | | |
|---|---|---|---|---|---|---|---|---|
| | | | World | India | India's share (%) | World | India | India's share (%) |
| 1 | 2 | 3 | 10 | 11 | 12 | 13 | 14 | 15 |
| 01 | | Meat and meat preparations | 17832 | 67 | 0.4 | 15755 | 61 | 0.4 |
| 03 | | Fish, crustaceans and molluscs & preparations | 12258 | 242 | 2.0 | 14335 | 337 | 2.4 |
| 04 | | Cereals and cereal preparations | 41989 | 201 | 0.5 | 32643 | 211 | 0.6 |
| | 042 | Rice | 4355 | 160 | 3.7 | 2916 | 162 | 5.6 |
| 05 | | Vegetables and fruits | 24018 | 259 | 1.1 | 23606 | 332 | 1.4 |
| 06 | | Sugar, sugar preparations and honey | 16183 | 46 | 0.3 | 10113 | ... | ... |
| 07 | | Coffee, tea, cocoa, spices and manufactures | 22121 | 879 | 4.0 | 20779 | 971 | 4.7 |
| | 071 | Coffee and coffee substitutes | 12979 | 271 | 2.1 | 11676 | 226 | 1.9 |
| | 074 | Tea and mate | 1631 | 452 | 27.7 | 1973 | 517 | 26.2 |
| | 075 | Spices | 1072 | 156 | 14.5 | 1188 | 229 | 19.3 |
| 08 | | Feeding stuff for animals | 10322 | 164 | 1.6 | 8515 | 127 | 1.5 |
| 12 | | Tobacco and tobacco manufactures | 3423 | 151 | 4.4 | 7822 | 140 | 1.8 |
| | 121 | Unmanufactured tobacco and refuse | 3423 | 151 | 4.4 | 3798 | 113 | 3.0 |
| | 122 | Manufactured tobacco | ... | ... | ... | 4024 | 27 | 0.7 |
| 22 | | Oilseeds and oleaginous fruit | 9487 | 30 | 0.3 | 7896 | 20 | 0.3 |
| 28 | | Metalliferous ores and metal scrap | 30239 | 465 | 1.5 | 23137 | 557 | 2.4 |
| | 281 | Iron ore and concentrates | 6515 | 411 | 6.3 | 6154 | 478 | 7.8 |
| 51 | | Organic chemicals | 31841 | 17 | 0.1 | 36923 | 25 | 0.1 |
| 52 | | Inorganic chemicals | 15491 | 26 | 0.2 | 16318 | 22 | 0.1 |
| 53 | | Dyeing, tanning and colouring materials | 7986 | 65 | 0.8 | 8024 | 62 | 0.8 |
| 54 | 541 | Medicinal and pharmaceutical products | 13918 | 109 | 0.8 | 15920 | 130 | 0.8 |
| 55 | | Essential oils and perfume materials Soap, cleansing etc. | 7647 | 86 | 1.1 | 8136 | 56 | 0.7 |
| 58 | | Artificial resins, plastic materials, cellulose esters & ethers | 27223 | 3 | ... | 28456 | 5 | ... |
| 59 | | Chemical materials and products n.e.s. | 15960 | 8 | ... | 16613 | 28 | 0.2 |
| 61 | | Leather, leather manufactures & dressed fur skins | 5967 | 405 | 6.8 | 6444 | 534 | 8.3 |
| | 611 | Leather | 3415 | 342 | 10.0 | 4185 | 331 | 7.9 |
| | 612 | Manufactures of leather or of composition leather | 975 | 62 | 6.3 | 1233 | 202 | 16.4 |
| | 613 | Fur skins,tanned or dressed etc. | 1577 | 1 | 0.1 | 1026 | ... | ... |
| 65 | | Textile yarn, fabrics, made-up articles | 48884 | 1145 | 2.3 | 48218 | 1037 | 2.1 |
| | 652 | Woven cotton fabrics | 6632 | 351 | 5.3 | 6804 | 327 | 4.8 |
| | 653 | Woven fabrics of man made fibres | 9325 | 44 | 0.5 | 9735 | 20 | 0.2 |
| | 654 | Woven fabrics other than of cotton or man-made fibres | 3188 | 204 | 6.4 | 3462 | 167 | 4.8 |
| 66 | 667 | Pearls, precious and semi-precious stones | 18563 | 579 | 3.1 | 12073 | 1165 | 9.6 |
| 67 | | Iron and steel | 68231 | 87 | 0.1 | 61891 | 46 | 0.1 |
| 69 | | Manufactures of metals n.e.s. | 36840 | 221 | 0.6 | 32884 | 125 | 0.4 |
| 71 | | Power-generating machinery & equipment | 35722 | 88 | 0.2 | 38433 | 59 | 0.2 |
| 72 | | Machinery specialized for particular industries | 58495 | 65 | 0.1 | 54707 | 97 | 0.2 |
| 73 | | Metal-working machinery | 15671 | 32 | 0.2 | 12696 | 55 | 0.4 |
| 74 | | General industrial machinery & equipment & machine parts thereof | 59443 | 67 | 0.1 | 53954 | 60 | 0.1 |
| 75 | | Office machinery and ADP equipment | 24750 | 2 | ... | 53604 | 30 | 0.1 |
| 76 | | Telecommunication and sound recording and reproducing apparatus and equipment | 26799 | 11 | ... | 47318 | 4 | ... |
| 77 | | Electrical machinery, apparatus and appliances | 60947 | 114 | 0.2 | 75739 | 121 | 0.2 |
| 78 | | Road vehicles (including air cushion vehicles) | 127347 | 208 | 0.2 | 157446 | 126 | 0.1 |
| 79 | | Other transport equipment | 41291 | 32 | 0.1 | 50709 | 27 | 0.1 |
| 84 | | Articles of apparel and clothing accessories | 32365 | 590 | 1.8 | 38718 | 887 | 2.3 |
| | | **Total Exports** | **1997686** | **8486** | **0.4** | **1930849** | **8904** | **0.5** |

Contd...

## 7.5 : INDIA'S SHARE IN WORLD EXPORTS BY COMMODITY DIVISIONS AND GROUPS

(US $ million)

| Div. Sl. No. | Code Group | Commodity Division/Group | 1990 World | 1990 India | 1990 India's share (%) | 2000 World | 2000 India | 2000 India's share (%) |
|---|---|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 16 | 17 | 18 | 19 | 20 | 21 |
| 01 | | Meat and meat preparations | 34118 | 77 | 0.2 | 44690 | 324 | 0.7 |
| 03 | | Fish, crustaceans and molluscs & preparations | 32847 | 521 | 1.6 | 50875 | 1391 | 2.7 |
| 04 | | Cereals and cereal preparations | 45314 | 285 | 0.6 | 53575 | 783 | 1.5 |
| | 042 | Rice | 3995 | 254 | 6.4 | 6411 | 654 | 10.2 |
| 05 | | Vegetables and fruits | 50225 | 400 | 0.8 | 68355 | 856 | 1.3 |
| 06 | | Sugar, sugar preparations and honey | 14236 | 21 | 0.1 | 13866 | 118 | 0.9 |
| 07 | | Coffee, tea, cocoa, spices and manufactures | 21131 | 842 | 4.0 | 27953 | 956 | 3.4 |
| | 071 | Coffee and coffee substitutes | 8659 | 148 | 1.7 | 11559 | 264 | 2.3 |
| | 074 | Tea and mate | 2650 | 585 | 22.1 | 3087 | 431 | 14.0 |
| | 075 | Spices | 1415 | 109 | 7.7 | 2541 | 261 | 10.3 |
| 08 | | Feeding stuff for animals | 15603 | 336 | 2.2 | 20295 | 469 | 2.3 |
| 12 | | Tobacco and tobacco manufactures | 17860 | 145 | 0.8 | 21628 | 147 | 0.7 |
| | 121 | Unmanufactured tobacco and refuse | 5187 | 107 | 2.1 | 5525 | 147 | 2.7 |
| | 122 | Manufactured tobacco | 12674 | 39 | 0.3 | 16103 | … | … |
| 22 | | Oilseeds and oleaginous fruit | 10477 | 83 | 0.8 | 14388 | 244 | 1.7 |
| 28 | | Metalliferous ores and metal scrap | 35734 | 753 | 2.1 | 49515 | 510 | 1.0 |
| | 281 | Iron ore and concentrates | 7653 | 578 | 7.6 | 9229 | 363 | 3.9 |
| 51 | | Organic chemicals | 70721 | 232 | 0.3 | 134109 | 1491 | 1.1 |
| 52 | | Inorganic chemicals | 26079 | 59 | 0.2 | 33117 | 99 | 0.3 |
| 53 | | Dyeing, tanning and colouring materials | 19952 | 233 | 1.2 | 34105 | 481 | 1.4 |
| 54 | 541 | Medicinal and pharmaceutical products | 37753 | 453 | 1.2 | 107482 | 1255 | 1.2 |
| 55 | | Essential oils and perfume materials Soap, cleansing etc. | 21027 | 240 | 1.1 | 44279 | 216 | 0.5 |
| 58 | | Artificial resins, plastic materials, cellulose esters & ethers | 65712 | 29 | … | 123353 | 174 | 0.1 |
| 59 | | Chemical materials and products n.e.s. | 33418 | 76 | 0.2 | 63411 | 437 | 0.7 |
| 61 | | Leather, leather manufactures & dressed fur skins | 13226 | 832 | 6.3 | 24440 | 808 | 3.3 |
| | 611 | Leather | 9295 | 447 | 4.8 | 16551 | 388 | 2.3 |
| | 612 | Manufactures of leather or of composition leather | 2868 | 385 | 13.4 | 6831 | 421 | 6.2 |
| | 613 | Fur skins,tanned or dressed etc. | 1063 | … | … | 1058 | … | … |
| 65 | | Textile yarn, fabrics, made-up articles | 105147 | 2180 | 2.1 | 167528 | 6000 | 3.6 |
| | 652 | Woven cotton fabrics | 15559 | 571 | 3.7 | 22387 | 1103 | 4.9 |
| | 653 | Woven fabrics of man made fibres | 22021 | 156 | 0.7 | 32151 | 506 | 1.6 |
| | 654 | Woven fabrics other than of cotton or man-made fibres | 8466 | 195 | 2.3 | 9432 | 370 | 3.9 |
| 66 | 667 | Pearls, precious and semi-precious stones | 27577 | 2710 | 9.8 | 54105 | 6477 | 12.0 |
| 67 | | Iron and steel | 106342 | 283 | 0.3 | 146147 | 1481 | 1.0 |
| 69 | | Manufactures of metals n.e.s. | 66088 | 341 | 0.5 | 125259 | 1167 | 0.9 |
| 71 | | Power-generating machinery & equipment | 81675 | 126 | 0.2 | 158329 | 218 | 0.1 |
| 72 | | Machinery specialized for particular industries | 118617 | 236 | 0.2 | 167582 | 346 | 0.2 |
| 73 | | Metal-working machinery | 31051 | 58 | 0.2 | 41413 | 117 | 0.3 |
| 74 | | General industrial machinery & equipment & machine parts thereof | 130836 | 132 | 0.1 | 225981 | 78 | … |
| 75 | | Office machinery and ADP equipment | 126743 | 112 | 0.1 | 378980 | … | … |
| 76 | | Telecommunication and sound recording and reproducing apparatus and equipment | 100965 | 31 | … | 299356 | … | … |
| 77 | | Electrical machinery, apparatus and appliances | 185364 | 241 | 0.1 | 640575 | 92 | … |
| 78 | | Road vehicles (including air cushion vehicles) | 312550 | 344 | 0.1 | 549596 | 370 | 0.1 |
| 79 | | Other transport equipment | 96250 | 15 | … | 157654 | 53 | … |
| 84 | | Articles of apparel and clothing accessories | 94577 | 2211 | 2.3 | 201379 | 7093 | 3.5 |
| | | **Total Exports** | **3303563** | **18143** | **0.5** | **6254511** | **41543** | **0.7** |

Contd...

## 7.5 : INDIA'S SHARE IN WORLD EXPORTS BY COMMODITY DIVISIONS AND GROUPS

(US$ million)

| Div. Sl. No. | Code Group | Commodity Division/Group | 2009 World | 2009 India | 2009 India's share (%) | 2010 World | 2010 India | 2010 India's share (%) |
|---|---|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 22 | 23 | 24 | 25 | 26 | 27 |
| 01 | | Meat and meat preparations | 119470 | 1191 | 1.0 | 129869 | 1821 | 1.4 |
| 03 | | Fish, crust aceans and molluscs & preparations | 88077 | 1599 | 1.8 | 101931 | 2403 | 2.4 |
| 04 | | Cereals and cereal preparations | 120339 | 3161 | 2.6 | 127086 | 3136 | 2.5 |
| | 042 | Rice | 19056 | 2398 | 12.6 | 20457 | 2296 | 11.2 |
| 05 | | Vegetables and fruits | 163494 | 2108 | 1.3 | 180432 | 2338 | 1.3 |
| 06 | | Sugar, sugar preparations and honey | 36030 | 116 | 0.3 | 46421 | 1096 | 2.4 |
| 07 | | Coffee, tea, cocoa, spices and manufactures | 69615 | 1713 | 2.5 | 80839 | 2233 | 2.8 |
| | 071 | Coffee and coffee substitutes | 24223 | 410 | 1.7 | 29593 | 558 | 1.9 |
| | 074 | Tea and mate | 6266 | 582 | 9.3 | 7271 | 720 | 9.9 |
| | 075 | Spices | 5088 | 704 | 13.8 | 5994 | 927 | 15.5 |
| 08 | | Feeding stuff for animals | 52629 | 1708 | 3.2 | 57324 | 2067 | 3.6 |
| 12 | | Tobacco and tobacco manufactures | 35018 | 898 | 2.6 | 36003 | 879 | 2.4 |
| | 121 | Unmanufactured tobacco and refuse | 11392 | 739 | 6.5 | 10942 | 713 | 6.5 |
| | 122 | Manufactured tobacco | 23626 | 0 | 0.0 | 25061 | 0 | 0.0 |
| 22 | | Oilseeds and oleaginous fruit | 47984 | 555 | 1.2 | 56208 | 911 | 1.6 |
| 28 | | Metalliferous ores and metal scrap | 186790 | 6039 | 3.2 | 285344 | 8475 | 3.0 |
| | 281 | Iron ore and concentrates | 56738 | 5299 | 9.3 | 103695 | 6147 | 5.9 |
| 51 | | Organic chemicals | 274486 | 6149 | 2.2 | 334364 | 7735 | 2.3 |
| 52 | | Inorganic chemicals | 71004 | 624 | 0.9 | 91053 | 926 | 1.0 |
| 53 | | Dyeing, tanning and colouring materials | 56151 | 1178 | 2.1 | 66818 | 1604 | 2.4 |
| 54 | 541 | Medicinal and pharmaceutical products | 124511 | 1322 | 1.1 | 135999 | 1357 | 1.0 |
| 55 | | Essential oils and perfume materials soap, cleansing etc. | 110346 | 1039 | 0.9 | 122701 | 1159 | 0.9 |
| 58 | | Artificial resins, plastic materials, cellulose esters & ethers | 89179 | 546 | 0.6 | 108277 | 798 | 0.7 |
| 59 | | Chemical materials and products n.e.s. | 146421 | 1753 | 1.2 | 173675 | 2136 | 1.2 |
| 61 | | Leather, leather manufactures & dressed fur skins | 20631 | 669 | 3.2 | 28071 | 915 | 3.3 |
| | 611 | Leather | 16583 | 544 | 3.3 | 23361 | 785 | 3.4 |
| | 612 | Manufactures of leather or of composition leather | 2697 | 125 | 4.6 | 3140 | 130 | 4.2 |
| | 613 | Fur skins,tanned or dressed etc. | 1351 | 0 | 0.0 | 1570 | 0 | 0.0 |
| 65 | | Textile yarn, fabrics, made-up articles | 217575 | 9111 | 4.2 | 258841 | 12833 | 5.0 |
| | 652 | Woven cotton fabrics | 24048 | 875 | 3.6 | 28364 | 1050 | 3.7 |
| | 653 | Woven fabrics of man made fibres | 31638 | 1909 | 6.0 | 36220 | 1987 | 5.5 |
| | 654 | Woven fabrics other than of cotton or man-made fibres | 8907 | 396 | 4.4 | 9907 | 518 | 5.2 |
| 66 | 667 | Pearls, precious and semi-precious stones | 89106 | 16969 | 19.0 | 127526 | 22589 | 17.7 |
| 67 | | Iron and steel | 318363 | 6471 | 2.0 | 415384 | 10612 | 2.6 |
| 69 | | Manufactures of metals n.e.s. | 264558 | 3374 | 1.3 | 301517 | 4169 | 1.4 |
| 71 | | Power-generating machinery & equipment | 285862 | 2286 | 0.8 | 330550 | 2335 | 0.7 |
| 72 | | Machinery specialized for particular industries | 286155 | 1889 | 0.7 | 365098 | 2231 | 0.6 |
| 73 | | Metal-working machinery | 59565 | 329 | 0.6 | 69410 | 327 | 0.5 |
| 74 | | General industrial machinery & equipment & machine parts thereof | 464352 | 3144 | 0.7 | 529021 | 3886 | 0.7 |
| 75 | | Office machinery and ADP equipment | 479054 | 0 | 0.0 | 576245 | 0 | 0.0 |
| 76 | | Telecommunication and sound recording and reproducing apparatus and equipment | 542434 | 4344 | 0.8 | 625098 | 2408 | 0.4 |
| 77 | | Electrical machinery, apparatus and appliances | 973103 | 4104 | 0.4 | 1248433 | 5522 | 0.4 |
| 78 | | Road vehicles (including air cushion vehicles) | 824433 | 5410 | 0.7 | 1062149 | 8746 | 0.8 |
| 79 | | Other transport equipment | 291394 | 4881 | 1.7 | 330994 | 5804 | 1.8 |
| 84 | | Articles of apparel and clothing accessories | 332366 | 12005 | 3.6 | 370111 | 11229 | 3.0 |
| | | **Total Exports** | **12367464** | **176765** | **1.4** | **15060481** | **220409** | **1.5** |

Source : United Nations: 2009 International Trade Statistics Year Book, UN-2010.

Note : A Zero in India's share means negilible or no share at all. n.e.s : not elsewhere specified.

## 7.6 : INDEX NUMBERS OF FOREIGN TRADE

(Base : 1999-2000=100)

| Year | Unit Value Index | | Volume Index | | Terms of trade | | |
|---|---|---|---|---|---|---|---|
| | Exports | Imports | Exports | Imports | Gross | Net | Income |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| 2000-01 | 102 | 109 | 125 | 99 | 79 | 94 | 118 |
| 2001-02 | 103 | 112 | 126 | 103 | 82 | 92 | 116 |
| 2002-03 | 106 | 128 | 150 | 109 | 73 | 83 | 125 |
| 2003-04 | 114 | 132 | 161 | 128 | 80 | 86 | 138 |
| 2004-05 | 131 | 157 | 179 | 150 | 84 | 83 | 149 |
| 2005-06 | 139 | 179 | 206 | 174 | 84 | 78 | 161 |
| 2006-07 | 158 | 206 | 227 | 191 | 84 | 77 | 175 |
| 2007-08 | 166 | 210 | 245 | 218 | 89 | 79 | 194 |
| 2008-09 | 194 | 239 | 267 | 262 | 98 | 81 | 216 |
| 2009-10 | 196 | 215 | 264 | 288 | 109 | 91 | 240 |
| 2010-11 | 186 | 239 | 378 | 317 | 84 | 78 | 295 |

Source : DGCI&S, Kolkata.

Note:- (i) Net terms of trade (NTT), i.e., the ratio of overall export unit value index to similar import index.
(ii) Gross terms of trade, i .e., the ratio of overall import quantum Index to similar export index.
(iii) Income terms of trade = (NTT x QIE)/100.
(iv) QIE= Quantum Index of Exports.

## 8.1(A) : OVERALL EXTERNAL ASSISTANCE

( ₹ crore)

| | Loans | Grants | Total |
|---|---|---|---|
| 1 | 2 | 3 | (2+3) |
| **A. AUTHORISATION** | | | |
| 1981-82 | 2766.5 | 207.4 | 2973.9 |
| 1982-83 | 2549.4 | 423.3 | 2972.7 |
| 1983-84 | 1700.8 | 386.9 | 2087.7 |
| 1984-85 | 4409.3 | 470.7 | 4880.0 |
| 1985-86 | 5337.0 | 313.4 | 5650.4 |
| 1986-87 | 5730.0 | 429.5 | 6159.5 |
| 1987-88 | 8203.1 | 1062.2 | 9265.3 |
| 1988-89 | 12855.6 | 214.2 | 13069.8 |
| 1989-90 | 10105.8 | 720.2 | 10826.0 |
| 1990-91 | 7601.3 | 522.1 | 8123.4 |
| 1991-92 | 11805.8 | 901.8 | 12707.6 |
| 1992-93 | 13082.1 | 1011.7 | 14093.8 |
| 1993-94 | 11618.8 | 2415.1 | 14033.9 |
| 1994-95 | 12384.3 | 1075.8 | 13460.1 |
| 1995-96 | 10833.2 | 1330.0 | 12163.2 |
| 1996-97 | 14208.8 | 2932.6 | 17141.4 |
| 1997-98 | 14865.0 | 2101.0 | 16966.0 |
| 1998-99 | 8320.8 | 209.8 | 8530.6 |
| 1999-00 | 17703.7 | 2615.3 | 20319.0 |
| 2000-01 | 17184.1 | 940.6 | 18124.7 |
| 2001-02 | 21630.0 | 3465.0 | 25095.0 |
| 2002-03 | 19875.7 | 1296.1 | 21171.8 |
| 2003-04 | 14754.4 | 2350.7 | 17105.1 |
| 2004-05 | 22746.1 | 3071.1 | 25817.2 |
| 2005-06 | 17309.1 | 1628.8 | 18937.9 |
| 2006-07 | 28271.0 | 3518.9 | 31789.9 |
| 2007-08 | 28988.4 | 4294.4 | 33282.8 |
| 2008-09 | 28283.4 | 1242.5 | 29525.9 |
| 2009-10 | 48968.8 | 957.6 | 49926.4 |
| 2010-11 | 35895.1 | 1536.5 | 37431.6 |
| **2011-12 P** | **36873.0** | **891.6** | **37764.6** |
| **B. UTILIZATION** | | | |
| 1981-82 | 1519.4 | 345.5 | 1864.9 |
| 1982-83 | 1909.2 | 342.8 | 2252.0 |
| 1983-84 | 1962.4 | 303.4 | 2265.8 |
| 1984-85 | 1962.2 | 397.2 | 2359.4 |
| 1985-86 | 2493.1 | 442.9 | 2936.0 |
| 1986-87 | 3175.7 | 429.3 | 3605.0 |
| 1987-88 | 4574.4 | 477.5 | 5051.9 |
| 1988-89 | 4738.6 | 565.8 | 5304.4 |
| 1989-90 | 5137.8 | 664.7 | 5802.5 |
| 1990-91 | 6170.0 | 534.3 | 6704.3 |
| 1991-92 | 10695.9 | 919.1 | 11615.0 |
| 1992-93 | 10102.2 | 879.6 | 10981.8 |
| 1993-94 | 10895.4 | 885.6 | 11781.0 |
| 1994-95 | 9964.5 | 916.0 | 10880.5 |
| 1995-96 | 9958.6 | 1063.6 | 11022.2 |
| 1996-97 | 10892.9 | 1085.6 | 11978.5 |
| 1997-98 | 10823.4 | 921.3 | 11744.7 |
| 1998-99 | 12343.4 | 895.5 | 13238.9 |
| 1999-00 | 13330.7 | 1073.9 | 14404.6 |
| 2000-01 | 13527.1 | 727.2 | 14254.3 |
| 2001-02 | 16111.7 | 1447.6 | 17559.3 |
| 2002-03 | 13898.3 | 1835.8 | 15734.1 |
| 2003-04 | 15271.0 | 2073.4 | 17344.4 |
| 2004-05 | 14660.9 | 2490.7 | 17151.6 |
| 2005-06 | 16097.8 | 2790.6 | 18888.4 |
| 2006-07 | 16890.6 | 2528.4 | 19419.0 |
| 2007-08 | 17177.7 | 2673.7 | 19851.4 |
| 2008-09 | 24089.9 | 2803.8 | 26893.7 |
| 2009-10 | 27617.8 | 3121.2 | 30739.0 |
| 2010-11 | 35098.5 | 2780.3 | 37878.0 |
| **2011-12 P** | **21254.4** | **2389.9** | **23644.3** |

Source : Aid Accounts and Audit Division, Deptt. of Economic Affairs, Ministry of Finance. P : Provisional (Up to 05.01.2012)

Notes :
1. Figures of authorization have been arrived at by applying the average exchange rate of the rupee with individual donor currencies. Figures of utilization are at current rates applicable on the date of transaction.
2. Figures of authorization and utilization include loans and grants on both Government and non-Government accounts.
3. Totals may not tally due to rounding off.

## 8.1(B) : OVERALL EXTERNAL ASSISTANCE

(US$ million)

| | Loans | Grants | Total |
|---|---|---|---|
| 1 | 2 | 3 | (2+3) |
| **A. AUTHORISATION** | | | |
| 1981-82 | 3084.9 | 231.3 | 3316.2 |
| 1982-83 | 2637.5 | 437.9 | 3075.4 |
| 1983-84 | 1644.8 | 374.2 | 2019.0 |
| 1984-85 | 3708.7 | 395.9 | 4104.6 |
| 1985-86 | 4362.1 | 256.2 | 4618.3 |
| 1986-87 | 4484.2 | 336.1 | 4820.3 |
| 1987-88 | 6326.7 | 819.2 | 7145.9 |
| 1988-89 | 8877.0 | 147.9 | 9024.9 |
| 1989-90 | 6069.9 | 432.6 | 6502.5 |
| 1990-91 | 4236.4 | 291.0 | 4527.4 |
| 1991-92 | 4766.0 | 364.1 | 5130.1 |
| 1992-93 | 4275.7 | 330.7 | 4606.4 |
| 1993-94 | 3717.5 | 772.7 | 4490.2 |
| 1994-95 | 3958.2 | 343.8 | 4302.0 |
| 1995-96 | 3249.8 | 399.0 | 3648.8 |
| 1996-97 | 4000.4 | 825.6 | 4826.0 |
| 1997-98 | 4006.8 | 566.3 | 4573.1 |
| 1998-99 | 1979.2 | 49.9 | 2029.1 |
| 1999-00 | 4091.4 | 604.4 | 4695.8 |
| 2000-01 | 3769.3 | 206.3 | 3975.6 |
| 2001-02 | 4438.7 | 711.1 | 5149.8 |
| 2002-03 | 4183.5 | 244.4 | 4427.9 |
| 2003-04 | 3300.8 | 525.9 | 3826.7 |
| 2004-05 | 5212.2 | 703.7 | 5915.9 |
| 2005-06 | 3912.2 | 368.1 | 4280.4 |
| 2006-07 | 6209.8 | 773.0 | 6982.8 |
| 2007-08 | 7182.2 | 1064.0 | 8246.1 |
| 2008-09 | 6183.2 | 271.6 | 6454.9 |
| 2009-10 | 10318.0 | 201.8 | 10519.8 |
| 2010-11 | 7870.1 | 336.9 | 8207.0 |
| **2011-12 P** | **7829.9** | **189.3** | **8019.2** |
| **B. UTILIZATION** | | | |
| 1981-82 | 1694.2 | 385.3 | 2079.5 |
| 1982-83 | 1975.2 | 354.6 | 2329.8 |
| 1983-84 | 1897.9 | 293.4 | 2191.3 |
| 1984-85 | 1650.4 | 334.1 | 1984.5 |
| 1985-86 | 2037.7 | 362.0 | 2399.7 |
| 1986-87 | 2485.3 | 336.0 | 2821.3 |
| 1987-88 | 3528.0 | 368.2 | 3896.2 |
| 1988-89 | 3272.1 | 390.7 | 3662.8 |
| 1989-90 | 3086.0 | 399.2 | 3485.2 |
| 1990-91 | 3438.7 | 297.8 | 3736.5 |
| 1991-92 | 4317.9 | 371.0 | 4688.9 |
| 1992-93 | 3301.8 | 287.5 | 3589.3 |
| 1993-94 | 3486.0 | 283.4 | 3769.4 |
| 1994-95 | 3184.8 | 292.7 | 3477.5 |
| 1995-96 | 2987.4 | 319.1 | 3306.4 |
| 1996-97 | 3066.8 | 305.6 | 3372.4 |
| 1997-98 | 2917.4 | 248.3 | 3165.7 |
| 1998-99 | 2936.0 | 213.0 | 3149.0 |
| 1999-00 | 3080.8 | 248.2 | 3329.0 |
| 2000-01 | 2967.2 | 159.5 | 3126.7 |
| 2001-02 | 3306.3 | 297.1 | 3603.4 |
| 2002-03 | 2946.6 | 386.6 | 3333.2 |
| 2003-04 | 3416.3 | 463.8 | 3880.1 |
| 2004-05 | 3359.5 | 570.7 | 3930.2 |
| 2005-06 | 3607.0 | 625.3 | 4232.3 |
| 2006-07 | 3918.0 | 586.5 | 4265.5 |
| 2007-08 | 4280.5 | 666.3 | 4946.8 |
| 2008-09 | 4769.3 | 555.1 | 5324.4 |
| 2009-10 | 6130.5 | 692.8 | 6823.3 |
| 2010-11 | 7678.5 | 608.2 | 8286.8 |
| **2011-12 P** | **3995.2** | **449.2** | **4444.4** |

Source : Aid Accounts and Audit Division, Deptt. of Economic Affairs, Ministry of Finance. P : Provisional (Up to 05.01.2012)

Note : 1. Figures in this table are converted from the preceding table 8.1(A) based on the respective Rupee-US dollar rate.
2. Totals may not tally due to rounding off.

## 8.2(A) : AUTHORIZATION OF EXTERNAL ASSISTANCE BY SOURCE

( ₹ crore)

| Source and type of assistance | 1980-81 | 1990-91 | 2000-01 | 2006-07 | 2007-08 | 2008-09 | 2009-10 | 2010-11 | 2011-12P |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| **I. Consortium Members** | | | | | | | | | |
| (a) Loans | 2614.9 | 6787.8 | 11918.5 | 21150.1 | 22206.9 | 19953.6 | 43501.0 | 28729.7 | 30835.7 |
| (b) Grants | 68.8 | 516.8 | 923.0 | 2596.4 | 3928.2 | 6.2 | 868.8 | 1185.1 | 47.7 |
| Total | 2683.7 | 7304.6 | 12841.5 | 23746.5 | 26135.1 | 19959.8 | 44369.8 | 29914.8 | 30883.4 |
| **Country-wise Distribution** | | | | | | | | | |
| **(i) Austria** | | | | | | | | | |
| Loans | 1.7 | ... | ... | ... | ... | ... | ... | ... | ... |
| **(ii) Belgium** | | | | | | | | | |
| (a) Loans | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| (b) Grants | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Total | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| **(iii) Canada** | | | | | | | | | |
| (a) Loans | 65.8 | ... | ... | ... | ... | ... | ... | ... | ... |
| (b) Grants | 4.9 | ... | 20.6 | ... | ... | ... | ... | ... | ... |
| Total | 70.7 | ... | 20.6 | ... | ... | ... | ... | ... | ... |
| **(iv) Denmark** | | | | | | | | | |
| Grants | ... | 7.4 | 15.6 | ... | ... | ... | ... | ... | ... |
| **(v) France** | ... | ... | ... | ... | ... | ... | | | |
| Loans | 182.0 | 1.3 | ... | ... | ... | ... | ... | ... | ... |
| **(vi) Germany** | | | | | | | | | |
| (a) Loans | 215.2 | 1069.3 | 187.7 | 116.1 | 1034.84 | 762.3 | 2069.2 | 1504.0 | 1646.1 |
| (b) Grants | ... | 11.4 | 5.5 | 152.6 | ... | ... | 60.4 | 12.0 | ... |
| Total | 215.2 | 1080.7 | 193.2 | 268.7 | 1034.84 | 762.3 | 2129.6 | 1516.1 | 1646.1 |
| **(vii) Italy** | | | | | | | | | |
| Loans | ... | 57.1 | ... | ... | ... | ... | ... | ... | ... |
| **(viii) Japan** | | | | | | | | | |
| (a) Loans | 46.6 | 1640.9 | 784.1 | 7009.1 | 8247.33 | 10445.3 | 11151.4 | 2557.4 | 7934.1 |
| (b) Grants | 15.0 | 61.6 | 2.2 | 2409.4 | ... | ... | 7.5 | 41.9 | ... |
| Total | 61.6 | 1702.5 | 786.3 | 9418.5 | 8247.33 | 10445.3 | 11158.9 | 2599.4 | 7934.1 |
| **(ix) Netherlands** | | | | | | | | | |
| (a) Loans | 67.7 | 101 | ... | ... | ... | ... | ... | ... | ... |
| (b) Grants | 22.1 | 126.2 | 6.5 | ... | ... | ... | ... | ... | ... |
| Total | 89.8 | 227.2 | 6.5 | ... | ... | ... | ... | ... | ... |
| **(x) Sweden** | | | | | | | | | |
| Grants | ... | 19.4 | ... | ... | ... | ... | ... | ... | ... |
| **(xi) U.K.** | | | | | | | | | |
| Grants | ... | 253.2 | 474.7 | ... | 3895.78 | ... | 379.2 | 905.3 | ... |
| **(xii) U.S.A.** | | | | | | | | | |
| (a) Loans | 135.0 | ... | ... | ... | ... | ... | ... | 0.0 | ... |
| (b) Grants | 26.8 | 37.6 | 0.8 | ... | ... | ... | ... | 156.6 | ... |
| Total | 161.8 | 37.6 | 0.8 | ... | ... | ... | ... | 156.6 | ... |
| **(xiii) I.B.R.D.** | | | | | | | | | |
| (a) Loans | 362.2 | 2219.0 | 6816.8 | 6842.6 | 7777.96 | 3247.7 | 27684.3 | 8237.1 | 13779.9 |
| (b) Grants | ... | ... | 391.7 | 11.5 | 9.47 | 3.6 | 421.7 | 60.6 | 47.7 |
| Total | 362.2 | 2219.0 | 7208.5 | 6854.1 | 7787.43 | 3251.3 | 28106.0 | 8297.7 | 13827.7 |
| **(xiv) I.D.A.** | | | | | | | | | |
| (a) Loans | 1538.7 | 1698.4 | 4129.9 | 7182.3 | 5146.79 | 5498.4 | 2596.2 | 16431.2 | 7475.6 |
| (b) Grants | ... | ... | 5.4 | 23.0 | 22.92 | 2.6 | 0.0 | 8.7 | ... |
| Total | 1538.7 | 1698.4 | 4135.3 | 7205.2 | 5169.71 | 5500.9 | 2596.2 | 16439.8 | 7475.6 |

Contd...

## 8.2(A) : AUTHORIZATION OF EXTERNAL ASSISTANCE BY SOURCE (Concl.)

(₹ crore)

| Source and type of assistance | 1980-81 | 1990-91 | 2000-01 | 2006-07 | 2007-08 | 2008-09 | 2009-10 | 2010-11 | 2011-12[P] |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| **II. Russia Fed. & East European Countries** | | | | | | | | | |
| Loans | 485.7 | … | … | … | … | … | … | … | … |
| **Country-wise Distribution** | | | | | | | | | |
| **(i) Russia Fed.** | | | | | | | | | |
| Loans | 485.7 | … | … | … | … | … | … | … | … |
| **III. Others** | | | | | | | | | |
| (a) Loans | 670.6 | 813.5 | 5265.6 | 7120.9 | 6781.46 | 8329.8 | 5467.8 | 7165.3 | 6037.3 |
| (b) Grants | 7.0 | 5.3 | 17.6 | 922.5 | 366.20 | 1236.3 | 88.8 | 351.4 | 843.8 |
| Total | 677.6 | 818.8 | 5283.2 | 8043.4 | 7147.66 | 9566.1 | 5556.6 | 7516.8 | 6881.2 |
| **(i) Switzerland** | | | | | | | | | |
| Grants | … | 5.3 | … | … | … | … | … | … | … |
| **(ii) European Economic Community** | | | | | | | | | |
| Grants | … | … | … | 844.3 | … | 1147.5 | … | 4.3 | … |
| **(iii) O.P.E.C. Fund** | | | | | | | | | |
| Loans | 39.8 | 11.6 | … | … | … | 137.2 | … | … | … |
| **(iv) Saudi Arab Fund for Development** | | | | | | | | | |
| Loans | … | … | … | … | … | … | … | … | … |
| **(v) Kuwait Fund for Arabic Economic Development** | | | | | | | | | |
| Grants | 7.0 | … | … | … | … | … | … | … | … |
| **(vi) IFAD (International Fund for Agricultural Development** | | | | | | | | | |
| (a) Loans | 13.9 | … | … | 186.7 | 65.19 | 276.9 | 197.9 | 87.9 | … |
| (b) Grants | … | … | … | 64.5 | 0.40 | 2.6 | 4.94 | 0.0 | … |
| Total | 13.9 | … | … | 251.2 | 65.59 | 279.5 | 202.8 | 87.9 | … |
| **(viii) IMF Trust Fund** | | | | | | | | | |
| Loans | 534.0 | … | … | … | … | … | … | … | … |
| **(ix) International Sugar Org.** | | | | | | | | | |
| Loans | … | … | … | … | … | … | … | … | … |
| **(x) ADB** | | | | | | | | | |
| (a) Loans | … | 801.9 | 5265.6 | 6934.2 | 6716.27 | 7915.7 | 5269.9 | 7077.5 | 6037.3 |
| (b) Grants | … | … | … | … | … | … | 0.0 | 0.0 | … |
| Total | … | 801.9 | 5265.6 | 6934.2 | 6716.27 | 7945.7 | 5269.9 | 7077.5 | 6037.3 |
| **(xi) Spain** | | | | | | | | | |
| (a) Loans | … | … | … | … | … | … | … | … | … |
| (b) Grants | … | … | … | … | … | … | … | … | … |
| Total | … | … | … | … | … | … | … | … | … |
| **(xii) Norway** | | | | | | | | | |
| (a) Loans | … | … | … | … | … | … | … | … | … |
| (b) Grants | … | … | … | … | … | … | … | … | … |
| Total | … | … | … | … | … | … | … | … | … |
| **(xiii) Australia** | | | | | | | | | |
| (a) Loans | … | … | … | … | … | … | … | … | … |
| (b) Grants | … | … | … | … | … | … | … | … | … |
| Total | … | … | … | … | … | … | … | … | … |
| **(xiv) Other International Institutions[a]** | | | | | | | | | |
| Grants | … | … | … | 13.7 | 365.8 | 86.1 | 83.9 | 347.1 | 843.8 |
| **Grand Total** | **3847.0** | **8123.4** | **18124.7** | **31789.9** | **33282.8** | **29525.9** | **49926.4** | **37431.6** | **37764.6** |
| **(a) Loans** | **3771.2** | **7601.3** | **17184.1** | **28271.0** | **28988.4** | **28283.4** | **48968.8** | **35895.1** | **36873.0** |
| **(b) Grants** | **75.8** | **522.1** | **940.6** | **3518.9** | **4294.4** | **1242.5** | **957.5** | **1536.5** | **891.6** |

Source : Aid Accounts and Audit Division, Deptt. of Economic Affairs, Ministry of Finance.
… Nil or negligible P : Provisional (Upto 05.01. 2012)
[a] Other International Institutions include UNDP, UNFPA, Global Fund, IDF(WB),UN-FAO and UPU (Universal Postal Union).

Note : 1. Figures of authorization of external assistance include agreements signed on Government and non-Government accounts.
2. Figures may not tally due to rounding off.

## 8.2(B) : AUTHORIZATION OF EXTERNAL ASSISTANCE BY SOURCE

(US$ million)

| Source and type of assistance | 1980-81 | 1990-91 | 2000-01 | 2006-07 | 2007-08 | 2008-09 | 2009-10 | 2010-11 | 2011-12[P] |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| **I. Consortium Members** | | | | | | | | | |
| (a) Loans | 3306.7 | 3783 | 2614.3 | 4645.7 | 5502.0 | 4362.2 | 9165.9 | 6307.8 | 6547.9 |
| (b) Grants | 87.0 | 288.0 | 202.5 | 570.3 | 973.2 | 1.4 | 183.1 | 260.2 | 10.1 |
| Total | 3393.7 | 4071.0 | 2816.8 | 5216.0 | 6475.2 | 4363.6 | 9349.0 | 6568.0 | 6558.0 |
| **Country-wise Distribution** | | | | | | | | | |
| **(i) Austria** | | | | | | | | | |
| Loans | 2.1 | ... | ... | ... | ... | ... | ... | ... | ... |
| **(ii) Belgium** | | | | | | | | | |
| (a) Loans | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| (b) Grants | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Total | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| **(iii) Canada** | | | | | | | | | |
| (a) Loans | 83.2 | ... | ... | ... | ... | ... | ... | ... | ... |
| (b) Grants | 6.2 | ... | 20.6 | ... | ... | ... | ... | ... | ... |
| Total | 89.4 | ... | 20.6 | ... | ... | ... | ... | ... | ... |
| **(iv) Denmark** | | | | | | | | | |
| Grants | ... | 4.1 | 15.6 | ... | ... | ... | ... | ... | ... |
| **(v) France** | | | | | | | | | |
| Loans | 230.1 | 0.7 | ... | ... | ... | ... | ... | ... | ... |
| **(vi) Germany** | | | | | | | | | |
| (a) Loans | 272.1 | 595.9 | 187.7 | 25.5 | 256.4 | 166.7 | 436.0 | 330.2 | 349.5 |
| (b) Grants | ... | 6.4 | 5.5 | 33.5 | ... | ... | 12.7 | 2.6 | ... |
| Total | 272.1 | 602.3 | 193.2 | 59.0 | 256.4 | 166.7 | 448.7 | 332.9 | 349.5 |
| **(vii) Italy** | | | | | | | | | |
| Loans | ... | 31.8 | ... | ... | ... | ... | ... | ... | ... |
| **(viii) Japan** | | | | | | | | | |
| (a) Loans | 58.9 | 914.5 | 784.1 | 1539.6 | 2043.4 | 2283.5 | 2349.7 | 561.5 | 1684.8 |
| (b) Grants | 19.0 | 34.3 | 2.2 | 529.2 | ... | ... | 1.6 | 9.2 | ... |
| Total | 77.9 | 948.8 | 786.3 | 2068.8 | 2043.4 | 2283.5 | 2351.2 | 570.7 | 1684.8 |
| **(ix) Netherlands** | | | | | | | | | |
| (a) Loans | 85.6 | 56.3 | ... | ... | ... | ... | 1.6 | ... | ... |
| (b) Grants | 27.9 | 70.3 | 6.5 | ... | ... | ... | ... | ... | ... |
| Total | 113.5 | 126.6 | 6.5 | ... | ... | ... | 1.6 | ... | ... |
| **(x) Sweden** | | | | | | | | | |
| Grants | ... | 10.8 | ... | ... | ... | ... | ... | ... | ... |
| **(xi) U.K.** | | | | | | | | | |
| Grants | ... | 141.1 | 474.7 | ... | 965.2 | ... | 79.9 | 198.8 | ... |
| **(xii) U.S.A.** | | | | | | | | | |
| (a) Loans | 170.7 | ... | ... | ... | ... | ... | ... | ... | ... |
| (b) Grants | 33.9 | 21.0 | 0.2 | ... | ... | ... | ... | 34.4 | ... |
| Total | 204.6 | 21.0 | 0.2 | ... | ... | ... | ... | 34.4 | ... |
| **(xiii) I.B.R.D.** | | | | | | | | | |
| (a) Loans | 458.0 | 1236.7 | 1495.3 | 1503.0 | 1927.1 | 710.0 | 5833.2 | 1808.5 | 2926.1 |
| (b) Grants | ... | ... | 85.9 | 2.5 | 2.4 | 0.8 | 88.9 | 13.3 | 10.1 |
| Total | 458.0 | 1236.7 | 1581.2 | 1505.5 | 1929.4 | 710.8 | 5922.1 | 1821.8 | 2936.3 |
| **(xiv) I.D.A.** | | | | | | | | | |
| (a) Loans | 1945.8 | 946.6 | 905.9 | 1577.6 | 1275.2 | 1202.0 | 547.0 | 3607.6 | 1587.4 |
| (b) Grants | ... | ... | 1.2 | 5.0 | 5.7 | 0.6 | ... | 1.9 | ... |
| Total | 1945.8 | 946.6 | 907.1 | 1582.7 | 1280.9 | 1202.6 | 547.0 | 3609.5 | 1587.4 |
| **II. Russia Fed. & East European Countries** | | | | | | | | | |
| Loans | 614.2 | ... | ... | ... | ... | ... | ... | ... | ... |

Contd...

## 8.2(B) : AUTHORIZATION OF EXTERNAL ASSISTANCE BY SOURCE (Concl.)

(US$ million)

| Source and type of assistance | 1980-81 | 1990-91 | 2000-01 | 2006-07 | 2007-08 | 2008-09 | 2009-10 | 2010-11 | 2011-12[P] |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| **Country-wise Distribution** | | | | | | | | | |
| **(i) Russia Fed.** | | | | | | | | | |
| Loans | 614.2 | … | … | … | … | … | … | … | … |
| **III. Others** | | | | | | | | | |
| (a) Loans | 848.0 | 453.4 | 1155.0 | 1564.1 | 1680.2 | 1821.0 | 1152.1 | 1573.2 | 1282.0 |
| (b) Grants | 8.9 | 3.0 | 3.9 | 202.6 | 90.7 | 270.3 | 18.7 | 77.2 | 179.2 |
| Total | 856.9 | 456.4 | 1158.9 | 1766.8 | 1770.9 | 2091.3 | 1170.8 | 1650.4 | 1461.2 |
| **(i) Switzerland** | | | | | | | | | |
| Grants | … | 3.0 | … | … | … | … | … | … | … |
| **(ii) European Economic Community** | | | | | | | | | |
| Grants | … | … | … | 185.5 | … | 250.9 | … | … | … |
| **(iii) O.P.E.C. Fund** | | | | | | | … | 0.9 | |
| Loans | 50.3 | 6.5 | … | … | … | 30.0 | … | … | … |
| **(iv) Saudi Arab Fund for Development** | | | | | | | | | |
| Loans | … | … | … | … | … | … | … | … | … |
| **(v) Kuwait Fund for Arabic Economic Development** | | | | | | | | | |
| Grants | 8.9 | … | … | … | … | … | … | … | … |
| **(vi) IFAD (International Fund for Agricultural Development)** | | | | | | | | | |
| (a) Loans | 17.6 | … | … | 41.0 | 16.2 | 60.5 | 41.7 | 19.3 | … |
| (b) Grants | … | … | … | 14.2 | 0.1 | 0.6 | 1.04 | 0 | … |
| Total | 17.6 | … | … | 55.2 | 16.3 | 61.1 | 42.7 | 19.3 | … |
| **(viii) IMF Trust Fund** | | | | | | | | | |
| Loans | 675.3 | … | … | … | … | … | … | … | … |
| **(ix) International Sugar Org.** | | | | | | | | | |
| Loans | … | … | … | … | … | … | … | … | … |
| **(x) ADB** | | | | | | | | | |
| (a) Loans | … | 446.9 | 1155.0 | 1523.1 | 1664.0 | 1730.5 | 1110.4 | 1553.9 | 1282.0 |
| (b) Grants | … | … | … | … | … | … | … | … | … |
| Total | … | 446.9 | 1155.0 | 1523.1 | 1664.0 | 1730.5 | 1110.4 | 1553.9 | 1282.0 |
| **(xi) Spain** | | | | | | | | | |
| (a) Loans | … | … | … | … | … | … | … | … | … |
| (b) Grants | … | … | … | … | … | … | … | … | … |
| Total | … | … | … | … | … | … | … | … | … |
| **(xii) Norway** | | | | | | | | | |
| (a) Loans | … | … | … | … | … | … | … | … | … |
| (b) Grants | … | … | … | … | … | … | … | … | … |
| Total | … | … | … | … | … | … | … | … | … |
| **(xiii) Australia** | | | | | | | | | |
| (a) Loans | … | … | … | … | … | … | … | … | … |
| (b) Grants | … | … | … | … | … | … | … | … | … |
| Total | … | … | … | … | … | … | … | … | … |
| **(xiv) Other International Institutions[a]** | | | | | | | | | |
| Grants | … | … | … | 3.0 | 90.6 | 18.8 | 17.7 | 76.2 | 179.2 |
| **Grand Total** | **4864.8** | **4527.4** | **3975.6** | **6982.8** | **8246.1** | **6454.9** | **10519.7** | **8218.4** | **8019.2** |
| **(a) Loans** | **4768.9** | **4236.4** | **3769.3** | **6209.8** | **7182.2** | **6183.2** | **10318.0** | **7881.0** | **7829.9** |
| **(b) Grants** | **95.9** | **291.0** | **206.3** | **773.0** | **1064.0** | **271.6** | **201.8** | **337.4** | **189.3** |

Source : Aid Accounts and Audit Division, Deptt. of Economic Affairs, Ministry of Finance.

… Nil or negligible P : Provisional (Upto 05.01. 2012)

[a] Other International Institutions include UNDP, UNFPA, Global Fund, IDF(WB), UN-FAO and UPU (Universal Postal Union).

Note : 1. Figures in this table are converted from the preceding table 8.2(A) based on the respective Rupee-US dollar rates.

2. Figures may not tally due to rounding off.

## 8.3(A) : UTILIZATION OF EXTERNAL ASSISTANCE BY SOURCE

(₹ crore)

| Source and type of assistance | 1980-81 | 1990-91 | 2000-01 | 2006-07 | 2007-08 | 2008-09 | 2009-10 | 2010-11 | 2011-12P |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| **I. Consortium Members** | | | | | | | | | |
| (a) Loans | 1687.1 | 5383.5 | 11168.6 | 122468.4 | 12256.6 | 16845.3 | 21001.5 | 27287.4 | 16137.3 |
| (b) Grants | 311.9 | 413.0 | 634.0 | 1650.9 | 1797.7 | 1883.8 | 1819.5 | 2018.5 | 1564.6 |
| Total | 1999.0 | 5796.5 | 11802.6 | 124119.4 | 14054.2 | 18729.1 | 22821.0 | 29305.9 | 17701.8 |
| **Country-wise Distribution** | | | | | | | | | |
| **(i) Austria** | | | | | | | | | |
| (a) Loans | 2.0 | 18.7 | … | … | … | … | … | … | … |
| (b) Grants | 0.6 | … | … | … | … | … | … | … | … |
| Total | 2.6 | 18.7 | … | … | … | … | … | … | … |
| **(ii) Belgium** | | | | | | | | … | … |
| Loans | 5.5 | … | … | … | … | … | … | … | … |
| **(iii) Canada** | | | | | | | | | |
| (a) Loans | 21.3 | … | … | … | … | … | … | … | … |
| (b) Grants | … | 15.8 | 2.9 | 2.0 | … | … | … | … | … |
| Total | 21.3 | 15.8 | 2.9 | 2.0 | … | … | … | … | … |
| **(iv) Denmark** | | | | | | | | | |
| (a) Loans | 2.9 | 0.1 | … | … | … | … | … | … | … |
| (b) Grants | … | 57.1 | 49.5 | -15.4 | -2.0 | … | … | … | … |
| Total | 2.9 | 57.2 | 49.5 | -15.4 | -2.0 | … | … | … | … |
| **(v) France** | | | | | | | | | |
| (a) Loans | 70.1 | 164.2 | 65.2 | 4.4 | 0.1 | 22.8 | … | … | … |
| (b) Grants | … | … | … | … | … | … | … | … | … |
| Total | 70.1 | 164.2 | 65.2 | 4.4 | 0.1 | 22.8 | … | … | … |
| **(vi) Germany** | | | | | | | | | |
| (a) Loans | 142.3 | 422.3 | 318.9 | 180.3 | 146.2 | 844.5 | 486.4 | 1076.9 | 1159.7 |
| (b) Grants | 1.2 | 0.4 | 67.8 | 213.3 | 99.0 | 98.6 | 78.0 | 276.2 | 97.1 |
| Total | 143.5 | 422.7 | 386.7 | 393.5 | 245.2 | 943.1 | 564.4 | 1353.1 | 1256.8 |
| **(vii) Italy** | | | | | | | | | |
| Loans | … | 10.6 | … | … | … | 1.9 | … | … | … |
| **(viii) Japan** | | | | | | | | | |
| (a) Loans | 62.0 | 861.3 | 2714 | 2125.3 | 3471.4 | 5861.5 | 6553.4 | 6582.2 | 5234.9 |
| (b) Grants | 28.2 | 33.6 | 15.8 | 53.5 | 6.6 | … | 2.6 | 1.5 | 1.2 |
| Total | 90.2 | 894.9 | 2729.8 | 2178.8 | 3478.0 | 5861.5 | 6556.0 | 6583.7 | 5236.1 |
| **(ix) Netherlands** | | | | | | | | | |
| (a) Loans | 72.5 | 125.3 | 49.5 | … | … | … | … | … | … |
| (b) Grants | 33.8 | 67.8 | 70.3 | 4.5 | -1.2 | … | … | … | … |
| Total | 106.3 | 193.1 | 70.3 | 4.5 | -1.2 | … | … | … | … |
| **(x) Sweden** | | | | | | | | … | … |
| (a) Loans | … | 164.8 | … | … | … | … | … | … | … |
| (b) Grants | 52.9 | 34.2 | … | … | … | … | … | … | … |
| Total | 52.9 | 199.0 | … | … | … | … | … | … | … |
| **(xi) U.K.** | | | | | | | | | |
| (a) Loans | 1.5 | … | … | … | … | … | … | … | … |
| (b) Grants | 195.2 | 181.7 | 307.3 | 1318.2 | 1599.3 | 1710.0 | 1707.4 | 1682.2 | 1385.4 |
| Total | 196.7 | 181.7 | 307.3 | 1318.2 | 1599.3 | 1710.0 | 1707.4 | 1682.2 | 1385.4 |
| **(xii) U.S.A.** | | | | | | | | | |
| (a) Loans | 82.4 | 34.5 | … | … | … | … | … | … | … |
| (b) Grants | … | 22.4 | 81.1 | 44.6 | 64.1 | 57.2 | 14.2 | 30.6 | 55.1 |
| Total | 82.4 | 56.9 | 81.1 | 44.6 | 64.1 | 57.2 | 14.2 | 30.6 | 55.1 |
| **(xiii) I.B.R.D.** | | | | | | | | | |
| (a) Loans | 138.8 | 2184.6 | 3222.4 | 4459.4 | 4391.0 | 4076.0 | 7472.1 | 14534.5 | 3188.2 |
| (b) Grants | … | … | 24.5 | 15.3 | 23.1 | 5.7 | 11.8 | 24.0 | 20.3 |
| Total | 138.8 | 2184.6 | 3246.9 | 4474.6 | 4414.1 | 4081.7 | 7483.8 | 14558.5 | 3208.5 |
| **(xiv) I.D.A.** | | | | | | | | | |
| (a) Loans | 522 | 1388.6 | 4848.1 | 4291.4 | 3263.1 | 5164.1 | 5566.6 | 4873.3 | 6531.3 |
| (b) Grants | 19.0 | … | 14.8 | 15.0 | 8.7 | 12.3 | 5.6 | 3.9 | 5.4 |
| Total | 541 | 1388.6 | 4862.9 | 4306.4 | 3271.8 | 5176.4 | 5572.2 | 4877.2 | 6536.7 |
| **(xv) IFAD (International Fund for Agricultural Development)** | | | | | | | | | |
| (a) Loans | 7.3 | 8.5 | 40.1 | 111.9 | 68.3 | 38.5 | 64.4 | 99.1 | 122.4 |
| (b) Grants | … | … | … | … | 29.9 | 10.6 | 14.1 | 0.3 | 5.5 |
| Total | 7.3 | 8.5 | 40.1 | 111.9 | 98.2 | 49.0 | 78.5 | 99.4 | 127.8 |
| **(xvi) IMF Trust Fund** | 537.5 | … | … | … | … | … | … | … | … |

Contd...

## 8.3(A) : UTILIZATION OF EXTERNAL ASSISTANCE BY SOURCE (Concl.)

(₹ crore)

| Source and type of assistance | 1980-81 | 1990-91 | 2000-01 | 2006-07 | 2007-08 | 2008-09 | 2009-10 | 2010-11 | 2011-12[P] |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| **II. Russia Fed.& East European Countries** | | | | | | | | | |
| Loans | 32.9 | 312.8 | 130.1 | 1407.7 | 984.9 | 874.5 | 923.0 | … | 23.2 |
| **Country-wise Distribution** | | | | | | | | | |
| **(i) Russia Federation.** | | | | | | | | | |
| Loans | 32.9 | 295.3 | 130.1 | 1407.7 | 984.9 | 874.5 | 923.0 | 220.5 | 23.2 |
| **(ii) Reps. of Czech & Slovak** | | | | | | | | | |
| Loans | … | 17.5 | … | … | … | … | … | … | … |
| **III. Others** | | | | | | | | | |
| (a) Loans | 45.3 | 473.7 | 2228.5 | 4422.2 | 4921.2 | 7244.5 | 6616.2 | 7811.1 | 5117.2 |
| (b) Grants | 84.6 | 121.3 | 93.2 | 877.4 | 876.0 | 920.1 | 1301.7 | 761.8 | 825.3 |
| Total | 129.9 | 595 | 2321.7 | 5299.7 | 5797.2 | 8164.6 | 7918.0 | 8572.9 | 5942.5 |
| **Country-wise Distribution** | | | | | | | | | |
| (i) Abu Dhabi Fund | | | | | | | | | |
| Loans | 2.0 | … | … | … | … | … | … | … | … |
| (ii) Switzerland | | | | | | | | | |
| (a) Loans | 0.3 | 18.6 | … | 1.5 | … | … | … | … | … |
| (b) Grants | 13.9 | 1.1 | … | 1.0 | … | -0.5 | … | … | … |
| Total | 14.2 | 19.7 | … | 2.6 | … | -0.5 | … | … | … |
| **(iii) Other International Institutions[a]** | | | | | | | | | |
| Grants | … | 48.9 | 50.0 | 375.1 | 557.11 | 583.0 | 889.7 | 492.4 | 611.8 |
| **(iv) European Economic Community** | | | | | | | | | |
| Grants | 63.7 | 51.2 | 36.3 | 394.4 | 131.76 | 239.6 | 315.97 | 269.0 | 208.1 |
| **(v) Oil Producing & Exporting Countries (OPEC)** | | | | | | | | | |
| Loans | 3.4 | 9.8 | 41.5 | … | … | 13.3 | 17.6 | 1.0 | 10.1 |
| **(vi) Saudi Arab Fund for Development** | | | | | | | | | |
| Loans | 13.0 | 29.7 | … | … | … | … | … | … | … |
| **(vii) Norway** | | | | | | | | | |
| (a) Loans | … | … | … | … | … | … | … | … | … |
| (b) Grants | … | 20.1 | 6.9 | … | … | … | … | … | … |
| Total | … | 20.1 | 6.9 | … | … | … | … | … | … |
| **(viii) Spain** | | | | | | | | | |
| Loans | … | 33.2 | … | … | … | … | … | … | … |
| **(ix) Kuwait Fund for Arabic Economic Development** | | | | | | | | | |
| (a) Loans | 8.6 | 1.3 | … | … | … | … | … | … | … |
| (b) Grants | 7.0 | … | … | … | … | … | … | … | … |
| Total | 15.6 | 1.3 | … | … | … | … | … | … | … |
| **(x) ADB** | | | | | | | | | |
| (a) Loans | … | 381.1 | 2146.9 | 4308.8 | 4836.0 | 7192.8 | 6534.3 | 7711.1 | 4984.7 |
| (b) Grants | … | … | … | 106.9 | 157.1 | 87.4 | 81.9 | … | … |
| Total | … | 381.1 | 2146.9 | 4415.7 | 4993.1 | 7280.2 | 6616.2 | 7711.1 | 4984.7 |
| **(xi) Australia** | | | | | | | | | |
| Loans | … | … | … | … | … | … | … | … | |
| **Grand Total** | **2161.8** | **6704.3** | **14254.3** | **19419.0** | **19851.4** | **26893.7** | **30739.0** | **37878.8** | **23644.3** |
| **(a) Loans** | **1765.3** | **6170** | **13527.1** | **16890.6** | **17177.7** | **24089.9** | **27617.8** | **35098.5** | **21254.4** |
| **(b) Grants** | **396.5** | **534.3** | **727.2** | **2528.4** | **2673.7** | **2803.8** | **3121.21** | **2780.3** | **2389.9** |

Source : Aid Accounts and Audit Division, Deptt. of Economic Affairs, Ministry of Finance.

… Nil or negligible P : Provisional (Upto 05.01.2012)

[a] Other International Institutions include UNICEF, UNDP, ILO, WHO, UNFPA, UNESCO, UPU, WFP, Global Fund, IDF (WB), UN-FAO and Ford Foundation.

Notes :
1. Utilization figures are exclusive of suppliers' credit and commercial borrowings.
2. Utilization of assistance is on Government and Non-Govt. accounts.
3. Authorization figures include agreement signed on Govt. and Non-Govt. accounts.
4. Figures may not tally due to rounding off.

## 8.3(B) : UTILIZATION OF EXTERNAL ASSISTANCE BY SOURCE

(US$ million)

| Source and type of assistance | 1980-81 | 1990-91 | 2000-01 | 2006-07 | 2007-08 | 2008-09 | 2009-10 | 2010-11 | 2011-12P |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| **I. Consortium Members** | | | | | | | | | |
| (a) Loans | 2133.4 | 3000.3 | 2449.8 | 2892.2 | 3054.2 | 3335.1 | 4661.8 | 6112.8 | 3033.3 |
| (b) Grants | 394.4 | 230.2 | 139.1 | 383.0 | 448.0 | 373.0 | 403.9 | 452.2 | 294.1 |
| Total | 2527.8 | 3230.5 | 2588.9 | 3275.2 | 3502.2 | 3708.0 | 5065.7 | 6564.9 | 3327.4 |
| **Country-wise Distribution** | | | | | | | | | |
| **(i) Austria** | | | | | | | | | |
| (a) Loans | 2.5 | 10.4 | ... | ... | ... | ... | ... | ... | ... |
| (b) Grants | 0.8 | ... | ... | ... | ... | ... | ... | ... | ... |
| Total | 3.3 | 10.4 | ... | ... | ... | ... | ... | ... | ... |
| **(ii) Belgium** | | | ... | ... | ... | ... | ... | ... | ... |
| Loans | 7.0 | ... | ... | ... | ... | ... | ... | ... | ... |
| **(iii) Canada** | | | | | | | | | |
| (a) Loans | 26.9 | ... | ... | ... | ... | ... | ... | ... | ... |
| (b) Grants | ... | 8.8 | 0.6 | ... | ... | ... | ... | ... | ... |
| Total | 26.9 | 8.8 | 0.6 | ... | ... | ... | ... | ... | ... |
| **(iv) Denmark** | | | | | | | | | |
| (a) Loans | 3.7 | 0.1 | ... | ... | ... | ... | ... | ... | ... |
| (b) Grants | ... | 31.8 | 10.9 | -3.6 | -0.5 | ... | ... | ... | ... |
| Total | 3.7 | 31.9 | 10.9 | -3.6 | -0.5 | ... | ... | ... | ... |
| **(v) France** | | | | | | | | | |
| (a) Loans | 88.6 | 91.5 | 14.3 | 1.0 | ... | 4.5 | ... | ... | ... |
| (b) Grants | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Total | 88.6 | 91.5 | 14.3 | 1.0 | ... | 4.5 | ... | ... | ... |
| **(vi) Germany** | | | | | | | | | |
| (a) Loans | 179.9 | 235.4 | 70 | 41.8 | 36.4 | 167.2 | 108.0 | 241.2 | 218.0 |
| (b) Grants | 1.5 | 0.2 | 14.9 | 49.5 | 24.7 | 19.5 | 17.3 | 61.9 | 18.3 |
| Total | 181.4 | 235.6 | 84.9 | 91.3 | 61.1 | 186.7 | 125.3 | 303.1 | 236.2 |
| **(vii) Italy** | | | | | | | | | |
| Loans | ... | 5.9 | ... | ... | ... | 0.4 | ... | ... | ... |
| **(viii) Japan** | | | | | | | | | |
| (a) Loans | 78.4 | 480 | 595.3 | 493.0 | 865.0 | 1160.5 | 1454.7 | 1474.5 | 984.0 |
| (b) Grants | 35.7 | 18.7 | 3.5 | 12.4 | 1.7 | ... | 0.6 | 0.3 | 0.2 |
| Total | 114.1 | 498.7 | 598.8 | 505.4 | 866.7 | 1160.5 | 1455.3 | 1474.9 | 984.2 |
| **(ix) Netherlands** | | | | | | | | | |
| (a) Loans | 91.7 | 69.8 | ... | ... | ... | ... | ... | ... | ... |
| (b) Grants | 42.7 | 37.8 | 15.4 | 1.1 | -0.3 | ... | ... | ... | ... |
| Total | 134.4 | 107.6 | 15.4 | 1.1 | -0.3 | ... | ... | ... | ... |
| **(x) Sweden** | | | | | | ... | ... | ... | ... |
| (a) Loans | ... | 91.8 | ... | ... | ... | ... | ... | ... | ... |
| (b) Grants | 66.9 | 19.1 | ... | ... | ... | ... | ... | ... | ... |
| Total | 66.9 | 110.9 | ... | ... | ... | ... | ... | ... | ... |
| **(xi) U.K.** | | | | | | | | | |
| (a) Loans | 1.9 | ... | ... | ... | ... | ... | ... | ... | ... |
| (b) Grants | 246.8 | 101.3 | 67.4 | 305.8 | 398.5 | 338.5 | 379.0 | 376.8 | 260.4 |
| Total | 248.7 | 101.3 | 67.4 | 305.8 | 398.5 | 338.5 | 379.0 | 376.8 | 260.4 |
| **(xii) U.S.A.** | | | | | | | | | |
| (a) Loans | 104.2 | 19.2 | ... | ... | ... | ... | ... | ... | ... |
| (b) Grants | ... | 12.5 | 17.8 | 10.3 | 16.0 | 11.3 | 3.1 | 6.8 | 10.4 |
| Total | 104.2 | 31.7 | 17.8 | 10.3 | 16.0 | 11.3 | 3.1 | 6.8 | 10.4 |
| **(xiii) I.B.R.D.** | | | | | | | | | |
| (a) Loans | 175.5 | 1217.5 | 706.8 | 1034.4 | 1094.2 | 807.0 | 1658.6 | 3255.9 | 599.3 |
| (b) Grants | ... | ... | 5.4 | 3.5 | 5.8 | 1.1 | 2.6 | 5.4 | 3.8 |
| Total | 175.5 | 1217.5 | 712.2 | 1038.0 | 1100.0 | 808.1 | 1661.2 | 3261.3 | 603.1 |
| **(xiv) I.D.A.** | | | | | | | | | |
| (a) Loans | 660.1 | 773.9 | 1063.4 | 995.5 | 813.1 | 1022.4 | 1235.6 | 1091.7 | 1227.7 |
| (b) Grants | 24.0 | ... | 3.2 | 3.5 | 2.2 | 2.4 | 1.3 | 0.9 | 1.0 |
| Total | 684.1 | 773.9 | 1065.6 | 998.9 | 815.3 | 1024.8 | 1236.9 | 1092.6 | 1228.7 |
| **(xv) IFAD (International Fund for Agricultural Development)** | | | | | | | | | |
| (a) Loans | 9.2 | 4.7 | 8.8 | 26.0 | 17.0 | 7.6 | 14.3 | 22.2 | 23.0 |
| (b) Grants | ... | ... | ... | ... | 7.5 | 2.1 | 3.1 | 0.1 | 1.0 |
| Total | 9.2 | 4.7 | 8.8 | 26.0 | 24.5 | 9.7 | 17.4 | 22.3 | 24.0 |
| **(xvi) IMF Trust Fund** | 679.7 | ... | ... | ... | ... | ... | ... | ... | ... |

Contd...

## 8.3(B) : UTILIZATION OF EXTERNAL ASSISTANCE BY SOURCE (Concl.)

(US$ million)

| Source and type of assistance | 1980-81 | 1990-91 | 2000-01 | 2006-07 | 2007-08 | 2008-09 | 2009-10 | 2010-11 | 2011-12[P] |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| **II. Russia Fed.& East European Countries** | | | | | | | | | |
| Loans | 41.6 | 174.3 | 28.5 | 326.5 | 245.4 | 173.1 | 204.9 | … | 4.4 |
| **Country-wise Distribution** | | | | | | | | | |
| **(i) Russia Federation.** | | | | | | | | | |
| Loans | 41.6 | 164.6 | 28.5 | 326.5 | 245.4 | 173.1 | 204.9 | 49.4 | 4.4 |
| **(ii) Reps. of Czech & Slovak** | | | | | | | | | |
| Loans | … | 9.8 | … | … | … | … | … | … | … |
| **III. Others** | | | | | | | | | |
| (a) Loans | 57.3 | 264.0 | 488.8 | 1025.8 | 1226.3 | 1434.3 | 1468.6 | 1749.8 | 961.9 |
| (b) Grants | 107 | 67.6 | 20.4 | 203.5 | 218.3 | 182.2 | 289.0 | 170.7 | 155.1 |
| Total | 164.3 | 331.6 | 509.2 | 1229.3 | 1444.6 | 1616.4 | 1757.6 | 1920.5 | 1117.0 |
| **Country-wise Distribution** | | | | | | | | | |
| **(i) Abu Dhabi Fund** | | | | | | | | | |
| Loans | 2.5 | … | … | … | … | … | … | … | … |
| **(ii) Switzerland** | | | | | | | | | |
| (a) Loans | 0.4 | 10.4 | … | 0.4 | … | … | … | … | … |
| (b) Grants | 17.6 | 0.6 | … | 0.2 | … | -0.1 | … | … | … |
| Total | 18 | 11 | … | 0.6 | … | -0.1 | … | … | … |
| **(iii) Other International Institutions[a]** | | | | | | | | | |
| Grants | … | 27.3 | 11.0 | 87.0 | 138.8 | 115.4 | 197.5 | 110.3 | 115.0 |
| **(iv) European Economic Community** | | | | | | | | | |
| Grants | 80.6 | 28.5 | 8.0 | 91.5 | 32.8 | 47.4 | 70.14 | 60.3 | 39.1 |
| **(v) Oil Producing & Exporting Countries (OPEC)** | | | | | | | | | |
| Loans | 4.3 | 5.5 | 9.1 | … | … | 2.6 | 3.9 | 0.2 | 1.9 |
| **(vi) Saudi Arab Fund for Development** | | | | | | | | | |
| Loans | 16.4 | 16.6 | … | … | … | … | … | … | … |
| **(vii) Norway** | | | | | | | | | |
| (a) Loans | … | … | … | … | … | … | … | … | … |
| (b) Grants | … | 11.2 | 1.5 | … | … | … | … | … | … |
| Total | … | 11.2 | 1.5 | … | … | … | … | … | … |
| **(viii) Spain** | | | | | | | | | |
| Loans | … | 18.5 | … | … | … | … | … | … | … |
| **(ix) Kuwait Fund for Arabic Economic Development** | | | | | | | | | |
| (a) Loans | 10.9 | 0.7 | … | … | … | … | … | … | … |
| (b) Grants | 8.9 | … | … | … | … | … | … | … | … |
| Total | 19.8 | 0.7 | … | … | … | … | … | … | … |
| **(x) ADB** | | | | | | | | | |
| (a) Loans | … | 212.4 | 470.9 | 999.5 | 1205.1 | 1424.0 | 1450.4 | 1727.4 | 937.0 |
| (b) Grants | … | … | … | 24.8 | 39.2 | 17.3 | 18.2 | … | … |
| Total | … | 212.4 | 470.9 | 1024.3 | 1244.2 | 1441.3 | 1468.6 | 1727.4 | 937.0 |
| **(xi) Australia** | | | | | | | | | |
| Loans | … | … | … | … | … | … | … | … | … |
| **Grand Total** | **2733.7** | **3736.5** | **3126.7** | **4265.5** | **4946.8** | **5324.4** | **6823.3** | **8485.4** | **4444.4** |
| **(a) Loans** | **2232.3** | **3438.7** | **2967.2** | **3918.0** | **4280.5** | **4769.3** | **6130.5** | **7862.6** | **3995.2** |
| **(b) Grants** | **501.4** | **297.8** | **159.5** | **586.5** | **666.3** | **555.1** | **692.8** | **622.8** | **449.2** |

Source : Aid Accounts and Audit Division, Deptt. of Economic Affairs, Ministry of Finance.
… Nil or negligible P : Provisional (Upto 05.01.2012)
a Other International Institutions include UNICEF, UNDP, ILO, WHO, UNFPA, UNESCO, UPU, WFP, Global Fund, IDF (WB), UN-FAO and Ford Foundation.

Note : 1. Figures in this table are converted from the preceding table 8.3(A)based on the respective Rupee-US dollar rates.
2. Figures may not tally due to rounding off.

## 8.4 (A) : INDIA'S EXTERNAL DEBT OUTSTANDING

(₹ crore)

| | at end-March | | | | | | | | | | | end-June | end Sept. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011[PR] | 2011[PR] | 2011 [QE] |
| **I. MULTILATERAL** | **1,45,105** | **1,55,633** | **1,42,683** | **1,31,105** | **1,38,897** | **1,45,503** | **1,54,053** | **1,57,901** | **2,01,425** | **1,93,436** | **2,16,672** | **2,22,525** | **2,40,427** |
| A. Government Borrowing | 1,27,886 | 1,38,023 | 1,29,727 | 1,20,073 | 1,27,782 | 1,33,800 | 1,41,746 | 1,44,627 | 1,81,997 | 1,70,722 | 1,90,326 | 1,93,913 | 2,08,982 |
| (i) Concessional | 89,008 | 96,177 | 1,02,559 | 1,01,490 | 1,05,114 | 1,05,852 | 1,08,448 | 1,07,395 | 1,27,771 | 1,16,046 | 1,20,653 | 1,22,514 | 1,30,877 |
| (a) IDA | 87,753 | 94,848 | 1,01,122 | 1,00,065 | 1,03,671 | 1,04,457 | 1,07,019 | 1,05,947 | 1,26,127 | 1,14,552 | 1,19,068 | 1,20,882 | 1,29,095 |
| (b) Others | 1,255 | 1,329 | 1,437 | 1,425 | 1,443 | 1,395 | 1,429 | 1,448 | 1,644 | 1,494 | 1,585 | 1,632 | 1,782 |
| (ii) Non-concessional | 38,878 | 41,846 | 27,168 | 18,583 | 22,668 | 27,948 | 33,298 | 37,232 | 54,226 | 54,676 | 69,673 | 71,399 | 78,105 |
| (a) IBRD | 26,376 | 28,012 | 19,069 | 14,074 | 16,500 | 19,626 | 21,864 | 22,631 | 29,948 | 28,874 | 39,218 | 39,802 | 42,815 |
| (b) Others | 12,502 | 13,834 | 8,099 | 4,509 | 6,168 | 8,322 | 11,434 | 14,601 | 24,278 | 25,802 | 30,455 | 31,597 | 35,290 |
| B. Non-Government Borrowing | 17,219 | 17,610 | 12,956 | 11,032 | 11,115 | 11,703 | 12,307 | 13,274 | 19,428 | 22,714 | 26,346 | 28,612 | 31,445 |
| (i) Concessional | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| (ii) Non-concessional | 17,219 | 17,610 | 12,956 | 11,032 | 11,115 | 11,703 | 12,307 | 13,274 | 19,428 | 22,714 | 26,346 | 28,612 | 31,445 |
| (a) Public Sector | 12,386 | 12,729 | 9,255 | 7,916 | 8,000 | 8,510 | 9,315 | 10,352 | 14,298 | 14,919 | 15,802 | 16,076 | 17,918 |
| (i) IBRD | 7,114 | 7,298 | 4,378 | 4,402 | 4,462 | 4,594 | 4,550 | 4,690 | 7,105 | 8,544 | 9,193 | 9,293 | 10,255 |
| (ii) Others | 5,272 | 5,431 | 4,877 | 3,514 | 3,538 | 3,916 | 4,765 | 5,662 | 7,193 | 6,375 | 6,609 | 6,783 | 7,663 |
| (b) Financial Institutions | 3,368 | 3,736 | 3,177 | 2,902 | 2,789 | 2,628 | 2,414 | 2,350 | 3,721 | 5,385 | 7,511 | 8,514 | 9,347 |
| (i) IBRD | 1,017 | 1,049 | 525 | 381 | 252 | 630 | 655 | 593 | 744 | 1,343 | 1,899 | 2,067 | 2,213 |
| (ii) Others | 2,351 | 2,687 | 2,652 | 2,521 | 2,537 | 1,998 | 1,759 | 1,757 | 2,977 | 4,042 | 5,612 | 6,447 | 7,134 |
| (c) Private Sector | 1,465 | 1,145 | 524 | 214 | 326 | 565 | 578 | 572 | 1,409 | 2,410 | 3,033 | 4,022 | 4,180 |
| (i) IBRD | 1,148 | 929 | 298 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| (ii) Others | 317 | 216 | 226 | 214 | 326 | 565 | 578 | 572 | 1,409 | 2,410 | 3,033 | 4,022 | 4,180 |
| **II. BILATERAL** | **74,519** | **74,762** | **79,921** | **77,084** | **74,530** | **70,302** | **70,034** | **78,802** | **1,04,997** | **1,01,975** | **1,15,335** | **1,18,328** | **1,33,366** |
| A. Government borrowing | 56,802 | 56,302 | 60,243 | 58,121 | 57,458 | 54,593 | 53,810 | 59,391 | 74,662 | 71,584 | 80,795 | 82,003 | 92,608 |
| (i) Concessional | 55,504 | 55,418 | 59,688 | 57,742 | 57,207 | 54,468 | 53,810 | 59,391 | 74,662 | 71,584 | 80,795 | 82,003 | 92,608 |
| (ii) Non-concessional | 1,298 | 884 | 555 | 379 | 251 | 125 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| B. Non-Government borrowing | 17,717 | 18,460 | 19,678 | 18,963 | 17,072 | 15,709 | 16,224 | 19,411 | 30,335 | 30,391 | 34,540 | 36,325 | 40,758 |
| (i) Concessional | 5,579 | 6,885 | 8,013 | 8,876 | 7,471 | 6,949 | 1,727 | 1,737 | 3,262 | 3,169 | 4,101 | 4,188 | 4,573 |
| (a) Public Sector | 2,962 | 4,278 | 5,152 | 5,759 | 5,653 | 5,285 | 1,241 | 1,226 | 1,156 | 1,121 | 1,621 | 1,687 | 1,802 |
| (b) Financial Institutions | 2,617 | 2,607 | 2,861 | 3,117 | 1,818 | 1,664 | 486 | 511 | 2,106 | 2,048 | 2,480 | 2,501 | 2,771 |
| (c) Private Sector | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| (ii) Non-concessional | 12,138 | 11,575 | 11,665 | 10,087 | 9,601 | 8,760 | 14,497 | 17,674 | 27,073 | 27,222 | 30,439 | 32,137 | 36,185 |
| (a) Public Sector | 3,715 | 4,822 | 5,116 | 4,851 | 4,353 | 3,628 | 7,420 | 10,097 | 15,076 | 13,868 | 13,851 | 13,962 | 15,167 |
| (b) Financial Institutions | 3,568 | 3,708 | 3,571 | 3,119 | 2,847 | 2,386 | 3,828 | 3,735 | 4,311 | 3,435 | 3,754 | 3,789 | 4,007 |
| (c) Private Sector | 4,855 | 3,045 | 2,978 | 2,117 | 2,401 | 2,746 | 3,249 | 3,842 | 7,686 | 9,919 | 12,834 | 14,386 | 17,011 |
| **III. IMF[a]** | **0** | **0** | **0** | **4,381** | **4,503** | **4,378** | **4,484** | **4,479** | **5,188** | **27,264** | **28,163** | **28,473** | **30,398** |
| **IV. EXPORT CREDIT** | **27,625** | **26,110** | **23,750** | **20,553** | **21,976** | **24,175** | **31,237** | **41,296** | **73,772** | **76,083** | **83,260** | **83,858** | **96,475** |
| (a) Buyers' credit | 17,336 | 16,147 | 13,421 | 11,061 | 13,040 | 16,088 | 23,617 | 33,134 | 64,046 | 66,923 | 73,373 | 73,893 | 85,221 |
| (b) Suppliers' credit | 5,401 | 5,144 | 5,139 | 4,471 | 3,961 | 3,351 | 2,941 | 2,998 | 3,234 | 2,935 | 2,861 | 2,834 | 3,201 |
| (c) Export credit component of bilateral credit | 4,828 | 4,819 | 5,190 | 5,021 | 4,975 | 4,736 | 4,679 | 5,164 | 6,492 | 6,225 | 7,026 | 7,131 | 8,053 |
| (d) Export credit for defence purchases | 60 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **V. COMMERCIAL BORROWINGS** | **1,13,839** | **1,13,908** | **1,06,843** | **95,611** | **1,15,533** | **1,17,991** | **1,80,669** | **2,49,243** | **3,18,209** | **3,19,505** | **3,97,019** | **4,19,419** | **4,84,395** |
| (a) Commercial bank loans [b] | 46,169 | 48,683 | 46,929 | 50,346 | 62,896 | 73,508 | 1,07,145 | 1,60,577 | 2,19,925 | 2,02,542 | 2,63,154 | 2,88,153 | 3,48,183 |
| (b) Securitized borrowings [c] | 64,769 | 62,714 | 57,495 | 41,567 | 48,992 | 41,112 | 68,020 | 82,641 | 91,286 | 1,13,269 | 1,30,599 | 1,28,211 | 1,33,489 |

Contd....

## 8.4 (A) : INDIA'S EXTERNAL DEBT OUTSTANDING (Contd.)

(₹ crore)

| | at end-March | | | | | | | | | | | end-June | end Sept. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011PR | 2011PR | 2011 QE |
| (c) Loans/securitized borrowings etc., with multilateral/bilateral guarantee + IFC(W) | 2,901 | 2,511 | 2,419 | 3,698 | 3,645 | 3,371 | 5,504 | 6,025 | 6,998 | 3,694 | 3,266 | 3,055 | 2,723 |
| (d) Self-Liquidating Loans | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **VI. NRI & FC(B&O) DEPOSITS[d]** (Above one year maturity) | **77,273** | **83,712** | **1,10,022** | **1,35,618** | **1,43,267** | **1,61,834** | **1,79,786** | **1,74,623** | **2,10,118** | **2,17,062** | **2,30,734** | **2,36,586** | **2,55,845** |
| (a) NRI deposits | 77,273 | 83,712 | 1,10,022 | 1,35,618 | 1,43,267 | 1,61,834 | 1,79,786 | 1,74,623 | 2,10,118 | 2,17,062 | 2,30,734 | 2,36,586 | 2,55,845 |
| (b) FC (B&O) Deposits[e] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **VII. RUPEE DEBT[f]** | **17,345** | **14,807** | **13,405** | **11,856** | **10,071** | **9,184** | **8,508** | **8,065** | **7,760** | **7,481** | **7,147** | **7,016** | **6,957** |
| (a) Defence | 15,573 | 13,198 | 11,946 | 10,539 | 8,887 | 8,112 | 7,533 | 7,172 | 6,935 | 6,710 | 6,416 | 6,311 | 6,254 |
| (b) Civilian | 1,772 | 1,609 | 1,459 | 1,317 | 1,184 | 1,072 | 975 | 893 | 825 | 771 | 731 | 705 | 703 |
| **VIII. TOTAL LONG TERM DEBT (I TO VII)** | **4,55,706** | **4,68,932** | **4,76,624** | **4,76,208** | **5,08,777** | **5,33,367** | **6,28,771** | **7,14,409** | **9,21,469** | **9,42,806** | **10,78,330** | **11,16,205** | **12,47,863** |
| **IX. SHORT-TERM DEBT** | **16,919** | **13,396** | **22,180** | **19,251** | **77,528** | **87,155** | **1,22,631** | **1,82,881** | **2,20,656** | **2,36,188** | **2,90,147** | **3,06,248** | **3,49,889** |
| (a) NRI deposits (up to one year maturity)[d] | 4,463 | 4,724 | 9,320 | 1,321 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| (b) FC(B&O) Deposits (up to one-year maturity)[g] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| (c) Trade-Related Credits | 12,456 | 8,672 | 12,860 | 17,930 | 71,173 | 86,531 | 1,13,256 | 1,67,540 | 2,03,345 | 2,14,267 | 2,61,008 | 2,75,201 | 3,15,022 |
| (1) Above 6 Months | 12,456 | 8,672 | 12,860 | 17,930 | 32,922 | 38,788 | 52,188 | 91,502 | 1,18,936 | 1,26,391 | 1,57,807 | 1,65,182 | 1,88,459 |
| (2) Upto 6 Months | 0 | 0 | 0 | 0 | 38,251 | 47,743 | 61,068 | 76,038 | 84,409 | 87,876 | 1,03,201 | 1,10,019 | 1,26,563 |
| (d) FII Investment in Govt. Treasury Bills and other instruments | 0 | 0 | 0 | 0 | 6,355 | 624 | 1,732 | 2,603 | 10,522 | 15,153 | 24,214 | 26,391 | 30,210 |
| (e) Investment in Treasury Bills by foreign central banks and other international institutions etc. | 0 | 0 | 0 | 0 | 0 | 0 | 712 | 620 | 534 | 467 | 223 | 215 | 602 |
| (f) External Debt Liabilities of: | 0 | 0 | 0 | 0 | 0 | 0 | 6,931 | 12,118 | 6,255 | 6,301 | 4,702 | 4,441 | 4,055 |
| (1) Central Bank | 0 | 0 | 0 | 0 | 0 | 0 | 2,185 | 4,458 | 3,892 | 3,139 | 692 | 595 | 323 |
| (2) Commercial banks | 0 | 0 | 0 | 0 | 0 | 0 | 4,746 | 7,660 | 2,363 | 3,162 | 4,010 | 3,846 | 3,732 |
| **X. GRAND TOTAL ( VIII+IX )** | **4,72,625** | **4,82,328** | **4,98,804** | **4,95,459** | **5,86,305** | **6,20,522** | **7,51,402** | **8,97,290** | **11,42,125** | **11,78,994** | **13,68,477** | **14,22,453** | **15,97,752** |

Source: Ministry of Finance (Department of Economic Affairs), Ministry of Defence,Reserve Bank of India, Securities & Exchange Board of India (SEBI).

PR Partially Revised QE Quick Estimates

IFC(W): International Finance Corporation, Washington D.C. FC(B&O) Deposits : Foreign Currency (Banks & Others) Deposits FII : Foreign Institutional Investors

[a] Relates to SDR allocations from March, 2004 onwards.

[b] includes Financial Lease since 1996.

[c] Also includes India Development Bonds (IDBs), Resurgent India Bonds (RIBs), India Millenium Deposits (IMDs), also includes Foreign Currency Convertible Bonds (FCCBs) and net investment by 100% FII debt funds. FCCB debt has been adjusted since end-March, 1998 after netting out conversion into equity and redemptions.

[d] Figures include accrued interest.

[e] The Scheme was discontinued in July, 1993.

[f] Rupee denominated debt owed to Russia and payable through exports.

[g] Special Short-term credits under Banker's Acceptance Facility.

Note : NRO Deposits are included under NRI Deposits from the quarter ended June 2005. Suppliers' Credits upto 180 days and FII investment in short-term debt instruments are included under short-term debt from the quarter ended March 2005. Vostro balances / Nostro overdrafts of commercial banks, balances of foreign central banks/international institutions with RBI and investment in T-bills/securities by foreign central banks/ international institutions have been included in external debt from the quarter ended March 2007.

## 8.4 (B) : INDIA'S EXTERNAL DEBT OUTSTANDING

(US $ million)

| | at end-March | | | | | | | | | | | end-June | end Sep. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2011[PR] | 2011[QE] |
| **I. MULTILATERAL** | **31,105** | **31,899** | **29,994** | **29,297** | **31,744** | **32,620** | **35,337** | **39,490** | **39,538** | **42,857** | **48,474** | **49,374** | **49,128** |
| A. Government Borrowing | 27,414 | 28,290 | 27,271 | 26,826 | 29,204 | 29,996 | 32,514 | 36,171 | 35,724 | 37,825 | 42,578 | 43,015 | 42,702 |
| (i) Concessional | 19,080 | 19,713 | 21,560 | 22,674 | 24,023 | 23,731 | 24,876 | 26,859 | 25,080 | 25,711 | 26,991 | 27,177 | 26,743 |
| (a) IDA | 18,811 | 19,440 | 21,258 | 22,356 | 23,693 | 23,418 | 24,548 | 26,497 | 24,757 | 25,380 | 26,637 | 26,815 | 26,378 |
| (b) Others | 269 | 273 | 302 | 318 | 330 | 313 | 328 | 362 | 323 | 331 | 354 | 362 | 365 |
| (ii) Non-concessional | 8,334 | 8,577 | 5,711 | 4,152 | 5,181 | 6,265 | 7,638 | 9,312 | 10,644 | 12,114 | 15,587 | 15,838 | 15,959 |
| (a) IBRD | 5,654 | 5,742 | 4,009 | 3,144 | 3,771 | 4,400 | 5,015 | 5,660 | 5,878 | 6,397 | 8,774 | 8,829 | 8,748 |
| (b) Others | 2,680 | 2,835 | 1,702 | 1,008 | 1,410 | 1,865 | 2,623 | 3,652 | 4,766 | 5,717 | 6,813 | 7,009 | 7,211 |
| B. Non-Government Borrowing | 3,691 | 3,609 | 2,723 | 2,471 | 2,540 | 2,624 | 2,823 | 3,319 | 3,814 | 5,032 | 5,896 | 6,360 | 6,426 |
| (i) Concessional | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| (ii) Non-concessional | 3,691 | 3,609 | 2,723 | 2,471 | 2,540 | 2,624 | 2,823 | 3,319 | 3,814 | 5,032 | 5,896 | 6,360 | 6,426 |
| (a) Public Sector | 2,655 | 2,609 | 1,945 | 1,770 | 1,828 | 1,908 | 2,136 | 2,589 | 2,807 | 3,305 | 3,536 | 3,569 | 3,661 |
| (i) IBRD | 1,525 | 1,496 | 920 | 984 | 1,020 | 1,030 | 1,043 | 1,173 | 1,395 | 1,893 | 2,057 | 2,062 | 2,095 |
| (ii) Others | 1,130 | 1,113 | 1,025 | 786 | 808 | 878 | 1,093 | 1,416 | 1,412 | 1,412 | 1,479 | 1,507 | 1,566 |
| (b) Financial Institutions | 722 | 766 | 668 | 651 | 637 | 589 | 554 | 587 | 730 | 1,193 | 1,681 | 1,892 | 1,910 |
| (i) IBRD | 218 | 215 | 110 | 85 | 58 | 141 | 150 | 148 | 146 | 298 | 425 | 459 | 452 |
| (ii) Others | 504 | 551 | 558 | 566 | 579 | 448 | 404 | 439 | 584 | 895 | 1,256 | 1,433 | 1,458 |
| (c) Private Sector | 314 | 234 | 110 | 50 | 75 | 127 | 133 | 143 | 277 | 534 | 679 | 899 | 855 |
| (i) IBRD | 246 | 190 | 63 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| (ii) Others | 68 | 44 | 47 | 50 | 75 | 127 | 133 | 143 | 277 | 534 | 679 | 899 | 855 |
| **II. BILATERAL** | **15,975** | **15,323** | **16,802** | **17,277** | **17,034** | **15,761** | **16,065** | **19,708** | **20,610** | **22,593** | **25,808** | **26,289** | **27,254** |
| A. Government borrowing | 12,176 | 11,540 | 12,664 | 12,987 | 13,132 | 12,239 | 12,344 | 14,853 | 14,655 | 15,860 | 18,075 | 18,191 | 18,923 |
| (i) Concessional | 11,898 | 11,359 | 12,547 | 12,900 | 13,074 | 12,211 | 12,344 | 14,853 | 14,655 | 15,860 | 18,075 | 18,191 | 18,923 |
| (ii) Non-concessional | 278 | 181 | 117 | 87 | 58 | 28 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| B. Non-Government borrowing | 3,799 | 3,783 | 4,138 | 4,290 | 3,902 | 3,522 | 3,721 | 4,855 | 5,955 | 6,733 | 7,733 | 8,098 | 8,331 |
| (i) Concessional | 1,196 | 1,411 | 1,685 | 1,983 | 1,708 | 1,558 | 396 | 435 | 641 | 702 | 918 | 929 | 934 |
| (a) Public Sector | 635 | 877 | 1,083 | 1,287 | 1,292 | 1,185 | 285 | 307 | 227 | 248 | 363 | 374 | 368 |
| (b) Financial Institutions | 561 | 534 | 602 | 696 | 416 | 373 | 111 | 128 | 414 | 454 | 555 | 555 | 566 |
| (c) Private Sector | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| (ii) Non-concessional | 2,603 | 2,372 | 2,453 | 2,307 | 2,194 | 1,964 | 3,325 | 4,420 | 5,314 | 6,031 | 6,815 | 7,169 | 7,397 |
| (a) Public Sector | 797 | 988 | 1,076 | 1,110 | 995 | 813 | 1,702 | 2,525 | 2,959 | 3,072 | 3,100 | 3,111 | 3,100 |
| (b) Financial Institutions | 765 | 760 | 751 | 710 | 650 | 535 | 878 | 934 | 846 | 761 | 840 | 842 | 819 |
| (c) Private Sector | 1,041 | 624 | 626 | 487 | 549 | 616 | 745 | 961 | 1,509 | 2,198 | 2,875 | 3,216 | 3,478 |
| **III. IMF[a]** | **0** | **0** | **0** | **1,008** | **1,029** | **981** | **1,029** | **1,120** | **1,018** | **6,041** | **6,308** | **6,367** | **6,213** |
| **IV. EXPORT CREDIT** | **5,923** | **5,368** | **4,995** | **4,697** | **5,022** | **5,420** | **7,165** | **10,328** | **14,481** | **16,857** | **18,647** | **18,737** | **19,722** |
| (a) Buyers' credit | 3,717 | 3,311 | 2,823 | 2,546 | 2,980 | 3,607 | 5,417 | 8,287 | 12,572 | 14,828 | 16,435 | 16,522 | 17,422 |
| (b) Suppliers' credit | 1,158 | 1,069 | 1,081 | 1,029 | 905 | 751 | 675 | 750 | 635 | 650 | 640 | 633 | 655 |
| (c) Export credit component of bilateral credit | 1,035 | 988 | 1,091 | 1,122 | 1,137 | 1,062 | 1,073 | 1,291 | 1,274 | 1,379 | 1,572 | 1,582 | 1,645 |
| (d) Export credit for defence purchases | 13 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **V. COMMERCIAL BORROWINGS** | **24,408** | **23,320** | **22,472** | **22,007** | **26,405** | **26,452** | **41,443** | **62,334** | **62,461** | **70,789** | **88,928** | **93,777** | **99,028** |
| (a) Commercial bank loans [b] | 9,899 | 9,962 | 9,870 | 11,588 | 14,375 | 16,479 | 24,577 | 40,159 | 43,169 | 44,875 | 58,943 | 64,428 | 71,181 |
| (b) Securitized borrowings [c] | 13,887 | 12,851 | 12,093 | 9,568 | 11,197 | 9,217 | 15,603 | 20,668 | 17,918 | 25,096 | 29,253 | 28,666 | 27,290 |

Contd....

## 8.4 (B) : INDIA'S EXTERNAL DEBT OUTSTANDING (Contd.)

(US $ million)

| | at end-March | | | | | | | | | | | end-June | end-Sep. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2011[PR] | 2011[QE] |
| (c) Loans/securitized borrowings etc., with multilateral/bilateral guarantee + IFC(W) | 622 | 507 | 509 | 851 | 833 | 756 | 1,263 | 1,507 | 1,374 | 818 | 732 | 683 | 557 |
| (d) Self-Liquidating Loans | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **0** | **0** | **0** | **0** | **0** |
| **VI. NRI & FC(B&O) DEPOSITS[d]** | **16,568** | **17,154** | **23,160** | **31,216** | **32,743** | **36,282** | **41,240** | **43,672** | **41,554** | **47,890** | **51,682** | **52,898** | **52,304** |
| (Above one year maturity) | | | | | | | | | | | | | |
| (a) NRI deposits | 16,568 | 17,154 | 23,160 | 31,216 | 32,743 | 36,282 | 41,240 | 43,672 | 41,554 | 47,890 | 51,682 | 52,898 | 52,304 |
| (b) FC (B&O) Deposits[e] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **VII. RUPEE DEBT[f]** | **3,719** | **3,034** | **2,822** | **2,720** | **2,302** | **2,059** | **1,951** | **2,017** | **1,523** | **1,658** | **1,601** | **1,568** | **1,422** |
| (a) Defence | 3,339 | 2,704 | 2,515 | 2,426 | 2,031 | 1,819 | 1,728 | 1,794 | 1,361 | 1,487 | 1,437 | 1,411 | 1,278 |
| (b) Civilian | 380 | 330 | 307 | 294 | 271 | 240 | 223 | 223 | 162 | 171 | 164 | 157 | 144 |
| **VIII. TOTAL LONG TERM DEBT (I TO VII)** | **97,698** | **96,098** | **1,00,245** | **1,08,222** | **1,16,279** | **1,19,575** | **1,44,230** | **1,78,669** | **1,81,185** | **2,08,685** | **2,41,448** | **2,49,010** | **2,55,071** |
| **IX. SHORT-TERM DEBT** | **3,628** | **2,745** | **4,669** | **4,431** | **17,723** | **19,539** | **28,130** | **45,738** | **43,313** | **52,329** | **64,990** | **68,474** | **71,530** |
| (a) NRI deposits (up to one year maturity)[d] | 957 | 968 | 1,962 | 304 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| (b) FC(B&O) Deposits (up to one-year maturity)[g] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| (c) Trade-Related Credits | 2,671 | 1,777 | 2,707 | 4,127 | 16,271 | 19,399 | 25,979 | 41,901 | 39,915 | 47,473 | 58,463 | 61,532 | 64,402 |
| (1) Above 6 Months | 2,671 | 1,777 | 2,707 | 4,127 | 7,529 | 8,696 | 11,971 | 22,884 | 23,346 | 28,003 | 35,347 | 36,933 | 38,528 |
| (2) Upto 6 Months | 0 | 0 | 0 | 0 | 8,742 | 10,703 | 14,008 | 19,017 | 16,569 | 19,470 | 23,116 | 24,599 | 25,874 |
| (d) FII Investment in Govt. Treasury Bills and other instruments | 0 | 0 | 0 | 0 | 1,452 | 140 | 397 | 651 | 2,065 | 3,357 | 5,424 | 5,901 | 6,176 |
| (e) Investment in Treasury Bills by foreign central banks and other international institutions etc. | 0 | 0 | 0 | 0 | 0 | 0 | 164 | 155 | 105 | 103 | 50 | 48 | 123 |
| (f) External Debt Liabilities of: | 0 | 0 | 0 | 0 | 0 | 0 | 1,590 | 3,031 | 1,228 | 1,396 | 1,053 | 993 | 829 |
| (1) Central Bank | 0 | 0 | 0 | 0 | 0 | 0 | 501 | 1,115 | 764 | 695 | 155 | 133 | 66 |
| (2) Commercial banks | 0 | 0 | 0 | 0 | 0 | 0 | 1,089 | 1,916 | 464 | 701 | 898 | 860 | 763 |
| **X. GRAND TOTAL (VIII+IX)** | **1,01,326** | **98,843** | **1,04,914** | **1,12,653** | **1,34,002** | **1,39,114** | **1,72,360** | **2,24,407** | **2,24,498** | **2,61,014** | **3,06,438** | **3,17,484** | **3,26,601** |
| **Memo Items :** | | | | | | | | | | | | | |
| Concessional Debt[h] | 35,893 | 35,517 | 38,614 | 40,277 | 41,107 | 39,559 | 39,567 | 44,164 | 41,899 | 43,930 | 47,585 | 47,864 | 48,022 |
| Concessional Debt to total external debt (per cent) | 35.4 | 35.9 | 36.8 | 35.8 | 30.7 | 28.4 | 23.0 | 19.7 | 18.7 | 16.8 | 15.5 | 15.1 | 14.7 |
| Short-term debt | 3,628 | 2,745 | 4,669 | 4,431 | 17,723 | 19,539 | 28,130 | 45,738 | 43,313 | 52,329 | 64,990 | 68,474 | 71,530 |
| Short-term debt to total external debt (per cent) | 3.6 | 2.8 | 4.5 | 3.9 | 13.2 | 14.0 | 16.3 | 20.4 | 19.2 | 20.1 | 21.2 | 21.6 | 21.9 |

Source: Ministry of Finance (Department of Economic Affairs), Ministry of Defence, Reserve Bank of India, Securities & Exchange Board of India (SEBI).

[PR] Partially Revised [QE] Quick Estimates

IFC(W): International Finance Corporation, Washington D.C. FC(B&O) Deposits : Foreign Currency (Banks & Others) Deposits FII : Foreign Institutional Investors

[a] Relates to SDR allocations from March, 2004 onwards. [b] includes Financial Lease since 1996.

[c] Also includes India Development Bonds (IDBs), Resurgent India Bonds (RIBs), India Millenium Deposits (IMDs), also includes Foreign Currency Convertible Bonds (FCCBs) and net investment by 100% FII debt funds. FCCB debt has been adjusted since End-March, 1998 after netting out conversion into equity and redemptions.

[d] Figures include accrued interest. [e] The Scheme was discontinued in July, 1993.

[f] Rupee denominated debt owed to Russia and payable through exports. [g] Special Short-term credits under Banker's Acceptance Facility.

[h] The definition of concessional debt here includes concessional categories under multilateral and bilateral debt and rupee debt under item VII.

Note: NRO Deposits are included under NRI Deposits from the quarter ended June 2005. Suppliers' Credits upto 180 days and FII investment in short-term debt instruments are included under short-term debt from the quarter ended March 2005. Vostro balances / Nostro overdrafts of commercial banks, balances of foreign central banks/international institutions with RBI and investment in T-bills/securities by foreign central banks/ international institutions have been included in external debt from the quarter ended March 2007.

## 9.1 : SELECTED INDICATORS OF HUMAN DEVELOPMENT FOR MAJOR STATES

| Sl. No. | State | Life expectancy[a] at birth (2002-2006) | | | Infant Mortality Rate (per 1000 live births) (2010) | | | Birth rate (per 1000) | Death rate (per 1000) |
|---|---|---|---|---|---|---|---|---|---|
| | | Male | Female | Total | Male | Female | Total | (2010) | (2010) |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| 1 | Andhra Pradesh | 62.9 | 65.5 | 64.4 | 44 | 47 | 46 | 17.9 | 7.6 |
| 2 | Assam | 58.6 | 59.3 | 58.9 | 56 | 60 | 58 | 23.2 | 8.2 |
| 3 | Bihar | 62.2 | 60.4 | 61.6 | 46 | 50 | 48 | 28.1 | 6.8 |
| 4 | Gujarat | 62.9 | 65.2 | 64.1 | 41 | 47 | 44 | 21.8 | 6.7 |
| 5 | Haryana | 65.9 | 66.3 | 66.2 | 46 | 49 | 48 | 22.3 | 6.6 |
| 6 | Karnataka | 63.6 | 67.1 | 65.3 | 37 | 39 | 38 | 19.2 | 7.1 |
| 7 | Kerala | 71.4 | 76.3 | 74 | 13 | 14 | 13 | 14.8 | 7.0 |
| 8 | Madhya Pradesh | 58.1 | 57.9 | 58 | 62 | 63 | 62 | 27.3 | 8.3 |
| 9 | Maharashtra | 66.0 | 68.4 | 67.2 | 27 | 29 | 28 | 17.1 | 6.5 |
| 10 | Odisha | 59.5 | 59.6 | 59.6 | 60 | 61 | 61 | 20.5 | 8.6 |
| 11 | Punjab | 68.4 | 70.4 | 69.4 | 33 | 35 | 34 | 16.6 | 7.0 |
| 12 | Rajasthan | 61.5 | 62.3 | 62 | 52 | 57 | 55 | 26.7 | 6.7 |
| 13 | Tamil Nadu | 65.0 | 67.4 | 66.2 | 23 | 24 | 24 | 15.9 | 7.6 |
| 14 | Uttar Pradesh | 60.3 | 59.5 | 60 | 58 | 63 | 61 | 28.3 | 8.1 |
| 15 | West Bengal | 64.1 | 65.8 | 64.9 | 29 | 32 | 31 | 16.8 | 6.0 |
| | **India** | **62.6** | **64.2** | **63.5** | **46** | **49** | **47** | **22.1** | **7.2** |

Source : Sample Registration System, Office of the Registrar General, India, Ministry of Home Affairs.

[a] Data relating to Bihar, M.P. and U.P. includes Jharkhand, Chhattisgarh, and Uttarakhand respectively.

## 9.2 : GROSS ENROLMENT RATIO IN CLASSES I-V AND VI-VIII AND I-VIII

| Sl. No. | States/Union Territorries | A. All Categories of Students | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Classes I-V (6-10 years) | | | Classes VI-VIII (11-13 yrs) | | | Classes I-VIII (6-13 yrs) | | |
| | | Boys | Girls | Total | Boys | Girls | Total | Boys | Girls | Total |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
| 1 | Andhra Pradesh | 98.0 | 98.3 | 98.2 | 77.9 | 77.4 | 77.7 | 90.2 | 90.1 | 90.2 |
| 2 | Arunachal Pradesh | 170.0 | 163.4 | 166.8 | 106.1 | 96.2 | 101.2 | 146.3 | 138.1 | 142.3 |
| 3 | Assam | 91.7 | 94.2 | 92.9 | 67.3 | 70.3 | 68.8 | 82.2 | 84.9 | 83.5 |
| 4 | Bihar | 125.7 | 109.2 | 117.8 | 60.8 | 49.7 | 55.5 | 100.8 | 86.0 | 93.7 |
| 5 | Chhattisgarh | 126.3 | 120.5 | 123.5 | 87.2 | 81.1 | 84.2 | 111.6 | 105.6 | 108.6 |
| 6 | Goa | 93.4 | 91.7 | 92.6 | 81.2 | 77.1 | 79.2 | 88.8 | 86.1 | 87.5 |
| 7 | Gujarat | 120.0 | 121.0 | 120.4 | 90.5 | 82.0 | 86.5 | 108.9 | 106.0 | 107.6 |
| 8 | Haryana | 88.6 | 92.0 | 90.1 | 77.3 | 80.6 | 78.9 | 84.3 | 87.6 | 85.8 |
| 9 | Himachal Pradesh | 107.7 | 107.7 | 107.7 | 114.6 | 112.1 | 113.4 | 110.4 | 109.4 | 109.9 |
| 10 | Jammu & Kashmir | 110.3 | 112.6 | 111.4 | 95.3 | 90.9 | 93.2 | 104.7 | 104.3 | 104.5 |
| 11 | Jharkhand | 157.5 | 158.2 | 157.8 | 71.2 | 49.7 | 60.7 | 123.8 | 115.6 | 119.8 |
| 12 | Karnataka | 105.4 | 104.0 | 104.7 | 90.9 | 87.7 | 89.3 | 99.8 | 97.7 | 98.8 |
| 13 | Kerala | 93.4 | 93.9 | 93.7 | 107.1 | 102.4 | 104.8 | 98.6 | 97.1 | 97.9 |
| 14 | Madhya Pradesh | 149.3 | 150.0 | 149.7 | 106.1 | 97.4 | 101.9 | 133.3 | 130.2 | 131.8 |
| 15 | Maharashtra | 104.9 | 102.3 | 103.7 | 91.5 | 86.9 | 89.3 | 99.8 | 96.4 | 98.2 |
| 16 | Manipur | 189.7 | 182.3 | 186.0 | 107.2 | 99.2 | 103.3 | 155.4 | 147.7 | 151.6 |
| 17 | Meghalaya | 170.0 | 174.1 | 172.0 | 80.5 | 91.4 | 85.9 | 135.2 | 141.9 | 138.5 |
| 18 | Mizoram | 174.0 | 162.2 | 168.2 | 100.8 | 95.0 | 97.9 | 143.0 | 133.6 | 138.3 |
| 19 | Nagaland | 99.6 | 98.9 | 99.3 | 59.1 | 60.7 | 59.9 | 83.2 | 83.5 | 83.3 |
| 20 | Odisha | 118.4 | 119.3 | 118.8 | 85.4 | 82.0 | 83.7 | 105.6 | 104.7 | 105.2 |
| 21 | Punjab | 108.6 | 107.5 | 108.1 | 93.6 | 89.7 | 91.8 | 102.8 | 100.6 | 101.8 |
| 22 | Rajasthan | 119.1 | 115.1 | 117.2 | 95.1 | 72.8 | 84.4 | 110.0 | 98.7 | 104.6 |
| 23 | Sikkim | 157.9 | 152.8 | 155.3 | 70.9 | 86.6 | 78.6 | 118.8 | 123.4 | 121.1 |
| 24 | Tamil Nadu | 114.3 | 115.3 | 114.8 | 114.3 | 112.1 | 113.2 | 114.3 | 114.1 | 114.2 |
| 25 | Tripura | 146.8 | 143.7 | 145.3 | 93.3 | 93.1 | 93.2 | 123.6 | 121.7 | 122.7 |
| 26 | Uttar Pradesh | 106.6 | 114.7 | 110.4 | 74.3 | 65.9 | 70.3 | 94.7 | 96.3 | 95.4 |
| 27 | Uttarakhand | 108.6 | 111.8 | 110.1 | 101.0 | 107.9 | 104.3 | 105.8 | 110.3 | 108.0 |
| 28 | West Bengal | 124.8 | 126.4 | 125.6 | 80.3 | 87.0 | 83.6 | 107.2 | 110.7 | 108.9 |
| 29 | A&N Islands | 74.7 | 72.6 | 73.7 | 77.1 | 73.7 | 75.4 | 75.6 | 73.0 | 74.3 |
| 30 | Chandigarh | 61.1 | 64.8 | 62.8 | 65.3 | 64.5 | 65.0 | 62.6 | 64.7 | 63.6 |
| 31 | D&N Haveli | 107.4 | 107.5 | 107.5 | 101.1 | 90.5 | 96.2 | 105.2 | 102.0 | 103.7 |
| 32 | Daman & Diu | 75.1 | 84.8 | 79.3 | 67.5 | 81.0 | 73.2 | 72.4 | 83.5 | 77.1 |
| 33 | Delhi | 119.9 | 122.5 | 121.1 | 110.8 | 107.0 | 109.0 | 116.3 | 116.4 | 116.3 |
| 34 | Lakshadweep | 82.3 | 82.3 | 82.3 | 61.9 | 65.6 | 63.7 | 74.0 | 75.7 | 74.8 |
| 35 | Puducherry | 96.0 | 102.0 | 98.8 | 95.0 | 98.0 | 96.4 | 95.6 | 100.4 | 97.9 |
| | **INDIA** | **115.6** | **115.4** | **115.5** | **84.5** | **78.3** | **81.5** | **103.8** | **101.1** | **102.5** |

Source : Statistics of School Education- 2007-08.

## 9.3 : NUMBER OF RECOGNISED EDUCATIONAL INSTIUTIONS IN INDIA 2009-10 (PROVISIONAL)

| Sl. No. | States/ Union Territorries | Pre-Degree/Junior Colleges/Higher Sec. Schools | High/Post Basic Schools | Middle/ Sr. Basic Schools | Primary/ Jr. Basic Schools | Degree and above level: Universities/ Deemed Universities.) | Degree and above level: Colleges for Professional Education | Polytechnics |
|---|---|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 1 | Andhra Pradesh | 4364 | 18163 | 15381 | 65932 | 31 | 4473 | 213 |
| 2 | Arunachal Pradesh | 117 | 190 | 871 | 1841 | 2 | 23 | 3* |
| 3 | Assam | 855 | 5562 | 14133 | 31202 | 8 | 546 | 10 |
| 4 | Bihar | 1837 | 2399 | 20696 | 43445 | 20 | 1031 | 17 |
| 5 | Chhattisgarh | 2544 | 2104 | 15147 | 35344 | 9 | 584 | 15 |
| 6 | Goa | 82 | 376 | 444 | 1252 | 1 | 39 | 4 |
| 7 | Gujarat | 3508 | 5791 | 24366 | 17779 | 26 | 1218 | 104 |
| 8 | Haryana | 3278 | 3493 | 3439 | 13073 | 12 | 1002 | 32** |
| 9 | Himachal Pradesh | 1674 | 1413 | 4921 | 11301 | 7 | 582 | 26 |
| 10 | Jammu & Kashmir | 889 | 2216 | 8877 | 15446 | 10 | 303 | 0 |
| 11 | Jharkhand | 225 | 1429 | 9996 | 19818 | 8 | 161 | 19** |
| 12 | Karnataka | 3644 | 12453 | 32041 | 26254 | 29 | 979 | 273 |
| 13 | Kerala | 2380 | 3388 | 3062 | 6796 | 11 | 448 | 59** |
| 14 | Madhya Pradesh | 5161 | 6352 | 39227 | 97800 | 21 | 1311 | 49 |
| 15 | Maharashtra | 967 | 19711 | 27271 | 49101 | 42 | 3446 | 227^ |
| 16 | Manipur | 120 | 704 | 792 | 2579 | 1 | 73 | 3** |
| 17 | Meghalaya | 124 | 676 | 2259 | 6618 | 2 | 118 | 3 |
| 18 | Mizoram | 95 | 521 | 1313 | 1782 | 1 | 29 | 2 |
| 19 | Nagaland | 69 | 337 | 465 | 1662 | 1 | 74 | 0 |
| 20 | Odisha | 1144 | 7799 | 22209 | 52972 | 15 | 874 | 24 |
| 21 | Punjab | 2380 | 2741 | 9110 | 16954 | 14 | 578 | 89 |
| 22 | Rajasthan | 6675 | 12460 | 38889 | 49538 | 24 | 1610 | 71 |
| 23 | Sikkim | 59 | 126 | 244 | 749 | 3 | 18 | 2 |
| 24 | Tamil Nadu | 3518 | 3030 | 9966 | 27037 | 43 | 1936 | 363 |
| 25 | Tripura | 316 | 454 | 1139 | 2379 | 3 | 29 | 1 |
| 26 | Uttar Pradesh | 8547 | 7889 | 51948 | 132403 | 36 | 3104 | 163 |
| 27 | Uttarakhand | 1352 | 1087 | 4296 | 15644 | 12 | 225 | 0 |
| 28 | West Bengal | 9391 | 65 | 4296 | 73100 | 20 | 841 | 57 |
| 29 | A&N Islands | 53 | 45 | 67 | 207 | 0 | 5 | 2 |
| 30 | Chandigarh | 81 | 64 | 18 | 25 | 3 | 24 | 3 |
| 31 | D&N Haveli | 9 | 25 | 127 | 170 | — | 3 | 0 |
| 32 | Daman & Diu | 9 | 19 | 24 | 50 | 0 | 3 | 1 |
| 33 | Delhi | 1350 | 474 | 583 | 2586 | 19 | 155 | 79^ |
| 34 | Lakshadweep | 12 | 3 | 10 | 23 | 0 | 3 | 0 |
| 35 | Puducherry | 108 | 167 | 118 | 300 | 2 | 90 | 0 |
| | **India** | **66917** | **123726** | **367745** | **823162** | **436** | **25938** | **1914** |

Source: 1. Statistics of School Education 2009-10
2. Statictics of Higher & Technical Education 2009-10
**= repeated from 2006-07, * = repeated from 2007-08, ^= repeated from 2008-09

Notes: Professional Education includes Engineering & Technology, Architecture, Medical and Education/Teacher, Arts Science and Commerce Training Colleges.

## 9.4 : STATE-WISE LITERACY RATES (1951–2011)

(in per cent)

| Sl.No. | States/Union Territorries | 1951 | 1961 | 1971 | 1981 | 1991 | 2001 | 2011 $ |
|---|---|---|---|---|---|---|---|---|
| 1 | Jammu & Kashmir | na | 12.95 | 21.71 | 30.64 | na | 55.52 | 68.74 |
| 2 | Himachal Pradesh | na | na | na | na | 63.86 | 76.48 | 83.78 |
| 3 | Punjab | na | na | 34.12 | 43.37 | 58.51 | 69.65 | 76.68 |
| 4 | Chandigarh | na | na | 70.43 | 74.80 | 77.81 | 81.94 | 86.43 |
| 5 | Uttarakhand | 18.93 | 18.05 | 33.26 | 46.06 | 57.75 | 71.62 | 79.63 |
| 6 | Haryana | na | na | 25.71 | 37.13 | 55.85 | 67.91 | 76.64 |
| 7 | Delhi | na | 61.95 | 65.08 | 71.94 | 75.29 | 81.67 | 86.34 |
| 8 | Rajasthan | 8.5 | 18.12 | 22.57 | 30.11 | 38.55 | 60.41 | 67.06 |
| 9 | Uttar Pradesh | 12.02 | 20.87 | 23.99 | 32.65 | 40.71 | 56.27 | 69.72 |
| 10 | Bihar | 13.49 | 21.95 | 23.17 | 32.32 | 37.49 | 47.00 | 63.82 |
| 11 | Sikkim | na | na | 17.74 | 34.05 | 56.94 | 68.81 | 82.20 |
| 12 | Arunachal Pradesh | na | 7.13 | 11.29 | 25.55 | 41.59 | 54.34 | 66.95 |
| 13 | Nagaland | 10.52 | 21.95 | 33.78 | 50.28 | 61.65 | 66.59 | 80.11 |
| 14 | Manipur [a] | 12.57 | 36.04 | 38.47 | 49.66 | 59.89 | 70.53 | 79.85 |
| 15 | Mizoram | 31.14 | 44.01 | 53.80 | 59.88 | 82.26 | 88.80 | 91.58 |
| 16 | Tripura | na | 20.24 | 30.98 | 50.10 | 60.44 | 73.19 | 87.75 |
| 17 | Meghalaya | na | 26.92 | 29.49 | 42.05 | 49.10 | 62.56 | 75.48 |
| 18 | Assam | 18.53 | 32.95 | 33.94 | na | 52.89 | 63.25 | 73.18 |
| 19 | West Bengal | 24.61 | 34.46 | 38.86 | 48.65 | 57.70 | 68.64 | 77.08 |
| 20 | Jharkhand | 12.93 | 21.14 | 23.87 | 35.03 | 41.39 | 53.56 | 67.63 |
| 21 | Odisha | 15.80 | 21.66 | 26.18 | 33.62 | 49.09 | 63.08 | 73.45 |
| 22 | Chhattisgarh | 9.41 | 18.14 | 24.08 | 32.63 | 42.91 | 64.66 | 71.04 |
| 23 | Madhya Pradesh | 13.16 | 21.41 | 27.27 | 38.63 | 44.67 | 63.74 | 70.63 |
| 24 | Gujarat | 21.82 | 31.47 | 36.95 | 44.92 | 61.29 | 69.14 | 79.31 |
| 25 | Daman & Diu | na | na | na | na | 71.20 | 78.18 | 87.07 |
| 26 | Dadra & Nagar Haveli | na | na | 18.13 | 32.90 | 40.71 | 57.63 | 77.65 |
| 27 | Maharashtra | 27.91 | 35.08 | 45.77 | 57.24 | 64.87 | 76.88 | 82.91 |
| 28 | Andhra Pradesh | na | 21.19 | 24.57 | 35.66 | 44.08 | 60.47 | 67.66 |
| 29 | Karnataka | na | 29.80 | 36.83 | 46.21 | 56.04 | 66.64 | 75.60 |
| 30 | Goa | 23.48 | 35.41 | 51.96 | 65.71 | 75.51 | 82.01 | 87.40 |
| 31 | Lakshadweep | 15.23 | 27.15 | 51.76 | 68.42 | 81.78 | 86.66 | 92.28 |
| 32 | Kerala | 47.18 | 55.08 | 69.75 | 78.85 | 89.81 | 90.86 | 93.91 |
| 33 | Tamil Nadu | na | 36.39 | 45.40 | 54.39 | 62.66 | 73.45 | 80.33 |
| 33 | Puducherry | na | 43.65 | 53.38 | 65.14 | 74.74 | 81.24 | 86.55 |
| 35 | Andaman & Nicobar Islands | 30.30 | 40.07 | 51.15 | 63.19 | 73.02 | 81.30 | 86.27 |
| | **ALL INDIA [a]** | **18.33** | **28.30** | **34.45** | **43.57** | **52.21** | **64.84** | **74.04** |

Source: Office of the Registrar General, India. Ministry of Home Affairs.

[a] India and Manipur figures exclude those of the three sub-divisions viz. Mao Maram, Paomata and Purul of Senapati district of Manipur as census results of 2001 in these three sub-divisions were cancelled due to technical and administrative reasons.

$ Provisional

Note : 1. Literacy rates for 1951, 1961 and 1971 Censuses relate to population aged five years and above. The rates for the 1981, 1991, 2001 and 2011 Censuses relate to the population aged seven years and above. The literacy rate for 1951 in case of West Bengal relates to total population including 0-4 age group. Literacy rate for 1951 in respect of Chhatisgarh, Madhya Pradesh and Manipur are based on sample population.

2. na - Not available

## 9.5 : STATE-WISE INFANT MORTALITY RATE

| Sl. No. | States/Union Territorries | 1961 | | | 2009 | | | 2010 | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Male | Female | Person | Male | Female | Person | Male | Female | Person |
| 1 | Kerala | 55 | 48 | 52 | 10 | 13 | 12 | 13 | 14 | 13 |
| 2 | Puducherry | 77 | 68 | 73 | 25 | 20 | 22 | 22 | 22 | 22 |
| 3 | Mizoram | 73 | 65 | 69 | 33 | 38 | 36 | 36 | 39 | 37 |
| 4 | Manipur | 31 | 33 | 32 | 14 | 18 | 16 | 11 | 16 | 14 |
| 5 | Andaman & Nicobar Islands | 78 | 66 | 77 | 29 | 25 | 27 | 24 | 27 | 25 |
| 6 | Lakshadweep | 124 | 88 | 118 | 21 | 29 | 25 | 21 | 29 | 25 |
| 7 | Chandigarh | 53 | 53 | 53 | 26 | 23 | 25 | 20 | 25 | 22 |
| 8 | Goa | 60 | 56 | 57 | 7 | 14 | 11 | 6 | 15 | 10 |
| 9 | Arunachal Pradesh | 141 | 111 | 126 | 31 | 34 | 32 | 31 | 32 | 31 |
| 10 | Jammu & Kashmir | 78 | 78 | 78 | 41 | 51 | 45 | 41 | 45 | 43 |
| 11 | Maharashtra | 96 | 89 | 92 | 28 | 33 | 31 | 27 | 29 | 28 |
| 12 | Tripura | 106 | 116 | 111 | 33 | 30 | 31 | 25 | 29 | 27 |
| 13 | Delhi | 66 | 70 | 67 | 31 | 34 | 33 | 29 | 31 | 30 |
| 14 | Meghalaya | 81 | 76 | 79 | 59 | 59 | 59 | 55 | 56 | 55 |
| 15 | Sikkim | 105 | 87 | 96 | 35 | 33 | 34 | 28 | 32 | 30 |
| 16 | Tamil Nadu | 89 | 82 | 86 | 27 | 29 | 28 | 23 | 24 | 24 |
| 17 | West Bengal | 103 | 57 | 95 | 33 | 33 | 33 | 29 | 32 | 31 |
| 18 | Punjab | 74 | 79 | 77 | 37 | 39 | 38 | 33 | 35 | 34 |
| 19 | Karnataka | 87 | 74 | 81 | 41 | 42 | 41 | 37 | 39 | 38 |
| 20 | Dadra & Nagar Haveli | 102 | 93 | 98 | 38 | 37 | 37 | 36 | 40 | 38 |
| 21 | Gujarat | 81 | 84 | 84 | 47 | 48 | 48 | 41 | 47 | 44 |
| 22 | Himachal Pradesh | 101 | 89 | 92 | 44 | 45 | 45 | 35 | 47 | 40 |
| 23 | Andhra Pradesh | 100 | 82 | 91 | 48 | 50 | 49 | 44 | 47 | 46 |
| 24 | Bihar | 95 | 94 | 94 | 52 | 52 | 52 | 46 | 50 | 48 |
| 25 | Haryana | 87 | 119 | 94 | 48 | 53 | 51 | 46 | 49 | 48 |
| 26 | Assam | na | na | na | 58 | 64 | 61 | 56 | 60 | 58 |
| 27 | Rajasthan | 114 | 114 | 114 | 58 | 61 | 59 | 52 | 57 | 55 |
| 28 | Uttar Pradesh | 131 | 128 | 130 | 62 | 65 | 63 | 58 | 63 | 61 |
| 29 | Madhya Pradesh | 158 | 140 | 150 | 66 | 68 | 67 | 62 | 63 | 62 |
| 30 | Odisha | 119 | 111 | 115 | 65 | 66 | 65 | 60 | 61 | 61 |
| 31 | Nagaland | 76 | 58 | 68 | 23 | 28 | 26 | 19 | 28 | 23 |
| 32 | Daman & Diu | 60 | 56 | 57 | 21 | 28 | 24 | 22 | 23 | 23 |
| 33 | Chhatisgarh | a | a | a | 50 | 57 | 54 | 48 | 54 | 51 |
| 34 | Jharkhand | a | a | a | 42 | 46 | 44 | 41 | 44 | 42 |
| 35 | Uttarakhand | a | a | a | 41 | 42 | 41 | 37 | 39 | 38 |
| | **All India** | **122** | **108** | **115** | 49 | 52 | 50 | 46 | 49 | 47 |

Source : Sample Registration System, Office of the Registrar General, India, Ministry of Home Affairs.

[a] : Created in 2001.

Note : Infant mortality rates for 2009 and 2010 in respect of smaller States and UTs are based upon the three year period 2007-09 and 2008-10.

## 9.6 : ACCESS TO SAFE DRINKING WATER IN HOUSEHOLDS IN INDIA

(in per cent)

| Sl. No. | States/ Union Territorries | Tap/Handpump/Tubewell 1981 Total | 1981 Rural | 1981 Urban | 1991 Total | 1991 Rural | 1991 Urban | 2001 Total | 2001 Rural | 2001 Urban |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Jammu & Kashmir | 40.3 | 28.0 | 86.7 | na | na | na | 65.2 | 54.9 | 95.7 |
| 2 | Himachal Pradesh | 44.5 | 39.6 | 89.6 | 77.3 | 75.5 | 91.9 | 88.6 | 87.5 | 97.0 |
| 3 | Punjab | 84.6 | 81.8 | 91.1 | 92.7 | 92.1 | 94.2 | 97.6 | 96.9 | 98.9 |
| 4 | Chandigarh | 99.1 | 94.4 | 99.4 | 97.7 | 98.1 | 97.7 | 99.8 | 99.9 | 99.8 |
| 5 | Uttarakhand | [a] | [a] | [a] | [a] | [a] | [a] | 86.7 | 83.0 | 97.8 |
| 6 | Haryana | 55.1 | 42.9 | 90.7 | 74.3 | 67.1 | 93.2 | 86.1 | 81.1 | 97.3 |
| 7 | Delhi | 93.0 | 62.3 | 94.9 | 95.8 | 91.0 | 96.2 | 97.2 | 90.1 | 97.7 |
| 8 | Rajasthan | 27.1 | 13.0 | 78.7 | 59.0 | 50.6 | 86.5 | 68.2 | 60.4 | 93.5 |
| 9 | Uttar Pradesh | 33.8 | 25.3 | 73.2 | 62.2 | 56.6 | 85.8 | 87.8 | 85.5 | 97.2 |
| 10 | Bihar | 37.6 | 33.8 | 65.4 | 58.8 | 56.5 | 73.4 | 86.6 | 86.1 | 91.2 |
| 11 | Sikkim | 30.3 | 21.7 | 71.9 | 73.1 | 70.8 | 92.8 | 70.7 | 67.0 | 97.1 |
| 12 | Arunachal Pradesh | 43.9 | 40.2 | 87.9 | 70.0 | 66.9 | 88.2 | 77.5 | 73.7 | 90.7 |
| 13 | Nagaland | 45.6 | 43.4 | 57.2 | 53.4 | 55.6 | 45.5 | 46.5 | 47.5 | 42.3 |
| 14 | Manipur | 19.5 | 12.9 | 38.7 | 38.7 | 33.7 | 52.1 | 37.0 | 29.3 | 59.4 |
| 15 | Mizoram | 4.9 | 3.6 | 8.8 | 16.2 | 12.9 | 19.9 | 36.0 | 23.8 | 47.8 |
| 16 | Tripura | 27.3 | 22.2 | 67.9 | 37.2 | 30.6 | 71.1 | 52.5 | 45.0 | 85.8 |
| 17 | Meghalaya | 25.1 | 14.3 | 74.4 | 36.2 | 26.8 | 75.4 | 39.0 | 29.5 | 73.5 |
| 18 | Assam | na | na | na | 45.9 | 43.3 | 64.1 | 58.8 | 56.8 | 70.4 |
| 19 | West Bengal | 69.7 | 65.8 | 79.8 | 82.0 | 80.3 | 86.2 | 88.5 | 87.0 | 92.3 |
| 20 | Jharkhand | [a] | [a] | [a] | [a] | [a] | [a] | 42.6 | 35.5 | 68.2 |
| 21 | Odisha | 14.6 | 9.5 | 51.3 | 39.1 | 35.3 | 62.8 | 64.2 | 62.9 | 72.3 |
| 22 | Chhattisgarh | [a] | [a] | [a] | [a] | [a] | [a] | 70.5 | 66.2 | 88.8 |
| 23 | Madhya Pradesh | 20.2 | 8.1 | 66.7 | 53.4 | 45.6 | 79.4 | 68.4 | 61.5 | 88.6 |
| 24 | Gujarat | 52.4 | 36.2 | 86.8 | 69.8 | 60.0 | 87.2 | 84.1 | 76.9 | 95.4 |
| 25 | Daman & Diu | 54.5 | 46.4 | 67.0 | 71.4 | 56.9 | 86.8 | 96.3 | 94.9 | 98.9 |
| 26 | Dadra & Nagar Haveli | 19.4 | 16.8 | 54.3 | 45.6 | 41.2 | 91.0 | 77.0 | 70.5 | 96.1 |
| 27 | Maharashtra | 42.3 | 18.3 | 85.6 | 68.5 | 54.0 | 90.5 | 79.8 | 68.4 | 95.4 |
| 28 | Andhra Pradesh | 25.9 | 15.1 | 63.3 | 55.1 | 49.0 | 73.8 | 80.1 | 76.9 | 90.2 |
| 29 | Karnataka | 33.9 | 17.6 | 74.4 | 71.7 | 67.3 | 81.4 | 84.6 | 80.5 | 92.1 |
| 30 | Goa | 22.5 | 8.6 | 52.3 | 43.4 | 30.5 | 61.7 | 70.1 | 58.3 | 82.1 |
| 31 | Lakshadweep | 2.2 | 1.0 | 3.7 | 11.9 | 3.4 | 18.8 | 4.6 | 4.6 | 4.6 |
| 32 | Kerala | 12.2 | 6.3 | 39.7 | 18.9 | 12.2 | 38.7 | 23.4 | 16.9 | 42.8 |
| 33 | Tamil Nadu | 43.1 | 31.0 | 69.4 | 67.4 | 64.3 | 74.2 | 85.6 | 85.3 | 85.9 |
| 34 | Puducherry | 80.6 | 76.9 | 84.2 | 88.8 | 92.9 | 86.1 | 95.9 | 96.6 | 95.5 |
| 35 | Andaman & Nicobar Islands | 51.6 | 36.3 | 92.0 | 67.9 | 59.4 | 90.9 | 76.7 | 66.8 | 97.8 |
| | **ALL INDIA** | **38.2** | **26.5** | **75.1** | **62.3** | **55.5** | **81.4** | **77.9** | **73.2** | **90.0** |

Source: Office of the Registrar General, India. Ministry of Home Affairs

na : Not available as no census was carried out in Assam during 1981 and in Jammu & Kashmir during 1991.

[a] Created in 2001. Uttarakhand, Jharkhand and Chhattisgarh for 1981 and 1991 are included under Uttar Pradesh, Bihar and Madhya Pradesh respectively.

## 9.7 : POPULATION OF INDIA (1951–2011)

(in thousand)

| Sl.No. | States/Union Territories | 1951 | 1961 | 1971 | 1981 | 1991 | 2001 | 2011 $ |
|---|---|---|---|---|---|---|---|---|
| 1 | Uttar Pradesh | 60274 | 70144 | 83849 | 105137 | 132062 | 166198 | 199581 |
| 2 | Maharashtra | 32003 | 39554 | 50412 | 62783 | 78937 | 96879 | 112373 |
| 3 | Bihar | 29085 | 34841 | 42126 | 52303 | 64531 | 82999 | 103805 |
| 4 | West Bengal | 26300 | 34926 | 44312 | 54581 | 68078 | 80176 | 91348 |
| 5 | Andhra Pradesh | 31115 | 35983 | 43503 | 53551 | 66508 | 76210 | 84666 |
| 6 | Tamil Nadu | 30119 | 33687 | 41199 | 48408 | 55859 | 62406 | 72139 |
| 7 | Madhya Pradesh | 18615 | 23218 | 30017 | 38169 | 48566 | 60348 | 72597 |
| 8 | Rajasthan | 15971 | 20156 | 25766 | 34262 | 44006 | 56507 | 68621 |
| 9 | Karnataka | 19402 | 23587 | 29299 | 37136 | 44977 | 52851 | 61131 |
| 10 | Gujarat | 16263 | 20633 | 26697 | 34086 | 41310 | 50671 | 60384 |
| 11 | Odisha | 14646 | 17549 | 21945 | 26370 | 31660 | 36805 | 41947 |
| 12 | Kerala | 13549 | 16904 | 21347 | 25454 | 29099 | 31841 | 33387 |
| 13 | Jharkhand | 9697 | 11606 | 14227 | 17612 | 21844 | 26946 | 32966 |
| 14 | Assam [a] | 8029 | 10837 | 14625 | 18041 | 22414 | 26656 | 31169 |
| 15 | Punjab | 9161 | 11135 | 13551 | 16789 | 20282 | 24359 | 27704 |
| 16 | Haryana | 5674 | 7591 | 10036 | 12922 | 16464 | 21145 | 25353 |
| 17 | Chhatisgarh | 7457 | 9154 | 11637 | 14010 | 17615 | 20834 | 25540 |
| 18 | Delhi | 1744 | 2659 | 4066 | 6220 | 9421 | 13851 | 16753 |
| 19 | Jammu & Kashmir [b] | 3254 | 3561 | 4617 | 5987 | 7837 | 10144 | 12549 |
| 20 | Uttarakhand | 2946 | 3611 | 4493 | 5726 | 7051 | 8489 | 10117 |
| 21 | Himachal Pradesh | 2386 | 2812 | 3460 | 4281 | 5171 | 6078 | 6857 |
| 22 | Tripura | 639 | 1142 | 1556 | 2053 | 2757 | 3199 | 3671 |
| 23 | Meghalaya | 606 | 769 | 1012 | 1336 | 1775 | 2319 | 2964 |
| 24 | Manipur [c] | 578 | 780 | 1073 | 1421 | 1837 | 2294 | 2722 |
| 25 | Nagaland | 213 | 369 | 516 | 775 | 1210 | 1990 | 1980 |
| 26 | Goa | 547 | 590 | 795 | 1008 | 1170 | 1348 | 1458 |
| 27 | Arunachal Pradesh [d] | na | 337 | 468 | 632 | 865 | 1098 | 1383 |
| 28 | Puducherry | 317 | 369 | 472 | 604 | 808 | 974 | 1244 |
| 29 | Chandigarh | 24 | 120 | 257 | 452 | 642 | 901 | 1055 |
| 30 | Mizoram | 196 | 266 | 332 | 494 | 690 | 889 | 1091 |
| 31 | Sikkim | 138 | 162 | 210 | 316 | 406 | 541 | 608 |
| 32 | Andaman & Nicobar Islands | 31 | 64 | 115 | 189 | 281 | 356 | 380 |
| 33 | Dadra & Nagar Haveli | 42 | 58 | 74 | 104 | 138 | 220 | 343 |
| 34 | Daman & Diu | 49 | 37 | 63 | 79 | 102 | 158 | 243 |
| 35 | Lakshadweep | 21 | 24 | 32 | 40 | 52 | 61 | 64 |
| | **ALL INDIA[c]** | **361088** | **439235** | **548160** | **683329** | **846421** | **1028737** | **1210193** |

Source : Office of the Registrar General of India, Ministry of Home Affairs.

[a] The 1981 Census could not be held in Assam. Total population for 1981 has been worked out by Interpolation.

[b] The 1991 Census could not be held in Jammu & Kashmir. Total population for 1991 has been worked out by Interpolation.

[c] India and Manipur figures include estimated population for those of the three sub-divisions viz. Mao Maram, Paomata and Purul Senapati district of Manipur as census results of 2001 in these three sub-divisions were cancelled due to technical and administrative reasons.

[d] Census conducted for the first time in 1961.

[$] Provisional