

## VI Financial Sector (Part 2 of 3)

### *Credit Risk, Capitalisation and Efficiency*

6.39 The relationship between credit risk, capitalisation and efficiency has been tested empirically using regression analysis (simultaneous equation system). The empirical specification examining these issues in respect of three size classes of PSBs, viz., large, medium and small<sup>1</sup> is addressed in Box VI.3. The broad findings emerging from the analysis are set out below.<sup>2</sup>

#### Box VI.3

#### Credit Risk, Capitalisation and Bank Efficiency : Evidence from India

Keeping in view the theoretical observations on the interlinkages among the reform of credit risk, capital and efficiency, an attempt has been made to empirically examine the same for the 27 Indian PSBs for the period 1995-96 to 2001-02.<sup>1</sup> These banks were disaggregated into three size classes (large, medium and small), based on their total assets at the beginning of the sample period. The size class classification permitted an equal number of banks within each of the three categories.

A banking firm can achieve a certain level of overall risk exposure by choosing one of the several alternative convex combinations of credit risk and capital. As a consequence, these two types of risks have been modelled as simultaneously determined. Credit risk has been measured by the ratio of gross non-performing loans to gross advances (GNPA). In a sense, credit risk is measured *ex-post*. Capital adequacy, on the other hand, is measured by the ratio of capital to risk-weighted assets (CRAR). The inefficiency (INEFF) was derived following the intermediation approach<sup>2</sup>.

The empirical specification in the simultaneous equation system comprised the following three equations:

$$GNPA = f_1 (CRAR, INEFF, NPRIOL, ADVGR, ADVGRSQ)(1)$$

$$CAPITAL = f_2 (GNPA, INEFF, RoA, RPL, RPH, SIZE) (2)$$

$$INEFF = f_3 (GNPA, CRAR, ADVGR, ADVGRSQ, DIVEST) (3)$$

where,

NPRIOL = ratio of loans given to non-priority sector to total loans;

ADVGR = annual growth rate of total loans; ADVGRSQ=square of ADVGR;

RoA = return on assets;

SIZE = natural logarithm of total asset;

DIVEST = Government ownership, defined as a variable which equals 1 in the year in which the bank has made an equity offering (and all subsequent years) and zero, otherwise;

Low regulatory pressure: RPL=[(1/Stipulated CRAR)-(1/Actual CRAR)];

High regulatory pressure: RPH=[(1/Actual CRAR) - (1/Stipulated CRAR)]

GNPA, CRAR and INEFF are the three exogenous variables. The model is closed by including endogenous variables that have explanatory power for each of the exogenous variables.

GNPA is expected to be related to the loan portfolio composition. Accordingly, the ratio of non-priority sector loans to total loans (NPRIOL) has been included as an explanatory variable. The effect of loan growth on the quantity of bad loan is controlled by using the one-year loan growth rate (ADVGR). To allow for the possibility of a U-shaped relation between loan growth and bad loan, the square of loan growth term (ADVGRSQ) has also been included.

The CRAR is expected to exhibit positive relation with profitability, owing to the plough back of earnings into reserves. This suggests the RoA as a plausible explanatory variable. In addition, the effect of bank size is controlled by including the natural logarithm of total assets (SIZE). In order to capture the effects of capital regulation, regulatory pressure variables, denoted by RPH (high) and RPL (low) was included (Jacques and Nigro, 1997). By construction, RPH should have a positive effect on capital ratios, because one of the options available to banks to meet the prescribed capital standards is simply to raise capital. As regards RPL, although banks with risk-based capital ratios in excess of the stipulated minimum are not explicitly constrained by the prescribed capital standards, it might turn out that the risk-based standards induce them to reduce their ratios (the opportunity cost of holding additional capital might be high).

Finally, in the INEFF equation, the effect of loan growth is controlled by introducing ADVGR and ADVGRSQ.<sup>3</sup> To the extent that a low to moderate loan growth rate partially reflects on managerial quality, while a high growth rate is reflective of managerial entrenchment, the relation between growth and efficiency may turn out to be U-shaped. Finally, the effect of Government ownership is controlled by DIVEST. The variable intends to ascertain whether the divestment of Government ownership in state-owned banks has had an effect on efficiency.<sup>4</sup>

The estimation procedure employed was pooled time-series, cross-section observations using the two-stage least squares (2SLS) procedure separately for each size class.<sup>5</sup>

- 1 The choice of public sector banks is dictated by two considerations. The first is the availability of a consistent and published dataset. Second, given the wide heterogeneity across state-owned banks in terms of their product sophistication and customer orientation and the fact that these account for the majority of banking assets, a study of the state-owned banks enables to draw broad inferences about the banking sector as a whole.
  - 2 Three variables were selected as inputs: total funds (deposits *plus* borrowings), fixed assets and total number of employees. The relevant outputs are loans and investments. In order to mitigate the price effects, the variables were deflated by the relevant deflators. Accordingly, the cost of funds, repairs and maintenance and per employee cost was taken as the relevant input prices. A stochastic frontier cost function with composite error terms and standard distributional assumptions was specified. The total cost was approximated by a translog function with multiple inputs and outputs.
  - 3 The adjusted  $R^2$  in case of the INEFF equation was found to be the lowest. The result was, however, in consonance with evidence for the US banking industry, wherein the explanatory power of this variable was also found to be quite low (Kwan and Eisenbis, 1997).
  - 4 The disadvantage of such a variable, however, lies in the fact that it does not consider the extent of divestment. In other words, a bank, which has divested 20 per cent of its equity capital is treated at par with a divestment of, say, 35 per cent. Notwithstanding its limitations, DIVEST enables an inference of the impact of Government shareholding on efficiency.
  - 5 The 2SLS procedure performs the reduced-form regression of the dependent variable on all the pre-determined variables in the system (stage 1), obtaining the estimates of the dependent variable and thereafter replacing the dependent variable in the original equation by its estimated value and applying ordinary least squares to the transformed equation (stage 2). The estimators thus obtained are consistent, *i.e.*, they converge to their true values as the sample size increases.
- Greater soundness (higher capital position) leads to improvement in efficiency, particularly in the case of small banks. Improvements in efficiency, especially in respect of small banks, also have a positive effect on their soundness. Furthermore, the positive impact of efficiency

on soundness is reinforced as higher profitability was found to be leading to increased soundness in the case of small and medium-sized banks.

- Better asset quality (greater stability) promotes greater efficiency in the case of medium-sized banks but not in case of other two bank size classes. However, the relationship between asset quality and efficiency was not found to be mutually reinforcing for any of the bank groups.
- Soundness and stability were found to be reinforcing each other. In other words, adequately capitalised banks in the small and medium categories are less prone to credit risk. In the case of latter category, in particular, improvements in credit risk management also had a beneficial effect on stability through improvements in the capital position.
- On the whole, the empirical findings suggest that capital, credit risk and efficiency are interlinked, and to a certain extent, they reinforce and complement one another.

6.40 To conclude, various reform measures introduced in the banking sector have resulted in remarkable improvement in banks' capital position as reflected in the overall increase in their capital adequacy ratio. Asset quality of the commercial banking sector on the whole also improved markedly inspite of gradual tightening of prudential norms and the slowing down of the economy in recent years. There is evidence to suggest that competition in the banking industry has intensified. Significant improvement was also discernible in the various parameters of efficiency, especially intermediation costs, which declined significantly. Profitability of commercial banks, on the whole, improved significantly despite a decline in spread and higher provisioning following the introduction and subsequent tightening of prudential norms.

6.41 It was found empirically that in the case of the Indian banking sector, ownership did impinge on the efficiency of banks as old private sector banks performed better, in terms of various parameters, than those PSBs which divested their equity in the 1990s, which, in turn, performed better than the fully Government-owned banks. The performance of new private sector banks was well above all other bank groups. At the same time, however, it needs to be noted that the fully Government-owned banks showed remarkable improvement in almost all parameters in recent years and that their performance is gradually converging with that of better performing banks. Finally, financial soundness and stability tended to reinforce each other in the case of Indian banking sector and that there was no evidence of various stability measures impinging on the efficiency of financial institutions.

6.42 Notwithstanding significant improvements as set out above, there are several challenges that lie ahead. Much of the improvement in the capital position of banks in the initial years, especially in the case of PSBs, was due to recapitalisation support from the Government. This is not a sustainable option. Banks, therefore, need to further improve their profitability so that they can increase their capital funds through internal generation. Improved financial performance is also necessary when banks enter the market for raising capital. Notwithstanding improvement in the asset quality, the level of NPAs appears high by international standards. A major challenge in the years ahead, thus, lies in bringing down the non-performing assets. Alongside, provisioning for non-performing assets also needs to be enhanced. Tightening of the provisioning norms and a

switch-over to the forward-looking provisioning would further enhance the stability of the Indian banking sector. A related issue concerns a large amount of loss assets being carried by banks in their books. Such assets, which ideally should be written off, still constitute about 10 per cent of the gross NPAs mainly for the reason that many of the accounts are under litigation and cannot be written off before resolution of such cases. Profitability in India is still low as compared to several developing countries and banks need to make concerted efforts to improve their profitability by diversifying their business, especially into non-fund-based activities.

## Co-operative Banks

6.43 The co-operative banking sector in India comprising urban co-operative banks (UCBs) and rural co-operative banks such as state co-operative banks (StCBs) and district central co-operative banks (CCBs) has an extensive branch network and reach in the remote areas.<sup>3</sup> Though much smaller as compared to scheduled commercial banks, co-operative banks constitute an important segment of the Indian banking system and have traditionally played an important role in creating banking habits among the lower and middle-income groups and in strengthening the rural credit delivery system.

6.44 The reform process has tried to achieve regulatory convergence among various financial intermediaries in view of their systemic importance. Therefore, the basic objectives and instruments of reforms for co-operative banks have been the same as for SCBs. However, given the special characteristics of co-operative banks, they have been extended certain dispensations in terms of pace and sequencing of reforms.

### *Parameters Relating to Stability*

6.45 Information on CRAR of co-operative banks is not available. Therefore, for analysing the capital position of co-operative banks, alternative measures, *viz.*, share capital to asset ratio, owned funds to asset ratio and compliance with minimum capitalisation norm under Section 11(1) of the Banking Regulation Act, 1949 were examined.<sup>4</sup> Movements in share capital to asset ratio as well as owned funds to asset ratio indicate that there was very little perceptible improvement in capitalisation of co-operative banks between 1998 and 2002 (Table 6.13). Asset quality of co-operative banks during the same period also did not show any discernible improvement in any segment (Table 6.14). Gross NPAs in absolute terms increased significantly in respect of all types of co-operative banks. However, NPAs as a ratio of total loans outstanding remained more or less unchanged for all types of co-operative banks barring scheduled UCBs, in respect of which they increased sharply from 2001. The increase in the stock of NPAs over the years reflected partly the impact of gradual tightening of income recognition and asset classification norms and partly general deterioration of recovery performance.

**Table 6.13: Capitalisation of Co-operative Banks : Select Indicators**  
(Ratios in per cent)

|   | As at end-March |      |      |      |      |
|---|-----------------|------|------|------|------|
|   | 1998            | 1999 | 2000 | 2001 | 2002 |
|   | 1               | 2    | 3    | 4    | 5    |
| <b>Scheduled Urban Co-operative Banks</b> |                 |      |      |      |      |

|   |      |      |      |      |      |
|---|------|------|------|------|------|
| Share Capital to Asset Ratio                        | 1.0  | 1.0  | 1.0  | 1.0  | 1.1  |
| <b>Non-scheduled Urban Co-operative Banks</b>       |      |      |      |      | 11.9 |
| Owned Fund to Asset Ratio                           | 11.5 | 10.9 | 10.3 | 10.5 |      |
| Non-compliance with Minimum Capitalisation (Number) | N.A. | 250  | 261  | 119. | N.A. |
| <b>State Co-operative Banks</b>                     |      |      |      |      |      |
| Share Capital to Asset Ratio                        | 1.4  | 1.4  | 1.3  | 1.3  | N.A. |
| Owned Fund to Asset Ratio                           | 9.2  | 9.9  | 10.3 | 11.1 | N.A. |
| Non-compliance with Minimum Capitalisation (Number) | N.A. | 5    | 6    | 9    | N.A. |
| <b>District Central Co-operative Banks</b>          |      |      |      |      |      |
| Share Capital to Asset Ratio                        | 3.6  | 3.5  | 3.3  | 3.2  | N.A. |
| Owned Fund to Asset Ratio                           | 10.4 | 10.6 | 12.0 | 12.6 | N.A. |
| Non-compliance with Minimum Capitalisation (Number) | N.A. | 137  | 139  | 139  | N.A. |

N.A. Not available.

**Note :** Non-compliance with minimum capitalisation relates to the same under Section 11(1) of the B.R.Act, 1949.

**Table 6.14: Non-Performing Assets of Co-operative Banks**

|   | As at end-March |       |       |       |        |
|---|-----------------|-------|-------|-------|--------|
|   | 1998            | 1999  | 2000  | 2001  | 2002   |
|   | 1               | 2     | 3     | 4     | 5      |
| <b>Amount (Rs. crore)</b>                               |                 |       |       |       |        |
| Urban Co-operative Banks                                | 2,839           | 3,306 | 4,535 | 9,245 | 11,472 |
| State Co-operative Banks                                | 2,443           | 2,748 | 2,758 | 3,889 | N.A.   |
| District Central Co-operative Banks                     | 5,551           | 6,573 | 7,543 | 9,371 | N.A.   |
| <b>As a Ratio of Total Outstanding Loans (per cent)</b> |                 |       |       |       |        |
| Urban Co-operative Banks                                | 13.2            | 11.7  | 12.2  | 16.1  | 21.9   |
| State Co-operative Banks                                | 12.5            | 12.6  | 10.7  | 13.0  | N.A.   |
| District Central Co-operative Banks                     | 17.8            | 17.8  | 17.2  | 17.9  | N.A.   |

N.A. Not available.

**Note :** Data include unaudited information.

#### *Parameters Relating to Efficiency*

6.46 During the period from 1997-98 to 2001-02, interest spread of scheduled UCBs declined sharply and remained in alignment with those of commercial banks, while there was no significant change in spread of rural co-operative banks (Table 6.15). This reflected greater competition between scheduled UCBs and commercial banks and general insulation of rural cooperative banks from such competition. Operating expenses as a proportion of assets, however, declined significantly across all segments of co-operative banks with the movement in respect of scheduled UCBs closely following those of SCBs. Profitability of scheduled UCBs, however, deteriorated, while there was some improvement in profitability of rural co-operative banks between 1997-98 and 2000-01 (Table 6.15).

**Table 6.15: Select Indicators of Efficiency of Co-operative Banks *vis-à-vis* Scheduled Commercial Banks**

|   | (Per cent)  |             |               |             |             |
|---|-------------|-------------|---------------|-------------|-------------|
|   | 1997-<br>98 | 1998-<br>99 | 1999-<br>2000 | 2000-<br>01 | 2001-<br>02 |
|   | 1           | 2           | 3             | 4           | 5           |
| <b>Interest Spread as a Proportion of Assets</b>                      |             |             |               |             |             |
| Scheduled Urban Co-operative Banks                                    | 3.8         | 3.2         | 3.2           | 2.8         | 2.2         |
| State Co-operative Banks  | 2.0         | 1.5         | 1.9           | 2.1         | N.A.        |
| District Central Co-operative Banks                                   | 3.1         | 3.1         | 3.0           | 3.0         | N.A.        |
| Scheduled Commercial Banks  | 3.0         | 2.8         | 2.7           | 2.9         | 2.6         |
| <b>Operating Expenses as a Proportion of Assets</b>                   |             |             |               |             |             |
| Scheduled Urban Co-operative Banks                                    | 2.4         | 2.1         | 2.1           | 2.0         | 2.0         |
| State Co-operative Banks  | 0.9         | 0.8         | 0.8           | 0.7         | N.A.        |
| District Central Co-operative Banks                                   | 2.2         | 2.2         | 2.0           | 1.8         | N.A.        |
| Scheduled Commercial Banks  | 2.6         | 2.7         | 2.5           | 2.7         | 2.3         |
| <b>Net Profit as a Proportion of Assets</b>                           |             |             |               |             |             |
| Scheduled Urban Co-operative Banks                                    | 0.5         | 0.9         | 0.8           | -2.3        | -0.6        |
| State Co-operative Banks  | -0.4        | -0.2        | 0.3           | 0.4         | N.A.        |
| District Central Co-operative Banks                                   | -0.4        | 0.1         | 0.1           | 0.1         | N.A.        |
| Scheduled Commercial Banks  | 0.8         | 0.5         | 0.7           | 0.5         | 0.8         |
| <b>Profitable Banks as a Proportion of the Total for the Category</b> |             |             |               |             |             |
| Scheduled Urban Co-operative Banks                                    | N.A.        | N.A.        | 98.0          | 94.1        | 84.6        |
| State Co-operative Banks  | N.A.        | 75.9        | 79.3          | 76.7        | N.A.        |
| District Central Co-operative Banks                                   | N.A.        | 67.8        | 61.6          | 66.8        | N.A.        |
| Scheduled Commercial Banks  | 89.3        | 87.6        | 90.1          | 85.0        | 87.6        |

N.A. Not available.

6.47 The foregoing analysis, thus, shows that since the introduction of reforms, there has been very little perceptible improvement in either stability or efficiency of co-operative banks. In particular, the asset quality and profitability of scheduled UCBs showed some deterioration in the reform period. Positive impact of reforms, as has been witnessed in the case of commercial banking sector, may take longer to get manifested for co-operative banks given the late start of the reform process in this sector. Unless such a positive scenario evolves for the co-operative banking sector in the near future, the financial health of many of these banks would continue to remain a cause of concern.

6.48 It is significant to note that introduction of reforms and the consequent increase in competition has resulted in some convergence in operations of commercial banks and co-operative banks, especially scheduled UCBs. However, in the face of lower spread, while the commercial banking sector could maintain its profitable status, scheduled UCBs as a group incurred losses. Furthermore, while most of the loss-making commercial banks are relatively small, in the case of UCBs some of the large banks are incurring losses and this increases the vulnerability of the whole segment.

6.49 Detection of irregularities in a few UCBs in the recent past has raised concerns about the conduct of the management in co-operative banks. Although remedial measures have been taken to limit the contagion effect of such disturbances spreading to other segments of the financial sector, and mechanisms have also been put in place to avoid recurrence of such developments, the current duality of control over co-operative banks is an impediment to effective supervision of such entities. For this purpose, the Reserve Bank has suggested the establishment of a unified supervisory authority for UCBs and the related amendment of the Banking Regulation Act, 1949 is currently under consideration of the Central Government.

6.50 Between 1996-97 and 1998-99, deposits of UCBs grew much faster than those of commercial banks. Co-operative banks are allowed to offer higher interest rates than SCBs on saving and current account deposits. This, coupled with the same deposit insurance protection for co-operative and commercial banks, might have resulted in the higher deposit growth in co-operative banks. Such a situation, however, might create a moral hazard problem since in order to compensate for the higher cost of deposits mobilised by them, co-operative banks could deploy such funds in riskier avenues. Steps such as stricter entry point norms, enhanced internal control and corporate governance norms, effective supervision and increased market discipline through greater disclosure for co-operative banks are required to address the problem.

### **Development Finance Institutions**

6.51 Development finance institutions (DFIs) were set up in the country at various points of time starting from the late 1940s to cater to the medium to long-term financing requirements as the capital market in India had not developed sufficiently. The endorsement of planned industrialisation at the national level provided the critical inducement for establishment of DFIs at both all-India and State-levels. In order to perform their role, DFIs were extended funds in the form of Long-Term Operations (LTO) Fund of the Reserve Bank and Government guaranteed bonds, which constituted major sources of their funds. Funds from these sources were not only available at concessional rates, but also on a long-term basis with their maturity ranging from 10-15 years. On the asset side, their operations were marked by near absence of competition.

6.52 The Reserve Bank started monitoring the operations of DFIs in 1990 with a view to taking an integrated view of the operations of financial institutions and commercial banks and for providing a more comprehensive basis for the conduct of monetary and credit policies. DFIs were brought within the supervisory jurisdiction of the Board for Financial Supervision from 1994.

6.53 The main objectives of reforms in the case of DFIs were to impart market orientation to their operations and strengthen them by applying prudential norms. Following reforms in the financial sector, market borrowing allocations of Government guaranteed bonds were gradually phased out for DFIs. Their access to low cost funds of the Reserve Bank was also discontinued. Prudential norms relating to capital adequacy, income recognition, asset classification and provisioning were prescribed in 1994 and were progressively strengthened.

6.54 Notwithstanding withdrawal of two major sources of funds, operations of DFIs were not

adversely affected during the early years of the reform, as there were several factors that worked to their advantage. Lending interest rates both for banks and DFIs were deregulated in the early 1990s. However, this was the period when the inflation rate was very high. As a result, interest rates ruled very high. While the marginal cost of funds for DFIs increased sharply, they had the advantage of recycling some of the past concessional borrowings at high rate of interest (DFIs raised funds in the maturity range of 10-15 years but lent on a 5-7 year basis). Taking advantage of flexibility provided to them in the matter of raising and deploying external commercial borrowings, DFIs also raised significant funds from the international market. In view of the booming conditions in the domestic capital market, some of the DFIs could also raise resources successfully both by way of debt and equity at handsome premia. On the asset side, there was a good demand for funds due to acceleration of economic activity in general and industrial sector in particular. This is evident from their sanctions and disbursements, which grew rapidly between 1992-93 and 1997-98 (Table 6.16).

**Table 6.16: Sanctions and Disbursements of Select FIs\***

| Period       | (Annual Growth Rate)         |               |
|--------------|------------------------------|---------------|
|              | Sanctions                    | Disbursements |
|              | 1                            | 2             |
| 1991-92      | 6.8                          | 22.6          |
| 1992-93      | 38.0                         | 26.3          |
| 1993-94      | 42.5                         | 27.9          |
| 1994-95      | 59.7                         | 41.1          |
| 1995-96      | 7.6                          | 9.7           |
| 1996-97      | -11.2                        | 23.7          |
| 1997-98      | 57.0                         | 35.3          |
| 1998-99      | 7.8                          | 6.9           |
| 1999-2000    | 17.8                         | 16.3          |
| 2000-01      | 15.5                         | 11.3          |
| 2001-02      | -37.4                        | -26.5         |
| <i>Memo:</i> | (Annual Average Growth Rate) |               |
| 1980-90      | 21.4                         | 19.9          |
| 1990-95      | 38.0                         | 30.5          |
| 1995-2000    | 15.7                         | 18.4          |

\* Comprising ICICI, IDBI, IFCI and IIBI.

6.55 DFIs also took several steps to reposition themselves and reorient their operations in the competitive environment by offering innovative products and diversifying their activities into new areas of business (such as investment banking, stock broking, custodial services, etc.) so as to harness the synergies and to reduce the risk arising out of narrow specialisation. DFIs were reasonably successful in diversifying into some non-traditional products, especially fee and commission based business. As a result of all these factors, profitability of DFIs, in general, improved significantly between 1993-94 and 1997-98 (Table 6.17). At the same time, DFIs were subjected to income recognition and provisioning norms from the year ended March 1994.

**Table 6.17: Ratio of Profit Before Tax to Total Assets**



| Year      | (Per cent) |       |       |      |
|-----------|------------|-------|-------|------|
|           | IDBI       | IFCI  | ICICI | IIBI |
|           | 1          | 2     | 3     | 4    |
| 1991-92   | 2.05       | 1.45  | 1.58  | 5.72 |
| 1992-93   | 1.99       | 1.68  | 1.89  | 5.74 |
| 1993-94   | 2.30       | 1.39  | 2.37  | 0.00 |
| 1994-95   | 2.70       | 3.05  | 2.32  | 0.00 |
| 1995-96   | 2.95       | 3.32  | 2.34  | 0.07 |
| 1996-97   | 2.94       | 2.65  | 2.41  | 2.80 |
| 1997-98   | 3.00       | 2.17  | 2.57  | 3.16 |
| 1998-99   | 1.88       | 0.10  | 1.87  | 2.35 |
| 1999-2000 | 1.42       | 0.25  | 2.03  | 0.92 |
| 2000-01   | 1.02       | -1.15 | 0.79  | 2.54 |

**Source:** Report on Development Banking in India, IDBI (various issues).

6.56 Things, however, started changing for DFIs some time in 1998-99. Interest rates started softening gradually in the second half of the 1990s. The industrial sector also started decelerating from 1996-97. This affected DFIs in the following years in two ways. On the one hand, the main business of DFIs was adversely affected as reflected in the slowdown of their sanctions and disbursements (Table 6.16). On the other hand, it affected the asset quality of DFIs adversely as some of the traditional industries to which DFIs had significant exposures were affected badly both due to high cost of funds borrowed in the past and slowdown of the industrial sector. As a result of liberalisation of trade and industrial sectors, competition in the commodity market increased. While some companies were able to cope with the increased competition effectively, some others were not. This also had an adverse effect on the asset quality of DFIs. In a declining interest rate scenario, high cost of funds raised by DFIs in the past became a cause of concern. As a result, some of the DFIs by exercising call option redeemed the long-term bonds long before their final maturity. Competition on the asset side also increased with some banks stepping up their project finance activity. All these factors significantly impinged on the profitability of DFIs. As DFIs have high NPAs, they would be required to provide for them, which is likely to put a further pressure on their profitability. An idea as to how DFIs were adversely affected both on the asset and the liability sides from the year 1998-99 could be discerned from the parameters as set out in Table 6.18. Net interest income and net profits declined sharply in the recent years. In tandem with the decline in interest rates, while the ratio of interest expended to total assets declined in the case of banks, it remained almost stagnant in the case of DFIs. Increase in the cost of funds, on the one hand, and lending at very competitive rates on the other resulted in decline in spread and profitability of DFIs.

**Table 6.18: Important Financial Ratios for Development Finance Institutions\***

| Item                         | (Per cent to total assets) |      |           |      |         |      |         |      |
|------------------------------|----------------------------|------|-----------|------|---------|------|---------|------|
|                              | 1998-99                    |      | 1999-2000 |      | 2000-01 |      | 2001-02 |      |
|                              | DFIs                       | SCBs | DFIs      | SCBs | DFIs    | SCBs | DFIs    | SCBs |
|                              | 1                          | 2    | 3         | 4    | 5       | 6    | 7       | 8    |
| Interest Expended            | 7.6                        | 6.4  | 7.9       | 6.3  | 7.9     | 6.0  | 7.6     | 5.7  |
| Other Operating Expenses     | 1.2                        | 2.7  | 1.0       | 2.5  | 1.1     | 2.6  | 0.6     | 2.2  |
| Net Interest Income (Spread) | 2.3                        | 2.8  | 1.7       | 2.7  | 2.1     | 2.9  | 1.3     | 2.6  |
| Provisions & Contingencies   | N.A.                       | 1.0  | 0.3       | 1.0  | 0.6     | 1.0  | 0.7     | 1.2  |
| Net Profit                   | 1.6                        | 0.5  | 1.4       | 0.7  | 1.4     | 0.5  | 0.9     | 0.8  |

|                     |                                      |     |     |                           |     |     |     |     |
|---------------------|--------------------------------------|-----|-----|---------------------------|-----|-----|-----|-----|
| Net NPA**           | 9.8                                  | 7.6 | 9.7 | 6.8                       | 8.5 | 6.2 | 8.8 | 5.5 |
| N.A. Not available. | * Comprising 10 DFIs (9 in 2001-02). |     |     | ** As ratio to net loans. |     |     |     |     |

6.57 While asset quality of DFIs in general deteriorated over the years, some DFIs were affected more than others. Asset impairment of two DFIs, *i.e.*, IFCI and IIBI was significant at above 20 per cent (Table 6.19). Despite decline in profitability and asset quality, DFIs were able to maintain CRAR. However, growing NPAs and declining profitability could also impinge on the capital adequacy of certain DFIs in future.

**Table 6.19: Financial Institution-wise CRAR and Net NPAs to Net Loans**

| Financial Institution | (Per cent) |           |         |           |         |           |           |           |         |           |         |           |
|-----------------------|------------|-----------|---------|-----------|---------|-----------|-----------|-----------|---------|-----------|---------|-----------|
|                       | 1996-97    |           | 1997-98 |           | 1998-99 |           | 1999-2000 |           | 2000-01 |           | 2001-02 |           |
|                       | CRAR       | Net NPAs* | CRAR    | Net NPAs* | CRAR    | Net NPAs* | CRAR      | Net NPAs* | CRAR    | Net NPAs* | CRAR    | Net NPAs* |
|                       | 1          | 2         | 3       | 4         | 5       | 6         | 7         | 8         | 9       | 10        | 11      | 12        |
| IDBI                  | 14.7       | 10.9      | 13.7    | 10.1      | 12.7    | 12.0      | 14.5      | 13.4      | 15.8    | 14.8      | 17.9    | 13.4      |
| ICICI                 | 13.3       | 7.8       | 13.0    | 7.7       | 12.5    | 7.8       | 17.2      | 7.6       | 14.6    | 5.2       | @       | @         |
| IFCI                  | 10.0       | 13.9      | 11.6    | 13.6      | 8.4     | 20.8      | 8.8       | 20.7      | 6.2     | 20.8      | 3.1     | 22.5      |
| SIDBI                 | 25.7       | 2.5       | 30.3    | 2.0       | 26.9    | 1.4       | 27.8      | 1.3       | 28.1    | 1.2       | 45.0    | 3.0       |
| NABARD                | 40.4       | 0.9       | 52.5    | 1.5       | 53.3    | 4.2       | 44.4      | 3.5       | 38.5    | 0.0       | 36.9    | 0.0       |
| EXIM Bank             | 31.5       | 14.9      | 30.5    | 14.5      | 23.6    | 14.5      | 24.4      | 8.4       | 23.8    | 8.2       | 33.1    | 7.4       |
| IIBI                  | 10.6       | 19.3      | 12.8    | 13.1      | 11.7    | 14.0      | 9.7       | 16.7      | 13.9    | 22.9      | 13.6    | 24.1      |
| <i>Memo:</i>          |            |           |         |           |         |           |           |           |         |           |         |           |
| SCBs                  | 10.4       | 8.1       | 11.5    | 7.3       | 11.3    | 7.6       | 11.1      | 6.8       | 11.4    | 6.2       | 11.9    | 5.5       |

@ Merged with ICICI Bank.

\* As per cent of net loans.

6.58 A comparison of performance of DFIs with SCBs, based on certain operational and prudential indicators shows that the asset quality of DFIs as a group stood significantly lower than that of the commercial banking sector as at end-March 2002. The ratio of spread to total assets for DFIs was also much lower than that of banks. The profitability of DFIs declined in recent years, in contrast with the profitability of SCBs, which showed a considerable improvement (Table 6.18). Thus, on the whole, financial performance of DFIs has been adversely affected in the post-reform period, though they have been able to maintain comfortable capital position.

6.59 DFIs were set up with the specific objective of meeting the medium to long-term requirement of funds. However, DFIs in the present form are finding it difficult to sustain their operations. Their business has slowed down and their operations have become less profitable. This has raised issues relating to the viability of DFIs. It is not clear, however, whether the perceived lack of viability emanates from the structural constraints under which they operate or simply from the legacy of the past.

6.60 The Narasimham Committee II (1998) had recommended that DFIs should, over a period of time, convert themselves into banks or NBFCs. There would then be only two forms of intermediaries, *i.e.*, banks and NBFCs. The Reserve Bank in the Discussion Paper released in January 1999 indicated that DFIs should have the freedom to retain their status and specialise in their own activities. However, if a DFI chooses to become a bank, that option should also be available. In response to interest evinced by DFIs, the Reserve Bank issued guidelines setting out

various operational and regulatory parameters that need to be complied with by DFIs if they are to become banks. ICICI, one of the major DFIs, along with two of its subsidiaries has recently merged with the ICICI Bank. However, to fill the void being created by the disappearance of DFIs, urgent steps are required to be taken to develop the private corporate debt market and introduce appropriate instruments to reduce the risk arising out of long-term financing by other players such as banks.

## **Non-Banking Financial Companies**

6.61 Non-Banking Financial Companies (NBFCs) in India offer a wide variety of financial services and play an important role in providing credit to the unorganised sector and to small borrowers at the local level. NBFCs are of various types such as equipment leasing companies, hire purchase companies, loan and investment companies *etc.* In terms of relative importance of various activities financed by NBFCs, hire-purchase finance is the largest activity, accounting for over one-third of their total assets, followed by loans and inter-corporate deposits, equipment leasing and investment. In terms of public deposit taking activities, Residuary Non-Banking Companies (RNBCs), which have certain similarities with banks in terms of their asset composition, hold the largest deposits.

6.62 Though NBFCs in India have existed for long, there was a sudden proliferation of such entities between the late 1980s and the mid-1990s. While, on an average basis, deposits of NBFCs as a proportion of bank deposits were 0.8 per cent during 1985-86 to 1989-90, they shot up to 9.5 per cent by 1996-97. This sharp jump in NBFC deposits was mostly on account of the high rates of interest offered on such deposits.

6.63 Although NBFCs were regulated by the Reserve Bank, the focus was mainly on the liability side. Given the lack of adequate regulation and supervision mechanism for most types of NBFCs, funds mobilised by many such companies were deployed into unsustainable uses. In 1994, prudential regulations as prescribed for commercial banks were extended to NBFCs. However, keeping in view various systemic issues, the need was felt for further strengthening of the regulatory and supervisory framework for NBFCs. Accordingly, the Reserve Bank (Amendment) Act enacted in 1997 conferred extensive powers on the Reserve Bank for regulation and supervision of NBFCs. Given the immense diversity among NBFCs, norms were strengthened particularly for public deposit taking and systemically important NBFCs. As against the uniform CRAR of 8 per cent across all NBFCs earlier, the CRAR requirement now ranges between 12-15 per cent depending on the principal line of business activity of an NBFC.

### *Parameters Relating to Stability (Capital Adequacy and Asset Quality)*

6.64 Distribution of NBFCs in terms of the level of CRAR maintained by them indicates that compliance with CRAR requirement has generally improved since 1998 (Table 6.20). Apart from capital adequacy ratio, two other ratios, *viz.* the ratio of public deposits to net owned funds and public deposits to total assets were also examined with a view to assessing the stability of the sector. The public deposits to net owned funds ratio of NBFCs declined considerably between 1998 and 1999 and has remained generally stable since then. The public deposits to assets ratio, on the other hand, declined continuously from 1998 (Table 6.21).

**Table 6.20: Capital Adequacy Position of NBFCs**

| CRAR Range<br>(per cent)      | As at end-March |      |      |      |
|-------------------------------|-----------------|------|------|------|
|                               | 1998*           | 1999 | 2000 | 2001 |
|                               | 1               | 2    | 3    | 4    |
| <b>Number of NBFCs</b>        |                 |      |      |      |
| Less than 12                  | 98              | 88   | 33   | 61   |
| 12-15                         | 17              | 18   | 7    | 8    |
| Above 15                      | 390             | 571  | 559  | 645  |
| Total                         | 505             | 677  | 599  | 714  |
| <b>As percentage of Total</b> |                 |      |      |      |
| Less than 12                  | 19.4            | 13.0 | 5.5  | 8.5  |
| 12-15                         | 3.4             | 2.7  | 1.2  | 1.1  |
| Above 15                      | 77.2            | 84.3 | 93.3 | 90.3 |

\* As at end-September.

**Note:** Including Residuary Non-banking Companies.

**Table 6.21: Public Deposits of NBFCs**

|   | As at end-March |      |      |      |
|---|-----------------|------|------|------|
|   | 1998            | 1999 | 2000 | 2001 |
|   | 1               | 2    | 3    | 4    |
| Public Deposits to Net<br>Owned Funds Ratio | 1.6             | 1.2  | 1.3  | 1.3  |
| Public Deposits to Assets Ratio             | 39.0            | 27.2 | 20.8 | 17.2 |

**Note:** Excluding Residuary Non-banking Companies.

6.65 Information regarding the extent of NPAs in the NBFC sector was not available on a consistent basis. However, according to the limited information available, the asset quality of NBFCs deteriorated in the late 1990s. This was evident from supervisory returns submitted by around 50 NBFCs, according to which the NPAs of such entities as proportion of total assets, which were 7.1 per cent as at end-September 1998, increased to 9.3 per cent as at end-March 1999.

#### *Parameters Relating to Efficiency*

6.66 Consolidated information on financial performance of NBFCs was available for only three years and, therefore, it was difficult to draw any firm conclusion about the impact of the reform measures. There are, however, indications that the reform process has not as yet resulted in any noticeable improvement in the operational efficiency of NBFCs. In fact, profitability position showed some signs of deterioration in recent years (Table 6.22).

**Table 6.22: Operating Expenditure and Net Profit**

|                       | (As per cent to total assets) |           |         |
|-----------------------|-------------------------------|-----------|---------|
|                       | 1998-99                       | 1999-2000 | 2000-01 |
|                       | 1                             | 2         | 3       |
| Operating Expenditure | 3.0                           | 4.0       | 3.1     |

|            |     |     |      |
|------------|-----|-----|------|
| Net Profit | 0.3 | 0.3 | -0.9 |
|------------|-----|-----|------|

**Note:** Excluding Residuary Non-banking Companies.

6.67 In recent years, operations of NBFCs witnessed significant changes especially on the liability side. With the tightening of regulations, many of the NBFCs with insufficient capital base have been weeded out. This combined with the tightening of regulations for raising deposits resulted in reduction in size of this sector. Although the definition of public deposits of NBFCs has been revised and no strict comparison is possible between deposits of NBFCs before and after 1998, there are clear indications of a sharp decline in the relative importance of NBFC deposits. The ratio of NBFC deposits to total bank deposits declined from the peak of 9.5 per cent in 1996-97 to 1.1 per cent in 2000-01. Public deposits of NBFCs including RNBCs as at end-March 1998 were just 19 per cent of the total deposits and 45 per cent of the regulated deposits of NBFCs as at end-March 1997.

6.68 It is significant to note that between 1988-89 and 2000-01, considerable changes were noticed in the share of different types of NBFCs in total public deposits held by them. While the shares of RNBCs and hire purchase finance companies increased significantly, those of loan and investment companies fell sharply. RNBCs were the only category of NBFCs whose public deposit increased in absolute terms between 1998 and 2001. As on March 31, 2001, RNBCs accounted for over 30 per cent of the assets and nearly two-thirds of the public deposits of the NBFC sector, while their net owned fund was negative. RNBCs have important systemic implications, given their large size.

6.69 The decline in deposits of NBFCs in the recent years, however, was not captured by the banking sector in a significant way. This was evident from the average annual growth rate of bank deposits, which after the tightening of norms for NBFCs (*i.e.*, 1998-2001) increased only marginally in comparison with the period prior to the introduction of such norms.

6.70 The decline in the deposits of NBFCs should not be a matter of concern as in several other countries public deposit is generally not a significant source of funding for NBFCs. As the share of deposits declined, other sources of funds, especially borrowing from banks, market borrowings, borrowings from the Government and inter-corporate borrowings emerged as major sources of funding for NBFCs. As a result of changes in the financing pattern of NBFCs, their cost of funds also increased. High cost of funds could induce NBFCs into excessive risk-taking and may, thereby, result in adverse selection. Deposit insurance, as has been suggested in some quarters, may reduce the risk premium demanded by depositors and may, therefore, reduce some cost of funds for these companies. However, the extension of deposit insurance to NBFCs could create a serious moral hazard problem that might be difficult to tackle.

6.71 While NBFCs may not have much control over the cost of funds, they can improve their profitability by operating more efficiently. The operating cost of NBFCs as a group increased in the recent years as indicated earlier. In fact, their operating cost stood much higher than that of even co-operative banks. Therefore, NBFCs need to make concerted efforts to reduce their high operating expenses.

6.72 As NBFCs provide important services in certain niche areas of the financial sector,

improvement in the efficiency of these entities is of crucial importance. The Reserve Bank continues to pursue with various State Governments the case for enacting legislation for protection of interest of depositors in financial establishments. Creating public awareness about activities and risk-profile of NBFCs is yet another important area, which needs to be focussed upon even as an extensive publicity campaign has already been taken up using the print and electronic media to educate the depositors. Improvement in corporate governance practices and financial disclosures by NBFCs also need to be focused upon in future.

## Insurance

6.73 Insurance has been an important part of the Indian financial system. Until recently, insurance services were provided by the public sector, *i.e.*, life insurance by the Life Insurance Corporation of India since the mid-1950s, and general insurance by the General Insurance Corporation (GIC) and its four subsidiaries since the 1970s. The insurance industry was opened up to the private sector in August 2000. The primary objective of liberalisation in the insurance sector was to deepen insurance penetration by enlarging consumer choices through product innovation. After opening up of the insurance sector, 12 new companies have entered the life segment and 9 companies in the non-life segment. The increased competition led to rapid product innovations for catering to the diverse requirements of the various segments of the population. Besides statutory commitments in respect of weaker sections of society, competitive pressures are pushing life insurers to adopt innovative marketing strategies to extend insurance penetration, especially targeting lower income groups.

6.74 The size of the insurance sector, which stagnated around 0.6 per cent of GDP during the 1980s and the 1990s, accelerated in recent years as the existing insurers endeavoured to retain their market share, while new players attempted to establish themselves (Table 6.23 and Chart VI.5).

**Table 6.23: Insurance Business: Summary Statistics**

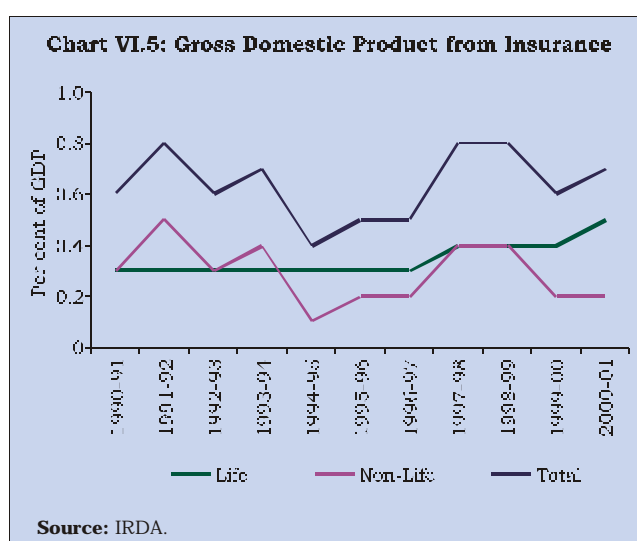
|  | (Rs. crore) |          |
|--|-------------|----------|
|  | 2000-01     | 2001-02  |
|  | 1           | 2        |
| <b>Life Insurance</b>                                      |             |          |
| Premium  | 36,070      | 50,094   |
| <i>Of which:</i> Private Insurers                          | 7           | 273      |
| Total Investments  | 1,94,010    | 2,46,869 |
| <i>Of which:</i> Government & Other<br>Approved Securities | 1,00,037    | 1,32,177 |
| Other than Approved Investments                            | 18,584      | 16,521   |

## General Insurance

|  |        |         |
|--|--------|---------|
| Gross Direct Premium Income                                  | 10,087 | 12,383* |
| <i>Of which:</i> Private Insurers                            | 7      | 466     |
| Total Investments  | 24,462 | 26,373  |
| <i>Of which:</i> Government & Other<br>Guaranteed Securities | 7,703  | 15,910  |
| Other than Approved Investments                              | 3,761  | 2,972   |

\* Excluding GIC.

Source: IRDA.



6.75 The share of insurance sector in household financial savings moved up from 7.6 per cent during the 1980s to 10.1 per cent during the 1990s and further to about 12 per cent during 2000-01. However, the insurance penetration ( *i.e.*, the share of premium as percentage of GDP) in India remained low at 2.3 per cent as at end-March 2000 in comparison with the world average of 7.8 per cent and the emerging market average of 3.2 per cent.

6.76 The opening up of the insurance sector is expected to lead to increased competition and innovations in financial products. Insurance products compete with other saving products such as bank term deposits and small savings. Many of the new insurance products, especially unit-linked insurance/pension schemes, now bear a close resemblance to mutual funds. While the yield on life insurance products, in the range of 7.15 per cent to 9.46 per cent during the 1990s, was normally much lower than other long-run investments, this was compensated by the insurance cover and tax benefits. As new players join the fray, the competition in respect of various financial products is expected to go up in the near future.

6.77 The expansion of the insurance industry has a special significance in that it creates a demand for long-term Government paper, especially as Government securities accounted for 52.2 per cent of the life investment as at end-March 2002. This could ease the fiscal constraint on

monetary policy in two ways, *i.e.*, by enlarging the pool of institutional investors in the Government securities market and by according the Reserve Bank the necessary flexibility to enlarge the maturity profile of public debt.

6.78 The key policy challenge, at this stage, is to ensure the financial stability of the new insurers, while at the same time encouraging entrepreneurship, product innovation and increasing insurance penetration especially in rural and semi-urban areas.

There is, therefore, a case for gradually replacing across-the-board capital requirements with capital stipulations linked to the risk and claims characteristics of a particular line of business as is the practice in some advanced countries as recommended by the Advisory Group on Insurance Regulation (2001). This would increase the number of players and product innovation. Also, while the present statutory stipulations are adequate, there is a need to explore the possibilities of linking prudential norms to the size of the balance sheet, especially in terms of capital adequacy norms (IRDA, 2002). Presently, insurers are mainly offering insurance schemes, which are based on assured returns. This is fraught with serious risks, especially when interest rate scenario/market condition changes. In order to stave off the risks associated with assured returns schemes, insurers need to shift to unit-linked insurance schemes based on the market rates of return. While the joint ventures formed by new insurers with entities, including banks and NBFCs, having a large branch/dealer network, minimise establishment costs, the contagion risks also get amplified in the process. This would require close coordination among the regulating agencies.

## Mutual Funds

6.79 The Unit Trust of India (UTI), set up in 1964, was the only mutual fund in the country until 1987-88 when a public sector bank-sponsored mutual fund was established. The mutual fund industry expanded in the 1990s after it was opened to the private sector in 1993. A large number of mutual funds (37 as at end-March 2002) operating in the country has intensified competition and led to product innovation. Mutual funds presently offer a variety of options to investors such as income funds, balanced funds, liquid funds, gilt funds, index funds, exchange traded funds, sectoral funds, *etc.* In all, there were 417 schemes (as at end-March 2002) in operation to cater to diverse investor needs.

6.80 Despite increase in the number of mutual funds and the schemes operated by them, net resource mobilisation by mutual funds decelerated sharply during 1990-2002 (with the average annual growth rate being 13.0 per cent) in comparison with the 1980s (71.1 per cent). Net resource mobilisation in relation to GDP also declined sharply from 1.7 per cent in 1991-92 to 0.4 per cent in 2001-02 (Table 6.24). Their share in household savings also declined to 1.3 per cent in 2000-01 from 5.5 per cent in 1993-94. Total assets under management of all mutual funds also witnessed a similar trend.

**Table 6.24: Resources Mobilised/Assets under Management by Mutual Funds\***

| Year | Resources Mobilised<br>(Rs. crore) | Assets under Management<br>(Rs. crore) | Resources Mobilised<br>(% of GDP) | Assets under Management<br>(% of GDP) |
|------|------------------------------------|--|-----------------------------------|---------------------------------------|
|------|------------------------------------|--|-----------------------------------|---------------------------------------|



|           | 1      | 2        | 3     | 4    |
|-----------|--------|----------|-------|------|
| 1991-92   | 11,253 | –        | 1.72  | –    |
| 1992-93   | 13,021 | –        | 1.74  | –    |
| 1993-94   | 11,243 | –        | 1.31  | –    |
| 1994-95   | 11,275 | –        | 1.11  | –    |
| 1995-96   | -5,833 | –        | -0.49 | –    |
| 1996-97   | -2,037 | –        | -0.15 | –    |
| 1997-98   | 4,064  | –        | 0.27  | –    |
| 1998-99   | 2,695  | 68,193   | 0.15  | 3.88 |
| 1999-2000 | 22,117 | 1,07,946 | 0.15  | 5.59 |
| 2000-01   | 11,135 | 90,587   | 0.53  | 4.30 |
| 2001-02   | 8,024  | 1,00,594 | 0.35  | 4.38 |

\* Including UTI.

6.81 The sharp deceleration in the growth of mutual funds in the 1990s and early 2000s could be attributed partly to relatively poor performance of the stock market (the BSE Sensex during 1990-2002 on an average increased by 17.5 per cent per annum as compared with 22.4 per cent per annum during the 1980s) and partly to withdrawal of tax benefits under Section 80M of the Income Tax Act. Another major factor which appeared to have contributed to the deceleration was the problem with assured return schemes and US-64 of UTI.

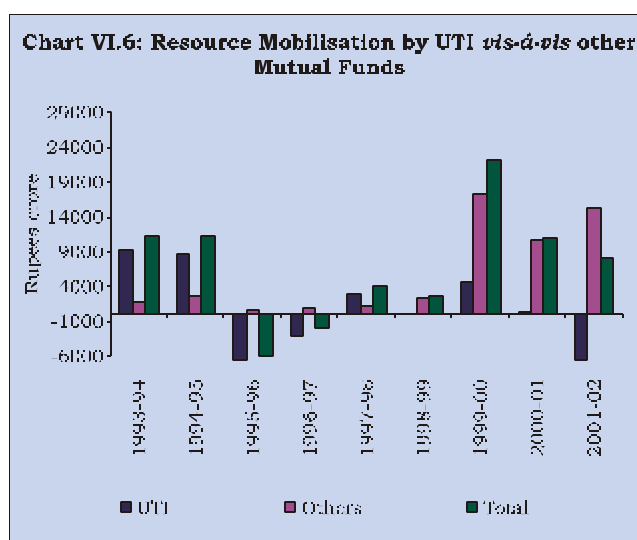
6.82 Some of the mutual funds had offered assured return schemes. While these assured return schemes enabled them to mobilise large resources, a number of mutual funds faced difficulties in meeting their redemption obligations relating to such schemes. In several cases, the sponsors of mutual funds had to infuse additional funds to meet the shortfall. As a result, mutual funds, by and large, discontinued the floatation of assured return schemes, which had some dampening effect on the resource mobilisation by mutual funds. While most of the mutual funds were somehow able to meet their commitments on account of assured return schemes, UTI faced a somewhat different problem on two different occasions between October 1998 and July 2001. US-64, which was the flagship scheme of UTI and enjoyed the investors' faith, first faced problem in December 1998 when the reserves under the scheme were reported negative. In July, the original corpus of US-64 scheme had been eroded to the extent of over Rs.1,000 crore. In order to restore investors' confidence, several measures were initiated by the Government/UTI. While these helped the US-64 to make a turnaround, the problem resurfaced again in July 2001 when UTI slashed down the dividend rate for the year 2000-01 and suspended sales and repurchases of US-64 for a period of six months from July 2001 to December 2001. This created a crisis of confidence and to restore investors' confidence various measures were initiated, which culminated in splitting the UTI into two parts, *i.e.*, UTI-I and UTI-II.<sup>5</sup> 6.83 The problem with US-64 scheme of UTI adversely affected the resource mobilisation by mutual funds in general and UTI in particular (Table 6.25 and Chart VI.6). On both the occasions when UTI faced difficulties, while resource mobilisation by UTI declined sharply, private sector mutual funds were able to fill the gap created by UTI only partially as overall mobilisation by all mutual funds on both the occasions declined sharply after the occurrence of the problem. During 1998-99, resource mobilisation declined by 33.67 per cent in comparison with 1997-98 (UTI faced problem first in October 1998) and by 27.9 per cent in 2001-02 in comparison with 2000-01 (UTI faced problem again in July 2001). During 2002-03 (April-September), net outflow of

resources from UTI was more or less offset by net inflows into private sector mutual funds and thus, private sector mutual funds were able to fill the gap created by UTI.

**Table 6.25: Net Resource Mobilisation by Mutual Funds**

(Rs. crore)

| Year      | UTI    | Public Sector | Private Sector | Total  |
|-----------|--------|---------------|----------------|--------|
|           | 1      | 2             | 3              | 4      |
| 1993-94   | 9,297  | 387           | 1,560          | 11,243 |
| 1994-95   | 8,611  | 1,342         | 1,322          | 11,275 |
| 1995-96   | -6,314 | 348           | 133            | -5,833 |
| 1996-97   | -3,043 | 143           | 864            | -2,037 |
| 1997-98   | 2,875  | 440           | 749            | 4,064  |
| 1998-99   | 170    | 459           | 2,067          | 2,695  |
| 1999-2000 | 4,548  | 631           | 16,937         | 22,117 |
| 2000-01   | 322    | 1,521         | 9,292          | 11,135 |
| 2001-02   | -7,284 | 1,330         | 13,977         | 8,024  |

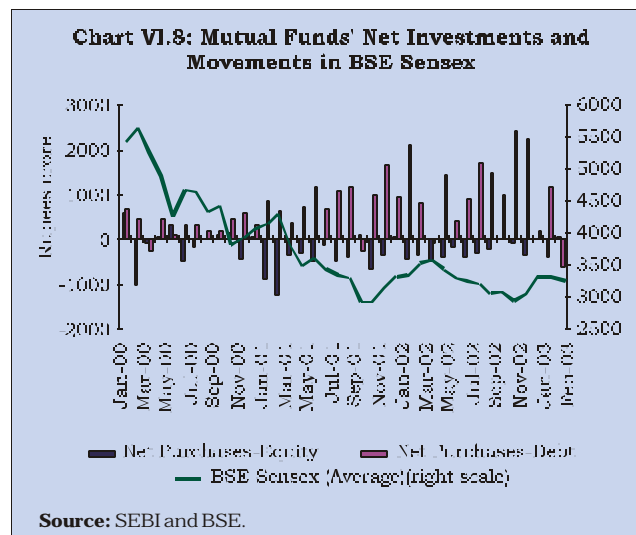
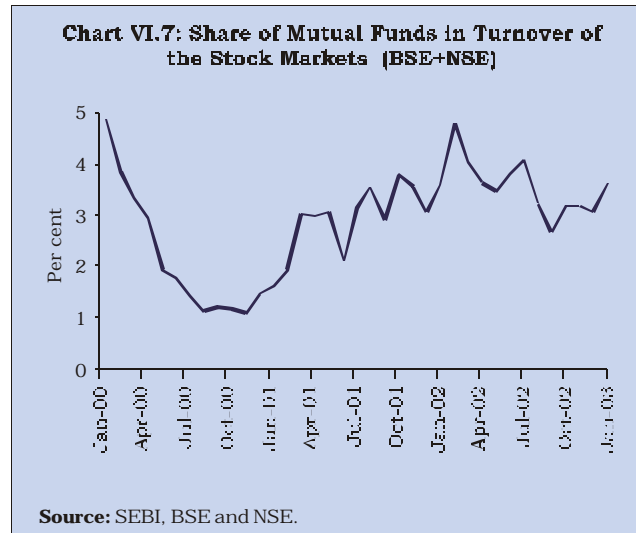


### *Role of Mutual Funds in the Stock Market*

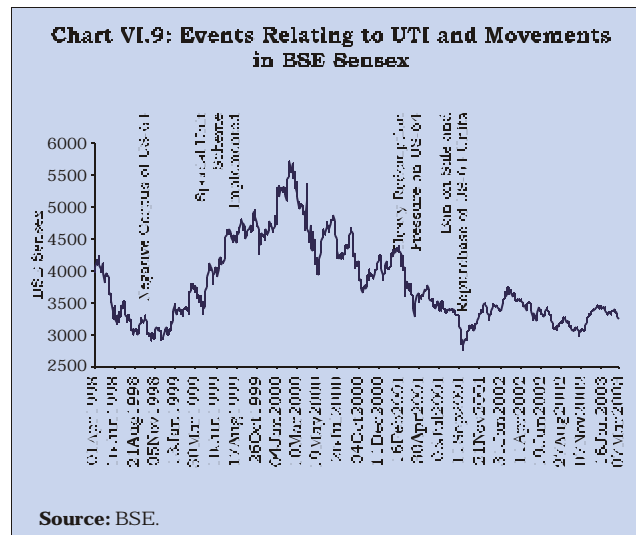
6.84 Mutual funds are an ideal vehicle for investment by retail investors in the stock market for several reasons. First, it pools the investments of small investors together increasing thereby the participation in the stock market. Secondly, mutual funds, being institutional investors, can invest in market analysis generally not available or accessible to individual investors, providing thereby informed decisions to the small investors. Thirdly, mutual funds can diversify the portfolio in a better way as compared with individual investors due to the expertise and availability of funds.

6.85 Mutual funds in India, because of their small size and slower growth in the recent past, have tended to play only a limited role in the stock market. The share of mutual funds in total turnover

of the stock markets (BSE+NSE), which was 4.9 per cent in January 2000, declined to 3.6 per cent by January 2003 (Chart VI.7). One of the reasons for the decline in the share of mutual funds in the turnover was that in the recent past, mutual funds shifted the portfolio composition from equity to debt due to subdued equity market conditions (Chart VI.8).



6.86 In view of small size of their operations, mutual funds in normal times hardly exert any influence on the stock market. This is evident from the correlation coefficient between net purchases of equities by mutual funds and the BSE Sensex during the period from February 4, 2000 to February 7, 2003, which worked out to an insignificant -0.02. Nonetheless, major developments concerning mutual funds do exert significant influence on the sentiment. It can be seen from Chart VI.9 that negative developments at UTI such as reporting of negative corpus for US-64 in October 1998, heavy redemption pressure on US-64 and ban on sale and repurchase of US-64 units in July 2001 resulted in decline in the BSE Sensex. On the other hand, positive developments like implementation of special unit scheme and announcement of positive corpus for US-64 were associated with general uptrend in the equity prices.



6.87 Mutual funds are very popular all over the world and they play an important role in many countries. As at end 2001, there were about 52,735 open-ended mutual fund schemes in operation in the world with a total asset base of US \$ 1,094 billion. Despite a long history, assets of mutual funds in India constitute less than 5 per cent of GDP which is very low in comparison with about 25 per cent in Brazil and 33 per cent in Korea. (Table 6.26).

**Table 6.26: Ratio of Assets of Open-end Funds to GDP**

| Country | (Per cent) |       |       |
|---------|------------|-------|-------|
|         | 1999       | 2000  | 2001  |
| Brazil  | 22.17      | 25.01 | 25.24 |
| Denmark | 15.83      | 20.24 | 18.88 |
| Korea   | 41.17      | 23.97 | 32.46 |
| India   | 2.92       | 2.98  | —     |
| UK      | 66.52      | 61.76 | 48.68 |
| USA     | 73.82      | 70.89 | 63.62 |

**Source :** Compiled from Mutual Fund Factbook, 2002.

6.88 One of the major reasons for this is that the penetration of mutual funds, especially in the rural areas remains small. According to the survey carried out by SEBI-NCAER (2000), mutual funds have been found to be popular mainly with the middle and high-income groups and have not been found to be an attractive investment avenue for the low-income groups. Thus, if mutual funds have to grow fast, they would need to devise appropriate schemes to attract the saving of low-income groups, especially in rural areas. This is the only way to ensure participation of all categories of investors into the capital market, which is so crucial for its long-term development. Mutual funds with large funds at their disposal are also required to act as a counterweight to FIIs, which generally exerts a significant influence on the stock market.

6.89 To sum up, financial sector reforms introduced since the early 1990s have brought about a significant improvement in the financial system. The commercial banking sector, which

constitutes the most important segment, has witnessed a remarkable improvement both in stability and efficiency parameters such as capital position, asset quality, spread and overall profitability. It is significant to note that the improvement was noticed in respect of all bank groups. However, the empirical evidence does suggest that public ownership impinged on the efficiency of the banking sector. This was evident from the fact that old private sector banks and those PSBs, which divested their equity recently, outperformed fully government-owned banks, although significant improvement was observed in the performance of fully Government-owned banks in the recent years. There is a feeling in some quarters that stability measures impinge on the efficiency of the banking sector. However, in the context of the Indian banking sector, various measures introduced to enhance the stability of the Indian banking system have not adversely affected their efficiency. In fact, stability and efficiency measures were found to be mutually reinforcing and complimentary.

6.90 In respect of other intermediaries, however, the impact of reforms was not so perceptible. In the case of co-operative banks, no significant improvement was observed either in the stability or efficiency parameters, except that state co-operative banks and District central co-operative banks, which were incurring losses, turned around and made some profits. The performance of scheduled urban co-operative banks in terms of asset quality and profitability deteriorated in the recent years. One reason for this appears to be that the reform process for co-operative banks started much later than the commercial banking sector and that too in a phased manner. It may, therefore, take some more time for the reforms to have their impact.

6.91 While there was some improvement in the stability parameters (capital and assets quality) of DFIs as a group, the asset quality of some of the DFIs was seriously impaired. Profitability of DFIs, in general, also declined. The decline in their profitability was due to increased competition on the asset side and increased cost of funds on the liability side after assured sources of funds were withdrawn. Thus, insofar as DFIs are concerned, overall there has been some deterioration in efficiency parameters. Reforms have been successful in increasing the competition in the insurance sector and mutual fund industry. In the case of mutual funds, while the reforms have been successful in creating a competitive environment, the growth of mutual funds slowed down sharply partly due to depressed market conditions and partly due to the problem faced by UTI. Reforms in the insurance sector, which are of recent origin, have also been successful in enhancing competition even as the impact of increased competition on insurance penetration is yet to be felt. Thus, insofar as financial intermediaries are concerned, reforms have had a mixed impact. While reforms have brought about significant improvement in respect of commercial banks, the impact was not so perceptible in respect of co-operative banks and non-bank financial intermediaries

### **III. FINANCIAL MARKETS: AN ASSESSMENT OF REFORMS**

6.92 A major objective of reforms in the financial sector was to develop various segments of the financial market, *viz.*, the money market, the Government securities market, the foreign exchange market and the capital market. Another important objective of reforms in financial markets was elimination of segmentation across various markets in order to smoothen the process of transmission of impulses across markets, easing the liquidity management process and making resource allocation process more efficient across the economy. The strategy adopted for

meeting these objectives involved removal of restrictions on pricing of assets, building the institutional structure and technological infrastructure, introduction of new instruments, and fine-tuning of the market microstructure. The market development efforts were supported by appropriate changes in the legal framework to remove structural rigidities and improvements in the regulatory design to ensure smooth functioning of markets. Aiming at widening and deepening of financial markets, new players and instruments were introduced (Box VI.4). This section assesses the impact of reforms on various market segments in terms of parameters such as liquidity, volatility, efficiency and integration of various segments.

### **Box VI.4** **Financial Markets - Reform Measures**

Since the early 1990s, various measures were initiated in all segments of financial markets aimed at improving depth and liquidity in the markets. The reforms also emphasised on improving the transparency and efficiency of the markets. The key reform measures undertaken in different market segments are briefly presented below.

#### *Money Market*

- A ceiling of 10 per cent on call money rates imposed by the Indian Banks Association was withdrawn in 1989.
- Initially, the participation in the call market was gradually widened by including non-banks, such as, financial institutions, non-banking finance companies, primary/satellite dealers, mutual funds, corporates (through primary dealers), *etc.* The process of transformation of call money market to a pure inter-bank market commenced effective May 2001.
- The 182-day treasury bills were introduced effective November 1986, followed subsequently by phasing out of on-tap treasury bills, introduction of auctioning system in 91-day treasury bills since January 1993, and introduction of 14-day and 364-day treasury bills. The system of *ad hoc* treasury bills (with a fixed 4.6 per cent interest rate since July 1974), which were issued by the Central Government to the Reserve Bank, was abolished effective April 1997. Currently only the 91-day and 364-day treasury bills exist.
- The Discount and Finance House of India (DFHI) was set up in April 1988, and was allowed to participate in the call/ notice money market both as a borrower and lender commencing from July 1988.
- Several new financial instruments were introduced, such as inter-bank participation certificates (1988), certificates of deposit (June 1989), commercial paper (January 1990) and repos (December 1992).
- Derivative products like forward rate agreements and interest rate swaps were introduced in July 1999 to enable banks, FIs and PDs to hedge interest rate risks.
- A full-fledged Liquidity Adjustment Facility was introduced on June 5, 2000 with a view to modulating short-term liquidity under diverse market conditions.
- With a view to adopting the sound risk management procedures and eliminating counter-party risk, the Clearing Corporation of India Ltd. was set up on February 15, 2002. The CCIL acts as a central counter-party to all trades involving foreign exchange, government securities and other debt instruments routed through it and guarantees their settlement.
- The segment refinance facility for banks is gradually being phased out.

#### *Government Securities Market*

- New auction-based instruments were introduced with varying maturities such as 364-day, 182-day, 91-day and 14-day treasury bills and the zero coupon bond. The auction system was also introduced for Government of India dated securities. An innovative feature of 'part payment' was added to the auction of Government of India dated securities.
- In the long-term segment, Floating Rate Bonds (FRBs) benchmarked to the 364-day treasury bill yields and a 10-year loan with embedded call and put options exercisable on or after 5 years from the date of issue were introduced.
- A system of Primary Dealers (PDs) was made operational in March 1996.
- Foreign Institutional Investors (FIIs) were allowed to set up 100 per cent debt funds to invest in Government

(Central and State) dated securities in both primary and secondary markets.

- The system of automatic monetisation of budget deficit through *ad hoc* treasury bills which hampered the development of the market was phased out over a period of three years from 1993-94 to 1996-97 and was replaced by the system of Ways and Means Advances (WMA) with effect from April 1, 1997.
- The Delivery-versus-Payment system (DvP) was introduced in 1995 for the settlement of transactions in Government securities. A screen-based trade reporting system with the use of VSAT communication network complemented by a centralised Subsidiary General Ledger (SGL) accounting system was put in place.
- The Negotiated Dealing System (NDS) (Phase I) was operationalised in February 2002 to enable on-line electronic bidding facility in the primary auctions of Central/State Government securities, OMO/LAF auctions, screen-based electronic dealing and reporting of transactions in money market instruments, including repo and to facilitate information on trades with minimal time lag.
- Since timely flow of information is a critical factor in evolving the efficient price discovery mechanism, improvements were brought in transparency of operations and data dissemination.
- A practice of pre-announcing a calendar of treasury bills and government securities auctions to the market was introduced.
- Retail trading in Government securities at select stock exchanges commenced in January 2003.

#### *Foreign Exchange Market*

- The current account was gradually made convertible leading to the acceptance of obligations under Article VIII of the IMF. The exchange rate, which was pegged to a basket of currencies, was made market-determined in a phased manner. Several transactions in the capital account were also gradually liberalised over the years.
- In line with the liberal policy environment of the 1990s, the Foreign Exchange Regulation Act, 1973 (FERA) was replaced by the Foreign Exchange Management Act (FEMA) in 1999.
- Banks were given increased freedom for operating in the forex market. These related to the following: (a) freedom to fix overnight position limit and gap limits approved by RBI, replacing the system of across-the-board or RBI-prescribed limits; (b) freedom to initiate trading position in the overseas market; freedom to borrow (up to 25 per cent of Tier I capital or up to US \$ 250 million, whichever is higher) or freely invest funds in the overseas market; (c) freedom to determine the interest rates (subject to a ceiling) and maturity period of Foreign Currency Non-Resident (FCNR) deposits (not exceeding three years); (d) freedom to use derivative products for asset-liability management.
- Corporates were allowed to undertake active hedging operations by resorting to cancellation and rebooking of forward contracts, book forward contracts based on past performance without having to produce documents endorsing a forex exposure, use foreign currency options and variations thereof like range forwards and ratio range forwards. They can access a range of products including Foreign Currency-Rupee Swap to manage longer-term exposures arising out of External Commercial Borrowings.

#### *Capital Market*

- With the repeal of the Capital Issues (Control) Act, 1947, companies were given freedom to price their issues. The book-building process in the new issue of capital was introduced with a view to further strengthen the price discovery process.
- In the secondary market, the floor-based open outcry trading system was replaced by electronic trading system in all the stock exchanges.
- The account period settlement system was replaced by rolling settlement, thus, reducing the scope for speculation. The rolling settlement cycle was shortened from T+5 to T+3 with effect from April 1, 2002. This process was enabled by a shift to electronic book entry transfer system through depository mechanism.
- The risk management system was made more comprehensive with trading members being subject to margins based on trading volumes and some other parameters and exposure norms based on the capital deposited with the exchange. The mark-to-market margins based on 99 per cent value at risk were introduced to capture the risk profile of trading members.
- The Indian companies were allowed to raise funds from abroad, through American/Global Depository Receipts (ADRs/ GDRs), foreign currency convertible bonds (FCCBs) and external commercial borrowings (ECBs). The Reserve Bank allowed two-way fungibility of ADRs/GDRs in February 2002.
- Foreign institutional investors (FIIs) were allowed to participate in the capital market.

- For strengthening the process of information flows from the listed companies, several measures were introduced: (i) while sufficient disclosures are mandatory for the companies at the stage of public issue, the listed companies are also required under the listing agreement to make disclosures on a continuing basis; (ii) for ensuring quick flow of information to the public, the decision pertaining to dividend, bonus and right announcements or any material event are now required to be disclosed to the public within 15 minutes of the conclusion of the board meeting in which the decisions are taken; (iii) the accounting practices were streamlined with norms introduced for segment reporting, related party transactions and consolidated balance sheets.
- Insider trading was made a criminal offence. The regulations governing substantial acquisition of shares and takeovers of companies were also introduced aimed at protecting the interests of minority shareholders by making the takeover process more transparent.
- For providing market participants instruments for hedging and risk management, several types of derivative products on equities were introduced. Non-transparent products like 'badla' were banned.

## **Money Market**

6.93 The money market forms an important part of the financial system by providing an avenue for equilibrating the surplus funds of lenders and the requirements of borrowers for short periods ranging from overnight up to a year. It also provides a focal point for central bank's intervention for influencing the liquidity in the financial system and thereby transmitting the monetary policy impulses.

6.94 Traditionally, the money market in India comprised mainly the call money market. Although other money market segments, viz., commercial bills market and inter-corporate deposits market have been in existence for a long time, there has not been much activity in these segments. Therefore, for assessing the impact of reforms on the money market the focus is mainly on the call money market. The impact of reforms is assessed in terms of behaviour of the call money market and the market growth related parameters, including those instruments, which were introduced in the 1990s.

### *Call/Notice Money Market*

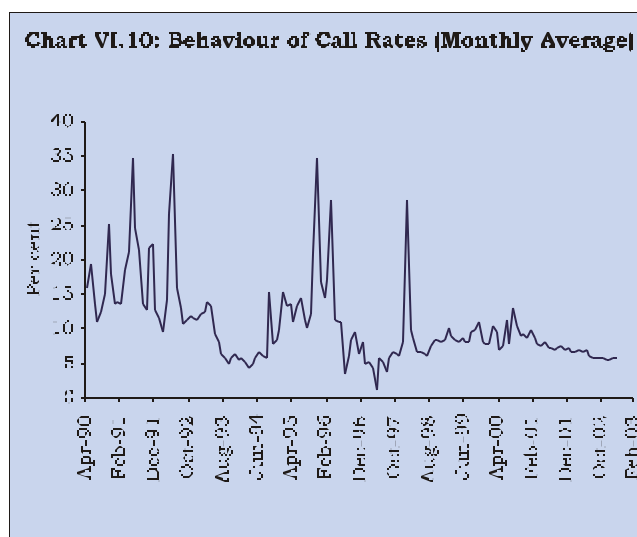
6.95 The call money market, which deals in overnight funds, is a key segment of the money market in India. Funds for 2-14 days are termed as notice money. Various reform measures initiated in this segment have resulted in more orderly conditions and increased liquidity.

6.96 In the initial phase of money market reforms in the late 1980s, considerable volatility was noticed in the call rate, resulting primarily from a free call money market while interest rates in other segments of the money market remained regulated. As a result, any fluctuation in the liquidity conditions impinged on the call money market.

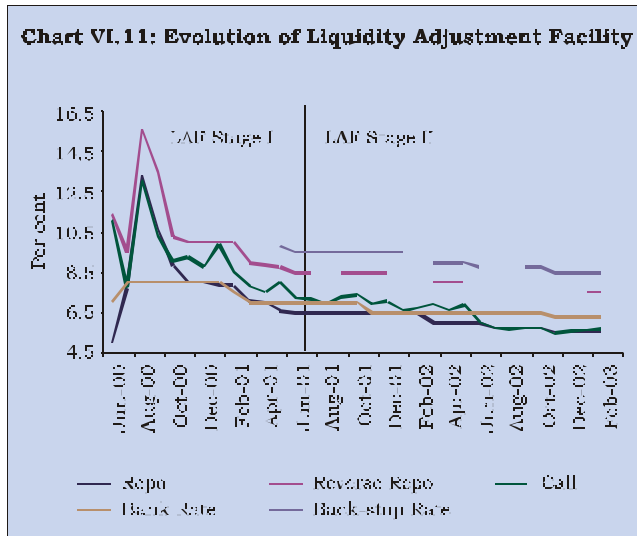
6.97 The call money market during the 1990s witnessed orderly conditions barring a few episodes of volatility (Chart VI.10). The call rates first came under pressure in May 1992 when they touched a peak of 35.3 per cent, essentially reflecting liquidity tightness due to high levels of statutory preemptions and withdrawal of all refinance facilities except for export credit refinance. After witnessing tranquil conditions during July 1992-December 1994, the call money market came under pressure again during 1995-96. The call rate touched a peak of around 35.0 per cent in November 1995, largely mirroring turbulence in the foreign exchange market. To stabilise the market, the Reserve Bank injected liquidity through reverse repos, enhanced banks'



refinance facilities against Government securities and reduced the CRR. The call rate softened to a single digit level thereafter till December 1997. However, the call rate hardened again and touched a high of around 29 per cent, in January 1998, reflecting the mopping up of money market liquidity by the Reserve Bank to squelch the pressure in the foreign exchange market. During 1999-2000, the inter-bank call money rates ruled steady within a narrow range, excepting few bouts of volatility, primarily attributable to the unanticipated demand for reserves by commercial banks.



6.98 Thus, excepting a few episodes of volatility, conditions in the call money market remained stable in the 1990s. The full-fledged Liquidity Adjustment Facility (LAF), which was introduced on June 5, 2000, with a view to modulating short-term liquidity under diverse market conditions, has emerged as an effective instrument to provide a corridor for the overnight call rate movement. This has resulted in stability and orderly market conditions through clear signalling (Chart VI.11). The LAF (as explained in [Chapter V](#)) combined with strategic open market operations (OMOs) has since been used to signal the monetary stance by removing shortfalls and excesses of liquidity in the system so as to keep the short-term interest rates reasonably stable.



6.99 The level of weighted average call money borrowing rates declined from around 7.5 per cent in April 2001 to 5.7 per cent in February 2003. The LAF has also enabled a reduction in the volatility in call rates (measured by coefficient of variation) from 85.7 per cent during 1997-98 to 7.6 per cent during 2002-03 so far (April to February).

6.100 The call/notice money market essentially serves the purpose of equilibrating the short-term liquidity position of banks and other participants. The turnover in the call/notice money market depends on the amount of surplus funds available with some participants and the requirements of funds by some other participants. Over the years, the number of participants in the market has gradually increased to include banks and Primary Dealers both as lenders and borrowers, and select mutual funds, insurance companies, development financial institutions and corporates through Primary Dealers (as lenders).

6.101 The supply of and demand for funds in the market arise on account of (i) compliance with cash reserve requirement of banks as mandated by the Reserve Bank, (ii) as a funding source to build up assets, (iii) temporary surpluses that are available with lenders, (iv) foreign exchange flows and (v) seasonal factors such as festival, election, harvesting, advance tax payments, *etc.* Over the years, a few banks tended to be overly exposed to the call/notice money market. Such banks relied excessively on the call money market for carrying out banking operations and long-term asset creation. The Narasimham Committee II recommended that there must be clearly defined prudent limits beyond which banks should not be allowed to rely on the call/notice money market and that access to this market should essentially be for meeting unforeseen mismatches and not as regular means of financing banks' lending operations. With the progressive regulations, asset liability management system was put in place, which kept the mismatches in cash flows in the 1-28 days bucket under check. As part of streamlining the Liquidity Adjustment Facility and improving the transmission channel of monetary policy, the phasing out of non-bank participants from the call money market commenced from May 2001. Furthermore, recognising that building up of substantial exposure to the call/notice money market relative to the balance-sheet size by some participants on a continuous basis has the potential not only for default and the consequent systemic instability but also impeding other segments of the money market, participants are now operating within limits on both lending and

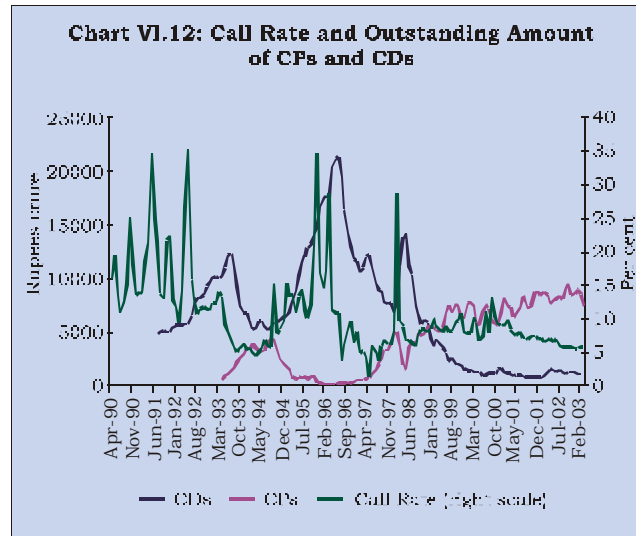
borrowing operations. Thus, the call/notice money market is evolving as a pure inter-bank market with ALM discipline for participants and prudential limits for borrowing and lending.

6.102 With the establishment of the Clearing Corporation and the enhanced liquidity in the repo market both in Government and non-Government securities, it is envisaged that eventually both the call market and the repo market combined with other money market instruments, would constitute an integrated market for equilibrating short-term funds for both banks and non-banks.

6.103 During the first half of the 1990s, volumes in the call money market at Mumbai remained more or less steady. However, the turnover increased sharply and fluctuated widely during the last few years. The average daily turnover rose from Rs.23,221 crore in 1999-2000 to Rs.30,320 crore in 2000-01 and further to Rs.35,144 crore in 2001-02, before falling to Rs.29,857 crore in 2002-03 so far (up to February 2003). The turnover in the call/notice market should also be seen alongside the repo amount accepted by the Reserve Bank on a daily basis where one can observe substantial volatility. LAF has been effective in reducing the volatility in the call/notice money market.

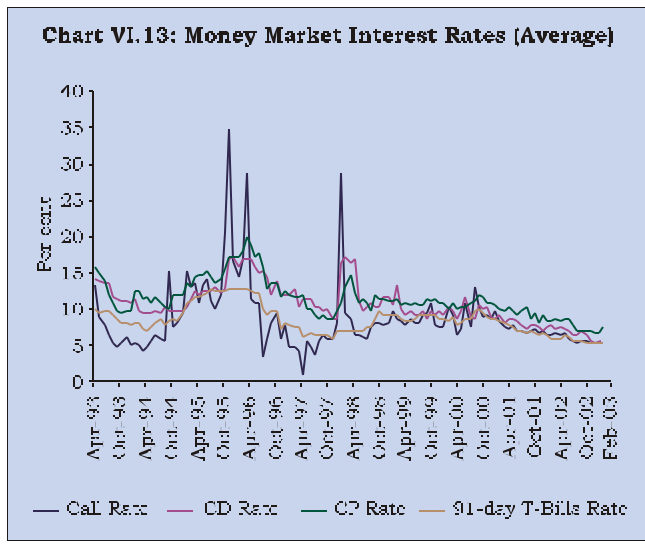
#### *Commercial Paper*

6.104 Commercial Paper (CP) was introduced as a money market instrument in January 1990 with a view to enabling corporates to diversify their sourcing of short-term borrowings as well as for providing investors with an additional instrument for investment. It was made broad-based with the lowering of the minimum issue size to Rs.5 lakh and the widening in the maturity period from 91 days-6 months to 15 days-1 year in July 2000 to make it compatible with instruments of comparable maturities. The Indian CP market is driven by swings in bank liquidity. Banks prefer investing in CPs, especially in times of easy liquidity as they can park funds at interest rates higher than call rates and at the same time avoid higher transaction costs associated with bank loans. The effective discount rate of CP usually lies between representative money market rate and the bank lending rate. On the other hand, companies are able to raise funds through CPs at a lower rate than the lending rates of banks under easy liquidity conditions. The amount of CPs outstanding increased significantly from Rs.577 crore in March 1993 to a high of Rs.4,511 crore in August 1994 accompanied by a decline in the average discount rate from 15.9 per cent to 10.5 per cent during this period. As the call rates firmed up, the average discount rate touched a peak of 20.2 per cent in April 1996 with the concomitant decline in outstanding amount to Rs.71 crore. The subsequent easing of liquidity conditions and institution of a series of reforms including dematerialisation of issuances and alignment of minimum maturity period boosted the CP market taking the outstanding amount to Rs.7,622 crore in February 2003 (Chart VI.12).



### *Certificates of Deposit*

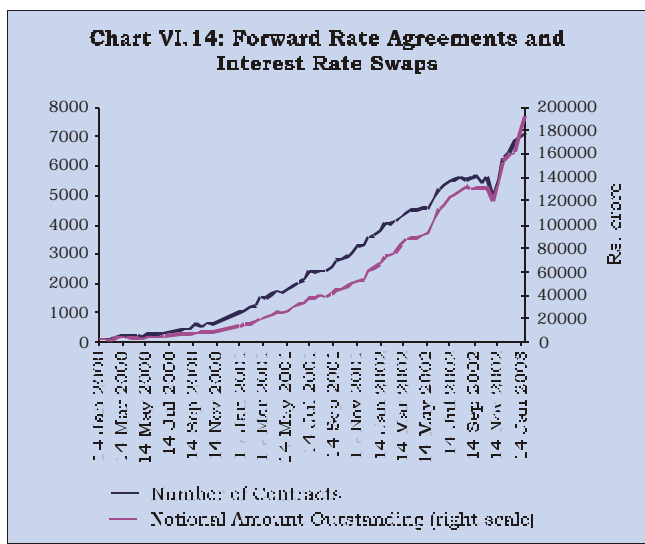
6.105 Certificates of Deposit (CDs) were introduced in 1989 as a money market instrument to mobilise large value deposits. CDs were freed from the interest rate regulation in 1992, thus, providing banks with an option to meet their liquidity needs through CDs issued at a premium during tight phases of liquidity. Thus, in its early stages of development, as and when the market faced tight liquidity conditions, banks found CDs as an appropriate instrument to raise funds, thereby taking the outstanding amount of CDs from Rs.2,000 crore in July 1990 to Rs.12,557 crore in July 1993. However, as liquidity conditions eased, the CDs outstanding amount declined to Rs.5,218 crore in July 1994. A credit pick-up again spurred the outstanding amount of CDs to a historical peak of Rs.21,503 crore in June 1996. Another phase of liquidity tightness during the South East Asian crisis in the fourth quarter of 1997-98 led to a pick-up in the CDs issuances. The subsequent easing of liquidity conditions enabled banks to reduce borrowing through CDs leading to a decline in the outstanding amount of CDs to Rs.1,212 crore in January 2003. Interest rates on CDs softened in the recent period in line with other short-term interest rates (Chart VI.13).



*Forward Rate Agreements (FRAs) / Interest Rate Swaps (IRS)*

6.106 With interest rate deregulation and the consequent flexibility in the market-determined rates, the associated risk factor for market participants also increased. This necessitated the development of derivative products for hedging risks by participants. Accordingly, banks and financial institutions were allowed in July 1999 to adopt risk management tools such as forward rate agreements (FRAs) and interest rate swaps (IRS) for their balance sheet management and hedging of interest rate risks by using the implied rates from any market segment such as money, debt or foreign exchange segment, for their own benchmarking.

6.107 The market has developed with successive rounds of interest rate deregulation in the economy. The notional principal amount under FRA/IRS contract moved up from Rs.2,065 crore during the fortnight ended January 14, 2000 to Rs.1,92,170 crore by January 24, 2003 (Chart VI.14).



## *Repos*

6.108 Repo (Repurchase Agreement) instruments enable collateralised short-term borrowing through sale operations in debt instruments. Under a repo transaction, the holder of securities sells them to an investor with an agreement to repurchase it at a predetermined date and rate. Reverse repo is a mirror image of repo, and represents acquiring of the debt securities with a simultaneous commitment to resell.

6.109 The Reserve Bank has been emphasising expansion and diversification of the repo market under regulated conditions so that repos become very active in enabling smooth adjustment of liquidity in the system. The essential reason to promote the repos as against the call/notice money market is the collateralised nature of the former. It is mandatory to actually hold the securities in the portfolio before undertaking repo operations. To further develop and widen the repos market, the Reserve Bank introduced regulatory safeguards such as delivery *versus* payments (DvP) system in April 1999. The operationalisation of the Negotiated Dealing System (NDS) and the Clearing Corporation of India Ltd. (CCIL) combined with placement of prudential limits on borrowing and lending in the call/notice market for banks are also expected to provide further boost to this market. The phase-out process of non-banks from the call/notice money market as also laying down of prudential restrictions on exposure limits of banks and PDs to this uncollateralised market segment is being followed up with the concomitant development of the repo market. Thus, the supply of funds of non-banks to the repo market picked up in the recent months. While the turnover in the call/notice money declined, the turnover in the repo market (outside RBI) increased from Rs.11,311 crore in April 2001 to Rs.27,712 crore in May 2001, when the non-bank phasing out process commenced. The turnover further moved up to Rs.34,503 crore in November 2002.

6.110 To sum up, the money market in India, which traditionally consisted largely of call/notice money market, now comprises many other instruments such as CP, CDs, Repos and FRAs/IRS. Various reform measures have helped in improving the depth and efficiency of the money market operations. The operationalisation of the LAF has provided an informal corridor for overnight call money borrowing rate, which has further imparted stability and flexibility in the interest rate structure and to the market. The other money market instruments such as, CP and CDs have also been developed through alignment in maturity (with deposit instruments like term deposits) and easing of issuance norms. With the proper development of other money market segments, non-banks have been able to smoothly switch over from the call/notice money market to the other segments.

6.111 Though significant progress has been made through initiation of various reforms, there are several issues, which need to be addressed. While the overnight market is reasonably developed, the term-money market is yet to develop necessitating large rollover of short-term funds in the overnight market. This is mainly on account of the inability of participants to form appropriate interest rate expectations in the medium-term due to which there is a tendency on their part to lock themselves into short-term period. Besides, the absence of a proper yield curve at the shorter end of the market also renders pricing of intra-fortnight money difficult. Furthermore, corporates' overwhelming preference for "cash" credit rather than for "loan" credit generally forces banks to deploy a large amount in the call/notice money market rather than in the term

money market.

6.112 Another issue relates to the avenues available to deploy short-term funds to non-bank corporates. A critical issue in transforming the call/notice money market to a pure inter-bank market is the availability of some other avenue for short-term funds for non-bank participants. The commercial bill market at the present stage continues to be limited especially as few participants are willing to bear the concomitant risk of default. Thus, the repo trade at this stage offers a quick medium for developing a market for short-term funds especially as the transactions are collateralised in the case of non-banks. While the Reserve Bank has taken several steps to develop a repo market for non-bank participants, a vibrant repo market is, however, yet to develop. There is also a need to develop uniform accounting and documentation procedures in this regard. Besides, there is a need to explore the possibility of expanding an array of repo-able instruments in terms of both the type of paper and the investment category.

### **Government Securities Market**

6.113 Existence of a well-developed government securities market is essential for the pursuit of a market-based monetary policy. Well-developed government securities market is also required to develop a domestic rupee yield curve, which could provide a credible benchmark for pricing of securities in other markets.

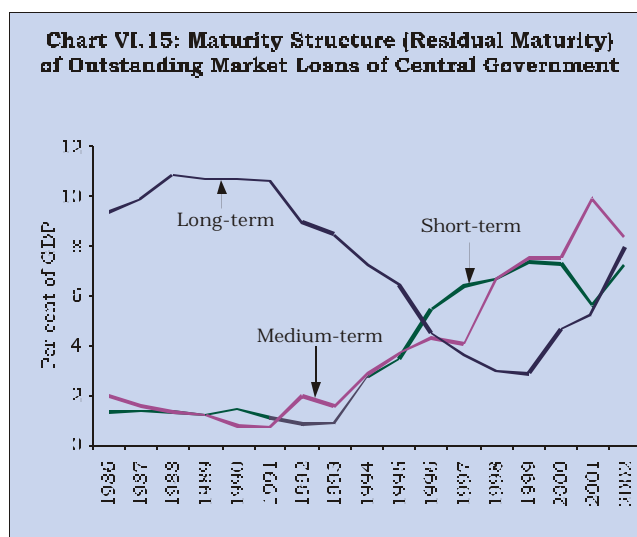
6.114 The major objective of reforms in the government securities market was to impart liquidity and depth to the market by broadening the investor base and by ensuring market-clearing interest rate mechanism. Keeping this in view, a number of reform measures were initiated in this segment (Box VI.4), which had a positive impact on both the primary and the secondary markets.

#### *Primary Market*

6.115 After the switchover to auction-based system for issuing securities, the amount of market-based primary issuance of Government securities increased by more than ten-fold from about Rs.12,000 crore in 1991-92 to about Rs.1,40,000 crore in 2001-02. This was accompanied by a sharp decline in primary subscription by the Reserve Bank from 45.9 per cent in 1992-93 to 1.45 per cent in 1993-94 and to mere 0.74 per cent in 1994-95. However, in the recent years, devolvement/private placement on the Reserve Bank was higher at around 30 per cent in 1999-2000 and 25 per cent in 2001-02, essentially reflecting the liquidity management operations undertaken by the Reserve Bank. These securities are, however, offloaded in the market to contain the monetary impact.

6.116 The switchover to the system of borrowing at market-related rates provided the flexibility to modulate the maturity structure according to the needs. In the initial years of reforms, the maturity structure was shortened to reduce the cost, apart from making the government securities attractive to investors in terms of their tenor. Consequently, the weighted average maturity, which was around 16 years in 1990-91, was reduced to 6.59 years in 1997-98. This, in turn, resulted in significant bunching of redemptions. Consequently, it was considered desirable to elongate the maturity profile of the Government debt. Accordingly, during 1998-99, longer dated securities with tenors of 11, 12, 15 and 20 years were issued. Reflecting this, the weighted

average maturity of dated securities went up from 7.71 years in 1998-99 to 14.3 years in 2001-02 (Chart VI.15). The average maturity of the Government debt in India compares favourably with other countries (Table 6.27).



**Table 6.27: Maturity Profile of Central Government Debt**

(As at end-March 2000)

| Country/Region | Average remaining years to maturity |
|----------------|-------------------------------------|
|                | 1                                   |
| Euro area*     | 6 years                             |
| Japan          | 5 years 2 months                    |
| United Kingdom | 9 years 11 months                   |
| United States  | 5 years 10 months                   |
| India**        | 7 years 6 months                    |

\* end 1999. \*\* as at March 31, 2001.

**Source :** Thorat, 2002.

6.117 Despite the increase in maturity, the average cost of issuance of dated securities declined substantially during 2001-02 to 9.44 per cent from 13.69 per cent in 1996-97 (Table 6.28).

**Table 6.28: Weighted Average Yield and Maturity of Market Loans of Government of India**

| Years   | Range of YTM's at Primary Issues (%) |             |               | Weighted Average Yield (%) | Range of Maturity of New Loans | Weighted Average Maturity (WAM) (yrs.) | WAM of Outstanding Stock |
|---------|--------------------------------------|-------------|---------------|----------------------------|--------------------------------|--|--------------------------|
|         | Under 5 years                        | 5-10 years  | Over 10 years |                            |                                |  |                          |
|         | 1                                    | 2           | 3             |                            |                                |  |                          |
| 1995-96 | 13.25-13.73                          | 13.25-14.00 | –             | 13.75                      | 2-10                           | 5.7                                    | –                        |
| 1996-97 | 13.40-13.72                          | 13.55-13.85 | –             | 13.69                      | 2-10                           | 5.5                                    | –                        |
| 1997-98 | 10.85-12.14                          | 11.15-13.05 | –             | 12.01                      | 3-10                           | 6.6                                    | 6.5                      |
| 1998-99 | 11.40-11.68                          | 11.10-12.25 | 12.25-12.60   | 11.86                      | 2-20                           | 7.7                                    | 6.3                      |



|                                   |            |             |             |       |            |      |     |
|-----------------------------------|------------|-------------|-------------|-------|------------|------|-----|
| 1999-2000                         | –          | 10.73-11.99 | 10.77-12.45 | 11.77 | 5.26-19.61 | 12.6 | 7.1 |
| 2000-01                           | 9.47-10.95 | 9.88-11.69  | 10.47-11.70 | 10.95 | 2.89-20    | 10.6 | 7.5 |
| 2001-02                           | –          | 6.98-9.81   | 7.18-11.00  | 9.44  | 5-25       | 14.3 | 8.2 |
| 2002-03 (up to<br>March 17, 2003) | –          | 6.57-8.14   | 6.06-8.62   | 7.34  | 7-30       | 13.8 | 8.9 |

6.118 A policy of reissuance/reopenings through price-based auctions (as opposed to earlier yield-based auctions) introduced in 1999 with a view to improving fungibility amongst the securities and facilitating consolidation of the debt greatly improved market liquidity and helped in the emergence of benchmark securities in the market. The process of passive consolidation itself helped in more or less containing the number of bonds to a level that was prevailing at the end of 1998-99. Of the 25 loans issued (excluding private placements) during 2001-02, 12 were new loans and the remaining were reissues of the existing loans. This ability to ‘reissue’ or ‘reopen’ loans is limited by the maximum outstanding amount that is perceived as ‘manageable’ from the viewpoint of redemption.

#### *Secondary Market*

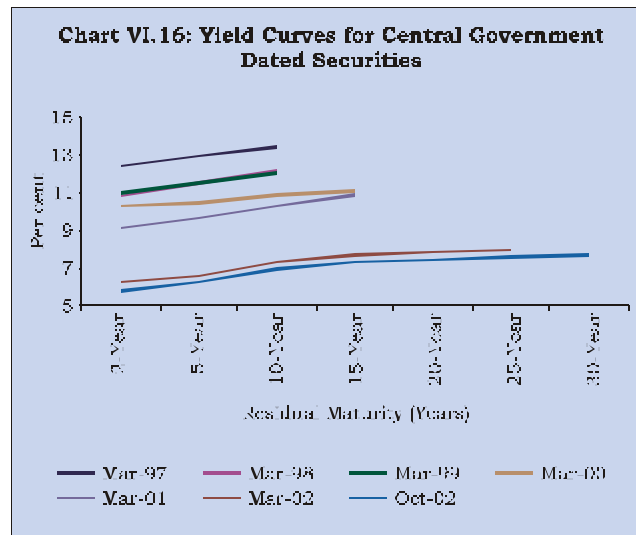
6.119 As a result of a series of structural and institutional reforms, a deep, wide and vibrant gilt market has emerged. The secondary market turnover of government securities in India has been rising steadily, reflecting increased liquidity in the market and increased trading activity by market participants. Over the 6-year period ended March 2002, turnover increased 12-fold (Table 6.29). This sharp increase in turnover, particularly in the last 2 to 3 years, in part, was due to a sustained rally in the Government securities market.

**Table 6.29: Secondary Market Transactions in Central Government Securities**

| Year                     | (Rs. crore) |          |           |
|--------------------------|-------------|----------|-----------|
|                          | Outright    | Repo     | Total     |
|                          | 1           | 2        | 3         |
| 1995-96                  | 17,553      | 92,834   | 1,27,179  |
| 1996-97                  | 59,903      | 25,415   | 1,22,942  |
| 1997-98                  | 1,18,541    | 20,811   | 1,85,708  |
| 1998-99                  | 1,43,097    | 38,076   | 2,27,228  |
| 1999-00                  | 4,05,308    | 75,723   | 5,39,255  |
| 2000-01                  | 5,09,112    | 1,09,097 | 6,98,146  |
| 2001-02                  | 11,38,504   | 3,35,861 | 14,74,365 |
| 2002-03 (April-February) | 12,27,426   | 4,23,233 | 16,50,659 |

6.120 There was a sharp decline in the weighted average interest cost of market borrowings by the Government from 13.75 per cent in 1995-96 to 10.95 per cent in 2000-01 and to 9.44 per cent in 2001-02. Real interest rate on government securities [adjusting for the inflation (WPI)] also declined from 5.7 per cent in 1995-96 to 3.7 per cent in 2000-01 before rising to 5.8 per cent in 2001-02. The sharp fall in yields could be partly attributed to increased liquidity and efficiency of the market.

6.121 One of the major objectives of the reforms was the evolution of the yield curve. Chart VI.16 shows the evolution of the yield curves over the years. Up to 1999, the curve was limited to 10 years. Gradually, with the elongation of maturity of Government bond issuance, the yield curve got extended up to 30 years.



6.122 Thus, a series of institutional and structural reform measures undertaken in the government securities market since the early 1990s with the objective of creating a deep and liquid market have brought about significant improvements. With the aligning of coupons on government securities with market interest rate, market gradually widened with the participation of several non-bank players. Presently, investor base includes, apart from banks and insurance companies, private corporate sectors, private sector mutual funds, finance companies as also individuals. Recent steps to allow retailing of government securities and introduction of trading in government securities at stock exchanges are expected to give a further impetus to this trend. As a result, the market has become more deep and liquid and the Government is able to mobilise adequate funds from the market. The Reserve Bank's absorption of primary issues has come down drastically. Even the limited primary purchases taken as private placement/ devolvement are off-loaded in the market. This, in turn, enabled the elimination of automatic monetisation by the Reserve Bank and reduction in statutory pre-emption of banks. These arrangements provided functional autonomy to the Reserve Bank in the conduct of monetary policy.

6.123 Government securities are emerging as a benchmark for pricing private debt instruments. This would enable market players to appropriately price the securities.

### Foreign Exchange Market

6.124 The foreign exchange market in India is a three-tier structure comprising (a) the Reserve Bank at the apex, (b) Authorised Dealers (ADs) licensed by the Reserve Bank, and (c) customers such as exporters and importers, corporates and other foreign exchange earners. Apart from these main market players, there are foreign exchange money changers who bring buyers and sellers together but are not permitted to deal in foreign exchange on their own account. The ADs are

governed by the guidelines framed by the Foreign Exchange Dealers Association of India (FEDAI). Dealings in the foreign exchange market include transactions between ADs and the exporters/ importers and other customers, transactions among ADs themselves, transactions with overseas banks and transactions between ADs and the Reserve Bank.

6.125 In line with the liberalisation measures undertaken in other areas, various reform measures were also initiated in the foreign exchange market guided mainly by the recommendations of various high level committees with the main objective of making it more deep and liquid, more vibrant, open and market determined (Box VI.4).

6.126 The impact of reforms on the forex market could be assessed by examining the behaviour of the market over the period as also the trends in various market growth related parameters.

### *Trends and Conditions*

6.127 With the gradual opening of current and capital account transactions in the 1990s, the increasing volume of capital flows had a direct bearing on the stability of the exchange rate. There were intermittent periods of excessive capital inflows followed by episodes of ebbing of capital flows and subsequent recovery in capital inflows. From the viewpoint of examining the impact of external transactions on the exchange rate stability, the 10-year period starting from March 1993 (when the exchange rate became market determined) could be divided into three sub-periods as detailed below.

6.128 *March 1993-August 1995*: Reflecting the positive investor confidence, the Indian economy experienced surges in capital inflows during 1993-94, 1994-95 and the first half of 1995-96, which, coupled with robust export growth, exerted upward pressures on the exchange rate. In the face of these inflows, the Reserve Bank absorbed the excess supplies of foreign exchange. In the process, the nominal exchange rate of the Rupee *vis-à-vis* the US dollar remained virtually unchanged at around Rs.31.37 per US dollar over the extended period from March 1993 to August 1995.

6.129 *September 1995-December 1996*: The period from September 1995 to February 1996 witnessed large capital inflows. The real appreciation of the Rupee resulting from surges in capital inflows triggered off market expectations and led to a depreciation of the Rupee in the second half of 1995-96, *i.e.*, between September 1995-mid-January 1996. In response to the upheavals, the Reserve Bank intervened in the market to signal that the fundamentals were in place and to ensure that market correction of the overvalued exchange rate was orderly and calibrated. The interventions in the forex market were supported by monetary tightening to prevent speculative attacks. These decisive and timely measures brought stability to the market lasting till mid-January 1996. In the first week of February 1996, another bout of uncertainty led the Rupee to overshoot to Rs.37.95 per US dollar. The monetary and other measures succeeded in restoring orderly conditions and the Rupee traded in a range of Rs.34-35 per US dollar over the period March-June 1996. The Rupee remained range bound during the second half of 1996.

6.130 *1997 onwards*: The foreign exchange market since 1997 had to cope with a number of adverse internal as well as external developments. The important internal developments included

the economic sanctions in the aftermath of nuclear tests during May 1998 and the border conflict during May-June 1999. The external developments included, *inter alia*, the contagion due to the Asian financial crisis and the Russian crisis during 1997-98 and the sharp increase in international crude prices in the period since 1999, especially from May 2000 onwards. Movements in interest rates in the industrialised countries as well as the cross-currency movements of the US dollar *vis-à-vis* other major international currencies were some of the other external developments impacting the foreign exchange market. These developments created a large degree of uncertainty in the foreign exchange market leading to excess demand, which was reflected in the spot market gap in the merchant segment, increasing from US \$ 3.2 billion in 1997-98 to US \$ 4.4 billion in 1998-99 (Table 6.30). The Reserve Bank responded through timely monetary and other measures like variations in the Bank Rate, the repo rate, cash reserve requirements, refinance to banks, surcharge on import finance and minimum interest rates on overdue export bills to curb destabilising speculative activities during these episodes of volatility while allowing an orderly correction in the value of the Rupee. Reappearance of uncertainty in the foreign exchange market between mid-May to mid-August 2000 reflected hardening of international oil prices, successive interest rate increase in industrial countries and the withdrawal of portfolio flows. This resulted in widening of the excess demand gap in the spot segment of merchant transactions and compensating activity built up in the inter-bank segment (Table 6.31). Tight monetary measures adopted during May-June 2000 coupled with inflows in respect of the Indian Millennium Deposits during October-November 2000 eased market tightness and brought stability to the foreign exchange market. In the aftermath of September 11, 2001 incident in the US, once again the pressure was felt in the forex market as the Rupee depreciated against the US dollar, but the RBI tackled the situation through quick responses in terms of a package of measures and liquidity operations.

**Table 6.30: Merchant Transactions in the Foreign Exchange Market**

| Year                    | (US \$ billion) |       |      |           |       |       |                   |
|-------------------------|-----------------|-------|------|-----------|-------|-------|-------------------|
|                         | Spot            |       |      | Forward   |       |       | Merchant Turnover |
|                         | Purchases       | Sales | Net  | Purchases | Sales | Net   |                   |
| 1                       | 2               | 3     | 4    | 5         | 6     | 7     |                   |
| 1997-98                 | 54.7            | 57.9  | -3.2 | 20.0      | 28.4  | -8.4  | 209.6             |
| 1998-99                 | 54.3            | 58.8  | -4.4 | 16.0      | 33.5  | -17.5 | 246.1             |
| 1999-2000               | 67.1            | 67.0  | 0.1  | 19.9      | 31.0  | -11.1 | 244.0             |
| 2000-01                 | 80.8            | 80.6  | 0.2  | 21.0      | 41.7  | -20.7 | 269.4             |
| 2001-02                 | 77.2            | 75.8  | 1.5  | 19.6      | 39.0  | -19.3 | 256.8             |
| 2002-03 (April-January) | 74.1            | 71.1  | 3.0  | 32.5      | 30.5  | 2.0   | 260.1             |

3 There are other types of credit co-operatives as well, which are, however, not banks under the definition provided by the Banking Regulation (B.R.) Act, 1949.

4 Depending on certain characteristics of a bank, the minimum capitalisation requirement under this Act varies between Rs. 1-10 lakh.

5 The UTI-I comprises US-64 for which assured repurchase prices have been announced and all other assured returns scheme and would be managed by a Government-appointed administrator with the Government meeting all obligations annually to cover any deficit. The UTI-II comprises all NAV-based schemes, managed by a professional Chairman and Board of Trustees and will be disinvested in the future. Since UTI-II would not be subject to any redemption guarantees or assured returns schemes, its transactions could be based on the market perception of its fund managers and the management.