V - Financial Markets

[Money Markets](#)
[Foreign Exchange Market](#)
[Government Securities Market](#)
[Equity, Debt and Term Lending Markets](#)

5.1 During 2000-01, financial markets in India were characterised by orderly and liquid conditions except for a brief period of uncertainty from mid-May to August 2000. A growing integration between money, gilt and foreign exchange market segments was visible in the convergence of financial prices, within and among various segments, and co-movement in turnovers. The call money market was broadly stable except for some pressures in June and August 2000 emanating from the foreign exchange market on account of unfavourable international developments. Apart from this brief period, the foreign exchange market experienced generally comfortable supply conditions. The Government securities market experienced a perceptible downward shift in yields in the primary as well as secondary segments during the second half of the year. The credit market tracked the movements in the other segments with a lag. The capital market exhibited isolated behaviour from the other segments of domestic financial markets with a clear indication of cross-border integration, particularly reflecting the large decline in international technology stock driven exchanges. Liquidity operations of the Reserve Bank were conducted keeping in view the market conditions (Table 5.1).

5.2 In view of the easy liquidity conditions at the beginning of 2000-01, the financial markets witnessed a softening of interest rates across segments up to mid-May 2000. The daily call money borrowing rates, on an average basis, moved generally within the corridor of the fixed rate repo of 5 per cent and slightly above the Bank Rate of 7 per cent. The 3-month and 6-month forward premia declined by 124 basis points and 64 basis points, respectively, in April 2000. The markets for Government securities witnessed price rallies with the yield-to-maturity (YTM) of 10-year residual maturity paper declining by 48 basis points as at end-April 2000 from its level a month ago. In the credit market, prime lending rates (PLRs) of public sector banks (PSBs) eased by 75-100 basis points in April 2000. The stock prices declined in the capital market in April 2000 with the BSE Sensex moving down by 6.87 per cent as compared with the previous month.

Table 5.1: Developments in the Money and Foreign Exchange Markets

Month	Commercial Bank Borrowings from the RBI* (Rs. crore)	Average Daily Inter-bank Foreign Excha-nge Turnover (US $ million)	Turn-over in Central Govt. Dated Secu-rities Market (Rs. crore)+	Exchange Rate (Rs. per US Dollar)	RBI's net Foreign Currency Sale (-)/ Purcha-se(+) (US $ million)	Net OMO Sales (-)/ Purch-ases (+) (Rs. crore)	Average Daily Repos (LAF) outstan-ding Rs. crore)	Average Daily Reverse Repo (LAF) Out-stan-ding Rs. crore)	Liqui-dity Support to PDs (as at end of the month) (Rs. crore)	Average Daily Call/ Notice Turn-over Rs. crore)	Average Call Money Borro-wing Rates (Per cent)	Forward Premia 3-month (Per cent)
1	2	3	4	5	6	7	8	9	10	11	12	13
2000												

April	5,068	3,802	79,072	43.6388	368	-36	-	-	466	33,401	6.79	2.59
May	10,341	4,781	78,198	43.9829	-897	-1,479	-	-	1,543	30,343	7.48	2.29
June	8,713	5,115	37,602	44.6893	-1,051	-510	0	1,327	4,136	27,089	11..08	3.32
July	5,847	4,253	86,571	44.7788	-408	-6,299	1,150	34	3,972	28,418	7.77	3.69
August	6,251	5,213	36,490	45.6800	-467	1,197	8,807	36	5,614	21,809	13.06	5.10
September	5,292	4,603	45.660	45.8883	-287	-1,335	10,672	2	5,141	23,334	10.32	5.19
October	6,225	4,344	50,930	46.3445	-494	-66	8,321	166	4,716	30,218	9.07	4.40
November	5,624	4,282	1,07,696	46.7789	3,686	-11,565	2,634	1403	1,229	32,148	9.28	4.05
December	6,692	4,173	87,004	46.7496	-155	-1,671	1,206	565	5,519	30,159	8.76	3.48
2001												
January	6,099	4,670	1,51,498	46.5439	832	-87	0	1,762	5,333	38,530	9.89	4.24
February	5,130	5,087	1,41,793	46.5167	624	-2	2,802	160	3,788	33,412	8.51	4.15
March	3,896	5,362	1,15,710	46.6205	606	-40	3,952	650	5,010	36,217	7.78	4.44
April	5,843	4,914	1,14,534	46.7835	-18	-5,064	10,390	15	2,533	35,785	7.49	4.51
May	4,772	4,936	1,89,026	46.9202	469	-27	2,132	1,737	167	36,458	8.03	4.95
June	3,616	4,956	2,00,119	47.0038	36	-5,837	2,458	45	2,061	38,606	7.24	4.82
July	6,441	-	-	47.1393	-	5,092	2,349	200	622	37,793	7.19	4.50

* Outstanding as on last reporting Friday of the month.
+ Outright only.
- Not Available.

5.3 Excess demand conditions surfaced sporadically in the foreign exchange market during May-August, 2000. Monetary, regulatory and other measures were combined with repo auctions to break circuits of arbitrage running from money to foreign exchange segments. The tightening of market conditions affected the credit market as well and was reflected in the hardening of the PLRs of the PSBs, particularly in August 2000. The stock prices also went down in August 2000 with the BSE Sensex declining by 3.87 per cent as compared with April 2000.

5.4 As the foreign exchange market stabilised from November 2000 onwards, monetary measures were phased out during the last quarter of 2000-01 to return to the April 2000 position. Comfortable liquidity fuelled price rallies in the secondary market for Government paper and the PSBs also reduced PLRs during this period. The BSE Sensex also gained by 7.73 per cent in November 2000 as compared with the previous month.

5.5 Liquidity conditions eased in April 2001 in line with seasonal trends coupled with slackening in credit demand, after exhibiting the usual financial year-end hardening during March 2001. This was reflected in the large-scale participation in repo auctions and existence of unavailed refinance limits for banks and PDs. However, once the government commenced its market borrowing programme for 2001-02 there was a withdrawal from repo auctions under LAF with the outstanding amount of repos declining from a high of Rs.19,170 crore as on April 12, 2001 to Rs.110 crore as on April 27, 2001. The liquidity conditions continued to remain comfortable throughout the month with the call rates remaining within the informal corridor. Against this background the Reserve Bank rejected large repo bids on some occasions and reduced the repo and reverse repo cut-off rates by 25 basis points each to 6.75 per cent as on April 27, 2001 and 8.75 per cent as on April 30, 2001, respectively. Government completed around a quarter of its budgeted gross market borrowing programme for 2001-02 during April 2001 itself. As the ways and means advances of the Central Government crossed the limit of Rs.10,000 crore for the first half of the fiscal year, it privately placed three securities of Rs.4,000 crore each with the Reserve Bank on April 20, 2001. The Reserve Bank sold one of the securities (11.60% Government Security 2020) on the tap sale basis on April 21, 2001. The participants absorbed the entire issue. In the secondary gilt segment, the yields came down more prominently at the extreme ends of the maturity spectrum with the yields for the 10-year maturity paper not witnessing any significant change. The foreign exchange market was broadly stable during April 2001 with the increased supply of foreign exchange on account of foreign institutional investment inflows.

5.6 During May 2001, the call money rates moved above the repo-reverse repo corridor reflecting rationalisation of standing facilities available to the commercial banks and primary dealers at the Bank Rate, and call money lendings by non-bank financial institutions. The Reserve Bank injected liquidity through the reverse repos which nudged the call money rates back to the corridor by May 19, 2001. As the liquidity conditions became comfortable, the Reserve Bank absorbed excess liquidity through repos and the repo cut-off rate was further reduced by 25 basis points to 6.5 per cent on May 28, 2001. The Central Government resumed its market borrowing through a price-based re-issue of Rs.4,000 crore on May 17, 2001 and a twin yield-based auction of Rs.3,000 crore and Rs.2,000 crore, respectively, which were all oversubscribed. There was a private placement of Rs.5,000 crore of Government security with the Reserve Bank on May 30, 2001 which was only partially off-loaded to the market during the first week of June 2001. With the cut in Federal Reserve Bank's Fund rate of 50 basis points to 4.0 per cent on May 15, 2001, preceded by the announcement of the CRR cut of 50 basis points to 7.5 per cent with effect from fortnight beginning May 19, 2001, the yields of Treasury Bills and Government securities came down. The foreign exchange market was generally stable during May 2001 with orderly movements in the exchange rate. The PLR of PSBs was reduced by 25 basis points in May 2001.

5.7 Liquidity in the financial markets was comfortable during June 2001 and call rates remained generally within 7.0-7.5 per cent, *i.e.*, well within the repo-reverse repo corridor, on account of unusually low quarter-end advance tax outflow from the banking system to the Government, resource augmentation due to CRR cut along with an appreciable mobilisation of time deposits since April 20, 2001, a moderate off-take in non-food credit and a tapering off of the tempo of gilt auctions. The reverse repo cutoff rate declined by 25 basis points to 8.5 per cent on June 7, 2001 reflecting the comfortable liquidity position. A firming up of the weighted average call money borrowing rate to 8.0 per cent on June 8, 2001 on account of outright absorption of liquidity through the open market operations was stabilised through the reverse repo operations. The privately placed Government paper of Rs.4,000 crore on June 20, 2001 could be entirely off-loaded to the market through the open market sales. The implicit yields at the cut-off prices in the month-end twin issuances of 9.39 per cent Government security, 2011 for Rs.4,000 crore and 10.45 per cent Government security, 2018 for Rs.2,000 crore turned out to be below the corresponding secondary market yields of gilts reflecting prevalence of ample liquidity in the system. The excess liquidity was absorbed through repos during the course of the month. As the non-food credit off-take was low and the direct market off-take of funds by the Government took place only at the month-end, there was a rally in the prices of secondary market of gilts where the 10-year paper touched a low of 9.48 per cent by end-June 2001. The foreign exchange market was generally stable with the increased supply of foreign exchange on account of foreign institutional investment inflows.

5.8 The liquidity situation remained comfortable during July 2001 as deposit growth continued to be buoyant with low non-food credit off-take. The call money rates (weighted average) generally ruled in the range of 6.7-8.9 per cent averaging at 7.2 per cent. The liquidity was ample in the first week of July 2001. There was some tightness when liquidity was absorbed through the open market sales on July 12, 2001. Nevertheless, the weighted average call money rate remained within the corridor throughout the month except on the reporting Friday after the gilt auction on July 25, 2001. The Government continued its market borrowing programme through price-based auctions and completed 59.5 per cent of the gross budgeted amount of borrowings for 2001-02 by July 31, 2001. The rally in prices of gilts in the secondary market persisted till the open market sales of a short-term paper through an auction on July 12, 2001 arrested it. Thereafter, the yields hardened at the long-end and softened somewhat at the short- and medium-ends, thereby making the yield curve steeper as at end-July 2001 in relation to a month ago. The foreign exchange market continued to exhibit orderly conditions during July 2001 with the exchange rate moving in a narrow range of Rs. 47.07-47.18 per US dollar. The average forward premia eased during the month across all maturities. The comfortable liquidity conditions continued in August 2001 so far (up to August 10) and the call money rates remained around the Bank Rate. The PLR of PSBs and deposit rates were reduced by about 25 basis points each.

5.9 The stock prices tended to move generally downward between April-July 2001. The Sensex declined by 5.40 per cent between April 2001 and July 2001. The slowdown in the industrial sector and profit warnings issued by various software companies for the coming quarters had a negative impact on the market sentiment. In May 2001, the SEBI announced significant changes in the capital market in keeping with the international practices. The ban on deferral products in the cash segment by SEBI and the ban by UTI on sales and repurchases of US-64 units affected the market sentiment adversely in July 2001. The subdued market sentiment continued in August 2001. The Sensex declined by 6.6 per cent between April 21 and August 14, 2001 in sharp contrast to gains of 10.2 per cent by the Nasdaq and 6.5 per cent by the Dow Jones.

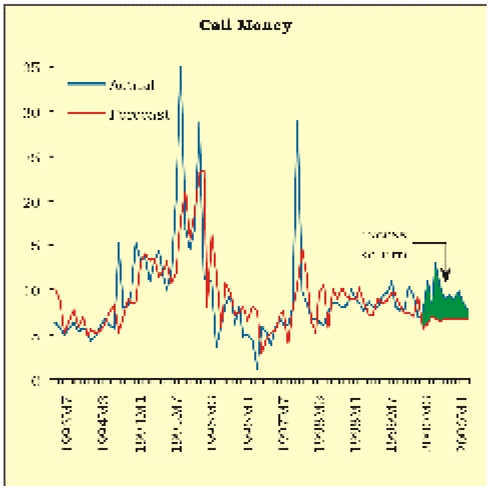
5.10 Recent empirical analyses of financial market behaviour in India have yielded evidence of growing integration between money, debt and foreign exchange markets with relatively weak convergence of capital markets. The experience of 2000-01 suggests that market integration has tended to strengthen during episodes of volatility, pointing to a swifter transmission of market pressures from one segment to another than in earlier years. An indication of this integration during periods of market pressures is the existence of excess returns contemporaneously in various segments. This imposes additional constraints on the management of market conditions requiring simultaneous action across the spectrum (Box V.1).

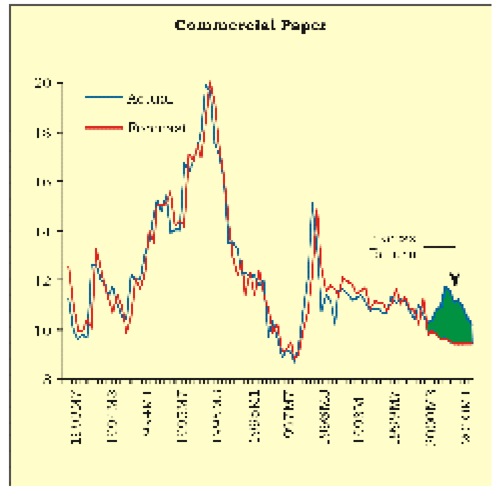
Box V.1
Integration of Financial Markets in India: Some New Evidence

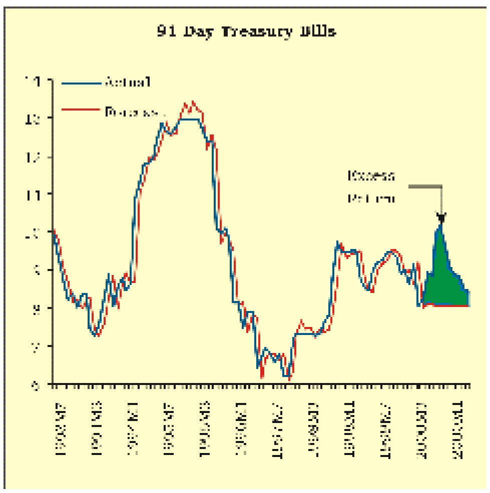
The progress of financial sector reforms in India has been marked by a growing integration within the financial market spectrum. Evidence of market inter-linkages is reflected in the close co-movement of turnovers and rates of return. The structure of financial returns across markets continues to be differentiated by maturity, liquidity and risk, indicative of seams in the integration. In periods of orderly market conditions, the strengthening linkages between market segments suggests enhancement in the operational efficiency of markets as well as the conduct of monetary policy, the latter through the improvement in the transmission channels that integrated markets provide. On the other hand, the emerging market integration has entailed a swifter diffusion of turbulence originating in one market segment across the spectrum. Episodes of volatility have tended to unleash almost contemporaneous perturbations in several market segments, particularly the money, debt and foreign exchange markets. This has severely constrained monetary policy. On several occasions in the late 1990s and again during May-August, 2000 monetary operations have had to be undertaken simultaneously in various market segments in order to localize contagion in the presence of the asymmetric integration of markets. This has necessitated a flexible approach, allowing for temporary departures from the announced stance to contend with disorderly conditions across the market spectrum. The monetary policy reaction has been in terms of a combination of instruments, including regulatory action, to ensure the rapid restoration of stability. In general, markets have responded positively to the policy signals, returning to normalcy fairly quickly and this, in turn, has enabled a smooth vacation of market interventions to revert to the monetary stance. Under these conditions, the evolving channels of financial market integration in India warrant close and continuous scrutiny so as to distinguish between market reactions to fundamentals and transitory forces and thereby shape the policy response to the growing frequency of episodes of heightened but asymmetric inter-linkages.

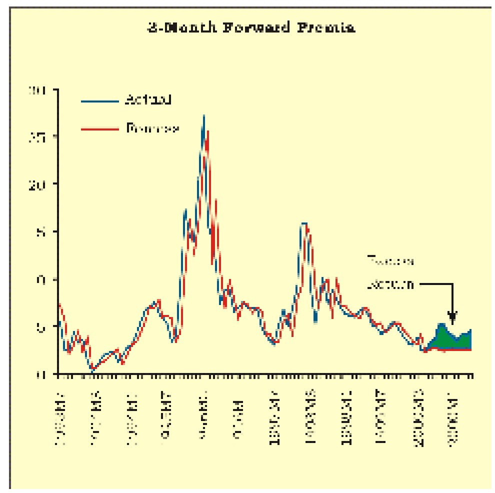
In the economics and finance literature, a necessary condition for financial market integration is the convergence of risk-adjusted returns across the market continuum. The existence of a reference rate around which this convergence occurs is regarded as a sufficient condition of integration. As noted in the literature co-movement need not, however, indicate integration. Studies have found that market co-movements can also be the result of market contagion. In a world of asymmetric information about market prices, price changes in one market segment may depend on price changes in other segments through 'structural contagion coefficients'. As a consequence, markets do not absorb all information simultaneously and price movements exhibit lead/lag correlation structures. Empirical studies conducted in the Indian context have provided reasonably robust evidence of integration between the money market segments *i.e.*, call money, commercial paper (CPs) and certificates of deposit (CDs), the gilt market represented by the Treasury Bill segments and the forward foreign exchange market segment. The equity market is found to have remained segregated from this integration. The 91-day Treasury Bill rate was observed to have the potential of emerging as a reference rate. Cross-border integration of the forex market is weak: while there is some evidence that covered interest parity may hold in India, the occurrence of uncovered interest parity is unambiguously rejected. This points to forward market inefficiency as the forward exchange rate does not provide unbiased predictions of the future spot exchange rate. Moreover, modeling market efficiency in the forward market segment indicates the persistence of excess returns, *i.e.*, deviations from uncovered interest parity.

Preliminary evidence of financial market integration is provided by the strength of association in the movements of rates of returns, *i.e.*, the cross correlation structure. The balance of opinion in the literature, however, does not favour the use of correlations for empirical verification of market integration. This is because financial rates of return predominantly exhibit 'random walk' properties, *i.e.*, that today's prices cannot be used to predict future prices or that they are non-stationary with no tendency to revert to an underlying trend value. Variance is infinite under these conditions and this yields inconsistent estimates of the parameter. In India, most financial rate movements are found to be non-stationary. Accordingly, the series were differenced to make them stationary and correlation coefficients were computed on the differenced data. A comparison with the results of earlier studies (conducted on non-stationary data) shows a significant improvement in the correlation coefficient for call money rates and 91-day Treasury Bill rates from 0.62 in the period 1993-98 to 0.73 in 2000-01, the latter period containing the most recent episode of market volatility spread across segments. The correlation between 91-day Treasury Bill rate and the three-month forward premia improved from 0.49 to 0.87 and the correlation between call money rates and the forward premia remained high at 0.70.









Differencing the data runs the disadvantage of losing information about underlying long run relationships between the rates of return. Accordingly, the co-movement between rates was examined in a co-integration framework in which linear combinations of non-stationary variables can be identified which are stationary. It may be mentioned that co-integration could not be established between equity and other market segments. The rationale for seeking a cointegrated relationship between the rates of return in the money, foreign exchange and gilt market segments emerges from the fact that all the rate variables were integrated of the same order *i.e.*, I(1). Conducting the estimation under the Johansen-Juselius (JJ) procedure yields a unique cointegrating vector between the call money rate, the 91-day Treasury Bill rate and the three-month forward premia by subjecting the call money rate to the normalization restriction. The coefficient of the 91-day Treasury Bill (risk-free gilt) rate being close to unity suggests operational efficiency, but the significance of the coefficient of the forward premia at 0.3 indicates that the foreign exchange market has a small but decisive influence on the call money rate. The short run dynamics of the cointegrated relationship were examined in a vector error correction model (VECM) framework. It was found that the call money rate adjusts rapidly to the long run path with a correction of about 80 per cent of disequilibrium error in a one month period. In the case of Treasury Bills and forward rates, the adjustment in disequibrium error is comparatively slow. An analysis in terms of orthogonalised variance accounting shows that the variation in 91-day Treasury Bill rate is explained almost fully (90 per cent) by its own variance. The call money rate movements, besides being influenced by their own behaviour, are explained primarily (30 per cent) by the 91-day Treasury Bill rate followed by three-month forward premia (12 per cent) over a time horizon of 12 months. In case of the forward rate, more than 50 per cent of its variation is explained by the call money rate.

The out of sample forecasts from the VECM for the different rate variables indicated contemporaneous episodes of excess returns across market segments in the first half of 2000-01. Excess returns were most pronounced in the call money market ranging between 0.7-6.3 percentage points over the underlying forecast during April to September 2000. In the case of Treasury Bills and forward markets, the excess returns ranged between 0.2-2 percentage points and 0.1-2.7 percentage points and for CP, between 0.4-2.1 percentage points. These excess returns tend to disappear in all markets with the restoration of stability from October-November, 2000 (please see charts in this box).

The simultaneous appearance of co-movement and volatility in financial markets in India indicates asymmetric integration. Even as efforts are intensified for deepening and broadening financial market segments and developing a seamless and vibrant market continuum, the policy response in the transition would rely on multiple interventions and a combination of instruments to ensure financial stability.

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MONEY MARKETS

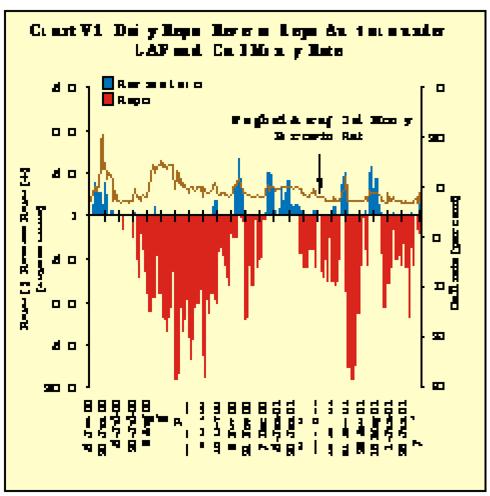
Call/Notice Money Market

5.11 The call money market remained orderly during 2000-01 with short-lived episodes of volatility in June and August 2000. Call rates were range-bound within the informal corridor created by the Reserve Bank's liquidity operations. The daily call money borrowing rates, on an average basis, moved between a peak of 10.35 per cent and a low of 7.55 per cent. The Liquidity Adjustment Facility (LAF) introduced from June 5, 2000 onwards modulated short-term liquidity under varied financial market conditions and thereby imparted stability to market conditions during the year. The average of daily weighted average call money borrowing rate was higher at 9.15 per cent during 2000-01 than 8.87 per cent during 1999-2000 (Table 5.2).

5.12 Market liquidity was ample up to mid-May 2000, and the call money rates (weighted average borrowing rate) generally ruled steady in the range of 7.0-8.0 per cent. Market conditions tightened in June 2000 as foreign currency sales by the Reserve Bank in the face of uncertainty in the foreign exchange market sucked out domestic liquidity. This coincided with the seasonal tightening on account of advance tax outflows. The Reserve Bank injected liquidity through a series of reverse repo auctions under the LAF progressively increasing the reverse repo cut-off rate from 9.05 per cent on June 5, 2000 to 10.85 per cent on June 14, 2000 (Appendix Table V.1). However, the weighted average call money borrowing rate spurted to touch a high of 20.34 per cent on June 17, 2000. The reverse repo cut-off rate was further raised to 14.0 per cent on June 20, 2000 in order to prevent spillovers between the call money and foreign exchange market segments. As the call money rates moved down from June 21, 2000 onwards and pressures eased, the reverse repo cut-off rate was reduced to 12.25 per cent by June 28, 2000. The call money rates tracked the reverse repo rate movements, declining to 7.14 per cent by the end of June 2000. Thus, liquidity management ensured that a further run away spike, after a temporary spurt in the call money rates in response to the transient impact of market volatility, was contained (Chart V.1).

Table 5.2: Daily Call Money Borrowing Rates
(Summary Statistics)

	2000-01			1999-2000		
	Low	High	Weighted Average	Low	High	Weighted Average
1	2	3	4	5	6	7
Minimum (%)	0.20	7.00	3.15	0.10	7.00	3.99
Maximum (%)	13.80	35.00	20.34	10.50	35.00	18.79
Average (%)	7.55	10.35	9.15	7.48	10.07	8.87
SD (%)	1.56	3.26	2.23	1.02	3.49	1.73
CV	0.21	0.32	0.24	0.14	0.35	0.19



5.13 Market conditions eased during the first half of July 2000 with the coupon payments and redemption of zero coupon bonds. The reverse repo cut-off rate declined to 9 per cent and the call rates also moved down to around 7.0 per cent. A temporary renewal of pressures in the foreign exchange market was countered by monetary tightening on July 21, 2000. Call rates edged up, ruling in the range of 8.4 per cent to 9.7 per cent between July 22-24, 2000. In August 2000, following persistent pressures from the foreign exchange market, a significant amount of liquidity was absorbed by the Reserve Bank through daily, three-day and seven-day repos. Progressively higher cut-off rate, from 8.0 per cent as on August 2, 2000 to a peak of 15.0 per cent as on August 18, 2000, were set in repo auctions and call rates moved in tandem, hovering around 14.0 per cent level during a greater part of the month.

5.14 Foreign exchange market conditions stabilised in September 2000. Accordingly, repo cut-off rate was progressively reduced to 10.0 per cent on September 11, 2000 and further to 8.0 per cent on October 25, 2000. The call rates also decreased from an average of 10.32 per cent during September 2000 to 9.07 per cent during October 2000 (Table 5.3). In the second week of November 2000, liquidity conditions tightened. Reverse repos were employed to inject liquidity and assuage market pressure at a cut-off rate of 10.0 per cent. Thereafter, liquidity improved substantially on account of India Millennium Deposits (IMD) inflows. Outright open market sales along with repo auctions under LAF effectively absorbed excess liquidity. The repo cut-off rate at 8.0 per cent served as a floor for the call money rates.

5.15 Seasonal tightening of the call money rates during the last week of December 2000 owing to advance tax payments and a price rally in the Government securities market was eased through reverse repo operations during December 22, 2000-February 2, 2001. Monetary easing in the form of Bank Rate and CRR cuts between mid-February and early March 2001 enabled a further decline in call rates to an average of 8.5 per cent in February 2001 and 7.8 per cent during March 2001. The usual year-end tightening at the end of March 2001 on account of balance sheet considerations was accommodated through the reverse repo auctions including a special LAF auction on March 31, 2001 in order to adjust market mismatches of funds.

Table 5.3: Monthly Call Money Borrowing Rates

Month	Mean (%)	SD (%)	CV
1	2	3	4
1999-2000	8.87	1.73	0.19
2000-01	9.15	2.23	0.24
2000			
April	6.79	1.21	0.18
May	7.48	0.67	0.09
June	11.08	3.68	0.33
July	7.77	0.86	0.11
August	13.06	2.12	0.16
September	10.32	1.28	0.12
October	9.07	0.77	0.08
November	9.28	1.27	0.14
December	8.76	0.84	0.10
2001			
January	9.89	0.21	0.02

February	8.51	0.59	0.07
March	7.78	0.72	0.09
2001-02 (so far)			
2001			
April	7.49	1.21	0.16
May	8.03	0.81	0.10
June	7.24	0.30	0.04
July	7.19	0.48	0.07

SD Standard Deviation. CV Co-efficient of Variation.

5.16 During the first quarter of 2001-02, the call money rates remained easy and well within the repo-reverse repo corridor except for a brief period during May 9-21, 2001, reflecting adjustment of the market with revised guidelines under the second stage of LAF. The call money market eased in April 2001 after the usual hardening in end-March 2001 with the weighted average call money borrowing rates hovering slightly above the repo rate of 7.0 per cent for most part of the month. The excess liquidity was absorbed by a series of repo auctions and the repo outstanding amount averaged Rs.11,544 crore during April 3-29, 2001. However, as the market borrowing programme of the Government built up tempo during the latter half of the month the outstanding amount of repos declined from Rs.19,170 crore on April 12 to Rs.110 crore on April 27, 2001. Reflecting the prevalence of comfortable liquidity conditions the repo and reverse repo rates declined by 25 basis points each to 6.75 per cent and 8.75 per cent, respectively. However, in response to the rationalisation of standing facilities available to the commercial banks and PDs under the second stage of LAF, the weighted average call money borrowing rate moved up to 9.13 per cent on May 9, 2001 and remained generally above the ceiling of the corridor till May 18, 2001. A series of liquidity injections in the form of reverse repos (averaging an outstanding amount of around Rs.3,340 crore during May 8-23, 2001) as well as a cut in the CRR by 50 basis points to 7.5 per cent of net demand and time liabilities effective May 19, 2001 could nudge the call rates back to the corridor by May 21, 2001. With appreciable mobilisation in time deposits during May-June 2001, a decline in non-food credit up to fortnight ended June 1, 2001 followed by a low increase thereafter and a low advance tax outflow to Government in June 2001, the liquidity conditions remained easy. Mirroring this, the call money rates remained well within the corridor hovering between 7-7.5 per cent for the rest of the first quarter of 2001-02. The excess liquidity was absorbed through a series of repo auctions.

5.17 During July 2001, liquidity conditions were comfortable and call money rates (weighted average) generally ruled in the range of 6.70-8.88 per cent averaging 7.19 per cent. This comfortable liquidity was underscored by the substantial over-subscription to the issue of Government dated securities during the month. However, following the sale of dated securities, there was some firmness in the call money rates during the concluding part of second and fourth weeks of the month. Reverse repos were employed to inject liquidity in the market. The liquidity conditions remained comfortable during August 2001 (up to August 10) with daily call rates hovering mostly below the Bank Rate.

Other Money Market Segments

Term Money Market

5.18 There has been a steady rise in outstanding transactions in this segment of the market, though the volumes continue to be small. During March 2001, the daily volume of transactions (outstanding) ranged between Rs.1,242-2,687 crore as compared with that of Rs.941-1,489 crore in March 2000. During April-July 2001 the daily volume of transactions (outstanding) ranged between Rs.2-2,556 crore as compared with that of Rs.258-1,977 crore during the corresponding period of the previous year.

Certificates of Deposit (CDs) Issued by Banks

5.19 Developments in the CD market closely reflected the alternating phases of money market behaviour. The outstanding amount of CDs issued by scheduled commercial banks (SCBs) declined from Rs.1,273 crore as on April 21, 2000 to Rs.872 crore as on May 5, 2000 on account of improvement in liquidity (Appendix Table V.2). Thereafter, following tight liquidity condition as also reduction in maturity period of CDs to 15 days effective May 3, 2000, issuances started rising and outstandings touched a peak level of Rs.1,695 crore as on October 20, 2000. However, with a return of comfortable liquidity conditions, the outstanding amount of CDs declined to Rs.771 crore as on March 23, 2001. The typical discount rates (for 3 months maturity) on CDs, which declined from 11.00 per cent as on April 7, 2000 to 8.50 per cent as on June 16, 2000, ranged between 10.0 - 10.50 per cent during August-November 2000, reflecting market conditions. In the following months, discount rates started declining and ranged between 8.00 - 10.0 per cent during the period December 2000 to March 23, 2001.

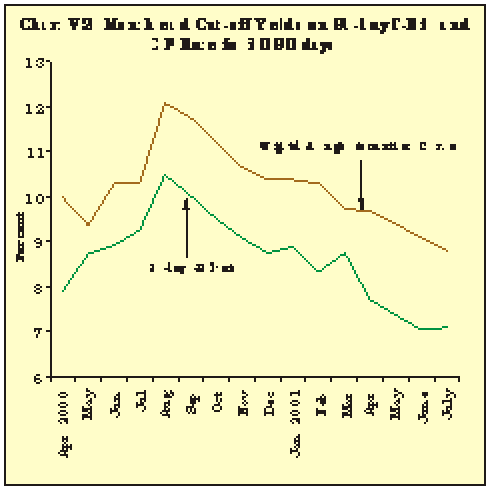
5.20 During 2001-02 the outstanding amount of CDs issued by scheduled commercial banks decreased from Rs.1,042 crore as on April 6 to Rs.905 crore on April 20, 2001, reflecting easy conditions. However, it rose to Rs.935 crore on May 18, 2001 on account of the tight liquidity conditions prevailing during the second and third weeks of the month. It moved down to Rs.921 crore as on June 29, 2001. The typical discount rate (for three-month maturity) on CDs, which increased from 9.75 per cent as on April 6, 2001 to 10.00 per cent as on April 20, 2001, declined to 8.00 per cent as on May 18, 2001 and remained at that level as on June 29, 2001. The typical discount rate ranged between 8.00-10.00 per cent during April-June 29, 2001, reflecting the market conditions.

Commercial Paper

5.21 The weighted average discount rates on commercial paper (CP) which were ruling in a narrow range of 9.55 - 9.95 per cent during April 30- June 15, 2000, firmed up to 12.03 per cent in the fortnight ended September 15, 2000 in consonance with other financial prices. As a result, the outstanding amount of CP which increased from Rs.5,634 crore as on April 15, 2000 to Rs.7,627 crore as on June 30, 2000, declined subsequently to Rs.5,577 crore as on September 15, 2000 (Appendix Table V.3). With easing of liquidity conditions, discount rates declined from 11.44 per cent in the fortnight ended October 15, 2000 to 9.87 per cent in the fortnight ended March 31, 2001. During the second half of the year, the CP market recorded heightened activity. By end-December 2000, the outstanding amount of CP reached the peak level of Rs.8,343 crore before declining to Rs.6,991 crore as on March 15, 2001 and further to Rs.5,847 crore as on

March 31, 2001. During 2000-01, manufacturing and related companies issued 86.2 per cent of the total CPs issued while 12.7 per cent of the total were issued by leasing and finance companies and the balance 1.1 per cent by financial institutions.

5.22 The liquidity premium on CPs, measured by the differential between the 91-day Treasury Bill rate and the weighted average effective rate of discount on CPs (60-90 days), remained stable at an average of 1.5 percentage points in 2000-01(Chart V.2). The average differential between the average discount rate on CPs (60-90 days) and 91-day Treasury Bill rate worked out to 1.7 percentage points during 1999-2000.



5.23 Reflecting the trends in other segments of money market, the weighted average discount rate on CP ruled in a narrow range of 9.4-9.98 and the outstanding amount of CP issued by corporates rose steadily from Rs.6,295 crore as on April 15, 2001 to Rs.8,566 crore as on June 30, 2001 on account of improvement in liquidity. The share of manufacturing and other companies in the amount of CP issued increased from 78.31 per cent as on April 15, 2001 to 90.96 per cent on May 15, 2001 but decreased to 81.54 per cent on June 30, 2001 with concomitant variations in the share of finance/leasing companies/FIs. Guidelines of CP issuance in terms of dematerialised form came into effect from July 1, 2001. The outstanding amount of CPs declined to Rs.7,275 crore as on July 31, 2001.

Commercial Bill Market

5.24 The outstanding amount of commercial bills rediscounted by commercial banks and various financial institutions stood at Rs.1,033 crore at end-December 2000, higher than that of Rs.785 crore during the corresponding period of the previous year. The stock of rediscounted commercial bills rose further to Rs.1,063 crore at end-January 2001. The activity in the bill market slowed down with the outstanding amount of bills rediscounted by banks and FIs declining to Rs.668 crore as at end-February 2001 but rose to Rs.1,013 crore as at end-March 2001. The outstanding amount of bills rediscounted by banks with financial institutions as at the end of April 2001 declined sharply to Rs.691 crore before recovering a little to Rs.700 crore as at end-June 2001.

Repurchase Agreements: Inter-bank Repo

5.25 During the year, the weekly turnover in the inter-bank repo market ranged between Rs.196 crore and Rs.4,216 crore except during the last weeks of June and November 2000 when the turnover spurted to Rs.5,799 crore and Rs.6,907 crore, respectively. Reflecting the trends in other segments of the money market, repo rates which ranged between 5.0-10.0 per cent up to mid-June 2000, started rising and ranged between 6.5-22.0 per cent in the latter half of June 2000. Subsequently, rates started rising and ranged between 7.50 - 16.50 per cent up to September 8, 2000. During October 2000 - April 2001, the inter-bank repo rate moved between 8.00 - 12.30 per cent.

5.26 During the period April-July 2001, the weekly turnover in the inter-bank repo market ranged between Rs.3,035 crore and Rs.8,176 crore. Reflecting the trends in other segments of the money market, repo rates ranged between 6.40 - 10.25 per cent up to July 2001, except during the first week of April 2001, when repo rate had increased to 14.0 per cent. The volume of turnover in the inter-bank repo market is expected to go up in future following the gradual phasing out of non-bank entities from the call/ notice money market coupled with the setting up of the Clearing Corporation.

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

5.27 There were increases in volumes of FRAs/ IRS during 2000-01. FRAs/IRS transactions, both in terms of number of contracts and outstanding notional principal amount, rose from 216 contracts amounting to Rs.4,249 crore as on March 24, 2000 to 399 contracts for Rs.6,617 crore as on August 11, 2000 and further to 1,521 contracts amounting to Rs.21,504 crore as on March 23, 2001. The participation in the market continued to be restricted mainly to a few foreign and private sector banks, PDs and all-India financial institutions.

5.28 During 2001-02 up to July, the number of contracts in FRAs/IRS transactions rose from 1,615 contracts as on April 6, 2001 to 2,383 contracts as on July 27, 2001 and the outstanding notional principal amount increased from Rs.22,865 crore to Rs.38,101 crore. Though there was a significant increase in the number and amount of contracts, participation in the market continued to be restricted mainly to foreign and private sector banks, PDs and all-India financial institutions.

FOREIGN EXCHANGE MARKET

5.29 Comfortable supply conditions characterising the foreign exchange market in the early part of 2000-01 were dissipated by the hardening of international oil prices, successive interest rate increases in industrial countries and the withdrawal of portfolio flows during the period mid-May to mid-August 2000. Inflows under the IMDs during October-November 2000 eased market tightness and brought stability to various segments of the foreign exchange market.

5.30 During April 2000, excess supply conditions were reflected in net market purchases of US $ 368 million by the Reserve Bank. With pressures mounting in May 2000 due to the adverse international environment, the exchange rate moved from Rs.43.66 per US dollar at end-April

2000 to Rs.44.28 per US dollar as on May 25, 2000. Excess demand conditions were reflected in the spot market gap in the merchant segment increasing from US $ 202 million in April 2000 to US $ 855 million in May 2000 (Table 5.4). In the inter-bank segment, banks took positions in response to merchant activity (Table 5.5). Monetary measures in the form of interest rate surcharge of 50 per cent of the lending rate on import finance, penal interest at 25 per cent per annum (minimum) in respect of overdue export bills and net foreign exchange sales of US $ 1,948 million during May-June 2000 were undertaken by the Reserve Bank to meet genuine demand-supply mismatches and to prevent building up of speculative positions (Table 5.6). In response to these measures, the rupee regained stability, trading within a narrow range of Rs.44.57-Rs.44.79 per US dollar during June 2000.

5.31 The exchange rate, which was trading in the range of Rs.44.67-Rs.44.73 per US dollar during the first half of July 2000, moved to Rs.45.02 per US dollar on July 21, 2000 as the market gap in the spot merchant segment more than doubled from US $ 233 million in June 2000 to US $ 586 million in July 2000 and compensating activity built up in the inter-bank segment. Market pressures were met with orthodox monetary tightening in the form of increases in the Bank Rate and the CRR and reduction in the limits available to banks for all refinance facilities. The rupee remained range-bound around Rs.45.00 per US dollar in the last week of July 2000.

5.32 Demand pressures resurfaced during the first few days of August 2000 with the exchange rate moving from Rs.45.00 per US dollar at end-July 2000 to Rs.45.83 per US dollar on August 11, 2000. Balances in Exchange Earners Foreign Currency (EEFC) accounts were scaled down and restrictions were imposed on future accretions and credit facilities available against EEFC accounts. Market supply improved as a result, and the rupee traded in a narrow band of Rs.45.67-Rs. 45.91 per US dollar during the last fortnight of August 2000. The monetary and other measures were further supported by the Reserve Bank through net sales of US $ 1,656 million during July-October 2000 on top of net sales of US $ 1,948 million during May-June 2000 or a total of US $ 3,604 million during May-October 2000 to meet temporary demand-supply mismatches.

Table 5.4: Merchant Transactions in the Foreign Exchange Market

(US $ million)

Month	Spot			Forward			Merchant
	Purchases	Sales	Net	Purchases	Sales	Net	Turnover*
1	2	3	4	5	6	7	8
2000							
April	5,865	6,067	-202	1,608	2,453	-845	20,000
May	5,768	6,623	-855	1,838	3,747	-1,909	21,930
June	6,553	6,786	-233	1,348	2,679	-1,331	21,038
July	5,984	6,570	-586	2,005	3,607	-1,602	21,880
August	6,306	6,574	-268	2,326	4,009	-1,683	23,991
September	7,161	6,334	827	1,864	3,778	-1,914	23,214
October	6,429	6,624	-195	1,478	3,244	-1,766	20,547

November	6,354	6,991	-637	1,817	3,760	-1,943	23,475
December	6,749	6,609	140	1,515	3,466	-1,951	21,553
2001							
January	7,788	6,724	1,064	1,596	3,410	-1,814	23,116
February	7,391	6,988	403	1,628	3,452	-1,824	22,796
March	8,410	7,696	714	1,940	4,047	-2,107	25,902
April	5,588	6,065	-477	1,733	3,589	-1,856	20,074
May	5,946	5,622	324	1,456	3,325	-1,869	19,813
June P	6,428	6,555	-127	1,467	3,305	-1,838	21,336

* Include cross-currency (*i.e.*, foreign currency to foreign currency, both spot and forward) transactions and cancellation/re-booking of forward contracts.
P Provisional.

Table 5.5: Inter-bank Transactions in the Foreign Exchange Market

(US $ million)

Month	Spot			Forward/Swap			Inter-bank
	Purchases	Sales	Net	Purchases	Sales	Net	Turnover*
1	2	3	4	5	6	7	8
2000							
April	8,017	6,627	1,390	14,893	13,601	1,292	60,829
May	15,472	13,474	1,998	22,209	21,742	467	105,192
June	12,721	12,072	649	22,677	21,895	782	107,406
July	12,508	11,103	1,405	20,063	18,605	1,458	89,304
August	15,611	14,857	754	28,499	25,871	2,628	109,473
September	12,781	12,343	438	23,491	22,110	1,381	92,063
October	12,290	11,597	693	23,607	22,456	1,151	86,879
November	11,286	10,085	1,201	25,984	23,845	2,139	89,920
December	8,660	7,963	697	20,477	20,106	371	75,106
2001							
January	14,370	14,588	-218	26,707	23,866	2,841	102,743
February	12,915	12,414	501	24,012	21,061	2,951	91,558
March	13,751	13,915	-164	29,635	26,304	3,331	107,243
April	10,293	9,035	1,258	24,612	23,025	1,587	83,532
May	10,330	10,271	59	32,031	29,984	2,047	103,646
June P	10,605	10,440	165	26,209	25,316	893	99,126

* These data are on gross basis and include cross-currency (*i.e.*, foreign currency to foreign currency, both spot and forward) transactions.
P Provisional.

Table 5.6: Purchases and Sales of US Dollars By the Reserve Bank

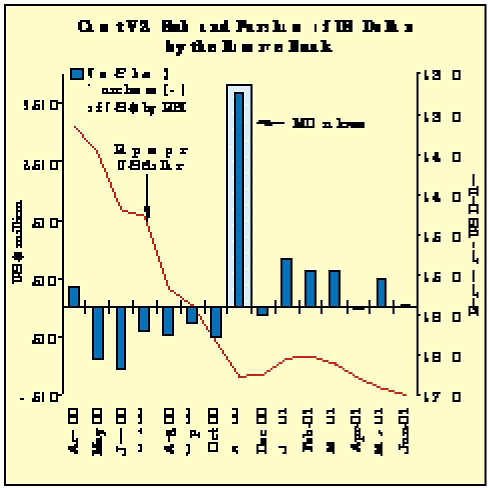
(US $ million)

Month	Net Sales(-)/ Purchases *	Cumulative since April 2000	Outstanding Forward Sales (-) / Purchases #
1	2	3	4
2000			
April	368	368	-670
May	-897	-529	-1,380
June	-1,051	-1,580	-1,693
July	-408	-1,988	-1,903
August	-467	-2,455	-2,225
September	-287	-2,742	-2,225
October	-494	-3,236	-2,225
November	3,686	450	-2,025
December	-155	295	-1,643
2001			
January	832	1,126	-1,638
February	624	1,750	-1,438
March	606	2,356	-1,259
April	-18	2,338	-1,160
May	469	2,807	-980
June	36	2,843	-800

* Include spot, swap and forward transactions besides transactions under Resurgent India Bonds (RIBs) and India Millennium Deposits (IMDs).
# Outstanding as at the end of the month.

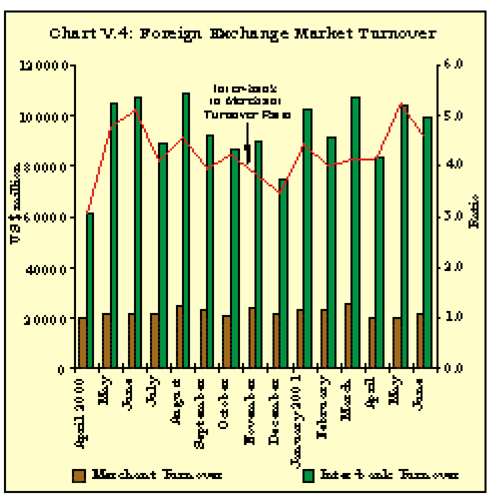
5.33 In the remaining period of the year, orderly conditions returned to all segments of the market. Buoyant supply conditions were reflected in net market purchases of US $ 5,593 million by the Reserve Bank between November 2000-March 2001 which more than offset the net sales of US $ 3,604 million during the earlier part of the year (May-October 2000). For the year as a whole, the Reserve Bank's net market operations, therefore, resulted in net market purchases of US $ 2,356 million (Chart V.3 and Table 5.6). The interest rate surcharge on import finance and the penal interest rate on overdue export bills were withdrawn with effect from January 6, 2001.

5.34 The average monthly turnover in the merchant segment of the foreign exchange market increased from US $ 20 billion during 1999-2000 to US $ 23 billion during 2000-01. The average monthly turnover in the inter-bank foreign exchange market increased to US $ 93 billion during 2000-2001, reversing its declining trend of the previous two years. The average monthly total turnover (inter-bank plus merchant) increased from US $ 95 billion in 1999-2000 to US $ 116 billion in 2000-01. The ratio of inter-bank to merchant turnover hovered around 4 reflecting orderly market activity. Between May and August 2000, however, the ratio exceeded 4 indicating hectic inter-bank activity (Chart V.4).



5.35 The recent experience with exchange rate regimes in the world over indicates that central banks are getting more actively involved in the dynamics of market processes with a view to signaling their stance on exchange market developments. Monetary authorities' reactions to exchange market pressures are typically swift with a preference for withdrawal from market activity as soon as orderly conditions prevail. In general, they tend to adopt a combination strategy within which monetary policy and regulatory measures are employed to support direct and indirect interventions.

5.36 To investigate the practice of foreign exchange intervention, a recent survey based on response of 22 institutions out of 43 institutions that participated in the Bank for International Settlements (BIS) and the European Central Bank, presents interesting results on issues like instruments, timing, amounts, motivation, secrecy and perception of efficacy of foreign exchange interventions (Box V.2).



Box V.2
Mechanics of Foreign Exchange Market Interventions by the Central Banks

Surveying the mechanics of monetary authorities' foreign exchange intervention reveal the following :

- Official intervention, both sterilised and unsterilised, was reasonably common in foreign exchange markets; the Reserve Bank of New Zealand was the only authority to report that it had not intervened in the last 10 years. The central banks indicated a preference for dealing with major domestic banks but they also transact with major foreign banks. About 50 per cent of central banks sometimes conducted business with other entities like other central banks (23.5 per cent) or investment banks (25 per cent).

- About 95.2 per cent of authorities reported that the official intervention activities always include spot market transactions and other 4.8 per cent sometimes include spot transactions. Around 52.9 per cent sometimes used the forward market, perhaps in conjunction with spot market to create a swap transaction; no authority reported always using the forward market.

- Direct dealing over telephone is the most popular method of intervention with 43.8 per cent of authorities using direct dealing over an electronic network. Live foreign exchange brokers are used sometimes or always by 63.2 per cent of the respondents.

- About 95 per cent of central banks reported that the size of intervention sometimes or always depended on market reaction to initial trades.

- Most interventions took place during the business day but almost half of central banks surveyed reported that they sometimes intervene prior to business hours and more than half intervenes after business hours (*e . g .* , Reserve Bank of Australia).

- About 23.8 per cent of authorities reported sometimes intervening with indirect methods like changing banking regulations on foreign exchange exposure and moral suasion.

- 89.5 per cent of authorities sometimes or always intervened to resist short-run trends and 66.7 per cent of the authorities intervened to make the exchange rates return to "fundamental values". Some countries specified "other" reasons that might be interpreted as variations on the leaning-against-the-wind or misalignment hypothesis. Still other countries indicated macroeconomic goals such as limiting exchange rate pass-through to prices, defence of an exchange rate target or accumulating reserves as motivating factor behind intervention. The profitability consideration in intervention decisions was uniformly rejected by all respondents.

- As regards secrecy in intervention, about 76.5 per cent of authorities reported sometimes or always intervening secretly to maximise market impact, whereas 57.1 per cent of authorities reported sometimes or always intervening secretly to minimise market impact. No central bank cited portfolio adjustment as a reason for secret intervention.

- As regards effect of intervention on exchange rates as well as the time horizon of the effect, all the central banks felt that intervention had some effect on exchange rates. Most of the respondents believed in a relatively rapid response, over a few minutes (38.9 per cent) or a few hours (22.2 per cent). A substantial minority expressed that intervention's full effect is seen over a few days (27.8 per cent) or more (11.1 per cent).

References

1. Neely, Christopher J., (2000), "The Practice of Central Bank Intervention: Looking Under the Hood", *Federal Reserve Bank of St. Louis, Working Paper* No 2000-028, October.

2. Bank for International Settlements, (1999) , "Central Bank Survey of Foreign Exchange and Derivatives Market Activity," May, Basel.

5.37 The excess demand for merchant transactions in the forward segment increased from US $ 845 million in April 2000 to US $ 1,909 million in May 2000 and remained large, moving in a range of US $ 1,602-1,914 million during July-September 2000. In reflection, the six-month forward premia increased from 2.5 per cent in May 2000 to 4.9 per cent in September 2000. The one-month premia increased from 2.2 per cent in May 2000 to 6.1 per cent in August 2000. Volatility in the forward segment was reflected in an inversion of the forward premia curve (Chart V.5). Net forward sales by the Reserve Bank increased from US $ 670 million as at end-April 2000 to US $ 2,225 million as at end-August 2000. With the return of normalcy, forward premia generally remained stable from October 2000 onwards. The one-month premia declined from its peak of 6.1 per cent during August 2000 to 4.3 per cent during March 2001 while the six-month premia declined from 4.9 per cent during September 2000 to 4.6 per cent during March 2001. Net forward sales of the Reserve Bank declined, in tandem, from US $ 2,225 million as at end-August 2000 to US $ 1,259 million as at end-March 2001. The average six-month forward premia for the fiscal year 2000-01 at 3.9 per cent was lower than that of 4.7 per cent during the preceding year (Table 5.7).

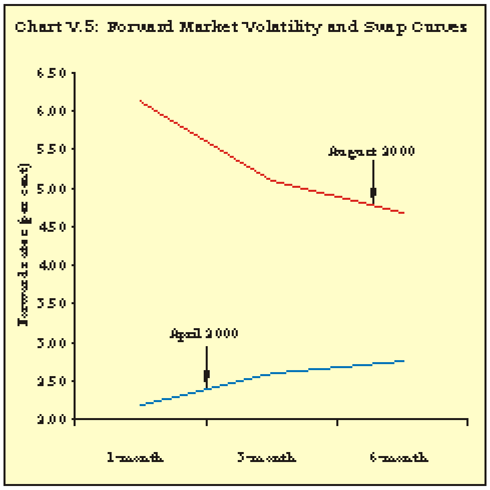


Chart V.5: Forward Market Volatility and Swap Curves

Table 5.7: Forward Premia (Monthly Average)

(Per cent per annum)

Month	1-month	3-month	6-month
1	2	3	4
2000			
April	2.18	2.59	2.76
May	2.16	2.29	2.51
June	3.70	3.32	3.17
July	3.70	3.69	3.69
August	6.13	5.10	4.67
September	5.16	5.19	4.92
October	4.20	4.40	4.32
November	3.78	4.05	4.12
December	3.07	3.48	3.88
2001			
January	4.24	4.24	4.32

February	3.60	4.15	4.33
March	4.34	4.44	4.55
April	3.95	4.51	4.84
May	5.02	4.95	5.06
June	4.43	4.82	4.95
July	4.22	4.50	4.73

5.38 During 2001-02 so far (up to August 10), the foreign exchange market exhibited orderly conditions with the rupee moving in a range of Rs. 46.56 - 47.18 per US dollar. The excess supply conditions resulted in net purchases by the Reserve Bank from the market amounting to US $ 487 million during the first quarter of 2001- 02. The spot exchange rate moved to an average of Rs.47.14 per US dollar in July 2001 from an average of Rs.46.62 per US dollar during March 2001. The 6-month forward premia which increased marginally to 5.0 per cent during June 2001 from 4.6 per cent during March 2001 fell to 4.7 per cent during July 2001. The orderly market conditions also enabled a reduction in outstanding forward liabilities of the Reserve Bank to US $ 800 million as at end-June 2001 from US $ 1,259 million as at end-March 2001.

GOVERNMENT SECURITIES MARKET

5.39 The Government securities market during 2000-01 was driven by expectations of declining yields in the wake of reductions in the administered interest rates on small savings, provident funds, and the Bank Rate. The easing of yields over the year was interrupted by the impact of the Government borrowing programme and monetary measures to counter foreign exchange market conditions. Comfortable liquidity at the beginning of 2000-01 built up a positive market sentiment leading to a mild rally in the Government securities during April-mid-May 2000. Pressures in the foreign exchange market in mid-May and July 2000, the tightening of liquidity during June 2000 on account of advance tax outflows, monetary tightening in July 2000 and a steady increase in the repo cut-off rates in August 2000 caused a mid-year hardening of gilt yields. The Reserve Bank undertook substantial devolvements and private placements to absorb market pressures. In the wake of the IMD inflows, interest in government paper revived and a smart rally in prices enabled a decline in yields from November 2000. The rally in the gilt segment gathered momentum as monetary conditions were eased during February-March 2001. During 2001-02 (up to August 10) the gilt yields generally declined due to expectations of fall in the interest rates.

Primary Market Developments

Dated Securities

5.40 Dated securities aggregating Rs.1,00,183 crore were issued during 2000-01 as against Rs.86,630 crore during 1999-2000 (Appendix Table V.4). The Central Government's market borrowing commenced in April 2000 with the entire notified amount of Rs.5,000 crore in the first auction being absorbed by the market at a YTM cut off of 10.26 per cent (Appendix Table V.5). The ratio of bid amount received to notified amount (BR/NA) was 2.10 during April 2000, indicative of the favourable market response (Table 5.8). The devolvement on primary dealers (PDs) of Rs.3,055 crore and of Rs.5,401 crore on the Reserve Bank during April-May 2000 reflected the policy preference for easier interest rates. With the tightening of liquidity conditions during mid-May-August 2000, market sentiment turned unfavourable resulting in a fall in the BR/NA ratio below unity in June and August 2000. The Reserve Bank had to undertake private placements besides accepting devolvements of 39 per cent and 42 per cent of the gross amounts raised through auctions during June and August 2000, respectively. The weighted average cut-off yields of primary gilt issuances moved up from 10.28 per cent in April 2000 to 10.71 per cent in June 2000 and further to 11.47 per cent in August 2000.

5.41 As the liquidity conditions stabilised and IMD inflows poured into the system, the BR/NA ratio moved up from 1.34 during September 2000 and remained above 2 up to January 2001 rising even further to 3.43 in February 2001 as the mid-year monetary measures were unwound. There was complete market absorption of the primary gilt issuances between October 2000-March 2001 except for a devolvement upon the Reserve Bank of Rs.1,000 crore in the auction on December 26, 2000 and a devolvement of Rs.1,911 crore on the PDs in the auction on March 29, 2001. The primary market cut-off gilt yield of a ten year paper declined from 11.69 per cent in October 2000 to 11.10 per cent in December 2000 (Chart V.6).

5.42 The issuances of securities to accommodate the market's preference for shorter-term paper during phases of market uncertainties reduced the weighted average maturity of debt issued to 10.6 years during 2000-01 from 12.6 years during 1999-2000. Furthermore, the range of maturities of loans issued also widened to 2.9 years-20 years during 2000-01 from 5.3 years-19.6 years during 1999-2000. The weighted average cost of primary issuance during the year, however, was lower at 10.95 per cent against 11.77 per cent during the previous year.

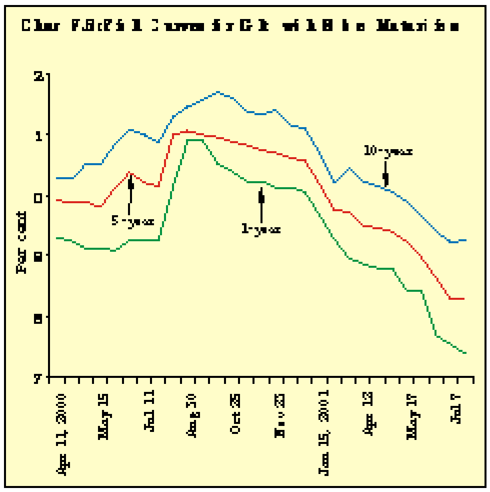
Table 5.8: Major Indicators of Primary Auctions of Central Government Dated Securities*

Month	Notified amount (Rs. crore)	Number of bids received	Amount of bids received (Rs. crore)	BR/NA**	Devolvement on PDs(%)	Devolvement on RBI (%)
1	2	3	4	5	6	7
2000						
April	11,000	737	23,059	2.10	23	0
May	16,000	754	20,989	1.31	3	34
June	4,000	104	2,904	0.73	23	39
July	9,500	505	15,672	1.65	0	37
August	3,000	51	2,264	0.75	49	42
September	3,000	135	4,030	1.34	0	13
October	6,000	414	15,248	2.54	0	0
November	10,000	565	20,445	2.04	0	0
December	7,000	543	14,686	2.10	0	14
2001						
January	4,000	409	11,505	2.88	0	0
February	3,000	231	10,290	3.43	0	0
March	3,000	161	4,397	1.47	64	0

April	16,000	1,184	47,733	2.98	0	0
May	9,000	759	25,763	2.86	0	0
June	0	0	0	-	0	0
July	18,000	1,187	37,625	2.09	0	0

* Excluding private placement and tap issuance
** Ratio of amount of bids received (BR) to notified amount (NA).

5.43 During 2001-02 (upto August 13), the Central Government raised a gross amount of Rs.70,000 crore through issue of dated securities with about 30 per cent privately placed with/devolved on the Reserve Bank.



Secondary Market Transactions

5.44 The year 2000-01 was characterised by volatility in secondary market both in terms of yield movements and turnover. Under the easy liquidity conditions during April-mid-May, the yield curve shifted downwards, particularly at the short-end as long tenor securities were issued by the Reserve Bank. Thereafter, the yield curve shifted up particularly in the short-end, as the liquidity conditions tightened. The turnover declined sharply during June 2000 over the level in the previous month. There was some easing of yields during the first half of July 2000 on account of inflows of coupon payments and redemption of Government securities as well as aggressive open market operations by the Reserve Bank. The turnover rose sharply in July 2000.

5.45 Yields began to rise again during the second half of July and August 2000 eroding the earlier gains in gilt prices. The upward movement in yields reflected the impact of monetary measures and the absorption of liquidity through repos. The illiquidity of longer maturity papers prompted the Reserve Bank to offer the PDs switches from medium- to long-term Government securities to 364-day Treasury Bills. The turnover fell during August 2000 as banks and other participants turned to money and foreign exchange market segments in search of better returns.

5.46 Activity in the secondary market revived during September-October 2000 and yields at the short- and medium-segments declined. As the proceeds of IMDs entered the system, activity picked up for the first time in 2000-01 at the longer-end of the maturity spectrum. The yields of longer dated maturities fell in the face of a strong rally in the prices of Government securities. The aggressive auctioning of Government securities could arrest this rally temporarily. In December 2000, the rally resumed at the long-end with improved sentiment and stable financial market conditions.

5.47 The two-stage cut in the Federal Reserve Bank's interest rate by a total of 100 basis points in January 2001 fuelled market expectations of an imminent adjustment in key interest rates in India to the pre-July 2000 level. As the liquidity conditions eased and there was a slowdown in the non-food credit of the scheduled commercial banks the Reserve Bank reduced the Bank Rate and the Cash Reserve Ratio by 50 basis points each. With a conducive environment created by the 150 basis point reduction in the administered interest rates on small savings announced in the Union Budget for 2001-02 on February 28, 2001, the Bank Rate was reduced by a further 50 basis points effective close of business on March 1, 2001. This reduction did not bring down yields any further as the market had already discounted it prior to the presentation of the Union Budget. In March 2001, the market remained volatile on year-end considerations, *viz.*, profit booking and reluctance to take fresh positions as also the developments in the capital markets. The profile of the yield curves captures the three liquidity phases during the year (Chart V.7).

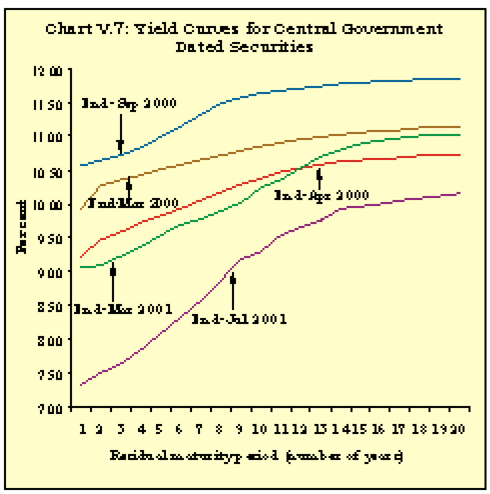


Chart V.7: Yield Curves for Central Government Dated Securities

5.48 The secondary market for Central Government dated securities and Treasury Bills (outright as well as repos) deepened during 2000-01 to register an aggregate volume of transactions of Rs.6,95,135 crore (Appendix Table V.6), as compared with Rs.5,35,602 crore in 1999-2000. As much as 82 per cent (Rs.5,69,174 crore) of the transactions were on outright basis with the balance by way of repos. Transactions in State Government securities, however, were lower at Rs.2,986 crore as against Rs.3,632 crore during 1999-2000. The turnover in Central Government securities (calculated by counting twice the volume of transactions in the case of outright transactions and counting four times the volume of transactions in the case of repos) during 2000-01 amounted to Rs.16,42,190 crore as against Rs.12,36,678 crore in 1999-2000. The outright turnover aggregated Rs.11,38,348 crore as compared with Rs.9,05,722 crore in 1999-2000. Thus, the average monthly turnover in Central Government securities aggregated Rs.1,36,849 crore in 2000-01 as compared with Rs.1,03,056 crore in 1999-2000. The average monthly turnover of outright transactions amounted to Rs.94,862 crore during 2000-01 as against Rs.75,477 crore in 1999-2000. The average daily turnover was also higher at about Rs.4,512 crore as against Rs.3,388 crore in 1999-2000. The turnover in State Government securities during 2000-01 amounted to Rs.6,005 crore as against Rs.7,265 crore during 1999-2000. The turnover in Central Government securities during 2001-02 (up to June) amounted to Rs. 7,96,558 crore. The outright turnover aggregated to Rs. 5,40,485 crore. The turnover in the State Government securities was Rs. 2,175 crore during the period.

5.49 An analysis of the most heavily traded securities in the secondary market during 2000-01 indicates that during April and May the tenor of these securities ranged mostly between 4-10 years showing the market preference for medium to long term securities. During June-September, 2000 it mostly ranged between 1-8 years exhibiting the shift to shorter to medium tenor bonds while from October 2000 onwards, it was mostly 6-12 years exhibiting the shift towards medium to long-term securities.

5.50 During 2001-02 upto mid-August, easy liquidity conditions in the financial markets and interest rate cuts in the developed economies turned the domestic gilt market buoyant. The reduction in the LAF repo rate by 25 basis points to 6.75 per cent on April 27, 2001 was positively received. The reduction in the CRR by 50 basis points to 7.5 per cent of net demand and time liabilities effective May 19, 2001 was followed with another reduction in the LAF repo rates by 25 basis points to 6.5 per cent on May 28, 2001. Gilt prices surged across the spectrum as these measures seemed to have the desired effect upon the cost and availability of liquidity in the banking system.

Open Market Operations

5.51 Liquidity management in the short-term consisted of absorption of excess liquidity through repos and injection of liquidity through the reverse repos during tight liquidity conditions. Long-term management of liquidity was conducted through outright open market sales to absorb excess liquidity in conjunction with private placement/devolvement operations and outright open market purchases in tight liquidity conditions.

5.52 The Reserve Bank's initial subscriptions during the first quarter of 2000-01 amounted to Rs.7,961 crore with net open market sales of Rs.2,025 crore (Table 5.9). The open market activity picked up in July 2000. The liquidity conditions turned easy during the first half of July 2001. With foreign exchange market conditions turning uncertain and market appetite for gilts remaining weak, the Reserve Bank resorted to private placement of an 11-year paper on July 3, 2000 and subsequently conducted open market sales of shorter maturity gilts and Treasury Bills. As the monetary conditions were tightened, the Reserve Bank's open market purchase of 11.9 per cent Government Stock 2007 enabled stability of yields in the 4-8 year tenor. Subsequently, the Reserve Bank again undertook private placements, offloading them to the market on tap basis. The net OMO sales amounted to Rs.5,966 crore during July 2000 (up to the last reporting Friday of the month). PDs were offered a switch from long dated papers to Treasury Bills between August 24 and September 7, 2000.

Table 5.9: Net RBI Credit to the Centre, RBI's Initial Support to

Market Borrowing and Open Market Operations

(Rupees crore)

Up to	Net RBI Credit to Centre			RBI's initial subscription (cumulative)			Net OMO Sales (cumulative)		
	2001-02	2000-01	1999-2000	2001-02	2000-01	1999-2000	2001-02	2000-01	1999-2000
1	2	3	4	5	6	7	8	9	10
April	5,067	13,507	9,615	12,000	0	12,000	60	36	7,021
May	20,774	11,077	7,847	12,000	515	16,000	5,083	36	12,003
June	19,523	14,393	8,205	21,000	7,961	21,275	10,929	2,025	18,598
July	11,849	17,479	8,913	21,000	20,801	24,547	16,020	7,991	18,817
August		8,481	3,146		26,916	24,547		7,126	24,590
September		8,168	3,510		31,603	25,192		8,460	25,750
October		24,359	9,887		31,978	29,267		8,527	23,686
November		14,154	7,935		31,978	29,267		20,063	27,206
December		3,041	7,572		32,978	29,267		21,764	27,206
January		6,360	3,217		32,978	29,267		21,851	27,276
February		6,932	-1,086		32,978	29,267		21,853	31,774
March		6,705	-5,587		32,978	29,267		21,892	30,861

Note : Data on fiscal year variation basis pertaining to March 31 for March and last reporting Friday for all other months.

5.53 The return to easy liquidity conditions on account of inflow of IMD proceeds prompted a step up of open market sales during November 2000. The net open market sales during this month amounted to Rs.11,536 crore (up to the last reporting Friday of the month) as against an average monthly sale of Rs.1,218 crore during April-October 2000 in order to mop up the excess liquidity. Furthermore, the Reserve Bank conducted an OMO auction of 11.19 per cent Government security 2005 from its own portfolio for a notified amount of Rs.3,500 crore for the first time since 1995 on November 16, 2000 to facilitate price discovery. The market response was, however, lukewarm with an off-take of Rs.1,200 crore at a cut-off yield of 10.66 per cent. There were no major OMO conducted during the rest of 2000-01. The net sales of Central Government dated securities and Treasury Bills under OMO amounted to Rs.21,892 crore during 2000-01 as against Rs.30,861 crore during 1999-2000.

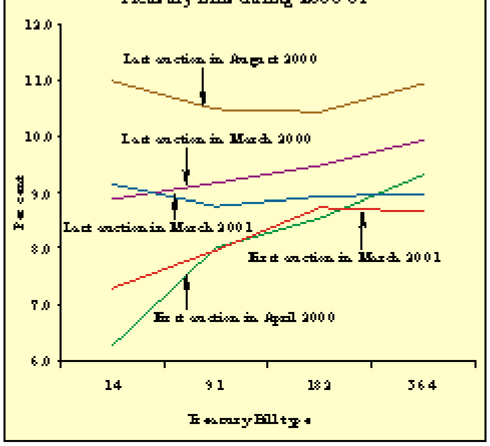
5.54 During the first quarter of 2001-02, low levels of advance tax collections as well as tax shortfall in the previous fiscal year necessitated not only direct borrowing by Government from the market but also private placement of its securities with the Reserve Bank. The Reserve Bank undertook private placement of three gilts aggregating to Rs.12,000 crore on April 20, 2001 whose monetary impact was neutralized partially through the subsequent open market sales to the tune of Rs.5,000 crore. Securities of Rs.5,000 crore privately placed on May 30, 2001 could only be partially off-loaded subsequently during the first week of June 2001. Securities of Rs.4,000 crore privately placed on June 20, 2001, could be completely sold off in the open market sales conducted on the next day. During this quarter the Reserve Bank's initial subscriptions amounted to Rs.21,000 crore with the net open market sales aggregating to Rs.10,929 crore. With a view to provide short-term investment avenues the Reserve Bank conducted open market sales (on an auction basis) during July 2001. During 2001-02 (up to August 10), the Reserve Bank's initial subscriptions amounted to Rs 21, 679 crore, with net open market sales aggregating to Rs. 16,050 crore.

Treasury Bills

5.55 The easing of interest rate environment during 2000-01 was reflected in the yield movements of Treasury Bills. The structure of the implicit primary yield for minimum cut-off price of Treasury Bills flattened with the average cut-off yield of the 14-day Treasury Bills remaining unchanged at 8.23 per cent while those of 91-day, 182-day and 364-day Treasury Bills declining by 5 basis points, 25 basis points and 33 basis points, respectively, to 8.98 per cent, 9.43 per cent and 9.76 per cent during 2000-01 in relation to their respective average yields during 1999-2000. In contrast, the average yield levels for all the Treasury Bills had increased during 1999-2000 compared to the previous year.

5.56 The intra-year dynamics between events and yield movements of the Treasury Bills in the auctions were clearly in evidence during the 2000-01 (Chart V.8). The setting of easy liquidity and monetary conditions at the start of 2000-01 provided a conducive environment for successful auctions at lower implicit yields especially at the shorter ends and, therefore, the yield structure shifted down and became steeper between end-March 2000 and early-April 2000.

Chart V.8: Primary Cut-off Yield Structure of Treasury Bills during 2000-01



5.57 As the liquidity conditions started to tighten and the implicit cut-off yields began to firm up in June 2000, the Reserve Bank took substantial devolvement to contain the further firming up of yields. The liquidity conditions eased somewhat in early half of July 2000. From July 21, 2000 onwards, the cut-off yields rose in the primary Treasury Bill market. Despite increasing yields there was devolvement on the Reserve Bank in Treasury Bill auctions during August 2000. The yield levels of the Treasury Bills touched the peak for 2000-01 and the yield structure inverted as on end-August 2000 with the yield of 14-day Treasury Bills highest at 10.97 per cent, followed by that of 10.91 per cent for the 364-day, 10.47 per cent for 91-day and 10.42 per cent for 182-day Treasury Bills. The yields for 14-day, 91-day, 182-day and 364-day Treasury Bills were higher by 471 basis points, 247 basis points, 189 basis points and 162 basis points, respectively, over their levels at the beginning of April 2000.

5.58 Market sentiment improved from September 2000 accompanied by a decline in the repo cut-off rates during October 2000. Price expectations turned positive with the external inflows of the IMDs. The cut-off yields came down reflecting the movement in the call money rates and the yields of 14-day Treasury Bills realigned at lower levels than the yields of the other Treasury Bills. After the easing of monetary conditions by February 2001 and early March 2001, the yields declined. The year ended with the hardening of interest rates. This was reflected in the upward shift of the yield structure by end-March 2001.

5.59 During 2001-02 so far (August 13) barring spurts in the second and third weeks of May as well as in the first week of June in respect of the yield of 91-day Treasury Bill, the cut off yields of both 91-day and 364-day Treasury Bills witnessed a gradual easing with softening of the call/notice money market after the cut in CRR on May 19, 2001. In July 2001, the yields of both these Treasury Bills showed fluctuation and thereafter declined during August 2001 (up to August 13).

14-day Treasury Bills

5.60 The total issues of 14-day auction Treasury Bills during 2000-01 amounted to Rs.10,480 crore (Appendix Table V.7), of which non-competitive bids aggregated Rs.5,280 crore and competitive bids Rs.4,436 crore representing 50 per cent and 42 per cent, respectively, of the total issues, with the balance being subscribed by the Reserve Bank. The notified amount was Rs.100 crore per auction. The outstanding at the year-end amounted to Rs.100 crore. During 2001-02 (up to May 14), the total issues aggregated to Rs.1,100 crore with 64 per cent being allocated to competitive bids and no devolvement on the Reserve Bank. The issues of 14-day Treasury Bills have been discontinued after May 14, 2001.

91-day Treasury Bills

5.61 A gross amount of Rs.7,255 crore was raised during 2000-01 through 91-day Treasury Bills as against Rs.8,155 crore in the previous year. Out of the gross amount, non-competitive bids aggregated Rs.2,055 crore accounting for about 28 per cent of the value of the total issues. The notified amount of each auction was kept unchanged at Rs.100 crore and the year-end outstanding amount was Rs.1,830 crore. The Reserve Bank's subscription to these Bills fell to 11.8 per cent (Rs.855 crore) of the total issues during 2000-01 from 18.7 per cent (Rs.1,523 crore) during the previous year. Reflecting market absorption of these Treasury Bills, the year-end outstanding Bills were held totally outside the Reserve Bank. As against this, in 1999-2000, the year-end holdings of the Reserve Bank at Rs.288 crore accounted for about 19 per cent of the outstanding bills (Rs.1,520 crore). During 2001-02 (up to August 13, 2001), the total issues of 91-day Treasury Bills amounted to Rs.6,665 crore. The notified amount in each auction has been increased from Rs.100 crore to Rs.250 crore since the issue dated May 18, 2001.

182-day Treasury Bills

5.62 A total notified amount of Rs.2,600 crore was raised through 182-day Treasury Bills during 2000-01 which was absorbed by competitive bids with devolvement on the Reserve Bank on only four occasions, in June 2000 and in August 2000, amounting to Rs.251 crore. The notified amount was kept at Rs.100 crore on each of the auctions. There were no non-competitive bids. The outstanding amount of Rs.1,300 crore as at end-March 2001 was held entirely outside the Reserve Bank. As against this, the Government had raised Rs.2,900 crore through these Treasury Bills during 1999-2000 with non-competitive bids that were accepted outside the notified amount on two occasions aggregating to Rs.600 crore. The total devolvement on the Reserve Bank on eight occasions was Rs.645 crore during 1999-2000. During 2001-02 (up to May 10, 2001) a notified amount of Rs.300 crore was fully absorbed by competitive bids with no devolvement on the Reserve Bank. Since May 14, 2001 the issues of 182-day Treasury Bills have been discontinued.

364-day Treasury Bills

5.63 With a view to offering increased amount of short-term paper to the market, the notified amount of these Treasury Bills for each auction was raised from Rs.500 crore to Rs.750 crore effective the auction on December 13, 2000 and the gross mobilisation through issuance of these Treasury Bills aggregated to Rs.15,000 crore as against Rs.13,000 crore in 1999-2000. The subscription by the Reserve Bank was Rs.1,827 crore or 12.2 per cent of the value of the total issues. During 2001-02 (up to August 10), gross amount of Rs.7,500 crore was raised by issue of these Treasury Bills without any devolvement on the Reserve Bank. The notified amount in each of the auctions continued to remain at Rs.750 crore.

Credit Markets

5.64 The movements in interest rates in term deposits and prime lending rates of scheduled commercial banks generally followed the three-phase pattern in alignment with the other segments of the financial market spectrum, *albeit* with some lags. On balance, term deposit rates across all maturities as well as the PLRs were lower as at end-March 2001 than the corresponding levels as at end-March 2000 for the three groups of scheduled commercial banks, *viz.*, PSBs, foreign banks and private banks.

5.65 The reduction of interest rate on saving deposits by 50 basis points to 4.0 per cent, effective April 1, 2000, lowered the cost of mobilisation of funds for the banking system. The interest rates on term deposits offered by the public sector banks (PSBs) eased from their levels in March 2000 with some time lag in June 2000. On the other hand, the response of lending rates was faster as the PLRs of the PSBs eased from their March 2000 levels in April 2000.

5.66 As the monetary conditions tightened during mid-May to August 2000, the rates for deposits of PSBs with maturities up to 1 year, between 1-3 years and beyond 3 years rose during August, October and September 2000, respectively. The PLRs of the PSBs also hardened in August 2000.

Table 5.10: Intra-Year Movements in Interest Rates

(Per cent)

Item	Interest Rates					
1	2	3	4	5	6	7
1. Prime Lending Rate*	10.0-12.5 (July 2001)	10.0-13.0 (March 2001)	11.50-13.00 (February 2001)	11.75-13.00 (August 2000)	11.25-12.50 (April 2000)	12.00-13.50 (March 2000)
2. Deposit Rates *						
i) Up to one year	4.25-8.0 (August 2001)	4.0-8.0 (December 2000)	4.0-8.25 (November 2000)	4.0-8.5 (August 2000)	4.0-8.0 (June 2000)	5.0-9.0 (March 2000)
ii) 1-3 years		7.75-9.25 (August 2001)	8.0-9.5 (March 2001)	8.5-9.5 (October 2000)	8.0-10.0 (June 2000)	8.5-10.5 (March 2000)
iii) Above 3 years	8.75-10.0 (June 2001)	9.0-10.0 (April 2001)	9.5-10.25 (December 2000)	9.5-10.5 (September 2000)	9.5-10.0 (June 2000)	9.75-11.0 (March 2000)
3. Treasury Bills#						
i) 14-day	7.56 (May 11, 2001)	8.35 (end-March 2001)	8.35 (end-Dec. 2000)	7.56 (end-Sept. 2000)	8.09 (end-June 2000)	8.87 (end-March 2000)
ii) 91-day	7.08 (end-July 2001)	8.75 (end-March 2001)	8.75 (end-Dec. 2000)	10.0 (end-Sept. 2000)	8.91 (end-June 2000)	9.17 (end-March 2000)
iii) 182-day	8.33 (May 9, 2001)	8.92 (end-March 2001)	9.49 (end-Dec. 2000)	10.42 (end-Sept. 2000)	9.23 (end-June 2000)	9.47 (end-March 2000)
iv) 364-day	7.38 (end-July 2001)	8.96 (end-March 2001)	9.99 (end-Dec. 2000)	10.91 (end-Sept. 2000)	9.24 (end-June 2000)	9.93 (end-March 2000)
4. 10-year residual maturity Government of India Security YTM (Secondary Market)	9.30 (end-July 2001)	10.23 (end-March 2001)	10.16 (end-Feb. 2001)	11.64 (end-Sept. 2000)	10.37 (end-April 2000)	10.85 (end-March 2000)

* Public Sector Banks
\# Treasury Bill yields as per auction dates

5.67 Surplus liquidity conditions and the easing of monetary conditions during the third phase enabled a softening of interest rates for deposits of PSBs with maturities up to 1 year, between 1-3 years and beyond 3 years in November 2000, March 2001 and December 2000, respectively. The PLR declined with a lag during the third phase *i.e.*, in February-March 2001 Deposit and lending rates declined further during the second quarter of 2001-02 (Table 5.10).

Mobilisation of Resources by Non-Bank Financial Sector

Financial Institutions

5.68 The aggregate amount of resources raised by the financial institutions[1] by way of term money, CDs, CPs[2], term deposits and inter-corporate deposits (ICDs) increased from Rs.7,789 crore as on March 24, 2000 to Rs.10,371 crore as on March 23, 2001. Among these instruments, the outstanding amount of ICDs increased from Rs.5,031 crore as on March 24, 2000 to Rs.5,768 crore as on March 23, 2001 and further increased to Rs. 5,937 crore as on July 13, 2001. Similarly, the outstanding amount of term deposits increased from Rs.677 crore as on March 24, 2000 to Rs.999 crore as on March 23, 2001 before declining a little to Rs. 987 crore. The outstanding amount of CDs also increased from Rs.1,689 crore as on March 24, 2000 to Rs.2,289 crore as on March 23, 2001. It, however, declined to Rs. 1,124 crore as on July 13, 2001 on improved liquidity conditions. The outstanding amount of term money borrowings by financial institutions increased substantially from Rs.392 crore as on March 24, 2000 to Rs.1,135 crore as on March 23, 2001 and further to Rs. 1,372 crore as on July 13, 2001. The outstanding amount of CPs, stood at Rs.99 crore as on March 23, 2001. It increased to Rs. 159.25 crore as on April 6, 2001 before declining to a range of Rs. 78-89 crore up to June 15, 2001. Thereafter, it increased to Rs. 217.25 crore as on July 13, 2001.

5.69 Interest rates offered on term money borrowings by financial institutions increased from 10.9 per cent in March 2000 to 11.0 per cent in March 2001 but declined to 10.25 per cent as on July 13, 2001. The interest rates on CDs issued by financial institutions hardened from a range of 9.50-9.65 per cent in March 2000 to 10.00-10.50 per cent in March 2001 but declined to 9.25-10.50 per cent as on July 13, 2001. Interest rates on term deposits moved in the range of 8.00-11.50 per cent during the period. The interest rates on CPs issued by FIs during the period prevailed in the range of 10.13-11.05 per cent during 2000-01 but declined to 8.45-9.20 per cent during the first quarter of 2001-02.

Non-Bank Financial Companies

5.70 Aggregate public deposits of non-banking financial companies (NBFCs), in terms of the survey data as reported by 979 NBFCs holding public deposits, stood at Rs. 19,426 crore as on March 31, 2000. Deposits with NBFCs as a proportion to that of commercial banks worked out to 2.4 per cent as at end-March 2000. The interest rate ranged between 12 per cent to 14 per cent for 43 per cent of the deposits, and 14 to 16 per cent for 36 per cent of the deposits mobilised by NBFCS (excluding RNBCs) for the reporting period as at end March 2000. According to the quarterly information pertaining to large NBFCs with a deposit base of Rs. 20 crore and above, the public deposits for 49 companies was Rs. 18,121 crore as at end-December 2000 as against Rs. 17,974 crore far as at end-September 2000. In response to an environment of easing interest rates, the ceiling rate of interest for public deposits held with NBFCs was reduced from 16 per cent to 14 per cent effective from April 1, 2001.

Housing Finance Market

5.71 Housing finance for the purpose of achievement of the stipulated allocation from incremental bank deposits includes direct housing finance to individuals or group of individuals including co-operative societies, indirect housing finance by way of term loans to housing finance intermediaries, State Housing Boards, etc. and investment in bonds and debentures of

NHB and HUDCO. For 2001-02, the scheduled commercial banks were advised to compute their respective share of housing finance allocation at 3 per cent of their incremental deposits as on the last reporting Friday of March 2001 over the corresponding figure of the last reporting Friday of March 2000. This would, however, be the minimum housing finance allocation for each bank.

EQUITY, DEBT AND TERM LENDING MARKETS

5.72 The capital market, in general, experienced depressed conditions during 2000-01. The primary market remained subdued. While the resource mobilisation from the public issues market declined, that from the private placement market witnessed a lower growth. Resource mobilisation by mutual funds also declined sharply, after a record mobilisation in 1999-2000. Activity in the secondary market remained generally bearish with share prices declining by more than 25 per cent during the year. During the first week of March 2001 the market was affected by considerable uncertainty arising from turbulence in stock exchanges and apprehensions of liquidity/payments problems. Timely measures were undertaken by the SEBI and the Reserve Bank to restore stability in the equity market and to prevent volatility spreading to other market segments. The market sentiment remained subdued in the following months reflecting, *inter alia*, ban on deferral products in the cash segment by SEBI and ban on sales/ repurchases of US-64 units by UTI and downgrading of India's rating by some international agencies.

Primary Market Developments

New Issues Market-Prospectus and Rights Issues

5.73 The primary market witnessed a sharp decline in resource mobilisation in the public issues market, despite a significant increase in the number of floatations. Aggregate resource mobilisation through prospectus and rights issues at Rs.6,421 crore was lower by 16.7 per cent as compared with Rs.7,704 crore mobilised during the previous year. Although resources raised by both public and private sectors declined, the decline was much sharper in the case of the former with PSUs and Government companies remaining absent from the public issues market for the third consecutive year. Resource mobilisation by banks and financial institutions in the public sector declined sharply by 42.3 per cent to Rs.1,472 crore (through 5 issues) from Rs.2,551 crore (through 4 issues) during 1999-2000 (Table 5.11).

5.74 During April-July 2001, resource mobilisation from the public issues market by the private sector at Rs.810 crore declined by 22.4 per cent from Rs.1,044 crore mobilised during April-July 2000. There was no issue from the public sector as was the case during the corresponding period of the previous year. The number of issues declined sharply to three during April-July 2001 from 64 during April-July 2000.

Table 5.11: Mobilisation of Resources from the Primary Market*

(Amount in Rupees crore)

Item	2000-01 P	1999-2000

	No. of Issues	Amount	No. of Issues	Amount
1	2	3	4	5
A. Prospectus and Rights				
1. Non-Government Public Limited Companies (Private Sector) (a+b)	145	4,948.9 (-4.0)	79	5,153.3 (2.8)
a) Financial	18	2,504.0	13	2,803.6
b) Non-financial	127	2,444.9	66	2,349.7
2. Public Sector Undertakings (PSU Bonds)	-	-	-	-
3. Government Companies	-	-	-	-
4. Banks/Financial Institutions (in the Public Sector)	5	1,472.2 (-42.3)	4	2,551.0 (-41.4)
5. Sub Total (1+2+3+4)	150	6,421.1 (-16.7)	83	7,704.3 (-17.7)
B. Private Placement+				
6. Private Sector	387	24,398.8 (25.7)	367	19,403.5 (14.2)
a) Financial	214	13,862.9	176	10,875.2
b) Non-financial	173	10,535.9	191	8,528.3
7. Public Sector	200	43,101.2 (3.0)	211	41,855.5 (28.1)
a) Financial	109	25,440.3	119	17,981.3
b) Non-financial	91	17,661.1	92	23,874.2
8. Sub-Total (6+7)	587	67,500.2 (10.2)	578	61,259.0 (23.3)
C. Total (A+B)	**737**	**73,921.3 (7.2)**	**661**	**68,963.3 (16.8)**

* Including both debt and equity. P Provisional. - Nil/Negligible.
+ Estimates based on information gathered from arrangers, FIs and newspaper reports.
Note: Parenthetic figures represent percentage variations over the previous year.

5.75 During 2000-01, resources mobilised by non-Government public limited companies (private sector) at Rs.4,949 crore through 145 issues declined by 4.0 per cent as compared with Rs.5,153 crore mobilised through 79 issues during 1999-2000 (Appendix Table V.8). Although the share of mega issues (Rs.100 crore or above) in total resource mobilisation increased marginally to 69.1 per cent (Rs.3,419 crore from 13 mega-issues) from 66.8 per cent (Rs.3,443 crore from 12 issues) in the previous year, most of the issues during 2000-01 were of Rs.10 crore and less (mostly equity issues from the IT sector) in sharp contrast to the previous year when most of the issues were of Rs.10 crore and above. As a result, the average size of issues by the private sector companies registered a sharp decline to Rs.34 crore from Rs.65 crore in 1999-2000. During 2000-01, there were 80 equity issues by the IT sector accounting for Rs.664 crore or 13.4 per cent of total resource mobilisation as compared with 32 issues aggregating Rs.495 crore (9.6 per cent) during 1999-2000. The public issues market continued to be dominated by equity issues numbering 136 issues out of a total of 145 issues, the remaining being debt issues. However, in terms of resource mobilisation, the share of equity instruments was only 53.9 per cent. The share of premium in the total amount mobilised by equity issues declined sharply to 47.5 per cent from 78.8 per cent.

Private Placement Market

5.76 The private placement market witnessed a relatively moderate growth during 2000-01 in comparison with the previous four years. Resources mobilised through private placements increased by 10.2 per cent to Rs.67,500 crore as compared with an increase of 23.3 per cent during 1999-2000. The shares of the public and private sectors stood at 63.9 per cent (Rs.43,101 crore) and 36.1 per cent (Rs.24,399 crore), respectively. The major all-India development financial institutions (IDBI, IFCI, ICICI, IIBI) were the largest mobilisers of funds as a group (Rs.14,124 crore) from the private placement market followed by the State level undertakings (Rs.11,972 crore).

Euro Issues

5.77 During 2000-01, resource mobilisation by Indian corporates through Euro issues by way of Foreign Currency Convertible Bonds (FCCBs), Global Depository Receipts (GDRs) and American Depository Receipts (ADRs) registered a significant increase. There were, in all, thirteen issues floated for an aggregate amount of Rs.4,197 crore during 2000-01 as compared with six issues aggregating Rs.3,487 crore in the previous year.

5.78 There were three Euro issues during April-July 2001 aggregating Rs.1,437 crore (US $ 305 million) as compared with six issues aggregating Rs.2,625 crore (US $ 593 million) during April-July 2000.

Mutual Funds

5.79 Net resource mobilisation by mutual funds during 2000-01 declined by 33.1 per cent to Rs.13,339 crore from Rs.19,953 crore during the previous year. Resource mobilisation by the private sector mutual funds declined by 43.1 per cent to Rs.8,481 crore and by 56.0 per cent to Rs.1,999 crore by the Unit Trust of India (UTI). However, resource mobilisation by the public sector mutual funds increased to Rs.2,860 crore as compared with Rs.513 crore during the previous year (Table 5.12).

5.80 According to the estimate made by SEBI, resource mobilisation by mutual funds during April-June 2001 at Rs.6,936 crore increased by 71.7 per cent from Rs.4,041 crore mobilised during the corresponding period of the previous financial year.

Disinvestment in Public Sector Enterprises

5.81 The disinvestment programme of the Government was muted with the actual proceeds from disinvestments falling far below the targeted amount. As against a target of Rs.10,000 crore during 2000-01, proceeds from disinvestments aggregated Rs.1,869 crore. In the Union Budget for 2001-02, the target for disinvestment has been increased to Rs.12,000 crore. The Government has set up a new Department of Disinvestment *(Vinivesh Vibhag)* after the tenure of the

Disinvestment Commission ended in November 1999, to establish a systemic policy approach to disinvestment and to give fresh impetus to this programme which will increasingly emphasise strategic sales of identified PSUs. The Government reconstituted the Disinvestment Commission in July 2001 with Dr. R.H. Patil as its new Chairman.

Table 5.12: Net Mobilisation of Resources by Mutual Funds#

(Amount in Rupees crore)

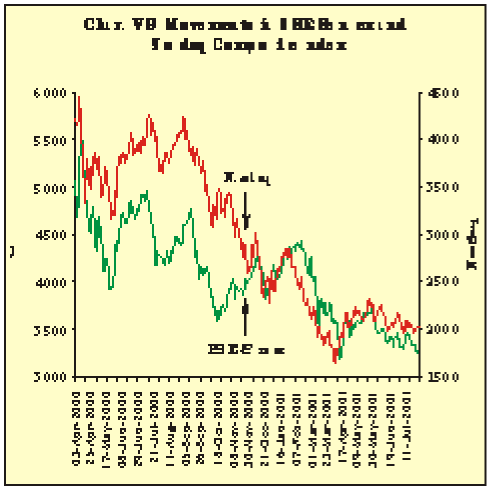
Item	2000-01 P		1999-2000 P	
	No. of Schemes	Amount	No. of Schemes	Amount
1	2	3	4	5
1 . Unit Trust of India @	. .	1,999.0	. .	4,548.0
2 . Public Sector Mutual Funds*	65	2,859.5	44	513.0
3 . Private Sector Mutual Funds	158	8,480.6	121	14,892.2
Total (1 to 3)	223	13,339.1	165	19,953.2

\# Net of repurchases/redemptions. P Provisional. .. Not available.
@ Net sales value with premium under all domestic schemes, includes re-investment sales.
* Sponsored by banks and FIs in the public sector.
Source: UTI and respective Mutual Funds.

Secondary Market Developments

5.82 The stock market remained generally subdued during 2000-01 reflecting large sell-offs in global equity markets, particularly, in new economy stocks on the Nasdaq, a slowdown in FII inflows, deceleration in industrial production and increase in international oil prices.

5.83 The market began the year on a subdued note in April 2000 and tended to move downwards, in general, as the year progressed. It declined sharply between April-May 2000. However, the equity prices recovered somewhat in June 2000 despite a sharp decline in net FII investment. Market sentiment was considerably influenced by the downturn in international equity markets (Chart V.9). As a consequence, the recovery could not be sustained and equity prices declined sharply in July 2000. The downtrend continued till October 2000 with pressures in other segments of the financial markets dampening the market sentiment. A fragile recovery in November 2000 could not be sustained as the stock prices declined again in the following month. The decline was mainly on account of substantial net sales by the FIIs during the month. The substantial decline in Nasdaq index during the second half of the month and weakness in Asian markets also affected the market sentiment adversely. Share prices registered modest gains in January 2001 mainly due to large FII inflows and expectations of strong earnings growth of the new economy companies in the third quarter.



5.84 The market responded positively to the Union Budget for 2001-02 with the BSE Sensex recording an 11-month peak for a single day. In the first week of March 2001, however, the market was adversely affected by considerable uncertainty leading to problems in certain stock exchanges as well as liquidity/solvency difficulties in some co-operative banks, which in turn, also affected some commercial banks. Timely policy actions were undertaken including banning of naked short sales, raising margin requirements, facilitating orderly settlement in stock exchanges, ensuring adequate liquidity in other market segments and specific measures to minimise the spread of contagion.

5.85 In May 2001, SEBI announced significant changes in the capital market in keeping with the international practices and operations in the securities markets. These measures included: (a) banning of all deferral products in the cash segment including badla, (b) bringing in 414 scrips accounting for 95 per cent of trading volumes within the ambit of rolling settlements system from July 2, 2001, (c) allowing index based and individual stock based options, (d) introduction of uniform Monday-to-Friday settlement cycle across all stock exchanges for all scrips not in the rolling mode, (e) a code of conduct and a preventive framework against insider trading, (f) removal of price bands for all stocks in the rolling mode from July 2, 2001 and for the entire market from January 2, 2002, (g) introduction of a market wide circuit breaker system to be applicable at three stages of the index movements, (h) shifting the margining system from net to gross basis (sales and purchases) with effect from September 3, 2001, (i) introduction of 99 per cent value at risk (VaR)-based margin system for all scrips in the compulsory rolling settlement with effect from July 2, 2001.

5.86 The BSE Sensitive Index (Base: 1978-79=100), which stood at 5001.28 as at end-March 2000 declined to touch a low of 3540.65 as on March 13, 2001. Although the Index recovered to close at 3604.38 as at end-March 2001, it still registered a decline of 1396.90 points (27.93 per cent) over the end-March 2000 level (Table 5.13). The monthly average of BSE Sensitive Index, which stood at 5261.77 in March 2000, declined to touch 3807.64 by March 2001 (Appendix Table V.9), registering a decline of 1454.13 points (27.64 per cent).

5.87 The continued weak trend witnessed in April 2001 was reinforced with the profit-warning for the next year issued by various IT companies. The BSE Sensex touched a low of 3183.77

points on April 12, 2001 in the current financial year. However, the share prices increased in May 2001 particularly on the back of net FII investment, which remained strong despite the reduction in India's weightage in the MSCI Emerging Market Free Index. The BSE Sensex closed the first quarter of 2001-02 at 3456.78 as on June 29, 2001 and declined further to close at 3329.28 on July 31, 2001. The trend in stock market remained subdued in August 2001 so far.

5.88 The volatility in the BSE Sensex, as measured by the co-efficient of variation, declined to 8.8 per cent in 2000-01 from 13.2 per cent in 1999-2000. The dispersion (the range between closing high and closing low) at 2001 points in 2000-01 was also lower than that of 2,689 points recorded during 1999-2000 (Appendix Table V.9).

5.89 The total turnover of BSE at Rs.10,00,031 crore during 2000-01 registered an increase of 46.0 per cent as compared with an increase of 119.6 per cent in the previous year. The market capitalisation of listed scrips at BSE declined sharply by 37.4 per cent to Rs.5,71,553 crore as at end-March 2001 in contrast to an increase of 68.1 per cent during 1999-2000. The average price-earning ratio based on 30 scrips included in the Sensex increased to 23.9 during 2000-01 from 19.8 in the previous year (Table 5.13). The average price-book value ratio based on the 30 Sensex scrips increased to 3.6 from 3.4 in 2000-01. The annualised yield based on the 30 scrips included in the Sensex, increased marginally from 1.2 per cent to 1.3 per cent in 2000-01.

5.90 The total turnover in the capital market segment of the National Stock Exchange (NSE) at Rs.13,39,511 crore registered an increase of 59.6 per cent during 2000-01 as against an increase of 102.4 per cent in the previous year. As at end-March 2001, the number of companies listed at the NSE stood at 785 with market capitalisation of Rs.5,43,575 crore as against 673 listed companies with market capitalisation of Rs.8,50,880 crore as at end-March 2000 (Table 5.14). The National Securities Clearing Corporation Limited (NSCCL), which handles the clearing and settlement operations of NSE, guarantees settlement on behalf of its clearing members through its Settlement Guarantee Fund (SGF).

5.91 The NSE and NSCCL have launched the Mutual Fund Services System (MFSS) to effectively cater to the individual investors buying and redeeming of mutual fund scheme units, which is presently being undertaken manually. NSE commenced trading in Nifty Index Futures from June 12, 2000. The futures contract has a maximum of 3-month expiration cycle.

Table 5.13: Important Indicators of the Stock Exchange, Mumbai

Indicators	2000-01	1999-2000	Percentage Variations	
			2000-01	1999-2000
1	2	3	4	5
1. BSE Sensex				
i) Average	4269.69	4658.63	-8.3	41.4
ii) End of the year	3604.38	5001.28	-27.9	33.7

2. Price Earning Ratio@	23.9	19.8	21.0	53.7
3. Price-Book Value Ratio@	3.6	3.4	5.9	50.4
4. Yield @ (per cent per annum)	1.3	1.2	5.7	-32.4
5. Listed Companies	5,955	5,889	1.1	0.7
6. Turnover (Rs.crore)	10,00,031	6,85,028	46.0	119.6
7. Market Capitalisation as at end-March (Rs. crore)	5,71,553	9,12,842	-37.4	68.1

@ Based on 30 scrips included in the Sensex and are averages for the year.
Source : The Stock Exchange, Mumbai.

Table 5.14: Important Indicators of the National Stock Exchange (Capital Market Segment)

Indicators	2000-01	1999-2000	Percentage Variations	
			2000-01	1999-2000
1	2	3	4	5
1 . S&P CNX Nifty				
i) Average	1334.76	1368.62	-2.5	43.3
ii) End of the year	1148.20	1528.45	-24.9	41.8
2 . Turnover (Rupees crore)	13,39,511	8,39,051	59.6	102.4
3 . Listed Companies*				
i) Number	785	673	16.6	4.3
ii) Market Capitalisation (Rupees crore)	5,43,575	8,50,880	-36.1	153.8
4 . Permitted Equities*				
i) Number	320	479	-32.2	-21.4
ii) Market Capitalisation* (Rupees crore)	59,165	1,09,457	-45.9	-29.8

* As at end of the year.
Source: National Stock Exchange of India Ltd.

Foreign Institutional Investors (FIIs)

5.92 Net investment[3] by FIIs continued to remain buoyant during 2000-01 at Rs.9,669 crore even as it was marginally lower than that of Rs.9,816 crore during 1999-2000. The monthly net FII investment was positive during January-April, May, August, October and November 2000 and negative during June, July September and December 2000. FII investment was also positive in January, February and March 2001. The monthly net FII investment touched a high of Rs.2,438 crore during April 2000. Cumulative investments by FIIs which stood at Rs.39,133 crore as at end-March 2000 increased to Rs.48,802 crore as at end-March 2001. The number of FIIs registered with SEBI which stood at 527 as at end-March 2001, came down to 505 as at end-July 2001.

Banks' Investments in Capital Market

5.93 During 2000-01, banks' direct investment in the capital market instruments declined sharply. Accommodation provided by scheduled commercial banks to the commercial sector through investments in bonds/ debentures/preference shares and equity shares (including loans to corporates against shares to meet promoters' contribution) declined to Rs.10,166 crore during 2000-01 from Rs.11,738 crore during the previous year. Banks' investments in bonds/debentures and preference shares at Rs.9,818 crore, formed the major portion of their investment in capital market instruments.

5.94 The guidelines relating to banks' financing of equities and investment in shares issued in November 2000 were revised based on the feedback received from banks and market participants on the recommendations made by the Technical Committee of the Reserve Bank and SEBI. In terms of the revised guidelines issued in May 2001, banks' overall exposure to the capital market in all forms (fund and non-fund based) was stipulated at 5.0 per cent of outstanding advances (including CPs) as on March 31 of the previous year as against the earlier stipulation whereby the ceiling of 5.0 per cent of outstanding credit was applicable only for their investment in shares, convertible debentures and units of MFs (other than debt funds), while there was no quantitative restriction on other forms of exposure.

Progress of Dematerialisation

5.95 In order to expedite the process of dematerialisation, the SEBI introduced an element of compulsion whereby settlement of trade in certain select scrips was required to be effected compulsorily in demat form. SEBI has been expanding the compulsory demat list from time to time and as on June 30, 2001 there were 2,335 scrips which needed to be settled only in the dematerialised form. In order to avoid creation of securities in physical form, it has recently directed that securities issued through initial public offering (IPO) can only be settled in dematerialised form.

Debt Market

Wholesale Debt Market - NSE

5.96 During 2000-01, the number of securities listed on the wholesale debt market (WDM) segment of NSE increased to 937 from 843 in 1999-2000 while the number of active securities listed and available for trading in the segment increased to 1,534 from 1,412 during the same period. The volume of trading increased by 40.9 per cent to Rs.4,28,582 crore in 2000-01 from Rs.3,04,216 crore in 1999-2000, with the highest volume recorded in January 2001 at Rs.66,400 crore. The trend in the trading pattern during 2000-01 remained almost the same as in the previous year with Government Securities and Treasury Bills accounting for the bulk of the trading volume at over 96 per cent of the total trade. However, in the current financial year so far, as a fall-out of the subdued stock market conditions, increased activity by banks, mutual funds and insurance companies was witnessed in the debt segment. The volume of corporate debt traded on the WDM Segment of NSE which was merely Rs. 10.73 crore in April 2001 , increased to 101.46 crore in May and Rs.118.33 crore in June 2001. The growth rate slowed down somewhat in July 2001 as the volume declined to Rs.111.33 crore. The volume of corporate debentures traded increased from Rs.498 crore in 1999-2000 to Rs.689 crore in 2000-01. Banks, brokers and PDs accounted for 96 per cent of the total volume, of which Indian banks accounted for 33 per cent of the trade in 2000-01.

Term Lending Institutions

5.97 During 2000-01, financial assistance sanctioned and disbursed by all-India financial institutions (AIFIs) at Rs.1,17,667 crore and Rs.72,528 crore, respectively, registered lower growth of 16.2 per cent and 7.3 per cent, respectively, as compared with 23.6 per cent and 20.1 per cent during 1999-2000 (Appendix Table V.10). During April-June 2001, sanctions and disbursements declined by 23.2 per cent and 0.3 per cent, respectively, as compared with sharp increases of 33.3 per cent and 47.3 per cent, respectively, during April-June 2000.

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[1] The data pertain to ten all-India financial institutions, *viz.*, IDBI, ICICI, IFCI, NABARD, Exim Bank, NHB, SIDBI, TFCI, IIBI and IDFC.

[2] The all-India financial institutions, with effect from October 10, 2000, have been permitted to issue CPs within the ceiling of their overall umbrella limit.

[3] Data on net investments by FIIs differ from data presented in Section VI which relate to net inflows.