IX - Development and Regulation of Financial Markets

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Introduction

9.1 The development and regulation of money, foreign exchange and Government securities markets is a function of the Reserve Bank that emerges out of its role as monetary authority as well as debt manager to the Government and its responsibility for the stability of the financial system. In this context, the Reserve Bank has been emphasising a redefinition of its regulatory role *vis-ã-vis* financial markets, particularly in an environment characterised by multiple regulation. The amendments to the Securities Contract (Regulations) Act (SCRA), 1956 which were brought into effect on March 1, 2000 assume critical significance. They establish the regulatory jurisdiction of the Reserve Bank over transactions in Government securities, money market securities, gold related securities, derivatives based on these securities and ready forward contracts in all debt securities, in conjunction with the Reserve Bank's regulation of foreign exchange transactions under the Foreign Exchange Regulation Act, 1973 and later by the Foreign Exchange Management Act, 1999.

9.2 The development of financial markets is regarded as a critical prerequisite for improving the operational effectiveness of the transmission of monetary policy. Accordingly, the first phase of financial sector reforms consisted of the easing of various structural rigidities – both price- and quantity-based, so as to increase participation in financial markets as well as to develop and strengthen inter-linkages between market segments, fostering competition, introduction of more sophisticated financial instruments and innovations in market practices, ensuring adequate liquidity in various segments of the market spectrum, and developing the regulatory, legal, institutional and technological infrastructure for orderly market activity.

9.3 In the second phase of reforms, issues relating to the stability of financial markets have received priority in the policy agenda. The liberalisation of financial markets has raised the vulnerability of financial institutions to volatility in financial asset prices and thereby increased the potential risks of impairment of their balance sheets, with implications for systemic stability. The international experience with market failures in 1997-98 and contagion effects have prioritised the regulatory function in the context of the development of financial markets in India. The need for regulation arises in the context of maintaining systemic stability given the strong complementarity between financial stability and price stability. In the country-specific situation, the challenge is to make the micro regulations consistent with macro objectives. In the recent period, policy initiatives have encompassed measures for market discipline, fine-tuning of the market microstructure in order to reflect the evolving sophistication and technological advancement in the functioning of markets, and specific changes in the legal and regulatory framework which would institute healthy market practices and also enable more effective supervision and oversight.

9.4 In regard to the money markets, a basic objective in the recent years has been to develop a proper short-term rupee yield curve with deep liquidity therein. A four-fold strategy is being adopted in this regard. First, LAF operations are being conducted with a view to keeping the short-term interest rates within a corridor. Secondly, the call money market is being developed into a pure inter-bank market with a phased withdrawal of non-bank participants who only lend in the market. Thirdly, the traditional sector-specific refinance support is being rationalised and the additional recourse to the standing liquidity facilities of the Reserve Bank is being made increasingly market-based. Finally, the other money market segments, especially the repo market, are being developed with lending as well as borrowing access to the non-banks in these markets.

9.5 In respect of Government securities market, the initiatives in the recent years have been to develop the market in terms of depth, liquidity, turnover and participants. Given the constraints imposed by conditions in the money and foreign exchange markets and the persistently large Government borrowing programme, the Reserve Bank has at times taken private placements in the primary issues or devolvement at the auctions and has subsequently undertaken open market operations at opportune points of time to assuage market pressures to contain the monetary impact of the fiscal operations and to allow for the emergence of a smooth yield curve. The Reserve Bank has also been adopting a policy of passive consolidation in the number of outstanding loan issuances and facilitating creation of volumes in benchmark securities. Open market operations are undertaken to contain volatility and to provide liquidity to the Government securities market.

9.6 The foreign exchange market in India continues to be relatively thin, localised and expectation-driven with a tendency towards 'herding' and asymmetrical behaviour. The medium-term policy endeavour is to develop the foreign exchange market in terms of depth and liquidity, enable the introduction of new instruments and pricing strategies and greater integration with other segments of the financial market. In the day-to-day regulation of the foreign exchange market, the policy objective is to manage volatility with no fixed rate target and allow demand and supply conditions to determine exchange rate movements in an orderly manner. The Reserve Bank also enters periodically into foreign exchange transactions with the market to prevent undue fluctuations in the exchange rate.

9.7 The operational aspects of the regulation of money, Government securities and foreign exchange markets are discussed under developments during 2000-01 in the following section. Under money markets, the issues covered include efforts to develop a pure inter-bank money market and to widen other money market segments. In the Government securities market, the discussion covers the increasing depth in the market in terms of various indicators of turnover in the primary as well as secondary segments, periods of heightened activity recorded during the year and the turning points in market activity and efforts undertaken by the Reserve Bank to improve the operational efficiency of the primary dealers (PDs). Under the foreign exchange market, the discussion covers the progressive liberalisation of current and capital transactions including Indian investment abroad, policy measures to deal with the mid-year uncertainty in market behaviour and the efforts to inform the public about various facilities available for the use of foreign exchange. The discussion on these developments is followed by institutional measures

to improve the functioning of the financial markets. These measures have a relatively long-term perspective and include setting up of a Clearing Corporation for facilitating clearing and settlement in money, Government securities and foreign exchange markets, broadening and deepening of various market segments, issues relating to the separation of debt management from monetary management and its implications for the functioning of markets, the proposal for introduction of electronic Negotiated Dealing System (NDS) and the likely medium-term agenda for the development and regulation of financial markets.

DEVELOPMENTS DURING 2000-01

9.8 During 2000-01, the Reserve Bank continued to adopt a strategy of maintaining orderly conditions in the money, Government securities and foreign exchange markets with a flexible stance of responding quickly to unforeseen developments in the external environment and reverting to normal conditions as pressures eased. Liquidity management operations were employed to maintain orderly conditions in the money market. In the Government securities market, outright sales of securities through OMO was undertaken to minimise the monetary impact of the increase in foreign currency assets on account of IMDs and switches/purchases of securities to provide liquidity to the longer end of the market (see Section V). Long-term securities had devolved heavily on the PDs in the primary auctions in the wake of volatility in the foreign exchange market and monetary tightening in May-August 2000. The strategy in regard to management of the exchange rate continued to be maintenance of orderly conditions in the foreign exchange market, meeting temporary supply-demand gaps arising due to uncertainties or other reasons, and curbing destabilising and self-fulfilling speculative activities.

Money Markets

9.9 A policy priority in the development of the money market has been the positioning of liquidity adjustment facility (LAF) as an instrument for modulating liquidity and signaling the monetary stance, and for creating conditions for orderly market activity. The first stage of the LAF, introduced with effect from June 5, 2000, progressed satisfactorily (Chart IX.1). The second stage, introduced with effect from May 8, 2001, brought about further refinements in LAF (a detailed description is given in Section VIII).

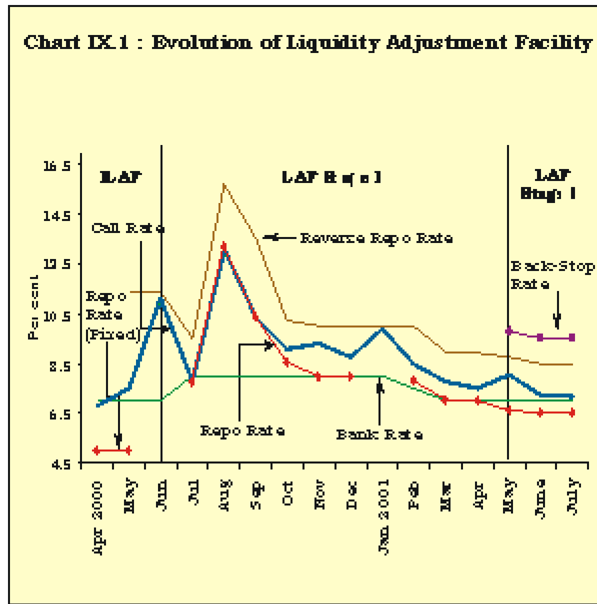

Chart IX.1 : Evolution of Liquidity Adjustment Facility

9.10 Efforts to develop the call money market into a pure inter-bank market (including PDs) while providing access to other short-term instruments for non-bank participants gathered momentum with the measures announced in the Statement on Monetary and Credit policy of April 2001. Corporates were allowed to route their call money transactions through PDs up to June 2001. A four-phased exit of non-bank institutions from the call money market commenced effective May 5, 2001, in which as part of stage I, non-bank institutions were permitted to lend, on an average, up to 85.0 per cent of their average daily call money lendings during 2000-01 during a reporting fortnight. This would be followed by reductions in their access to 70.0 per cent in the stage II when the Clearing Corporation (para 9.37 and Box IX.1) is operationalised. Subsequently, such limits would be reduced to 40.0 per cent and 10.0 per cent in stage III and stage IV, respectively, before effecting a complete withdrawal of non-bank participants from the call money market.

9.11 In consonance with the phasing out of non-banks from the call money market, other avenues for their short-term investments were made attractive. In 2000-01, the minimum maturity of certificates of deposit (CD) was reduced to 15 days to bring them on par with other short-term instruments. With a view to providing flexibility and depth to the secondary market, restriction on the transferability period for CDs issued by banks and financial institutions was withdrawn. Similarly, the minimum maturity period for wholesale deposits of Rs.15 lakh and above was reduced to 7 days. The repo market was expanded to cover non-bank entities holding both current and SGL accounts with the Reserve Bank. The minimum repo tenor was reduced to 1-day and State Government securities were made eligible for repos.

9.12 Guidelines for commercial paper (CPs) were modified to provide greater flexibility to issuers, to broaden the investor base and to simplify issuance procedures, including in dematerialised form. The most important measure in this regard was that CP no longer had to be carved out of working capital limit. Banks, FIs, PDs and satellite dealers (SDs) were directed to make fresh investments and hold CP in only dematerialised form with effect from June 30, 2001 and convert the outstanding investments in scrip form by October 31, 2001. In this regard, the

Fixed Income Money Market and Derivatives Association of India (FIMMDA) has issued detailed set of standardised market practices and documentations regarding dematerialisation of CP on July 29, 2001.

9.13 The main intention of these measures has been to transform call money market into a pure inter-bank market and evolve call money and repo markets to an integrated set for equilibrating short-term positions of banks as well as non-banks. Furthermore, these measures would enable development of a proper short-term rupee yield curve which, in turn, would influence the other financial market segments.

Government Securities Market

9.14 The aggregate volume of transactions in Central Government dated securities and Treasury Bills (outright as well as repos) during 2000-01 was higher by 30 per cent at Rs.6,95,135 crore as compared with Rs.5,35,602 crore in 1999-2000, reflecting increasing depth in the Government securities market. The deepening of the market was attributable to several factors such as generally stable call rates, favourable market expectations especially during the second half of the year, more active trading by the new PDs, mutual funds and some traditional participants like banks and LIC and active OMO by Reserve Bank. During 2000-01, the total outright transactions amounted to Rs.5,69,174 crore or 82 per cent of the aggregate transactions and the balance of Rs.1,25,961 crore or 18 per cent was by way of repos. During 1999-2000 the total outright transactions amounted to Rs.4,52,861 crore or 85 per cent of the aggregate transactions and the balance Rs.82,741 crore or 15 per cent was by way of repos. During 2000-01 the transactions in State Government securities were lower at Rs.2,986 crore as against Rs.3,632 crore during 1999-2000.

9.15 The turnover in Central Government securities (calculated as twice the volume of outright transactions *plus* four times the volume of repo transactions) amounted to Rs.16,42,190 crore in 2000-01 as against Rs.12,36,678 crore in 1999-2000. The outright turnover aggregated to Rs.11,38,348 crore as compared with Rs.9,05,722 crore in 1999-2000 (Chart IX.2). Thus, the average monthly turnover in Central Government securities aggregated to 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 ratio in Central Government securities (defined as the ratio of total turnover during the period to total outstanding securities at the beginning of the period) increased to 4.13 in 2000-01 from 3.82 during 1999-2000. The turnover in State Government securities amounted to Rs.6,005 crore during 2000-01 as against Rs.7,265 crore during 1999-2000.

9.16 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 *(i.e.* 68 per cent of the total turnover). The turnover in State Government securities was Rs. 2,175 crore during this period.

9.17 An analysis of the month-wise secondary market turnover in Government Securities Market (GSM) during 2000-01 shows intra-year fluctuations. The volume of transactions, which was stable at the beginning of the fiscal year, registered a sharp decline in June 2000 due to tight liquidity conditions in the market and the consequent high short-term rates. The transaction volumes fluctuated widely in the following months before moving up in September and October 2000 as a result of easy liquidity conditions, boosted by inflows of funds on account of IMDs in November 2000. The turnover showed a decline towards the end of the fiscal year with yields rising in Government securities.

9.18 Consistent with the market conditions, the investor preference, in terms of choosing the investment horizon, also showed a mixed trend during the year. Thus, during tight market conditions the preference shifted towards short and medium-term bonds and with the improvement in liquidity conditions, investor interest in long-term bonds revived.

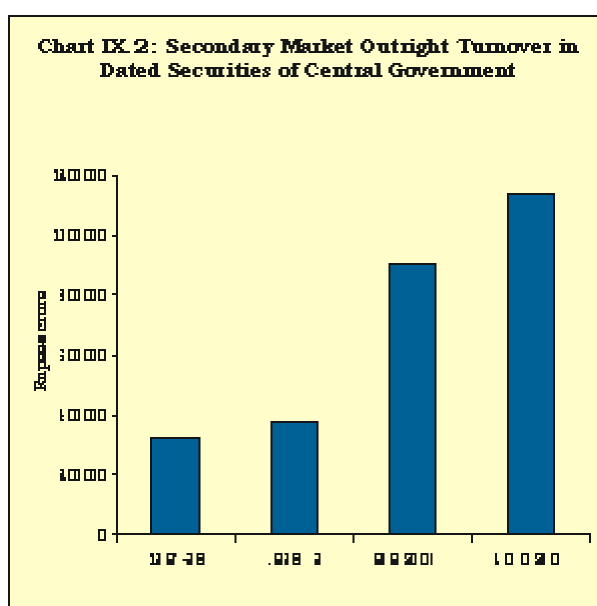
Chart IX.2: Secondary Market Outright Turnover in Dated Securities of Central Government

9.19 In the secondary market, in tandem with the easing of call rates during April to mid-May 2000, the Government securities market witnessed a small rally and the yield curve shifted downwards, tilting more at the short-end, as the issuance of long tenor securities by the Reserve Bank moderated the price increase at the long-end. As the liquidity conditions tightened, inflation crept up and uncertainties surfaced in the foreign exchange market, the yield curve shifted up with short-term maturity paper displaying a relatively high proportionate increase. 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 private placement of Government securities with the Reserve Bank.

9.20 The gains in gilt prices, however, dissipated during the second half of July and August 2000. Yields went up again in the face of uncertainties in the foreign exchange market warranting monetary tightening and absorbing of excess liquidity through repos in the second half of July and August 2000. The illiquidity of longer maturity papers prompted the Reserve Bank to offer to the PDs switches from three medium- to long-term Government securities to

364-day Treasury Bills during August 2000. The higher returns in the repo, call money and foreign exchange markets encouraged participants to divert their funds away from dated Government securities.

9.21 As the foreign currency market stabilised, the repo cut-off rate progressively declined during September-October 2000 and interest in the Government securities market was rekindled. Yield at the short-and medium-ends declined. As the proceeds of IMDs entered the system and currency and oil markets stabilised, activity picked up in 2000-01 at the longer-end of the maturity spectrum. The yields of longer dated maturities fell in the face of a rally in the prices of Government securities. The aggressive auctioning of Government securities in November 2000 arrested this rally temporarily. In December 2000, the rally resumed at the long-end with improved sentiment on account of a stable rupee, declining oil prices and expectations of cut in international interest rates.

9.22 The two-stage cut in the Federal Funds rate by 100 basis points not only provided the external backdrop for the sharp rally in January 2001 but also raised hopes for an imminent rate cut to restore the pre-July 2000 position. While partly meeting market expectations through reduction in the Bank Rate and the cash reserve ratio by 50 basis points each, the Government's resolve to tackle the fiscal deficit as also address some of the structural issues, *viz.*, reduction in interest rates on small savings in the Union Budget announced on February 28, 2001, allowed the Reserve Bank to further cut the Bank Rate by 50 basis points from March 2, 2001. The fact that the yields did not fall further after the second Bank Rate cut was indicative of the fact that this reduction had already been factored in. 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. During 2001-02 (up to August 11), barring a few spikes, the gilt yields mostly declined due to downward interest rate expectations.

9.23 With effect from October 6, 2000 the Reserve Bank allowed the same day sale of Government securities for entities which are successful in getting allotments in auctions. The Bank also encourages investors to hold securities in scrip-less form, and issued a set of guidelines governing the maintenance of the Constituents' SGL Accounts in October 2000. From September, 2000, the banks are required to value the unquoted Central Government securities on the basis of the prices/YTM rates put out by the Primary Dealers' Association of India (PDAI)/(FIMMDA) at periodic intervals. To take care of gridlocks in the DvP system due to shortfall of funds, a scheme of Special Fund Facility was introduced on October 3, 2000. Under this facility funds are made available on a collateralised basis against undrawn CLF and Primary Dealers' Liquidity Support (PDLS).

9.24 During 2001-02, the turnover in Government securities saw a steep rise of about 80 per cent in May over its level in April reflecting increased participation by non-bank entities in the repo market as a result of reduced lending by them in call money market as per the new regulations adopted by the Reserve Bank. The turnover was similar in June 2001 as in May 2001.

9.25 Several steps were taken during 2000-01 for developing and strengthening the PD system. Capital adequacy guidelines for PDs, consistent with international standards, were issued in December 2000. In order to provide liquidity, PDs were allowed a "switch facility" to swap

their medium- to long-dated Government securities with 364-day Treasury Bills during August 2000.Liquidity support to PDs was made contingent upon not only the bidding commitment but also the performance of PDs in both primary and secondary markets from April 2000. Since PDs were no more required to take devolvements at Treasury Bills auctions, the payment of commissions for Treasury Bills was withdrawn with effect from June 5, 2000. During 2001-02, a revised scheme for bidding and underwriting was announced in April 2001. The standing liquidity facilities were split into normal and back-stop components and the limits for PDs were announced separately. In order to promote retailing, it was proposed that a maximum of 5 per cent of the notified amount in each auction of dated securities would be allocated for allotment to retail investors, and that individuals and provident funds would be allowed to participate in these auctions on a non-competitive basis.

9.26 The Reserve Bank issued a notification permitting all the entities maintaining current and SGL account with the Bank to undertake repo operations in Treasury Bills and dated securities of all maturities issued by the Government of India and State Governments. Such ready forward contracts would be settled through the Subsidiary General Ledger Accounts of the participants with Reserve Bank at Mumbai only and no sale transaction should be put through without actually holding the securities in the portfolio.

Foreign Exchange Market

9.27 The foreign exchange market has undergone substantial liberalisation, both in terms of freedom for market participants as well as a liberalised exchange and payments system for current and capital transactions. Improvements in the market microstructure are undertaken as a result of continuous monitoring and consultations with market participants. The Reserve Bank continued to liberalise foreign exchange market and the payments regime with a view to i) paving the way for a smooth transition to the Foreign Exchange Management Act (FEMA), 1999 from the Foreign Exchange Regulation Act (FERA), 1973; ii) enabling a phased movement to capital account convertibility and iii) providing a hassle free and prompt exchange and payments system.

9.28 Regulations issued under FEMA would allow units in the Special Economic Zones (SEZs) to credit their entire exchange earnings to EEFC accounts. Limit for advance remittances towards import without any guarantee was raised to US $ 25,000 (from the existing limit of US $ 15,000). Passport endorsement about the release of foreign exchange for purposes other than private visits was made non-mandatory, while foreign nationals employed in India were permitted to credit 75 per cent of their salary to foreign currency accounts abroad subject to tax deduction on the entire salary.

9.29 As already referred to in Section VIII, in order to contain volatility in the foreign exchange market, an interest rate surcharge of 50 per cent on import finance was introduced on May 26, 2000 and as conditions stabilised it was withdrawn on January 6, 2001. In the context of fluctuating international prices of crude oil, importers/ exporters of crude oil and petroleum products were permitted to hedge their exposure to price risk.

9.30 The progressive liberalisation of capital account transactions continued to receive policy attention. In respect of Indian investment abroad, Indian companies were allowed to acquire foreign companies or make direct investment in joint ventures/wholly owned subsidiaries abroad i) up to US $ 50 million (with an additional US $ 25 million in case of Myanmar and SAARC countries other than Nepal, Bhutan and Pakistan), on an annual basis through the automatic route without the earlier three-year profitability condition and ii) by utilising the entire proceeds (from the earlier 50 per cent) of their American Depository Receipts (ADR)/Global Depository Receipts (GDR). The Reserve Bank also introduced a new facility for block allocation of foreign exchange for companies that have exhausted their US $ 50 million limit on fulfilling certain eligibility criteria. The facility of acquiring shares of foreign companies in the same area of core activity up to US $ 100 million or an amount equivalent to ten times of their exports, whichever was higher, after issuance of ADRs/GDRs was extended to all companies irrespective of the sector of activity.

9.31 As regards overseas investment, the ban on such investments by registered partnerships was removed. Partnerships in certain professional services, *viz*., chartered accountancy, legal services, medical and health care services, information technology and entertainment software services are now allowed to invest abroad in foreign concerns in the same line of activity up to US $ 1 million under the automatic route and beyond US $ 1 million with the approval of the Reserve Bank. Partnership firms in other activities would, however, require prior approval of the Reserve Bank for their investment proposals. Indian nationals who have the benefit of Employee Stock Option (ESOP) Scheme in foreign owned companies are now allowed to invest up to US $ 20,000 per annum (as against the earlier US $ 10,000 in a block of five years).

9.32 Indian companies will now be allowed to sponsor ADR/GDR issues with an overseas depository against bulk shares held by share holders wishing to use this option at issue prices determined by the lead manager subject to the condition of repatriation within a month and the provisions for the Foreign Currency Convertible Bonds and Ordinary Shares (through the Depository Receipt Mechanism) Scheme 1993.

9.33 Several steps were taken to improve the climate for foreign investment in India. Necessary changes in FEMA Regulations have been effected to facilitate a two-way fungibility in ADR/GDR issues of Indian companies, subject to sectoral caps, wherever applicable, under which stockbrokers in India would be able to (subject to Government guidelines) purchase shares and deposit them with the Indian custodian for the issuance of ADRs/GDRs by the overseas depository to the extent of the ADRs/GDRs that have been converted into underlying shares. Foreign institutional investors (FIIs) were allowed to invest up to 49 per cent (revised up from 40 per cent) of the paid-up capital of Indian companies with the approval of the general body of the share holders by a special resolution. Foreign venture capital investors (FVCI) could invest in an Indian venture capital undertaking (IVCU)/venture capital fund (VCF) or a scheme floated by such VCFs in accordance with regulations framed for the purpose.

9.34 In order to educate the public about the various facilities available for the use of foreign exchange, the Reserve Bank has published a Citizen's Charter. Detailed "helplines" were also set up at the Reserve Bank's offices at Ahmedabad, Bangalore, Hyderabad and New Delhi with exclusive telephone, fax and electronic media arrangements to provide necessary clarifications to

the public on enquiries relating to foreign exchange transactions. Customer service meetings are held every quarter in each of the Bank's regional offices. Banks have also been advised to provide easy encashment facilities of foreign currency and travellers' cheques at a number of locations, especially airports and other important tourist centres. With a view to ensuring that credit to customers' accounts for non-trade related inward remittances is not delayed, Authorised Dealers (ADs) were advised to make payments immediately and the purpose of remittance could be obtained subsequently under the reporting requirements of the Reserve Bank. The cut-off limit for reporting non-export receipt of inward remittance was increased from Rs.1,00,000 to US $ 10,000.

9.35 As an extension of the overall objective of interest rate deregulation, banks were allowed to choose current swap rates to form the base for fixing the ceiling interest rates in the case of FCNR(B) deposits. The ceiling interest rate on FCNR(B) deposits was revised downward to LIBOR/ SWAP rates from the earlier level of LIBOR/SWAP plus 50 basis points for the corresponding maturity. In order to impart greater flexibility in the pricing of rupee interest rate derivatives and facilitate integration between money and forex markets, interest rates implied in the foreign exchange forward market could now be used as a benchmark for *FRA/IRS* in addition to the existing domestic money and debt market rates.

INSTITUTIONAL MEASURES

9.36 Recent monetary policy statements have laid emphasis on structural measures to improve the functioning of financial markets. A consensus approach emerging out of a consultative process has been adopted for the institution of these measures involving interaction of working groups and technical committees with experts and market participants, seminars, and by inviting public opinion. The inter-departmental Financial Markets Committee, which has been operating since 1997, monitors the daily financial market developments while undertaking policy decisions.

9.37 One of the products of this consultative process is the establishment of a Clearing Corporation with the State Bank of India as the chief promoter. The Corporation once operationalised would facilitate clearing and settlement of transactions in money, Government securities and foreign exchange markets. It would help to open up the repo market to bonds of public sector undertakings (PSUs) and financial institutions. The working of the Corporation is expected to minimise credit risk and enable the management of collateral efficiently (Box IX.1).

9.38 The medium-term objective with regard to the money market is to develop the call/notice money market into a pure inter-bank market. Broadening the repo market and activating other short-term financial instruments for non-banks is a concomitant pursuit. The phased evolution of the LAF towards becoming the primary instrument for liquidity management and the gradual removal of specific liquidity facilities are consistent with this objective.

9.39 The separation of the functions of debt management and monetary management is regarded as a desirable medium-term objective, conditional upon development of the Government securities market, durable fiscal correction and an enabling legislative environment. The separation of the two functions is expected to have significant changes in the functioning of

the Government securities market. The existing Public Debt Act is sought to be repealed and replaced by a new Government Securities Act. The new Act will simplify the procedures for transactions in Government securities, allow lien marking/pledging of securities as also electronic transfer in demat form. Attendant legislative changes are envisaged under the Fiscal Responsibility Bill and amendments to Reserve Bank of India Act to enable greater flexibility and operational effectiveness in the conduct of monetary policy in the new environment. The amendments to various legal acts are also expected to bring about greater compatibility with various innovations taking place in banking operations.

Box IX.1
Clearing Corporation

A Clearing Corporation establishes and records obligations and settlement of transactions arising from trading executed by market participants as per the applicable rules specific to such trade. It facilitates large scale operations by eliminating the counterparty risk, thus, giving rise to scale efficiency and a reduction in the post-trade processing costs for market participants. The Clearing Corporation plays the role of a Central Counter Party (CCP) to all transactions and guarantees settlement of trade executed through its rules and regulations thus eliminating counter party risk. It interposes itself as buyer to each seller member and as seller to each buyer member in a defined trade giving rise to two new contracts - between the CCP and the buyer and the CCP and the seller - replacing the single original contract between two parties. The legal process of executing such counter party induction is called 'Novation'.
The CCP system helps in reducing risks and operational costs to participants through better risk management via substitution of one counter party for many, reduced volume of settlement on account of multilateral netting and settlement guarantees, standardised processing and market anonymity resulting in increased capacity and liquidity through netting of exposures in trading. The efficiency and stability of the system hinges on proper risk management which varies according to instruments, market sophistication and depth.

The cost-benefit analysis of a CCP system should be judged with respect to risk bearing capacity. The standard risk management practices followed by CCP are (i) daily maintenance and monitoring of members' eligibility standards defined through capital base, operational capabilities and trading practices, followed by the analysis of daily exposures of members to the CCP and their collateralisation which provides additional protection depending on legal certainty, the quality of collateral, member compliance, *etc.* and (ii) analysis of the level of protection required for the CCP based on the level of exposure which requires continuous valuation of collateral on marking to market basis to reduce default risk. The risk management and collateralisation depends on methodology, periodicity, accesses various available sources of funds like i) margin cover of the defaulting member ii) additional default/ participant fund contribution of the defaulting member meant for transferring significant part of the cost to the defaulting member thereby safeguarding the interest of other members (iii) excess assets held by the defaulting member at other CCPs linked through cross-guarantee arrangements, (iv) other members' participant fund contributions and CCP's assessment rights (mutualising the risk), (v) insurance cover (laying off the risk), (vi) reserves of the CCP and (vii) capital of the CCP as final line of defence. The thresholds and triggers to move from one source of fund to other typically depend on rules framed by the Clearing Corporation regarding procedures to meet the default risk.

A Clearing Corporation for clearing of money, Government securities and foreign exchange markets is being set up in India. "The Clearing Corporation of India Ltd." will have an authorised capital of Rs. 50 crore. It will be owned by the market participants and promoted by the State Bank of India (SBI), Bank of Baroda, HDFC Bank, ICICI, IDBI and LIC. It will be managed by a Board of Directors headed by a non-executive Chairman. It will facilitate extension of repos market to non-Government securities and enlargement of market participants, act as a triparty agent for efficient management of collateral in consonance with international practices and act as CCP through novation thereby minimising counter-party risk. The Corporation will also manage a Settlement Guarantee Fund thereby minimising settlement risk.

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9.40 An electronic Negotiated Dealing System (NDS) is proposed to be introduced with a view to facilitating transparent electronic bidding in auctions and secondary market transactions in Government securities on a real-time basis. It will encompass all SGL account holders and all transactions in gilts, Treasury Bills, repos, call/ notice money and term money, CPs, CDs and derivatives (Box IX.2). In order to promote retail access to Government securities, an order driven screen-based trading in Government securities on the stock exchanges is under review.

9.41 In the context of the growing integration of financial markets and the market orientation of monetary policy, two separate Advisory Committees were constituted by the Reserve Bank on money and Government securities markets with members comprising academicians, professionals and financial market participants. With the commonality of issues concerning development of these markets, the two Committees were unified into a single Technical Advisory Committee on Money and Government Securities Markets in July 1999 for a term of two years. The Committee reviews further efforts for: (i) deepening and widening the money and Government securities markets; (ii) developing a liquid secondary market; (iii) establishing linkages among market segments; (iv) instituting infrastructure, legal and institutional arrangements for trading, transfer and settlement in the context of the emerging payments system; (v) product/market development and advice on the policies and practices and (vi) improving risk management, accounting, disclosure, settlement, legal frameworks, *etc*.

9.42 The Committee held ten meetings up to August 2001 on several issues relating to their terms of reference, *viz.*, : (i) Interest Rate Swaps and Forward Rate Agreements; (ii) Development of Repos Market; (iii) Revolving Underwriting Facility (RUF); (iv) Retailing of Government Securities; (v) Guidelines relating to Commercial Paper, and Documentation and Procedures; (vi) Operations in Treasury Bills Market; (vii) Liquidity Adjustment Facility; (viii) Valuation of banks' investment Portfolio; (ix) Setting up of a Clearing Corporation; (x) Private placement of bonds (investments by banks and financial Institutions); (xi) Security Settlement risk and intra-day liquidity; (xii) Phasing out of non-bank entities from the call/notice money market; (xiii) Auction Formats for sale of Government Securities ; (xiv) Trading in Government Securities on Stock Exchanges; (xv) Negotiated Dealing System (NDS) and (XVI) Introduction of STRIPs.

Box IX.2
NDS and PDO Computerisation

An integrated project on Negotiated Dealing System (NDS) and computerisation of the Reserve Bank's Public Debt Office (PDO) has been initiated to facilitate electronic bidding in auctions and secondary market transactions in Government securities on a real-time basis. Call money, notice/term money, Government securities including Treasury Bills, repos, certificates of deposit, and commercial paper markets would be covered in the first phase. Interest rate swaps (IRS) and forward rate agreements (FRAs) markets would be covered in the second phase. The system can be used for daily LAF auctions. Banks, PDs and financial institutions with subsidiary general ledger (SGL) and current accounts with the Reserve Bank would be eligible to be members. The system will facilitate screen-based trading, provision of on-line trade information, reporting through trade execution system for settlement, centralised SGL and database systems with distributed servicing, inter-regional PDO connectivity, connectivity to participants and scaleable architecture. The entire project will be developed in five modules comprising secondary market operations (NDS), primary market operations, SGL Settlement and basic data maintenance, PDO operations and corporate events, and relief bonds.

The solution envisages a NDS linked to trade execution system (TES) which will be a front-end system and the Securities Settlement System (as a back-end system). NDS will be an interface between the members (SGL account holders) and the PDOs for facilitating settlement of deals done in Government securities and Treasury Bills. The member terminals would facilitate primary and secondary market operations. Pooled Terminal facility provided at all regional offices of PDOs would facilitate use by SGL account holders not having member terminals. The entire system will operate in a networked environment and INFINET will provide the backbone for communication. It will provide for reporting of trades executed through exchanges for information dissemination and settlement in addition to deals done through the NDS.

The NDS, integrated with the Securities Settlement System (SSS) will lead to efficiency in trading, settlement, interest payments and other improvements in services to investors in Government securities as the automated system will have minimum response time. The shut period for trading will also be reduced.

Outlook

9.43 The medium-term agenda would be to monitor smooth implementation of the various structural and technological measures which have already been announced. In the short-end of the financial market spectrum, the strategy of transforming the call money into a pure inter- bank market and development of the repo market to provide increased access to non-bank participants would be pursued with an emphasis on managing the transition. The integration of the various market segments would equilibrate short-term positions of banks as well as non-banks. Furthermore, efforts would be made to facilitate transparent electronic bidding in auctions and secondary market transactions in Government securities on a real-time basis and integration with EFT and RTGS. Institutional and technological arrangements for settling transactions through the delivery-versus-payment (DVP) system of the Reserve Bank on T + 1 basis will be strengthened in order to improve cash and liquidity management among money market participants and sensitise them to NDS. The operationalisation of Clearing Corporation would prepare the ground for reaping efficiency gains.