Report of the Technical Group on Money Market

Reserve Bank of India

May 2005

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Report of the Technical Group on Money Market

Introduction

1. Money market constitutes an important segment of the financial market by providing an avenue for equilibrating the surplus funds of lenders and the requirements of borrowers for short periods ranging from overnight upto an year. In this process, it also provides a focal point for central bank's intervention in influencing the liquidity in the financial system and thereby transmitting the monetary policy impulses.

2. The Indian money market till mid-1980s was relatively underdeveloped with few instruments and strict regulations with regard to participants and interest rates. Another issue of concern was that the distribution of liquidity in the market was skewed with a few large lenders and some chronic borrowers. The basic pre-requisite of a deep and liquid market that participants should alternate between borrowing and lending activity (i.e., providing two-way quotes) was also absent.

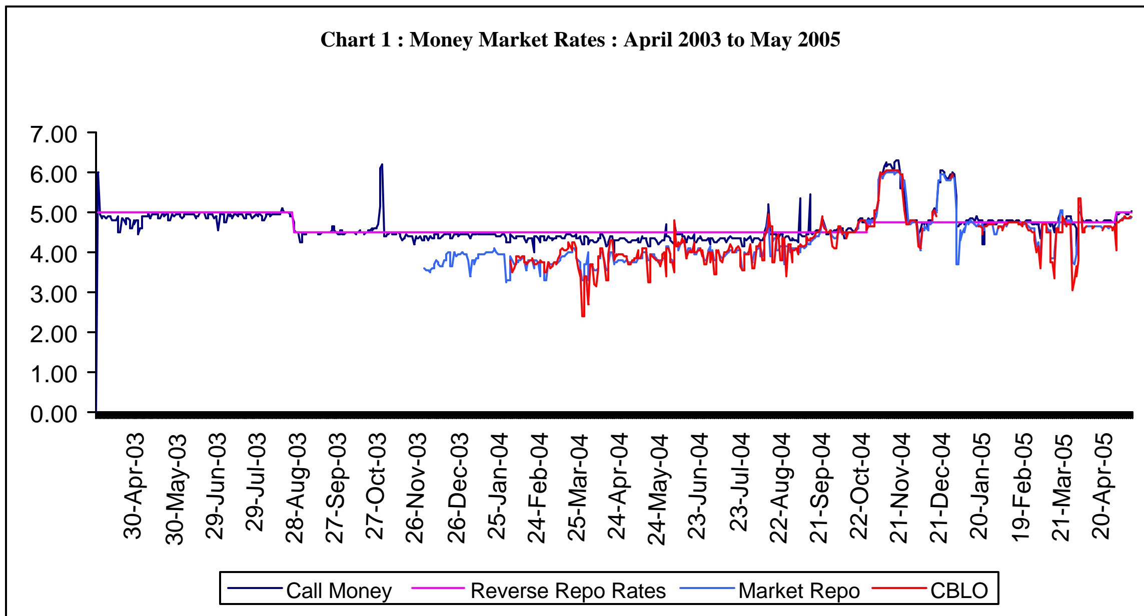
3. In pursuance of the recommendations of the Committee to Review the Working of the Monetary System (Chairman: Professor Sukhamoy Chakravarty) [1985] and the Working Group on the Money Market (Chairman: Shri N. Vaghul) [1987], a number of measures were taken by RBI to widen and deepen the money market through institution building and instrument development. Measures were also initiated to increase the number of participants in the money market. The Discount and Finance House of India Ltd. (DFHI) was set up jointly by the Reserve Bank, public sector banks and financial institutions to deal in short-term money market instruments with the primary objective of imparting improved liquidity to such instruments.

4. Accordingly, while introduction of new instruments, broadening of participants' base and strengthening of institutional infrastructure have been pursued during the 1990s based on the framework provided by the Vaghul Committee, the Narasimham Committee (1998) recommended rationalisation, *inter alia*, of the participation of different classes of entities in various segments of money market as also underscored the importance of money market in the

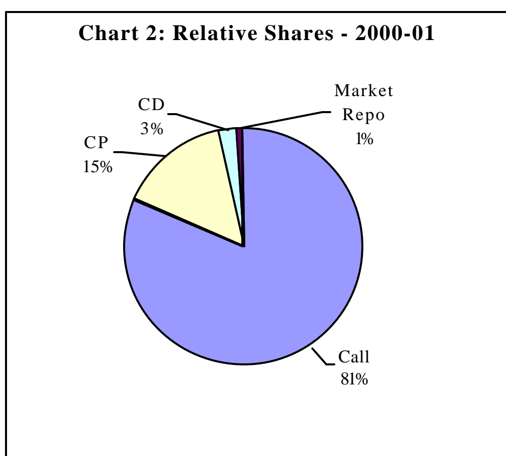
context of discretionary liquidity management of RBI. Pursuant to these recommendations, coupled with the need to keep the credit risk at a minimum in the financial market, encouraging inter-linkages across various segments of money market as also to foster a more balanced development of different markets, RBI has been initiating a number of structural and instrument-specific measures which have further contributed to the growth and sophistication of Indian money market, particularly since 2000-01.

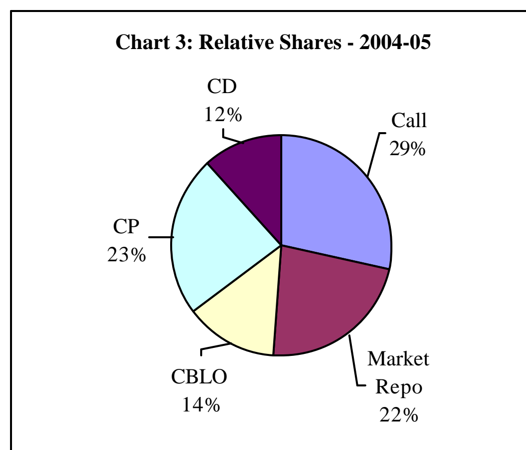
5. There are three broad policy objectives that are being pursued now for the development of the Indian money market which include (a) ensuring stability in short-term interest rates, (b) minimising default risk and (c) achieving a balanced development of various segments of money market.

6. With regard to the first objective, i.e., ensuring stability in short-term interest rates, it is stated that RBI has been reasonably successful in minimising volatility as well as in aligning these rates through active operation of Liquidity Adjustment Facility (LAF) combined with outright transactions under Open Market Operations (OMO) and more recently, Market Stabilisation Scheme (MSS). An important feature of these operations is that the present LAF framework, where the reverse repo rate attempts to provide the floor to the movement of call rates, has been in a position to hold all other short-term rates in reasonable alignment with the reverse repo rate. In other words, the RBI reverse repo rate has not only become the benchmark rate for call rates, it has also become the reference rate for market repo/Collateralised Borrowing and Lending Obligation (CBLO) rates with the spread between them declining over the years (Chart1).

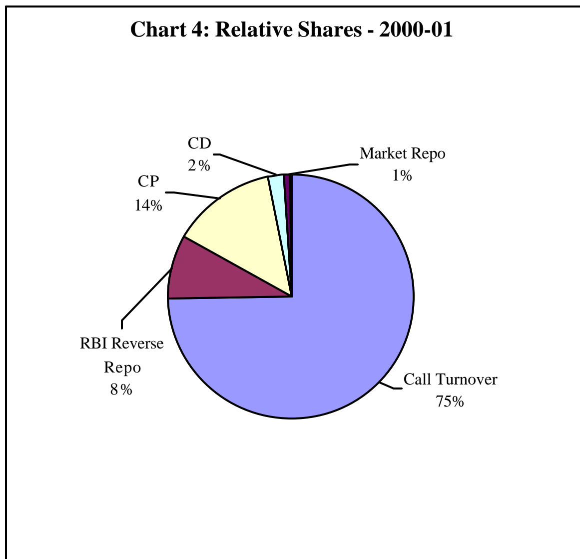


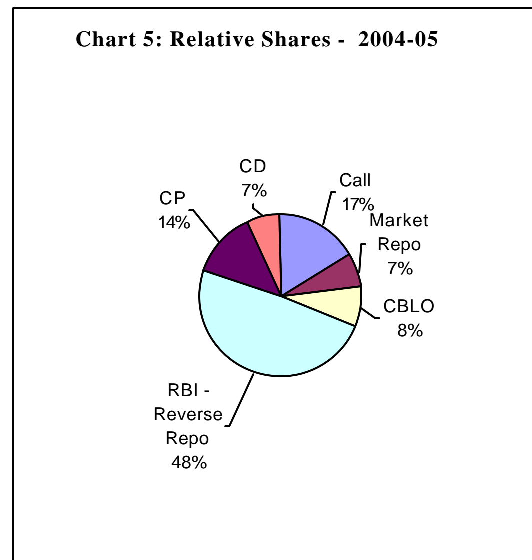
7. With regard to the second objective, i.e., minimising default risk in the money market, RBI has implemented a number of prudential measures such as prudential limits on call/notice money transactions, encouraging growth of collateralised market, dematerialisation of CP and CD etc. Consequently, within a short period of time from April 2000, the characterisation and the dynamics of functioning of the Indian money market have changed markedly.





8. Reflecting this, the relative turnover in various segments of money market has undergone significant changes over the years. This is partly policy driven and partly on account of the substantial improvement in underlying liquidity condition in the economy during this period. While the relative share of call/notice money market has declined from as high as 81 per cent during 2000-01 to only 29 per cent during 2004-05, that of market repo has increased from only 1 per cent to as much as 22 per cent over this period (Charts 2 and 3). CBLO, after a slow start, has been gathering significant momentum and now accounts for about 14 per cent during 2004-05. The situation, however, changes if the average volume accepted under RBI's reverse repo window is taken into account along with these instruments**.** It is evident from Charts 4 and **5** that with substantial improvement in liquidity, the share of RBI's reverse repo rose from 8 percent to 48 percent over this period.





9. Further, it is heartening to note that the attempt to develop a deep collateralized market, viz., market repo and CBLO vis-à-vis the uncollateralised call/notice market has already witnessed significant success. As regards other money market instruments, the outstanding amount under CP has been scaling new peaks with every passing month in the recent period. All these factors have

brought about a relatively more balanced development of various segments of money market though the prospect for further development is immense.

10. In order to identify the further expected changes in money market over a medium-term period based on cross-country practices and the changing dynamics of the Indian financial market, RBI constituted an internal Technical Group on Money Market (Annex I). The Report thus prepared was discussed with members of the Technical Advisory Committee (TAC) on Money, Foreign Exchange and Government Securities Markets on April 12, 2005. The Group places on record the valuable contributions made by the members during their deliberations on the Report.

11. The Report is organised into four Sections. Section I discusses the importance of money market and related issues in the conduct of monetary operations against the backdrop of sustained capital inflows. Against this macro scenario, Section II explores the expected future transformation in various segments of money market over a medium-term horizon. Section III captures the macro issues and their consequent implications for money market. A summary of recommendations of the Group is given in Section IV.

Section I

12. The money market, particularly the overnight market, is important from the point of view of any central bank. This is because a vibrant, deep and broad-based money market is the key for efficient distribution of liquidity among various economic agents in the economy. Therefore, it is through this segment, the central bank attempts to influence the systemic liquidity and stabilise short-term interest rates. In the process, it transmits the impulse of monetary policy. However, the pre-requisites for achieving a vibrant, deep and efficient money market are that there should be adequate number of liquid instruments, wider base of participants with diverse liquidity needs and sound institutional infrastructure including efficient payment and clearing mechanism. Further, the financial market in general, and money market in particular, perform best when the enabling environment is conducive in that the economy runs on a low fiscal deficit and the regulatory and prudential regime incentivises the functioning of the

market and makes the economic agents accountable for their actions. These issues have become particularly important as the Indian economy has become progressively more globalised.

13. Assessing the status of Indian money market against the above-mentioned perspective, one may maintain that the market has not only been transformed markedly, particularly during the last five years in terms of depth and more varied instruments, it has also brought in a wider level of participation in these markets. The institutional infrastructure, particularly with the upgradation of payment system infrastructure, viz., operationalisation of Clearing Corporation of India Ltd. (CCIL), Negotiated Dealing System (NDS), real-time gross settlement (RTGS) system and the Centralised Funds Management System (CFMS) has brought about immense benefit to the financial market at large. The substantial growth of collateralised market vis-à-vis uncollateralised market as mentioned earlier is reflective of the combined result of the developmental process set in motion by RBI and adapted by the market.

14. The above process would be further strengthened with the implementation of FRBM Act, 2003. Under this mandate, direct credit from RBI through its participation in primary auctions of central government securities would come to an end since April 1, 2006. This would functionally lead to separation of debt management operation from monetary operations. All these would give rise to an environment where RBI would have greater control over the composition of its balance sheet and further flexibility in monetary operations. This, however, presupposes that there would be close co-ordination between the fiscal authority and the monetary authority for ensuring stability in the financial market as a whole.

15. With the ensuing enabling environment within the domestic economy expected to be more conducive, it is envisaged that the money market in India is poised for a big leap. However, the principal challenge that the economy may experience over the medium-term following its increasing openness could be the management of liquidity in the face of strong capital inflows. This is particularly important because if India could sustain the present high level of growth rate

combined with **a** benign inflation environment, lower fiscal deficit and other strong macro-economic fundamentals, the economy could be expected to receive more than its normal share of capital inflows, notwithstanding changes in policy stance in major advanced economies.

16. The challenges before RBI in managing capital flows had been dealt with extensively in the *Report of the Internal Group on Liquidity Adjustment Facility* (November 2003) and the *RBI Working Group on Instruments of Sterilisation* (December 2003). It was underscored therein that "In order for the LAF to function as the principal monetary policy instrument for signalling the Reserve Bank's stance on interest rates, it is desirable that LAF operates to primarily manage liquidity at the margin on a day-to-day basis". The dilemma before any central bank under that situation was put forth as "while operationally it is difficult to distinguish between the sterilisation operations and liquidity management operations under LAF, conceptually there is a need to distinguish surplus liquidity of 'temporary' nature from surplus liquidity of a somewhat 'enduring' nature". Considering these issues, the LAF Group recommended that in order to improve the effectiveness of LAF, introduction of additional instruments of sterilisation against the backdrop of declining stock of government securities with RBI should be explored. Accordingly, the *RBI Working Group on Instruments of Sterilisation,* after considering pros and cons of various instruments, recommended that "Government may consider setting up of a Market Stabilisation Fund (MSF) …. for mopping up enduring surplus liquidity from the system". Taking into account all these issues, the revised LAF scheme as well as the Market Stabilisation Scheme were operationalised in April 2004.

17. The issue that needs to be appreciated here is that continued sterilisation has a financial cost in terms of the outgo of coupon on the sterilised amount. The trade-off here is that in the absence of sterilisation**,** there could be execessive volatility in financial markets, interest rates and exchange rate leading to erosion of competitiveness of the economy; this would have adverse impact on the economy at large and on the non-government sector in particular. This brings forth the core issue of stabilistion of short-term interest rates in

money market consistent with expected growth of GDP and inflation in an environment of large capital inflows. The framework for achieving this objective in a corridor setting was given by the *Report of the Internal Group on LAF.* This framework, based on the experiences of select developed economies, has been modified to suit the needs of Indian situation. Accordingly, under surplus mode, while the fixed reverse repo rate at 5.00 percent at which RBI absorbs liquidity from the market provides the floor to the movement of call money rates, the ceiling is provided by the fixed repo rate at 6.0 percent at which RBI is prepared to lend to eligible market participants. In this context, the reverse repo rate acts as the policy rate reflecting the stance of RBI besides being the rate for liquidity management. It is important to note here that outright purchase and sale of securities, often known as open market operations (OMOs), should be so conducted as to stabilise interest rates and minimise their volatility. The essential distinction between the reverse repo rate under LAF and the outright buy/sale of securities under OMO is that under the former, RBI determines the rate to provide clarity to the stance of RBI whereas under the latter, buy/sale of securities at a particular price is linked to the secondary market conditions. Therefore, while the reverse repo rate under LAF is a fixed one, the outright buy/sale of securities could be done at a variable price with reference to the corresponding secondary market price.

18. A related issue here is the width of the corridor. International experiences show that it varies between 50 basis points (bps) and 200 bps. In India, it stands at 100 bps now. Ideally, the spread should reflect the society's tolerance level of volatility in short-term interest rates. Even then, in the Indian context, RBI may find it difficult to tolerate daily fluctuations in call rates by 100 bps over a sustained period. Therefore, for all practical purpose, this spread of 100 bps should be interpreted as the maximum tolerance level under extreme one-off circumstance. This is also corroborated by the market practice as call rates generally fluctuate within 5/10 bps in the relation to the RBI's reverse repo rate. The success in keeping call rates in a narrower bound in relation to the RBI's reverse repo rate would, therefore, depend upon how successfully RBI would conduct LAF and OMO.

Section II

II.1 Call/Notice Money Market

19. RBI has implemented a series of prudential measures not only to minimise the default risk in call/notice market but also to achieve a balanced development of various segments of the financial market, particularly in favour of the collateralised segment. The major policy measures relevant for this purpose are enumerated below.

- *Following the recommendations of the Narasimham Committee (1998), RBI is in an advanced stage of making call/notice market a pure inter-bank market.*
- *Prudential limits have been placed on borrowings and lendings of banks and PDs in call/notice market.*

II.1.1 Prudential Limits on Call/Notice Money Market Operations: Review of Benchmark

20. **With a view to facilitating balanced development of various segments of money market, it was decided to stipulate prudential limits in a symmetric way on both borrowing and lending of banks and PDs in call/notice money market. The prudential limits as applicable to various classes of entities are indicated below:**

***Scheduled Commercial Banks*:**

- Lending of scheduled commercial banks, on a fortnightly average basis, should not exceed 25 per cent of their owned funds (OF) (i.e., sum of Schedules I and II); however, banks are allowed to lend a maximum of 50 per cent of their owned funds on any day during a fortnight.
- Borrowings by scheduled commercial banks, on a fortnightly average basis, should not exceed 100 per cent of their owned funds or 2 per cent of aggregate deposits, whichever is higher; however, banks are allowed to borrow a maximum of 125 per cent of their owned funds on any day during a fortnight.

***Co-operative Banks*:**

- Borrowings by urban co-operative banks (UCBs)/ State Co-operative Banks (SCBs) and District Central Co-operative Banks (DCCBs) in call/notice money market on a daily basis should not exceed 2.0 per cent of their aggregate deposits as at end March of the previous financial year.

***Primary Dealers**:*

- *PDs are permitted to lend, on average in a reporting fortnight, upto 25 per cent of their net owned funds (NOF) as at end-March of the preceding financial year.*

- *PDs are allowed to borrow, on average in a reporting fortnight, upto 200 per cent of their NOF as at end-March of the preceding financial year.*

***Non-Bank Entities**:*

- Non-bank participants are allowed to lend, effective January 8, 2005, on average in a reporting fortnight, upto 30 per cent of their average daily lending in call/notice money market during 2000-01.

21. It is; therefore, evident that at present, different classes of eligible participants have different benchmarking norms for their transactions in the call/notice money market. The limits are linked to owned funds, net owned funds (NOF) and aggregate deposits. However, keeping in view the risks, it may be desirable to have capital funds (sum of Tiers I & II) as the benchmark for fixing of call/notice money limits.

II.1.2 Feasibility of Migrating from Owned Funds (OF) to Capital Funds (Sum of Tiers I & II)

22. An exercise has been carried out here to examine the feasibility of migrating from owned funds to capital funds as the benchmark in an effort to standardise the benchmarking of norms. Accordingly, the limits with respect to the new benchmark of capital funds vis-a-vis those under Owned Fund (OF) for different classes of eligible participants in the call/notice money market are examined below.

Scheduled Commercial Banks

a) Lending Limit

23. It is evident that if the lending limit at 25 percent is linked to the capital funds (sum of Tiers I & II), then the aggregate lending limit of scheduled commercial banks would increase by Rs.2,440 crore (Table 1). Though there

would be a decline in the lending limit of foreign banks by Rs.95 crore, they would not be affected much since they are generally net borrowers.

Table 1: Lending Limit

(Rs. Crore)

Type of Bank	Current	Proposed	Difference between 2 & 1
	25% of OF	25% of Capital Funds	
	1	2	3
Public Sector	19806	21503	1697
Foreign	3594	3499	-95
Private Sector	5502	6340	838
Total	**28902**	**31342**	**2440**

b) Borrowing Limit

24. **As with lending limit, if the norm of 100 per cent of OF is changed to the alternate norm of 100 percent of capital funds, then apparently there would be a sharp jump in the aggregate borrowing limit of scheduled commercial banks by Rs.10,031 crore (Table 2). While foreign banks would have marginally lower limits than their current limits, the entitlements of public sector banks and private sector banks would increase by Rs.6,788 crore and Rs.3,622 crore respectively in the process. However, since public sector banks are generally surplus, the effective increase in borrowing limit should be around the level of that of private sector banks, i.e., about Rs.3,500 crore.**

Table 2: Borrowing Limit

(Rs. Crore)

Type of Bank	Current	Proposed	Difference between 2& 1
	100% of OF	100% of Capital Funds	
	1	2	3
Public Sector	79224	86012	6788
Foreign	14377	13998	-379
Private Sector	22008	25630	3622
Total	**115609**	**125640**	**10031**

Co-operative Banks

25. **At present, borrowings by Urban Co-operative Banks (UCBs)/State Co-operative Banks (SCBs) and District Central Co-operative Banks (DCCBs) in call/notice money market on a daily basis should not exceed 2.0 per cent of their aggregate deposits as at end-March of the previous financial year. To bring it in line with the norms applicable to scheduled commercial banks, their borrowing limit could be linked to their capital**

funds also. However, the capital adequacy norms as applicable for scheduled commercial banks have not been made applicable for District Central Co-operative Banks and State Co-operative Banks though the same has been extended to UCBs. Hence, it may not be desirable to prescribe different benchmarking norms for different types of banks within the co-operative segment. Accordingly, the Group recommends for continuing with the current benchmark of 2 percent of aggregate deposits for these banks in call/notice money market.

Primary Dealers

26. *The Group examined the feasibility of adopting Capital Funds as the benchmark. However, it has been found that unlike the banking sector, since the difference between Capital Funds and NOF for PDs as at end March 2004 was only marginal, it may not matter much if Capital Funds is used as the benchmark instead of the present benchmark based on NOF (Table 3). Therefore, the Group proposes that the current norm of NOF for benchmarking limits for PDs* ***may be continued****.*

Table 3: Norms for Primary Dealers

(Rs. Crore)

Category	**Current**	**Proposed**	**Difference between 2 & 1**
	As %age of NOF	**As %age of Capital Funds (Tier I + II)**	
	1	**2**	**3**
I. Lending	1493	1525	32
II. Borrowing	11944	12186	242

Non-bank Entities

27. *Currently, the non-bank participants are now allowed to lend, on average in a reporting fortnight, upto 30 per cent of their average daily lending in call/notice money market during 2000-01. Since they are in an advanced stage of being phased out from call/notice money market, the Group suggests that the present norm may not be changed.*

II.1.3 Dealings on an Electronic Negotiated Quote Driven System

28. At present, call/notice money transactions are essentially voice based. In order to improve transparency and facilitate real-time dissemination of information, the Group suggests that dealings in call/notice market transactions should be conducted on a screen based negotiated quote driven platform.

II.1.4 Participation in Call/Notice Market

29. The process is underway to make the call/notice market a pure inter-bank one by phasing out non-bank participants from this market following the

recommendations of the Narasimham Committee (1998). Accordingly, the process commenced after due consultations with market participants in May 2001 as non-bank participants were allowed to lend, on average in a reporting fortnight, upto 85 per cent of their average lending in 2000-01. This limit was brought down in successive stages following full scale oprationalisation of CCIL and reasonable development in alternative markets such as repo and CBLO. In view of market developments, the Group recommends that non-bank participants may be encouraged to move out of the call/notice market completely by the middle of 2005-06 and this market would then be purely an inter-bank one. In such a scenario, there could be a case for further review of prudential guidelines for banks and PDs for their transactions in call/notice money market.

II.1.5 Borrowing Limit

30. The main reason for placing limit on the borrowing in call/notice market is that an entity should not borrow an unsustainable amount from this market relative to the size of its balance sheet. Ideally, the implementation of an efficient ALM framework should be the first best solution to manage exposure to such uncollateralised market. During the last four years, major changes have taken place in risk management guidelines being followed by banks and PDs. This is also reflected in the market behaviour as co-operative banks intending to borrow have virtually moved out of the call market to the collateralised CBLO segment. Similarly, some banks, perceived to be weak by the market, have been apparently finding it difficult to borrow from call market. In such a scenario, the Group felt that, as underscored by RBI earlier, there could be a need to allow more flexibility to banks/PDs to borrow in call/notice market provided they have appropriate risk management systems in place and such need is warranted by their balance sheet structure.

II.1.6 Lending Limit

31. On the lending side, though the fundamental objectives of placing restriction are to limit the exposure to this uncollateralised market as also to develop term money, repo and CBLO markets, these have not contributed to the growth of term money market at the desirable level, as banks/PDs, especially the

former, have the softer option of placing funds in RBI's LAF window where return has been, on average, higher than those from repo and CBLO markets. The latter two markets have, however, developed largely because non-banks, particularly mutual funds and financial institutions, which, on being phased out from call/notice market, have become the largest supplier of funds in these two segments. Implementation of DVP III and roll over of repo have also contributed markedly to their growth. With call/notice money market being eventually an inter-bank one, the Group feels that with appropriate level of risk management capacity, participants could be afforded larger freedom to undertake their transactions.

II.2 Collateral for Repo and CBLO Markets

32. Increasing use of collateral, both in India and the major economies in the world, has been becoming the most important tool for mitigation of risk in the wholesale financial market. The motivation for increasing use of collateral could come from three areas. First, it could be "security–driven", e.g., for compliance with statutory liquidity ratio (SLR) norm or "cash-driven" in order to reduce funding costs as borrowing under the collateralised repo/CBLO is cheaper than that under uncollateralised call/notice market. Second, increasing use of collateralisation of positions in derivatives market has been coming in place to offset counterparty risk. Third, higher demand for collateral is expected to emanate from more sophistication in payment and settlement system, particularly in the wake of full scale operationalisation of RTGS system which is very liquidity intensive. Due to all these reasons, cross-country experiences show that the volume of repo transactions have been increasing markedly in major markets such as in the US, the UK, Euro area and Japan. A notable trend in these economies is that with the reduction in fiscal deficit and consequent decline in stock of government bonds, high quality corporate papers such as mortgage–backed securities and Pfandbriefe (i.e., bonds issued by German mortgage banks and collateralised by either loans to the public sector or mortgages) are increasingly being used as the underlying assets in repo transactions. Further,

equities belonging to major indices in stock markets are also being increasingly accepted for repos on account of their high quality.

33. Broadening the range of assets as collaterals for repo/CBLO also underscores the need for appropriate collateral management. This is particularly because managing of credit risk becomes important for private corporate papers compared to a situation when collaterals are essentially government papers, as the issue sizes of private papers tend to be smaller and more heterogeneous than those of government papers. Further, there could be virtually no liquid derivative market for private sector fixed income securities. In that case, it would be difficult to value and hedge these securities. Considering these issues, there could be a need to broad base the pool of securities beyond central government securities and treasury bills to act as collaterals for market repo and CBLO. While state government securities are eligible for repo, there have been very few repo transactions based on these securities largely on account of lack of liquidity in this segment. It is in this context, development of state government securities market assumes importance as these could also provide a pool of securities as collaterals for the use of market participants.

II.2.1 Dealings on an Electronic Anonymous Order Driven System

34. In order to improve transparency and facilitate real-time dissemination of information, the Group recommends that the possibility of conducting repo transactions on an electronic anonymous order driven trading system may be explored.

II.3 Term Money

35. Term money market is where funds with maturity from 15 days to one year are borrowed and lent without collateral. Two distinct policy measures were taken to activate the term money market. First, term money of original maturity between 15 days and 1 year was exempted from CRR in August 2001. Second, no limits were stipulated for transactions in term money market unlike those under call/notice money market. Apparently, the growth of term money market, as reported on NDS, has been very sluggish as can be observed by the fact that the average daily term money transactions at Rs.195 crore in 2001 increased to Rs.519 crore in 2003 before declining to Rs.477 crore in April 2005. However,

an analysis of data as reported by banks under Section 42 (Annex A to Form A) to RBI reveals that the outstanding amounts were as high Rs.15,000 - 20,000 crore. With regard to term money market, there seems to be some reporting issues.

36. In this connection, it may be noted that in order to improve transparency and strengthen efficiency in the money market, it is mandatory for all NDS members to report all their call/notice money market transactions through NDS within 15 minutes of concluding the transaction. Both RBI and the market participants have access to this information on a faster frequency and in a more classified manner, thereby improving transparency and price discovery.

37. It is widely accepted that the banking sector needs a deep and liquid term money market for managing its liquidity as also a smoother rupee yield curve. In order to improve transparency and strengthen efficiency in the term money market, the Group recommends that the reporting of term money deals on NDS may be made mandatory. Further, in order to improve transparency and facilitate a better price discovery process, the Group recommends that dealings in term money transactions should be conducted on a screen based negotiated quote driven platform.

II.4 Certificates of Deposit

38. Certificates of Deposit (CDs) were introduced in India in 1989 as a short-term unsecured promissory note. It has a maturity period ranging from 15 days to 365 days for banks. In this context, it may be noted that in the mid-term Review of annual policy Statement for the year 2004-05, the minimum tenor of retail domestic term deposits (under Rs. 15 lakh) was reduced from 15 days to 7 days. Apart from bulk deposits (Rs. 15 lakh and above), with effect from November 1, 2004, banks at their discretion can also reduce the minimum tenor of retail term deposits from 15 days to 7 days. Further, minimum maturity period of commercial paper (CP) was also reduced from 15 days to 7 days in the mid-term Review of annual policy Statement for the year 2004-05. In view of reduction of minimum maturity period for fixed deposits and CP, the Group

recommends that the minimum tenure of CD for banks may be reduced from 15 days to 7 days.

II.5 Commercial Paper

39. With a view to developing the commercial paper (CP) market further, a Status Paper was prepared by RBI and placed on its website in July 2003. After deliberating on the suggestions of the Status Paper with market participants and experts, three measures, viz., (i) reduction of minimum maturity period from 15 days to 7 days, (ii) reporting of issuance of CP on the negotiated dealing system (NDS) platform by issuing and paying agents (IPAs) and (iii) constitution of a Group comprising market participants to rationalise and standardise, wherever possible, various aspects of processing, settlement and documentation of CP issuance with a view to achieving the settlement at least on T+1 basis, were announced in the mid-term Review of annual policy Statement for the year 2004-05. The position in this regard is as follows:

- The minimum maturity period has already been reduced to 7 days.
- The reporting of CP issuance by IPAs on NDS platform has commenced since April 16, 2005 and would be made available on RBI website shortly.
- As regards standardisation, while the documentations and other market practices were already standardized by FIMMDA, settlement of CP on T+1 basis could be achieved if funds settlement is ensured on T+0 basis. The Group recognized that this would be possible after full operationalisation of RTGS system.

II.5.1 Asset Backed Commercial Paper

40. Asset backed commercial paper (ABCP) is reportedly the largest component of CP market in the US. It is issued by a company, which purchases receivables from one firm or a group of firms, and finances the purchase with funds raised in the commercial paper market. In other words, asset backed issuers securitise a portfolio of cash generating assets funded by liabilities including CP. The sole business activity of the special company is the purchase and finance of the receivables so that risk of the company and the CP it issues is isolated from the risk of the firm or firms, which originated the receivables. With asset-backed paper, the paper's risk is instead tied directly to the creditworthiness of specific financial assets, usually some form of receivables.

Asset-backed paper is one way whereby smaller, riskier firms can access the CP market. Traditionally, banks have used ABCP as a device to put their current asset off their balance sheets and yet provide liquidity support to their clients. The Group recommends that in India, ABCP may be introduced for further deepening the CP market. In this context, it may be noted that RBI issued the draft guidelines on securitisation of standard assets on April 4, 2005.

II.6 Forward Rate Agreements (FRAs)/Interest Rate Swap (IRS)

41. In the "Mid-term Review of Monetary and Credit Policy for 1998-99" announced on October 30, 1998, it was indicated that with a view to further deepening the money market as also to enable banks, primary dealers and all-India financial institutions to hedge interest rate risks, with effect from July 7, 1999, the Reserve Bank had allowed scheduled commercial banks (SCBs) excluding Regional Rural Banks, primary dealers and all India financial institutions to undertake Forward Rate Agreements / Interest Rate Swaps (FRA/IRS) as a product for their own balance sheet management and for market making/trading purposes. Also, effective November 1, 1999, with a view to providing further flexibility in the use of FRA/IRS, mutual funds were allowed to participate in the market for the purpose of hedging their own balance sheet risks. Further, effective April 27, 2000, the use of 'interest rate implied in the foreign exchange forward market' as a benchmark had been permitted in addition to the domestic money and debt market rates.

42. Presently, banks/PDs/FIs can undertake different kinds of plain vanilla FRAs/IRS. Swaps having explicit/implicit option features such as caps/floors/collars are not permitted. The rupee derivative market has grown significantly since 1999. It has increased from 104 contracts for the notional principal amount of Rs.2,065 crore as on January 14, 2000 to 35,634 contracts for Rs.10,12,671 crore as on April 1, 2005. In this context, it is worthwhile to note that exchange-traded derivatives were introduced by way of futures in Stock Exchange, Mumbai (BSE) and National Stock Exchange (NSE) from June 2000. Further, with regard to OTC products, Foreign Exchange Management Act 2000 permits banks to provide risk management tools like swaps, options, caps, collars and FRAs to clients to hedge interest rate risk arising out of foreign

currency liabilities. Against this background, since considerable time has elapsed after the introduction of guidelines on FRAs/IRS in 1999, there is a need to consider more complex features of swaps and options.

43. In order to examine all these issues, following the announcement in the mid-term review for the year 2002-03 on October 29, 2002, the Reserve Bank had constituted a Working Group. The Group was required to suggest the modalities for introducing dealing in the derivatives having explicit option features such as caps/collars/floors in the rupee derivative segment and also the norms for capital adequacy, exposure limits, swap position, asset liability management, internal control and other risk management methods for these derivatives. Thereafter, due to various issues relating to OTC derivatives such as ambiguity over legality of OTC derivative contracts, absence of netting laws, etc., further relaxation could not be afforded so far.

44. In this regard, in the Union Budget 2005-06, the Honourable Finance Minister has stated " Over the Counter (OTC) derivatives play a crucial role in mitigating the risks of corporates, banks and other financial entities. There is however, some ambiguity regarding the legality of OTC derivative contracts, which has inhibited their growth. I, therefore, propose to take measures to provide clear legal validity of such contracts". In view of the above, the Group proposes that the Government should amend appropriately the RBI Act, 1934 to provide legality to OTC derivatives. Further, it is felt that the recommendations given by the Jaspal Bindra Group can be implemented in a phased manner after putting in place the revised risk reporting system by market participants and the robust accounting standards, and legality of OTC derivatives is clarified.

II.7 MIBOR - Linked Short-term Papers

45. The jurisdiction of RBI over various segments of financial market was clarified following the issuance of notification by the Government of India on March 1, 2000 under Section 16 of the Securities Contracts (Regulation) Act (SCRA), 1956 whereby it was decided that *"in relation to any contracts in Government securities, money market securities, gold related securities and in securities derived from these securities and in relation to ready forward contracts*

in bonds, debentures, debenture stock, securitised debt and other debt securities shall also be exercisable by the Reserve Bank of India constituted under section 3 of the Reserve Bank of India Act 1934 (2 of 1934)".

46. There are some new instruments such as Mumbai Inter-bank Offered Rate (MIBOR) linked short-term papers upto 365 days with/without daily call/put options. In this market, top rated corporates generally raise funds from non-bank entities, particularly from mutual funds. There is a need to address regulatory issues pertaining to such papers for an orderly development of the market.

Section III

47. Though the money market has transformed markedly during the course of the last five years, it is expected to witness more remarkable changes in the coming years. The principal macro drivers of such changes could be the following:

- Sustained effort in deregulation and rationalisation of economic policies and
- Continued technological progress, particularly in the context of upgradation of payment system infrastructure.

48. All these changes are expected to have profound implications for the Indian money market in future. The Report has attempted to capture the possible progression of some of these major changes and their consequent implications for Indian money market below.

III.1 Deregulation and Rationalisation of Economic Policies

49. Since money market is part of the overall financial market, any change in the broader macro scenario is expected to impact the money market also. Though it is difficult to gauge how the money market would evolve in future, it is likely that there could be two macro factors that might affect this market significantly in future, viz., i) increasing concentration of activities of

market players arising out of mergers, acquisition and consolidation and ii) increasing activity in fixed income market.

50. An analysis of transactions of top 10 participants in various segments of money market reveals that there already exists high level of concentration in all these markets except in CBLO. For example, in call/notice money market, the shares of top 10 borrowers have increased substantially from 40 percent during 2000-01 to as much as 58 percent during 2004-05 (Annex II). This should, however, be seen against the background of contraction in the turnover of call/notice market from about Rs.36,000 crore to about Rs.16,000 crore over this period following substantial improvement in liquidity. Similarly, in market repo segment, while the shares of top 10 borrowers have increased from 62 percent during August-December 2001 to 73 percent during 2004-05, those in lending have also spurted from 66 percent to 90 percent over this period. In contrast, CBLO is the only segment among these three funding markets where the concentration has gone down markedly reflecting more broad basing of its market structure over the period (Annex II). While consolidation *per se* may be a desirable process, particularly in the context of increasing internationalisation of our economy, all these might also create an oligopolistic structure in the economy.

51. The fixed income market, particularly the corporate debt segment, is expected to witness greater activity in future. Additional demand is expected to emanate from deregulation in the pension and insurance sectors, financing demand arising on account of consolidation/merger/acquisition, foreign portfolio capital, phasing out of non-bank participants from call/notice money market as also from the payment system, in particular the RTGS system vis-à-vis expected shrinkage in supply of government papers following implementation of the FRBM Act, 2003. Further, there could be substantial demand for asset-backed securitised instruments due to increased awareness in credit risks, especially from the pension, insurance and mutual funds segments.

52. In the pension sector, it is likely that the pressure to migrate from defined benefit plan to defined contribution plan would increase in coming years.

This coupled with the liberalisation of investment norms for pension funds permitting them to invest a part of their corpus in equity and fixed income corporate papers facilitated recently, would create a large pool of savings which would demand both long-term and short-term assets for investment. Since a part of savings from insurance players might come through mutual funds, the demand for both capital market and money market instruments would most likely increase significantly.

53. The implications of all these expected developments would be that while investment interests in money market instruments are likely to go up substantially in future, the market could also be more volatile in future on account of rise in concentration. This implies that RBI would have to be more proactive with LAF and OMO in stabilising short-term interest rates and preserving financial stability.

III.2 Technological Progress

54. The Indian financial market has witnessed huge technological advancement in recent period. These include the operationalisation of CCIL, NDS, RTGS system, centralised funds management system (CFMS) and electronic clearing system (ECS), and the expected completion in a short period of time of cheque truncation, national electronic funds transfer (NEFT), virtual PDO and virtual DAD. All these have been bringing about some fundamental changes in the financial market in the form of the ability to shift not only funds from one place to the other but also from one market to the other and take positions in various segments of financial market.

55. The implications are that market participants have been exploiting the arbitrage opportunities existing in different segments of money market and thereby aiding the convergence of different money market rates subject to only the degree of credit risk prevalent in these instruments. This is clearly evident in recent period when not only a large part of call borrowing has migrated to repo and CBLO due to relatively cheaper funding costs in the latter two markets vis-à-vis call market but also select participants have been borrowing cheaper in call/repo/CBLO and placing them in RBI's reverse repo window so long as the

latter rate is higher than the other rates. All these have led to marked reduction in the spread among call, repo and CBLO rates vis-à-vis RBI's reverse repo rate under LAF (Chart 1, p. 2).

56. The advantage of this convergence is that different segments are getting increasingly interlinked and hence, price discovery process is more efficient now. The ensuing environment while improving the overall transmission process of monetary policy would pose greater challenges to RBI in its conduct of monetary operations. This is because coupled with progressive scaling down of CRR to very low level, the upgradation of payment system infrastructure in the form of full scale operationalisation of RTGS system would result in faster and more efficient funds transfer. In the process, the likely volatility in the call money market may have to be carefully managed. In this situation, the need for both marginal liquidity and collateral (for securing both intra-day and inter-day liquidity) for the system as a whole may increase substantially. All these may call for conduct of multiple LAF on intra-day basis and active OMO by RBI to smoothen the behaviour of short-term interest rates.

57. The Group noted that intra-day liquidity (IDL) would be available to eligible participants under RTGS system till 5.00 p.m. as of now. Since it has been mandated that IDL has to be extinguished by the end of the day, a dilemma arises with regard to holding of late hour repo auction. This is because conversion of IDL into overnight facility would have an unanticipated money supply impact. Further, IDL should be availed of by market participants against assured cash flows. Therefore, if IDL is allowed to be extinguished through borrowing from RBI's repo window, it would tantamount to shifting of cash management responsibilities of market participants on to RBI and unwarranted expansion of money supply in the economy. On balance, the Group felt that there is merit in exploring late hour intra-day LAF as and when warranted in future. Ideally, late hour intra-day LAF towards the closing hours of the market should aim at absorption of residual resources (i.e., reverse repo).

Section IV

Summary of Recommendations

58. The Group maintained that the policy thrust should be to encourage collateralised market, develope the rupee yield curve, ensure transparency and better price discovery, provide avenues for better risk management and strengthen monetary operations. Recommendations of the Group in this regard have been summarised below:

IV.1 Call/Notice Money Market

- RBI may migrate from OF (Owned Fund) to capital funds (sum of Tier I and Tier II capital) as the benchmark for fixing prudential limits for call/notice money market for scheduled commercial banks. RBI may, however, continue with the present norm associated with co-operative banks (i.e., Aggregate Deposit), PDs (i.e., Net Owned Fund) and non-banks (i.e., 30 per cent of their average daily lending during 2000-01).
- Call/notice money market transactions should be conducted on an electronic negotiated quote driven platform.
- Banks and PDs with appropriate risk management systems in place and balance sheet structure may be allowed more flexibility to borrow in call/notice money market.
- Upon accomplishing the call/notice money market into a pure inter-bank one, larger freedom in lending in call/notice market should be afforded to banks and PDs.

IV.2 Repo/CBLO

- Consequent upon coming into effect of the FRBM Act 2003, there would be a need to broad-base the pool of securities to act as collateral for repo and CBLO markets.
- The possibility of conducting repo transactions on an electronic, anonymous order driven trading system may be explored.

IV.3 Term Money

- Reporting of term money transactions on NDS platform may be made compulsory to improve transparency.
- Term money market transactions on an electronic, negotiated quote driven platform should be introduced.

IV.4 CD

- Maturity period of CDs to be reduced to 7 days, in line with that under CP and fixed deposit.

IV.5 Commercial Paper

- Asset-backed CP should be introduced in the Indian market.

IV.6 FRAs/IRS

- Appropriate amendment to the RBI Act, 1934 may be done to provide legal clarity to OTC derivatives.
- Limited optionality should be permitted in rupee derivative segment in a phased manner after putting in place the revised risk reporting system by market participants and the robust accounting standard, and legality of OTC derivatives is clarified.

IV.7 MIBOR-Linked Short-term Papers

- There is a need to address regulatory issues pertaining to this type of new instruments for an orderly development of the market.

IV.8 Timing of LAF

- There is merit in exploring late hour intra-day LAF as and when warranted in future. Ideally, late hour intra-day LAF towards the closing hour of the market should aim at absorption of residual resources (i.e., reverse repo).

Annex I : Constitution of Technical Group on Money Market

It is proposed to set up a Technical Group on Money Market with the following members:

i) Shri Deepak Mohanty, Adviser-in-Charge, MPD, Convenor
ii) Shri Himadri Bhattacharya, CGM, DEIO, Member
iii) Shri B. Mahapatra, CGM-in-C, IDMD, Member
iv) Shri P.Vijaya Bhaskar, CGM, DBOD, Member
v) Dr. Janak Raj, Director, DEAP, Member
vi) Shri Amitava Sardar, Director, MPD, Member-Secretary

2. The terms of reference of the Technical Group are:

i) Review of developments and current status of Money Market in India
ii) Cross-country experience in money market
iii) Suggest measures for further development of the money market in India

3. The Group is expected to submit its report within a fortnight from its first meeting.

(Shymala Gopinath)
Deputy Governor
February 23, 2005

Annex II

II.1 Composition of Top Ten Players in Call/Notice Money Market

(In per cent)

Entity	Borrowing		Lending	
	2000-01	2004-05	*2000-01*	2004-05
I. Bank	*40 (10)*	49 (8)	*24 (6)*	44 (9)
II. Non-Bank	-	*9 (2)*	*8 (4)*	4(1)
Total (I + II)	*40 (10)*	*58 (10)*	*32 (10)*	48 (10)

Note: Parenthetic figures indicate number of entities.

II.2 Composition of Top Ten Players in Market Repo

(In per cent)

Category	Borrowing		Lending	
	Aug - Dec 2001	2004-05	Aug - Dec 2001	2004-05
I. Public Sector Bank	*16 (1)*	12 (2)	-	9 (1)
II. Foreign Bank	17 (3)	6 (1)	11 (2)	8 (1)
III. Private sector Bank	*8 (3)*	27 (3)	-	6 (1)
IV. Co-operative Bank	-	-	-	-
V. PD	*21 (3)*	28 (4)	-	-
VI. FI & MF	-		55 (8)	67 (7)
Total	62 (10)	73 (10)	66 (10)	90 (10)

Note: Parenthetic figures indicate number of entities.

II.3 Composition of Top Four/Five Players in CBLO

(In per cent)

Category	*Borrowing*		Lending	
	Jan - Mar 2003	*May 04-Mar 2005*	*Jan - Mar 2003*	*May 04-Mar 2005*
I. Co-op. Bank	***40 (2)***	***-***	***65 (3)***	***-***
II. Public Sec. Bank	***38 (1)***	***29 (2)***	***20 (1)***	***-***
III. Pvt. Sec. Bank	***-***	***12 (1)***	***-***	***-***
IV. FIs & MF	***-***	***-***	***-***	***58(5)***
V. PDs	***13 (1)***	***26 (2)***	***-***	***-***
VI. Total	***91 (4)***	***67 (5)***	***85 (4)***	***58 (5)***

Note: Parenthetic figures indicate number of entities.