

**Report of the internal
Technical Group
on
Central Government Securities Market**

RESERVE BANK OF INDIA

July 2005

C o n t e n t s

		Page No.
Chapter I	Introduction	1-2
Chapter II	Evolution of Debt Management, Open Market Operations and the Government Securities Market	3-7
Chapter III	Reorienting Open Market Operations	8-11
Chapter IV	Institutional Setting for Debt Management	12-19
Chapter V	Developing the Government Securities Market	20-29
Chapter VI	Technological Infrastructure for Trading and Settlement Systems	30
Chapter VII	Summary of Recommendations	31-34
Annex I	Historical Development of the Debt Management Process in India	35-43
Annex II	Open Market Operations - Cross Country Practices	44-50
Annex III	Financial Market Integration: Empirical Evidence	51-53
Annex IV	Short Sale in Government Securities Markets	54-59
Annex V	Organisational characteristics of PD system – International Practice	60-62

I. INTRODUCTION

1. The Fiscal Responsibility and Budget Management (FRBM) Act, 2003 ushered in significant changes in the contextual setting and operating framework for the conduct of monetary policy, public debt management and regulatory oversight of the Government securities market by the Reserve Bank of India (RBI). Recognizing that the RBI's participation in the primary issues of Government securities will stand withdrawn with effect from April 1, 2006 under the FRBM Act, the Mid-Term Review of the RBI's Annual Policy Statement for the year 2004-05 envisaged that "open market operations (OMO) will become a more active instrument, warranting a review of processes and technological infrastructure consistent with market advancements" (Para 109). The Mid-Term Review also announced that a Study Group would be constituted "for strengthening the OMO framework to address these emerging needs and equip RBI as well as the market participants appropriately". Accordingly, an internal Technical Group on Central Government Securities Market was constituted with the following terms of reference:

- i) To examine the implications of the RBI's withdrawal under the FRBM Act from participation in primary issues (through devolvement or private placement) for the conduct of the RBI's debt management function;
 - ii) To make recommendations on the modifications required to the primary auction process, including redefining the role of Primary Dealers, to ensure that the RBI's debt management objectives relating to the Central Government's primary issuance of debt continue to be achieved efficiently;
 - iii) To suggest measures to enhance the depth and liquidity of the secondary market for Central Government securities, which will be necessary for an efficient completion of Central Government's Market Borrowing Programme without the RBI's participation;
 - iv) To study international experience with regard to Open Market Operations (OMOs) and consider a more active framework for OMOs to support the RBI's regulatory role in Central Government securities market;
 - v) To suggest steps that are needed for strengthening of processes and technological infrastructure within the RBI and strengthening of institutional arrangements, such as a review of the PD system, to support the modified primary issuance process and active debt market operations framework;
 - vi) Any other related matter.
-

2. The Group benefited from the suggestions of the Fixed Income Money Market and Derivatives Association of India and the Primary Dealers' Association of India with respect to laying a roadmap for the Government securities market.

3. The rest of this Report is organised as follows. Chapter II describes the evolution of debt management, OMO and the Government securities market in India. Chapter III examines the rationale for reorienting Open Market Operations in the emerging scenario and Chapter IV deals with the Institutional setting for debt management. Chapter V delves into the issues concerning developing the Government Securities Market. Chapter VI examines the changes required in the technological infrastructure, especially in trading and settlement systems. Chapter VII summarizes the recommendations of the Group.

II. EVOLUTION OF DEBT MANAGEMENT, OPEN MARKET OPERATIONS AND THE GOVERNMENT SECURITIES MARKET

2.1 Open Market Operations (OMO) means the buying and selling of government securities in the open market in order to expand or contract the amount of money in the banking system. Purchases inject money into the banking system and stimulate growth while sales of securities do the opposite.

2.2 The RBI is authorised to deal in Government securities under Section 17(8) of the Reserve Bank of India Act, 1934. Open market operations (OMO) of RBI comprise outright sale and purchase of securities, Repo and Reverse Repo operations through LAF. While the outright OMO are directed at influencing enduring liquidity, the LAF OMO operations target the temporary liquidity in the system. In addition to the above mentioned monetary policy considerations, OMO were also undertaken through 'switch' operations wherein purchase of gilts of a particular maturity against the sale of another were used to provide liquidity to Government securities and enable smooth conduct of the borrowing programme. Although OMOs had initially served as a key instrument of monetary policy, the persistence of high Government deficits resulting from the shift from fiscal neutrality to fiscal activism from the late 1950s posed serious problems for prudent monetary management, in particular a conflict between the objectives of debt management and monetary policy. Interest rates were administered to contain the interest cost of public debt and statutory liquidity ratio requirements were periodically hiked for easy access to market borrowing. In this regard, the nationalization of banks and the transfer of ownership to the Government provided a captive market for Government securities. Simultaneously, recourse to the RBI was also high, leading to high levels of monetization of the fiscal deficit.

2.3 The need to free monetary policy from the fiscal constraint was recognized early. An internal working group proposed to segregate the RBI's debt management function from the monetary management function as early as 1981. The Committee to Review the Working of the Monetary System, 1984 (Chairman: Professor Sukhomoy Chakravarty), in particular, made several recommendations to rekindle OMO as an instrument of monetary policy by limiting the monetization of the fiscal deficit, on the one hand, and developing the market for Government securities, on the other. The Committee on the Financial System, 1992 (Chairman: Shri M. Narasimham)

recommended that the statutory liquidity ratio should be used in conformity with the original intention of a prudential requirement rather than a source of financing the public sector.

Progress in the 1990s

2.4 The financial liberalization adopted in the 1990s with the overarching objective of reaping the benefits of competitive efficiency underscored the need to recast the monetary policy framework in tune with the increasing market orientation of the economy (Annex I). This required, *ipso facto*, a shift from relatively direct instruments of monetary control such as reserve requirements and credit controls to indirect instruments such as OMOs, which could work in consonance with the process of price discovery.

2.5 Liquidity expansion/contraction through OMOs was envisaged as an integral element of RBI's monetary policy dispensation. The stage for OMOs was set by allowing the Discount and Finance House of India to deal in dated Government securities in April 1992 and issuing Government paper through the auction process in June 1992. The RBI created an Internal Debt Management Cell as an independent unit with effect from October 1, 1992. The RBI also decided to set up a new institution - the Securities Trading Corporation of India - dedicated to the development of a secondary market for Government securities.

Open Market Operations and the Government Securities Market

2.6 The ability of the RBI to deploy OMO as a tool of monetary management in the 1990s was sharpened by the parallel development of the Government securities market and marketisation of debt management. With the switchover to borrowings by the Government at market-related interest rates through the auction system in 1992, the reduction in statutory liquidity requirements (SLR) to the statutory minimum of 25.0 per cent in October 1997 and the abolition of automatic monetisation by the replacement of *ad hoc* Treasury Bills by a system of Ways and Means Advances effective April 1997, it was possible to move towards greater market orientation in Government securities.

2.7 The RBI moved from a regime of *de facto* 'privately fixed private placements' (the pre-1992 period of *ad hoc* Treasury Bills) to 'market-driven private placements'. Within the latter phase, the emphasis was on taking private placements with a view to offloading in the market when liquidity conditions stabilize. In more recent years,

however, primary acquisitions through private placements have been ‘warehoused’ to smoothen volatility. This indicates that marketisation of Government’s borrowing programme is nearly complete. These measures have significantly empowered the conduct of monetary policy.

2.8 Further reforms in the Government securities markets have resulted in the rationalization of the Treasury Bills market, increase in instruments and participants, elongation of the maturity profile, creation of greater fungibility in the secondary market, institution of a system of Delivery *versus* Payment (1995), strengthening of the institutional framework through primary dealers (1996) and more recently, the creation of the Negotiated Dealing System (NDS) (2002) and the Clearing Corporation of India Limited (CCIL) (2002) and enhanced transparency in market operations. Clarity in the regulatory framework has also been established with the Notification under the Securities Contract Regulation Act (2000).

2.9 Further developments in the Government securities market hinge on the legislative changes consistent with modern technology and market practices, especially with the institution of the Real Time Gross Settlement System, integration of payment and settlement systems for Government securities and standardization of practices with regard to manner of quotes, conclusion of deals and code of best practices for repo transactions.

Open Market Operations and the Conduct of Monetary Policy

2.10 The thrust of monetary policy in recent years has been to develop an array of instruments to transmit liquidity and interest rate signals in a more flexible and bi-directional manner. The RBI now manages liquidity through a market-oriented mix of repo operations under the Liquidity Adjustment Facility and outright transactions, reinforced by interest rate signals through changes in the Bank Rate and the reverse repo rate, in addition to the traditional tools of changes in reserve requirements and refinance facilities. The Market Stabilisation Scheme (MSS), introduced in April 2004, serves as an additional instrument of liquidity management. Under this scheme, the Government parks the proceeds of paper issued to mop up surplus market liquidity with the Reserve Bank. Liquidity management operations by the RBI are in alignment with the international country experience (Table 1 and Annex II).

Table 1: Operating Procedures of Liquidity Management: Major Paradigms						
Central Bank/	Operating Target	Dissemination of	Instruments	Frequency of Market	Eligible Counter	Eligible Collateral

Country	estimate of Liquidity Forecast		Operations parties			
1	2	3	4	5	6	7
European Central Bank	No official operating target	Weekly	OMO, repos, marginal lending facility and deposit facility	One per week plus an additional one per month, on a regular basis	Credit institutions meeting certain operational requirements	Both marketable And non-marketable private and public instruments
Japan	Current account balances	Daily	OMO, repos, complementary lending facility	More than one per day	Major players in the market	Both private And public instruments
USA	Federal funds rate	Daily	Discount rate, OMO, repos, changes in required reserve ratios (rarely used)	Typically one per day	Primary dealers	Direct obligations of the government or those fully guaranteed by federal government agencies.
India	No official target	No	OMO, repos, CRR, Bank Rate, reverse repo rate	Repo daily, outright transactions need based	Banks & PDs in the LAF, otherwise no restrictions	Only Central Government papers accepted so far

2.11 The RBI has been able to use OMOs effectively to manage the impact of capital flows because of the stock of marketable Government securities at its disposal and development of financial markets as part of financial sector reforms (Table 2). During bouts of strong capital flows, such as during the first half of 1997-

Table 2: Reserve Bank's Holdings of Central Government Dated Securities

(Rupees crore)

Year	Devolvement Reserve Bank	Private Placement taken by Reserve Bank	OMO Purchases by Reserve Bank	Conversion of Special Securities into dated securities	Total addition to Stock of Reserve Bank's Investments (2+3+4+5)	Open Market Sales by Reserve Bank	Net Addition to Stock (6-7)	Outstanding Holding by Reserve Bank (end period)*	Memo : Net Repos Outstanding
1	2	3	4	5	6	7	8	9	10
1996-97	3,698	-	623	-	4,321	11,206	-6,885	6,666	2,300
1997-98	7,028	6,000	467	20,000	33,495	8,081	25,414	31,977	4,202
1998-99	8,205	30,000	-	-	38,205	26,348	11,857	42,212	400
1999-00	-	27,000	1,244	-	28,244	36,614	-8,370	35,190	-
2000-01	13,151	18,000	4,471	-	35,622	23,795	11,827	41,732	1,355
2001-02	679	28,213	5,084	-	33,976	35,419	-1,443	41,631	4,355
2002-03	5,175	31,000	-	40,000	76,175	53,780	22,395	54,961	2,415
2003-04	-	21,500	-	61,818	82,318	41,849	40,469	75,545	34,795

* Inclusive of securities sold under the LAF.

98 and 2002-04, the RBI was also able to convert the stock of non-marketable special securities, created out of funding of past *ad hoc* and tap Treasury Bills, into marketable paper. Besides, a strategy of combining private placements/devolvments with outright OMOs was able to neutralise the impact of temporary spells of tight liquidity on the interest cost of marketable public debt.

Current Challenges for OMO

2.12 The large sterilization requirement of recent years has driven down the share of Government securities available with the RBI to 3 per cent of reserve money as at

end-March 2004 from 91 per cent as at end-March 1991. This has circumscribed the ability of the RBI to conduct OMO in recent years. As a result, the RBI had to rely more on Liquidity Adjustment Facility and the MSS as OMO tools rather than outright absorption.

III. REORIENTING OPEN MARKET OPERATIONS

3.1 The operating procedure of monetary policy has changed quite dramatically worldwide in the 1990s with the progress of financial liberalisation. The primary challenge of contemporary central banks is to harness liquidity conditions in financial markets to achieve their policy objectives. The international experience shows that OMO play an important role in steering interest rates, managing the liquidity situation in the market and signaling the stance of monetary policy. Broadly, OMO takes the form of reverse transactions (repo and reverse repo) when liquidity imbalances are expected to be short-lived; outright purchases or sales (and redemptions) of securities (including debt certificates) when liquidity shortages or excesses are expected to persist; foreign exchange swaps and deposit/lending facilities for fine-tuning operations. The evolution of operating procedures worldwide has been in tandem with the state of development of Government bond markets, integration of different segments of the financial markets and market infrastructure (Table 3).

Central Bank	Government Securities owned outright	(per cent of total assets)	
		Repos	Credit to Financial Institutions Others
1	2	3	4
Euro System	10	47	0
Japan	60	19	1
UK	5	53	2
USA	88	7	0

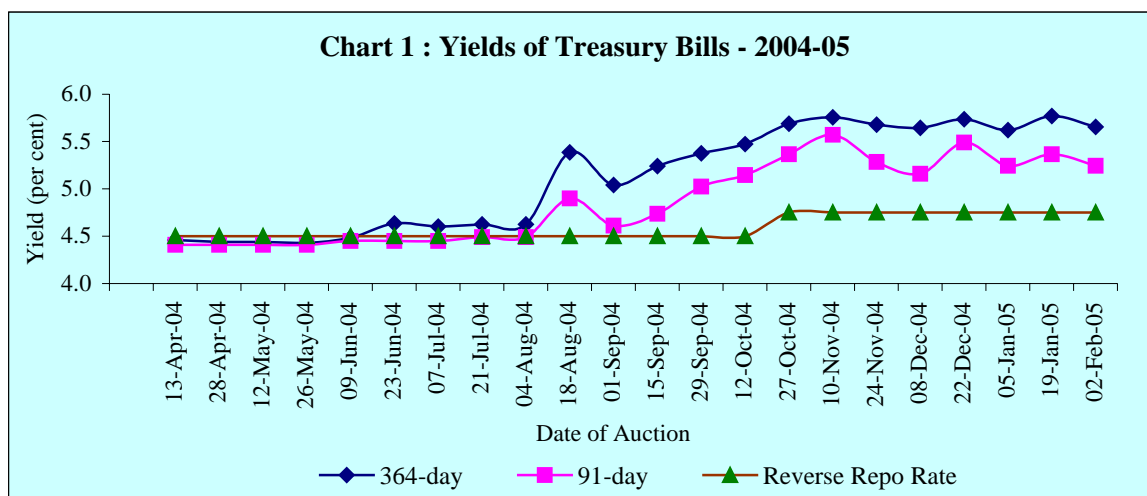
(Source: Respective Central Bank websites)

Open Market Operations in the Emerging Scenario

3.2 The Group is of the view that the need for reorienting OMO arises from the fact that the integration of financial market segments is far from complete (Annex III). Financial sector reforms undertaken since 1992-93 have brought in greater

operational autonomy for banks and non-bank financial institutions, freeing of interest rates, introduction of financial innovations in various markets, development of new segments and opening up of the economy through a cumulative process of liberalisation of the exchange and payments regime and underlying policies for current and capital flows. Indian financial markets, however, continue to be characterised by segmentation in terms of maturity, liquidity and risk, asymmetric integration and lack of depth.

3.3 Even within the Government securities market, integration across tenor is as yet incomplete (Annex III). Pressures of surplus liquidity, in particular, have often ended up distorting the yield curve. The narrowing of yield spreads in the 2-year to 10-year residual maturity segment (from 183 basis points to 63 basis points) and in the 10-year to 20-year segment (from 95 basis points to 77 basis points) during September 2001 to May 2004 made the yield curve in India one of the flattest internationally then. During April-May 2004, abundant liquidity emanating from strong capital flows drove the yields on 91-day and 364-day Treasury Bills below the weekly reverse repo rate of 4.5 per cent (Chart 1). Furthermore, there were instances when the cut-off yield on 364-day Treasury Bills fell below that of 91-day Treasury Bills.



3.4 The debt management objective of developing a yield curve for the long end of the maturity spectrum, as well as the need to manage rollover risk has led to an elongation of the maturity profile in recent years (Table 4). However, liquidity continues to be limited to a few segments only.

Year	Outstanding Stock			Issued During the Year		
	Under 5	5-10	Over 10	Under 5	5-10	Over 10
	Years	Years	Years	Years	Years	Years
1	2	3	4	5	6	7
1997-98	41	41	18	18	82	—
1998-99	42	42	16	18	68	14
1999-00	37	39	24	—	35	65
2000-01	27	47	26	6	41	53
2001-02	31	36	33	2	24	74
2002-03	26	35	39	—	36	64
2003-04	24	32	44	5	15	80

3.5 Captive demand for Government securities in terms of Statutory Liquidity Ratio (SLR) requirements under the Banking Regulation Act, 1949 has been shrinking with the SLR having been brought down to the minimum statutory level. The proposed amendment to Banking Regulation Act would provide the Reserve Bank with the flexibility to set even lower levels of SLR requirements consistent with the objective of financial sector liberalisation. Also, the government securities market continues to experience episodes of severe illiquidity, particularly in a rising interest rate scenario. Furthermore, when banks, the major investor class in the Government securities markets, keep out of the market in view of the rise in interest rates, the participant base in the secondary market also thins substantially. In the context of possibility of varying SLR requirements, therefore, it is crucial to ensure that interest rate expectations or tight market conditions do not affect the ability of the Government to meet its fiscal borrowing requirements in a non-disruptive and stable manner.

3.6 Using OMOs to control longer term interest rates was actively mooted by US Fed as recently as 2002, in the context of containing deflationary pressures. The Fed had resorted to bond-price pegging before the Federal Reserve-Treasury Accord of 1951, when it maintained a ceiling of 2-1/2 percent on long-term Treasury bond yields for nearly a decade. In fact, it had even been advocated that the Fed could announce explicit ceilings for yields on longer-maturity Treasury debt and enforce these ceilings by committing to make unlimited purchases of securities at prices consistent with the targeted yields (Bernanke, 2002)¹.

¹ Remarks by Governor Ben S. Bernanke, Before the National Economists Club, Washington D.C., November 21, 2002

3.7 Taking into consideration all the above-mentioned factors and looking at the historical context of RBI's developmental role and the evolution of the Government securities market in India, the Group felt that the RBI may continue its role of developing the markets with a view to facilitating market participants to take on themselves the role of supporting debt issuance in the context of RBI's vacation from the primary market and engage in a process of efficient price discovery in the secondary market. The provisions of FRBM Act and proposed changes to BR Act are consistent with the RBI's vision at the beginning of the reform process to work towards making the Government's borrowing entirely market-based.

3.8 The FRBM Act also provides for 'exceptional grounds' that the Central Government may specify under which RBI may subscribe to primary issues. As the understanding stands today, action under exceptional grounds may be enabled by the Government.

3.9 The Group, therefore, recommended that while OMO would continue to be principally directed at residual/unanticipated liquidity movements driven by 'autonomous' forces such as the Government's borrowing programme or capital flows, it may also be used to contain excessive volatility and promote orderly market conditions as well as to improve market liquidity in Government securities. RBI may, therefore, keep the option to participate in the secondary market as appropriate.

IV. INSTITUTIONAL SETTING FOR DEBT MANAGEMENT

4.1 As the manager of public debt, the RBI is required to ensure that the borrowing programme of the Government is successfully carried out and the cost of borrowing, including roll-over costs, is kept low. Issues of timing, sequencing and judgment of market conditions are critical to ensure the successful execution of the borrowing programme.

Current Status

4.2 An auction system for primary issuance of Government securities, introduced in 1992, currently covers almost the entire primary issuance of Government securities. Since 2002, the entire market borrowing programme of the Central Government is announced through half-yearly calendars. Generally, multiple price auctions are used for issuance of dated securities (barring special instruments like Floating Rate Bonds, bonds with optionality features and long tenor bonds) while Treasury Bills have been issued using both uniform and multiple price auctions at different points in time. Usually auction cut-offs are set at market-clearing levels.

4.3 The primary dealer (PD) system was created in 1996. There are currently 17 PDs. They are responsible for ensuring the success of primary auctions through a system of bidding commitments and success ratios and the scheme of underwriting of the auctions. Underwriting commitments are separately decided prior to the actual auction for primary issuance. PDs bid to underwrite various amounts at various commission rates. The actual allotment of the underwriting commitment is decided by the RBI after considering factors like the likelihood of devolvement and the commission sought. Rarely is the full notified amount allotted in underwriting auctions. Since underwriting is a purely voluntary responsibility, the success of primary auctions is sought to be achieved through bidding requirements, which are set at the beginning of the fiscal year for each PD depending mainly on its capital size. In order to ensure that bidding is not too defensive, the stipulation of a success ratio (40 per cent of bidding commitments) is mandated. There is no underwriting procedure for Treasury Bills and bidding commitments are fixed at a PD-wise flat percentage (determined at the beginning of the year) of the notified amount for each auction. The performance of bidding commitments and success ratios is monitored cumulatively over the year.

4.4 Even with the system of underwriting and bidding commitments for primary dealers (PDs) and buying interest from banks and large non-bank institutions

compensating for any lack of interest by the PDs, some auctions of Government securities have remained undersubscribed. It is in these situations that the RBI took devolvement on itself of the uncovered portion in auctions and thereby ensured the success of each auction. In cases of sudden requirement of funds by the Government, or when market conditions were not favourable to holding an auction, the RBI has resorted to the route of private placements by purchasing the entire primary issue at market related rates. The RBI's participation in the primary auction process, *albeit* at the margin, has ensured (i) that by acting as underwriter of the last resort, the central bank has enabled the Government to borrow as and when it required funds; and (ii) greater deterrence to irrational bidding behaviour.

4.5 In the final analysis therefore, the Group recognised the crucial role of the RBI in ensuring the full absorption of the Government borrowing programmes in the primary market. In the future, *i.e.*, from April 2006, the RBI's non-participation in primary auctions except under exceptional circumstances, as indicated in the FRBM Act, will require alternative institutional arrangements to ensure that

- debt management objectives are met; and
- the Government is able to borrow under all market conditions without exacerbating market volatility.

Restructuring the Primary Auction Process

4.6 The Group was of the view that the RBI's role in the primary market hitherto has to be replaced by a more active and dynamic participation by PDs. This will necessitate some restructuring of current institutional processes.

4.7 Since the current system of annual bidding commitments does not guarantee that the notified amount will be sold in each auction, the Group is of the view that a system of bidding commitments for each auction is preferable. All PDs put together must commit to bid 100 per cent of each auction. This would ensure that the notified amount is sold at each auction.

4.8 The Group recognised that 100 per cent bidding commitments by PDs does not ensure that the cost of issuance is minimised or is in line with price discovery. Accordingly, the Group felt that instead of bidding commitments, PDs could be required to underwrite the entire notified amount of an auction. As is the current practice, an underwriting auction will be held before the actual issuance. Each PD would have the responsibility of bidding a minimum percentage of the notified amount at the underwriting auction. The minimum amounts will be so fixed as to ensure that the entire notified amount is underwritten. This will also ensure that

auction cut-offs are in line with market levels and the RBI will continue to have the option of cutting off the auction below the notified amount and devolving the remaining amount on PDs at the cut-off price so decided. Since PDs are free to bid underwriting commissions according to their perception of risk, the Group recommends the following institutional arrangements to ensure 100 per cent underwriting commitments by PDs:

- i) *Minimum Underwriting Commitment (MUC)*: Secured and preferential access to primary auctions of government securities forms the rationale for developing PDs as a special class of investors in the primary market. Commensurate with this 'special' role, the responsibility of a PD in the primary auction process may be articulated in the form of a minimum underwriting commitment (MUC) in each auction. The MUC of each PD may be designed to ensure that at least 50 per cent of an auction is covered by the aggregate of all MUCs. Thus with 17 PDs in operation, each PD may be deemed to underwrite 3 per cent of the notified amount of each auction in its MUC. The MUC may be uniform for all PDs, irrespective of their capital or balance sheet size. PDs will not earn any commission on MUC, except as indicated in paragraph (4.8.3) below.
- ii) *Additional Competitive Underwriting*: The remaining portion of the notified amount may be open to competitive underwriting through underwriting auctions. Each PD would be required to bid a minimum of 3 per cent of notified amount. The auctions could be uniform price-based to ensure aggressive bidding and may be incentivised. The ACU will be remunerated through underwriting commission.
- iii) *Commission on MUC* - Only those PDs who succeed in the underwriting auction for a minimum of 5 per cent of the notified amount will be paid underwriting commission on their MUC. Others will get commission to the extent they are successful in ACU but will not get any commission for the 3 per cent MUC.

4.9 Recognising that the envisaged system casts a much larger responsibility on the PDs than under the current arrangements, the Group felt that PDs need to be compensated with appropriate incentives over and above those given currently such as access to the call market, cash and securities account with the RBI, refinance facility and access to LAF. RBI may examine the possibility of providing PDs with a facility to repo their auctioned stock with RBI for a limited period after the auction

allotment to help them tide over temporary funding risk, in case liquidity conditions tighten in the markets.

4.10 In this context, the Group recommends exclusivity in primary auctions for PDs. Exclusivity may be brought about in phases, commencing with Treasury Bills and a few auctions of dated securities and expanded further as the system assimilates the process. Exclusivity in primary auctions is a fairly common phenomenon internationally (Table 5). Of the 39 countries surveyed, 29 had a primary dealer system. PDs had exclusive access to primary auctions in 15 countries and they had exclusive access to central bank OMO operations in 13 countries. Five countries offered exclusivity in second rounds of primary operations (after the main auction/tap issue) or offered non-competitive access to PDs.

Table 5: Exclusivity to Primary Dealers - International Experience

1	Primary Auctions 2	Open Market Operations 3	Non-competitive / Second Round Bidding in Auctions 4
Argentina		√	
Armenia		√	√
Austria	√		√
Belgium	√	√	
Brazil		√	
Canada		√	
Czech	√		
Finland	√		
France			
Ghana	√	√	
Greece	√		
Hungary	√		
Iceland	√		
India			
Ireland	√	√	
Italy			√*
Kazakistan	√		
Korea	√		√
Mexico			
Morocco			
Netherland	√		
Norway			
Portugal			√
Singapore	√	√	
Spain		√**	
Sweden	√	√	
Thailand		√	
UK	√	√	
USA		√	

Source – Marco Arnone and George Iden, 2003, IMF Working Paper on ‘Primary Dealers in Government Securities: Policy Issues and Selected Countries’ Experience’

* Exclusive access to non-competetive tap within 10% of the amount offered

**Privileged counterparty to the issuer in its overall debt management activity

4.11 In the light of the international experience and the critical role of PDs in the context of ensuring the smooth absorption of the Government’s borrowing programme in the emerging scenario, the Group felt that RBI could consider giving PDs preferential treatment in primary auctions. It may be iniquitous for PDs to discharge their obligations if they have to compete in primary auctions with entities that do not have such responsibilities. On the other hand there could be the risk that exclusivity may not be acceptable to some of the larger institutional investors at this

stage. Besides, there could be concerns of cartelization and unhealthy practices in the market. The Group discussed the various issues that could arise in the context of exclusivity.

- i) **Is there a possibility of cartelization** – With 17 PDs who will be distributing the Government securities, there is some risk of cartelization among them because the entire market routes their demand through PDs. While it is not possible to entirely eliminate the possibility of cartelization in a skewed market, its possibility is sought to be minimized through competitive underwriting. The adverse consequence of cartelization is higher cost to the Government or to the investors. This may be unlikely in a situation where PDs underwrite the entire issue, since RBI retains the ability to control the issuance cost by devolving on the PDs. Similarly the possibility of manipulating secondary market prices through cartelization will be low because of more active RBI presence in the secondary market, and the fact that in a buyers market (supply exceeds demand) the ability of PDs to dictate terms to the buyers will be rather limited. If anything, there is a need to incentivise PDs to take up the responsibility of distribution of securities in what is essentially a buyers market.
 - ii) **Is there a risk of front running by PDs** – Under exclusivity, investors, especially large institutional buyers would be routing their bids through PDs. There is a concern that if their position is exposed to PDs, the latter might front run the customers bids. Front running refers to a situation where a market maker trades ahead of any observed customer's order in the same direction. The market maker buys securities ahead of his customer and therefore the price is higher at the time the customer's order is executed. This is undesirable. However, it is unlikely to take place in the proposed primary issuance structure. Firstly, since large buyers will distribute their orders through many PDs, it is difficult for any one PD to know the order size. Secondly, since PDs are leveraged entities, their ability to hold securities is limited. As the customer can change/defer his decision to buy that security, the risk of PDs being left stranded with positions is a disincentive for front running.
 - iii) **Would the cost of primary acquisition go up for investors** – Investors would only route their bids through PDs under exclusivity. Since investors will continue to have the full freedom to determine the price at which they would bid, there is no reason to believe that their cost of acquisition would go up. In fact, since PDs would compete to get customer bids to meet underwriting obligations,
-

they might even pass on some of their underwriting commission to customer, reducing their cost of acquisition.

- iv) **Bidding skills of investors** – It is reasonable to presume that bidding skills of PDs would be superior to those of investors. There have been instances where institutional investors have placed rather inefficient bids in auctions. Routing them through PDs would mean that investors would price their bids on the basis of professional advice of PDs. This would be beneficial to the investors.

4.12 Exclusivity to PDs would not be an impediment to other categories of bidders since the only change for them is that they route their bids through PDs as is the informal system operating currently in case of most banks. The proposed system would improve the transparency of the bidding process. Moreover, PDs with underwriting obligations would compete for client bids and, therefore, the access to the auction for non-PDs would be efficient. Non-competitive bids can, however, be received directly from banks or PDs, as at present. Retail competitive bids will be placed through PDs or with banks that would, in turn, place them through PDs.

4.13 From the above, it is clear that despite some initial apprehensions of institutional investors, exclusivity may not inconvenience investors nor is it likely to compromise their treasury performance. However, RBI may consider taking a measured approach in selectively permitting exclusivity so as to introduce it in a smooth and non-disruptive manner, taking the comfort of end investors into account.

More Flexible Issuance Process

4.14 The RBI has hitherto largely been resorting to multiple price auctions for dated securities. The Group is of the view that multiple price auctions are desirable in a bullish market where bidding tends to be aggressive because of the expected pay-off of long positions. Resorting to uniform price auctions in such markets would tend to make bidding overaggressive, as the experience of April 2004 shows. On the other hand, bidding tends to be very defensive in falling/flat markets. Resorting to uniform price auction would tend to make the bidding more aggressive, thereby improving the outcome for the issuer. The Group, therefore, recommends that the RBI conduct multiple as well as uniform price auctions flexibly depending on underlying market conditions.

4.15 In order to achieve better transparency and price discovery in the auction process (both primary auctions and OMO auctions), an open bidding process, where the participants would be aware of the bidding interest in a particular auction on a

real time basis, can be introduced. The settlement of these auctions could also be STP enabled to settle along with secondary market transactions to improve netting efficiency. STP would also improve operational efficiency and enable same day settlement of auctions, thus facilitating quick tender auctions.

4.16 RBI may consider recourse to the book building method for some issues of Government securities when excessively uncertain market conditions increase the bidding risk at auctions. Select PDs may be appointed as arrangers for the issue (3 or 4 arrangers per issue, to avoid any single PD from being privy to investor interest for the entire auction). Each PD would arrange to place the stock within a range mutually agreed between RBI and the PD. As the PD undertakes to arrange the issue, the success of the issue is guaranteed, albeit at a cost. This method can also be used as an incentive for the PDs for better performance in primary and secondary markets. PDs may be selected for book building by ranking them according to stipulated criteria in terms of success in primary auctions and turnover in secondary markets.

4.17 The Group is also of the view that arrangements may be worked out to reduce the processing time for auctions to one or two days, particularly in extraordinary situations.

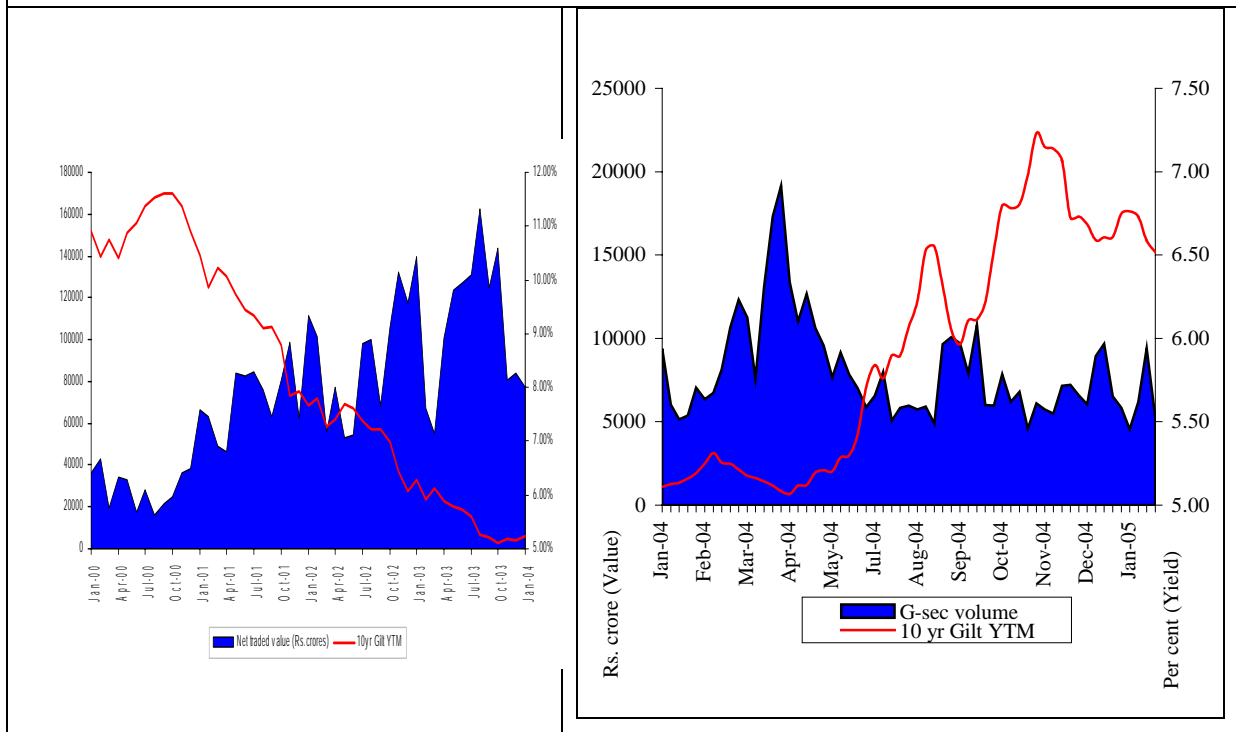
4.18 The Group notes that some of the above recommendations - exclusivity to PDs, open auction bidding process and book building route to issue securities – fundamentally alters the current issuance procedure, and therefore requires prior consultation with the Government of India.

V. DEVELOPING THE GOVERNMENT SECURITIES MARKET

Current Status

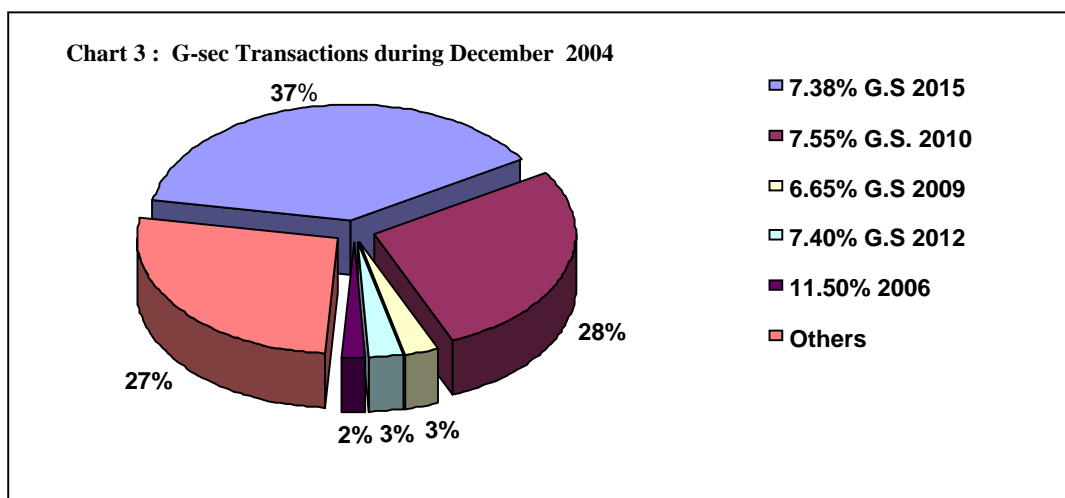
5.1 In the context of the more dynamic role sought for OMO and the associated debt management concerns, the Group is of the view that efforts need to be undertaken over the medium term to develop the Government securities market in terms of instruments/processes/participants. This should also encompass the removal of existing anomalies. The long-term objective should be to nurture a deep, liquid and vibrant market which can withstand pressures from large/unforeseen liquidity movements while simultaneously ensuring efficient price discovery. The development of a market for Government securities has been a *sine qua non* of the process of financial liberalisation. It is in this context that the RBI has taken a series of measures to develop the Government securities markets since the very inception of financial reforms. The Group noted that while market development has progressed satisfactorily, *albeit* in a graduated manner, there are still some imperfections in the markets which impede efficient price discovery as well as the conduct of debt management.

Chart 2: Volumes and Yields in the Government Securities Markets



5.2 First, in the absence of instruments to take interest rate views, it is observed that the markets are active and liquid when rates are falling but turn lackluster and illiquid when rates rise (Chart 2). Low volumes render markets shallow and prone to price manipulations. Accordingly, the Group is of the view that it is necessary to enable market participants to take two-way positions, to ensure market liquidity, irrespective of the direction of interest rates.

5.3 Secondly, the number of actively traded securities is very low as compared with the total number of securities outstanding. As at end- February 2005, there were 121 Central Government securities with an outstanding amount of Rs. 8,953 billion. Of these, 44 securities with minimum outstanding issues of Rs. 100 billion or more accounted for 69 per cent of the total outstanding amount. The turnover to total outstanding ratio dipped sharply to 1.50 in 2004 from about 2 in 2003, while it ranged between 3-38 for developed countries. On a daily basis, hardly 10-12 securities are traded, of which the number of actively traded securities would be a mere 4-5. (Illustration given in Chart 3) . Without active trades in the markets, the yield curve is kinky making pricing of securities difficult. This also leads to a situation where securities of similar maturity profiles trade at very different yields, with the liquidity premium sometimes going as high as 50 basis points.



5.4 Thirdly, the investor base is thin leading to volatility in the markets and enabling a few active players to effectively determine prices (Table 4). A major portion of the Government securities are held by banks resulting in the concentration of risk in the financial system (Chart 3).

Measures to Develop the Government Securities Markets

5.5 The Group felt that PDs may be invested with the following responsibility for market making.

a. *Market Making in the wholesale segment* – The Group discussed various

**Table 4: Ownership Of Central Government Securities *
(Outstanding as at end-March 2003)**

Category of holders	91	92	93	94	95	96	97	98	99	00	01	02	03
1	2	3	4	5	6	7	8	9	10	11	12	13	14
1 Reserve Bank of India (own account)	25	22	11	3	3	9	3	13	11	8	9	8	7
	%	%	%	%	%	%	%	%	%	%	%	%	%
2 Commercial banks	55	60	65	72	69	64	68	58	59	61	61	61	58
	%	%	%	%	%	%	%	%	%	%	%	%	%
3 Life Insurance Corporation of India	13	15	16	17	17	18	20	19	18	18	19	20	19
	%	%	%	%	%	%	%	%	%	%	%	%	%
4 Unit Trust of India	0	0	0	5	6	4	1	1	0	0	1	0	0
	%	%	%	%	%	%	%	%	%	%	%	%	%
5 NABARD	0	0	2	2	1	1	1	1	0	0	0	0	0
	%	%	%	%	%	%	%	%	%	%	%	%	%
6 Primary dealers	0	0	0	0	0	0	0	0	0	0	2	1	1
	%	%	%	%	%	%	%	%	%	%	%	%	%
7 Others (including EPF, Coal Mine PF and others)	7	3	6	1	4	4	7	9	11	12	8	10	13
	%	%	%	%	%	%	%	%	%	%	%	%	%

Source: Hand Book of Statistics on Indian Economy

methods of evaluating secondary market performance of PDs such as mandating minimum bid-ask spreads (as it prevails in MTS² in Europe), setting turnover targets *etc.* The recent episode on EuroMTS exposed the shortcomings of mandating spread limits. The Group felt that setting turnover targets may also be infructuous as PDs may resort to prearranged transactions just to meet turnover targets. The Group is also of the view that any targets mandated without the express consent of PDs is likely to prove ineffective. It, therefore, recommends that the RBI may, in consultation with the PDs, set some secondary market commitment linked to average stock and capital size. One possible criterion could be the transaction volume in Rs.5 crore (or higher) lots that PDs deal with non-

² EuroMTS, a private London-based company, officially started its operations in April 1999 as the pan-European electronic trading system for Euro denominated benchmark government bonds. Shares in the company are held by MTS SpA, whose shareholders are major financial institutions which have a strong presence in the European secondary government bond markets.

PDs. A suitable penal provision could be built in to discourage prearranged deals just to build volumes.

- b. The Group also recommends that instead of ensuring strict adherence to any pre-fixed targets, it would be more effective if secondary market performance were also incentivised. Besides granting exclusivity to PDs as discussed earlier, the Group is of the view that the selection of eligible counterparties among PDs could be based on relative secondary market performance in both wholesale and retail segments. This selection may be done at reasonable frequency, say, quarterly, to ensure that PDs continue to strive to outperform each other.
- c. *Market Making in the Mid Segment:* PDs have remained, by and large, wholesale players only. Their contribution in making the market for the mid-segment investors like provident and pension funds, cooperative banks, trusts *etc*, has not been significant. The Group is of the view that PDs must be required to transact a minimum share (say 10 per cent) of their secondary market transactions (outright) with non-NDS members. Any excess over this minimum threshold would be reckoned for assessing secondary market performance of a PD for the purpose of exclusivity in secondary market transactions with the RBI.

Active Consolidation of Government Securities

5.6 Reserve Bank has been, since the late 1990s, following a policy of passive consolidation, through the process of reissue of existing securities to achieve consolidation of stock. As a result, of the 118 outstanding securities issued by the Central Government as at the end of May 05, 13 have a size of Rs.15000 crore or more and together account for 29% of the total stock of Central Government securities. Twenty-two securities have an outstanding size of less than Rs.2000 crore. Thus, while re-issuance has achieved some degree of consolidation, there are still a large number of small sized securities and very few actively traded in the market. The lack of liquidity in all but a handful of securities underscores the need to ensure that adequate number of securities with sufficient outstanding size should be available in the market.

5.7 A faster way to consolidate stock would be through the process of active consolidation. This process of consolidation would involve, in one form or the other, buying back of large number of small sized illiquid Central Government securities from existing holders and issuing a smaller number of liquid securities in exchange. This will result in availability of more number of large sized securities. These large-

sized securities will be held across a wider base of market participants improving the availability of floating stock and thereby trading interest. The Group therefore recommends that active consolidation of securities may be considered.

Instruments and Procedures:

5.8 *Short selling*³: In the current trading framework, market participants can only be 'long' in securities.⁴ This sometimes results in overpricing of certain securities as the participants who believe the security to be overpriced have no means of executing their view. In this context, the Group recommends that market participants be allowed to take short interest rate positions in the securities market. Specifically, the Group recommends the introduction of the following stages:

Stage I -Intra-day Short Selling

- a. Eligible entities – All SGL account holders
- b. No other conditions.

Stage II - Short sale on zero net-duration basis - hedging

- a. Eligible entities – All SGL account holders
- b. Conditions – Net portfolio duration should always be positive or zero,
- c. Limit for any entity – One per cent of outstanding stock issued of a security. This limit will apply to the entire group of related entities.
- d. Short sale must be preceded by a contract to borrow the security.

Stage III – Open Short Selling - position

- (a) Eligible entities – All SGL account holders
- (b) Position Limit for any entity – One per cent of outstanding stock issued of a security.
- (c) Short sale must be preceded by a contract to borrow the security.
- (d) Net short portfolio duration to be subject to limits prescribed by top management/board and vetted by RBI.

5.9 The Group felt that in view of the skewed holding of Government securities in the Indian market, there could be instances of stock shortage for delivery. In view of

³ Short selling is usually the selling of a stock that the seller does not own.

⁴ When an investor goes long on an investment, it means he has bought a stock believing its price will rise in the future. Conversely, when an investor goes short, he is anticipating a decrease in price.

the market-making role envisaged for PDs, the Group recommended that RBI may consider offering a securities borrowing window for PDs. US FED, for example, offers a similar facility to PDs.

5.10 Annex IV contains a detailed note on short sales, analyzing the risk factors and the safeguards.

5.11 *STRIPS*: The Group also recommends the expeditious introduction of STRIPS which enables better risk allocation in the appropriate investor class. It enables, for instance, the outstanding stock of long tenor securities held with banks to move to the insurance / PF segments while leaving the shorter dated STRIPS in the books of banks to match their liability profile. Besides, the derivatives market only extends up to five to seven years and this leaves the balance sheets of banks open to risk. STRIPS correct this mismatch by reallocation of risk. STRIPS also help in removing the anomaly of securities of similar maturity profile trading at yields much higher than those of benchmark bonds. Having an active STRIPS market would help the market correct such anomalies by stripping out the components of the illiquid, higher yielding bonds. The STRIPS could also help in creating more demand for Government securities since investors can generate a stream of future cash flows which has a better match with their liabilities.

5.12 There are certain preconditions that need to be met for the introduction of STRIPs. Firstly, the present Public Debt Act, 1944 does not have provisions for stripping and reconstitution of securities. The New Government Securities Act, when passed, would have the necessary enabling provisions. Secondly, there is a need to have a sizeable stock of securities having identical coupon payment dates so as to enable 'bunching' (subject to Government's capacity to repay at a particular point of time). Thirdly, there should be fungibility among the coupon strips of the same date from different stocks. As regards technological and operational preparedness, the SRS (System Requirement Study) has already been done. The implementation of the module needs to be expedited so that the same takes off as soon as the legal enactments are in place.

When Issued Market

5.13 "When, as and if issued" (also known as "when-issued" (WI)) markets are in place in many developed countries. WI trading in Government securities functions somewhat like trading in a futures market in that positions may be taken and covered many times before the actual settlement date. Such trading takes place between the

time a new issue is announced and the time it is actually issued. WI trading has certain advantages like (i) facilitating the distribution process for Government securities by stretching the actual distribution period for each issue and allowing the market more time to absorb large issues without disruption and (ii) helping price discovery by reducing uncertainties surrounding auctions by enabling bidders to gauge market demand and price the securities being offered.

5.14 The international experience indicates that the estimated aggregate size of outstanding positions in the WI market typically exceeds the quantity of securities to be sold at that auction at some point between the date of announcement of the auction and the date on which the securities are delivered. Those positions can be taken more cheaply and potentially in greater size (due to the lack of a delivery requirement) during the WI period than in subsequent trading. Participants normally reduce the size of outstanding positions in the WI market as the issue date approaches. There is, however, the risk of participants overestimating their ability to cover short positions prior to settlement. Solutions to the potential for shortages may be found that do not impede when-issued trading.

5.15 The Group recommends that WI trading may be permitted in phases. In the first phase, WI trading be permitted in reissued securities. After about one year, it could be extended to new securities as well. The broad conditions subject to which WI trading could be permitted could be:

- a. WI trading could commence on the day after the date of notification of issue of a security and it would cease immediately on announcement of the auction results.
 - b. Only NDS members would be eligible to trade in the WI market;
 - c. Any WI trade must have a PD as a counterparty (both counterparties can be PDs) and non-PD cannot take a short position in the WI market.
 - d. Positions in the WI market may be subjected to regulatory limits. For non-PD entities, this limit may be fixed at 5 per cent of the notified amount.
 - e. Position limits for PDs may be linked to their performance in the primary auctions.
 - f. In case of reissues, settlement of both the WI security and the existing security would coalesce on settlement date.
 - g. In case the seller PD is unable to deliver securities to the buyer after the auction on the settlement date, the transaction may be allowed to be settled in cash by deeming that the security is bought by the seller from the buyer at the cut-off price in the auction, provided that in case any amount is payable by the buyer to
-

the seller PD consequent to such settlement, the buyer will make no payment to the seller PD.

h. In the event of cancellation of the auction, all WI trades will stand cancelled (subject to legal clearance).

5.16 The introduction of WI trading involves short selling. Even in the absence of general short selling, the Group recommends that short selling can be considered for the limited purpose of WI trading. Also, since such trading involves settlement beyond the T + 1 cycle, the RBI has to specifically permit such settlement as the SCRA stipulates that all transactions other than spot transactions (T + 1) must be made on exchanges. Also, for the reasons stated in Para 5.10 in connection with short selling in Government securities, introduction of WI market would also have to be done after prior consultation with the Government. The treatment of gains or losses in trading would need to be clarified for market participants.

Primary Dealers: Focus of Operations

5.17 The primary objectives of the PD system are to support the Government's borrowing programme and provide liquidity in the secondary market. It is, therefore, desirable that the activities of the PDs remain focused on these objectives. The measures suggested in Chapter IV and in this Chapter will create an environment in which PDs would have the wherewithal to operate in all interest rate cycles. Accordingly, the Group is of the view that PDs' exposures to non-Government securities as well as off-balance sheet business including merchant banking may be restricted in terms of appropriate limits on the risk-weighted assets in non-Government securities exposures.

5.18 The system of separate legal existence and not as part of a bank or financial institution for PDs has been favoured in India at the inception of PD system due to the then prevailing passive nature of investment by banks (due to high SLR requirements), lack of specialized skills in the areas of pricing, bidding, trading, risk management required for a primary dealer and need for a fresh approach to developing the Government Securities market. Looking at the performance of the PD system since its inception, there are no two opinions that the system has indeed played a great role in improving market liquidity. However, with the interest rate reversal and the current operating regulatory environment, the PDs have found it difficult to operate in a viable manner. In this context, suggestions have emerged that the participation in the PD system may be expanded to include banks to undertake

PD activity departmentally. A review of PD system in various countries reveal that in almost all countries, the concept of Primary Dealers is limited to an activity and not an entity. That is institutions like commercial banks and investment banks, financial institutions and broker-dealers are designated as Primary Dealers, and no separate entity need be formed for this purpose. Annex V gives experience of some major countries in this regard. The Group therefore recommends that, in addition to current eligibility norms of becoming a non-bank financial company (NBFC) and the requirement of predominance of operations in Government securities, permitted structures for PD business may be expanded to include banks directly undertaking PD activity as a department with independent subsidiary books of account. The operations of the bank may be kept scrupulously distinct from the PD activities. In this background, appropriately restructuring the PD system may be encouraged with smaller PDs either raising the capital base or merging with parent banks where there are bank subsidiaries.

Accounting Practices:

5.19 In the context of the sweeping changes envisaged for the secondary market for government securities, the Group felt it desirable to address the institution of appropriate accounting practices, including correction of existing anomalies.

- *Marking to Equity:* Banks are reluctant to hold Government securities in a rising interest rate scenario, as the depreciation on securities in the Available for Sale (AFS) category are required to be charged to their Profit & Loss (P&L) account. If the depreciation as well as appreciation is permitted to be charged to the Reserve Account instead of P & L, the banks would have a greater incentive to hold/trade in Government securities than currently. IAS39 permits marking to market (MTM) on AFS to be charged to equity. Therefore, such a step would be in line with international standards.
 - *Fair value Accounting:* In line with international practices, adoption of fair value accounting may be considered so as to recognise both gains and losses in the case of the Held-for-Trading portfolio. This would give more operating elbow room for the participants.
 - *Comprehensive Derivative Accounting Norms:* To enhance transparency in the derivative market, which will also improve regulatory as well as internal management considerations, the Group felt that the ICAI may be requested to expedite introduction of comprehensive accounting standards covering all
-

derivativeinstruments.

- **VI. Technological Infrastructure for Trading and Settlement Systems:**

6.1 The Group felt that it is desirable to move towards standardising T+1 settlement uniformly in *lieu* of T+0 and T+1 settlements that are being followed currently. This would standardise trading procedures and would help in better cash and risk management for both participants. In the event that participants might need to transact on a T+0 basis for any emergency purposes, it would be necessary for them to go through the RTGS instead of the NDS-CCIL settlement mechanism. The Group recommends, therefore, that the integration of Security Settlement System with RTGS may, therefore, be expedited.

6.2 Efforts may be made for early operationalisation of the proposed screen based order-matching trading system for Government securities. Since the proposed system provides transparency and real-time deal executions and reporting, the transactions involving short-sales and WI market may mandatorily be executed on the system.

6.3 With regard to the primary auction process, a fully automated underwriting auction module needs to be built into the NDS. Furthermore, a WI trading module will need to be introduced on the NDS with concomitant adjustments required to the systems with CCIL. Since it is preferable that WI trades are also settled along with primary market allotments, it may be useful to explore the possibility of primary and OMO auctions being routed through CCIL there may also be an exhaustive and effective monitoring of performance and surveillance module, either on NDS or as a standalone.

6.4 The NDS could be made robust by increasing the bandwidth to enable it to handle a larger number of participants accessing the system at the same time. The existing bottlenecks in terms of speed and availability may be addressed within the enhanced system requirement in an environment where participants will require to undertake quick tenders. The entire process from announcement of auction to announcement of results should not take more than one hour. In this regard, the Group felt that the Report of the Working Group on Screen Based Trading in Government Securities identifies the infrastructural bottlenecks in NDS and INFINET quite exhaustively and recommendations contained therein would largely address issues of systemic inadequacy.

VII. SUMMARY OF RECOMMENDATIONS

In pursuance of its terms of reference, the Group reviewed the evolution of OMO and noted the satisfactory *albeit* graduated progress since the 1990s. It also observed that the ability of the RBI to activate OMOs was sharpened by the parallel development of the Government securities markets. It also takes note of the constraints emerging on the use of OMO by the RBI on account of the depletion of Government securities in its portfolio due to large-scale sterilisation operations. The Group notes that some of the recommendations made by it fundamentally alter the debt issuance system/ prevailing regulation and therefore require prior consultations with the Government before they could be implemented. Against this background, the Group makes the following recommendations:

1. The Group recommended that RBI may keep the option to participate in the secondary market as considered appropriate with a view to contain excessive volatility, promote orderly market conditions and improve market liquidity in the Government securities market. **(Para 3.9)**

 2. The Group favoured a system of 100 per cent underwriting commitment by PDs over a system of 100 per cent bidding commitments to be achieved through:
 - a. Minimum underwriting commitment (MUC) in each auction in a manner designed to ensure that at least 50 per cent of the notified amount is covered by the aggregate of MUC of all PDs.
 - b. The remaining portion of the notified amount may be open to additional competitive underwriting (ACU) through uniform price-based underwriting auctions.
 - c. Only those PDs who succeed in the underwriting auction for a minimum of 5 per cent of the notified amount will be paid underwriting commission on their MUC. Others will get commission to the extent they are successful in ACU but will not get any commission for the 3 per cent MUC. **(Para 4.8)**

 3. RBI may examine the possibility of providing PDs with a facility to repo their auctioned stock with RBI for a limited period after the auction allotment to help them tide over temporary funding risk, in case liquidity conditions tighten in the markets. **(Para 4.9)**
-

4. RBI may consider taking a measured approach in selectively permitting exclusivity to primary dealers in primary auctions, so as to introduce it in a smooth and non-disruptive manner, taking the comfort of end investors into account. **(Para 4.13)**.
 5. The RBI may resort to multiple and uniform price auctions flexibly depending on the underlying market conditions **(Para 4.14)**.
 6. In order to achieve better transparency and price discovery in the auction process (both primary auctions and OMO auctions), an open bidding process, where the participants would be aware of the bidding interest in a particular auction on a real time basis, can be introduced. **(Para 4.15)**
 7. RBI may also be given flexibility to take recourse to the book building method for some issues of Government securities if considered necessary. **(Para 4.16)**
 8. Arrangements may be worked out to reduce the processing time for auctions to one or two days, particularly in extraordinary situations. **(Para 4.17)**
 9. The RBI may continue its role of developing the markets. In this regard, PDs may be invested with the responsibility for market making subject to incentives mentioned elsewhere like short selling, exclusivity, funding of G-secs already being allowed through repo. **(Para 5.5)**
 10. The Group recommended the following market making obligations for PDs
 - a. In the wholesale segment, the RBI may, in consultation with the PDs, set some secondary market commitment linked to average stock and capital size with a suitable penal provision to discourage prearranged deals.
 - b. In the mid-segment, PDs must make at least 10 per cent of their secondary market transactions (outright) with non-NDS members.
 - c. The selection among PDs, of eligible secondary market counterparties for RBI operations, may be done on the basis of relative secondary market performance in both wholesale and retail segments. (**Para 5.5**)
 11. In the mid-segment, PDs must make at least 10 per cent of their secondary market transactions (outright) with non-NDS members, with any excess reckoned for purpose of exclusivity in secondary market transactions with the RBI. (**Para 5.5**)
 12. Active consolidation of securities may be considered to improve the availability of floating stock and thereby trading interest. **(Para 5.7)**
-

13. Market participants may be allowed to short sell Government securities. This may be introduced in a phase-wise manner and with appropriate safeguards. **(Para 5.8)**
14. RBI may consider offering a securities borrowing window for PDs. **(Para 5.9)**
15. The introduction of STRIPS will enable better risk allocation in the appropriate investor class. **(Para 5.11)**
16. WI market may be introduced in a phased manner. **(Para 5.15-5.16)**
17. PDs' exposures to non-Government securities as well as off-balance sheet business including merchant banking may be restricted in terms of appropriate limits on the risk-weighted assets in non-Government securities exposures. **(Para 5.17)**
18. In addition to current eligibility norms of becoming a non-bank financial company (NBFC) and the requirement of predominance of operations in Government securities, permitted structures for PD business may be expanded to include banks fulfilling certain criteria directly undertaking PD activity as a department with independent subsidiary books of account. **(Para 5.18)**
19. The following changes in accounting practices will be desirable.
- a. Banks may be permitted to charge the appreciation as well as depreciation on securities in the Available for Sale (AFS) category to equity instead of their Profit & Loss (P & L) account in line with international standards.
 - b. In line with international practices, adoption of fair value accounting may be considered so as to recognize both gains and losses in the case of the Held-for-Trading portfolio and give more operating elbow room for the participants.
 - c. To enhance transparency in the derivative market, ICAI may be requested to expedite introduction of comprehensive accounting standards covering all derivative instruments. **(Para 5.19)**
20. It is desirable to move towards standardising T+1 settlement uniformly in lieu of T+0 and T+1 settlements that are being followed currently **(Para 6.1)**.
21. Integration of Security Settlement System with RTGS may be expedited. **(Para 6.1)**.
22. Efforts may be made for early operationalisation of the proposed screen based order-matching trading system for Government securities. **(Para 6.2)**
-

23. With regard to the primary auction process, a fully automated underwriting auction module needs to be built into the NDS. Furthermore, a WI trading module will need to be introduced on the NDS with concomitant adjustments required to the systems with CCIL. Since it is preferable that WI trades are also settled along with primary market allotments, it may be useful to explore the possibility of primary and OMO auctions being routed through CCIL there should also be an exhaustive and effective monitoring of performance and surveillance module, either on NDS or as a standalone. **(Para 6.3)**
24. The NDS could be made robust by increasing the bandwidth to enable it to handle a larger number of participants accessing the system at the same time. The existing bottlenecks in terms of speed and availability may be addressed within the enhanced system requirement in an environment where participants will be required to undertake quick tenders. **(Para 6.4)**
-

Annex I

Historical Development of the Debt Management Process in India

Review of Reforms in the Government Securities Market

Reforms in the Government securities market have completed more than a decade since their initiation in 1992, a watershed year. Prior to 1992, the market was characterised by:

- administered (and often artificially low) rates of interest to keep Government borrowing costs down;
- captive investors (mostly banks) due to high SLR requirements;
- an absence of a liquid and transparent secondary market resulting in the absence of a smooth and robust yield curve for pricing of the instruments.
- higher lending rates led by non-market related yields on Government securities which affected the yield structure of financial assets in the system, and as a result of which Reserve Bank's monetary management was dominated by direct instruments such as
 - a regime of administered interest rates,
 - and rising Cash Reserve Ratio (CRR) and Statutory Liquidity Ratio (SLR) prescriptions which left little room for monetary maneuvering.

2. It is against this backdrop of a burgeoning fiscal deficit and a compelling requirement of adopting fiscal prudence that the reforms in Government securities markets commenced in the beginning of the 1990s. Apart from the government's increasing borrowing requirements and the requirement of keeping its borrowing cost reasonable it was the need to develop a benchmark for other fixed income instruments for the purposes of pricing and valuation, and to act as a conduit for convergence of interest rates in other markets together with a need to operate monetary policy through indirect instruments like outright OMOs and repos-which requires an active secondary market for G-Secs, that gave further rationale for undertaking reforms in Government securities market. Some of the most salient reforms initiated in the G-sec market since 1992 are presented in Box 1.

Box 1: Reforms in the G-Sec Market

Year	Reform Initiated	Objective	Remarks
June 1992	Introduction of auction method for issue of Central Government Securities	To make Government yields market determined	Price discovery has become very fine over a period of time.
December 1992	Introduction of RBI repo auction	Fine-tuning liquidity	Precursor to LAF
Year	Reform Initiated	Objective	Remarks

January 1994	Issued Zero Coupon Bond for the first time. Securities Trading Corporation of India (STCI) commenced operations	To add new instruments and intermediaries	STCI and other PDs have become important intermediaries in the G-Sec market.
August 1994	Agreement between RBI and GOI on limiting issue of ad hoc treasury bills	To do away with automatic monetisation	Improved cash management for Government and a transparent issuance process
March 1995	Primary Dealer system introduced	To strengthen the market Intermediation and support primary issue	PD system has evolved as an important segment of G-sec market.
July 1995	Delivery-versus-Payment (DVP) in G- secs was introduced	To reduce settlement risk	We have now moved to DVP-III.
September 1995	Floating Rate Bonds (FRBs) introduced	To add more instruments	Floater are now becoming popular. 15-20 per cent of fresh GOI borrowing is now through FRBs.
January 1997	Technical Advisory Committee (TAC) constituted	To advise RBI on developing G-sec, money and forex markets	Plays a pivotal role in implementing RBI's reform agenda based on a consultative approach
March 1997	Introduction of WMA system for Centre	Discontinuation of automatic monetisation	Improved transparency and pricing as also autonomy in monetary policy making.
April 1997	FIMMDA was established	Introduction of self regulation and development of market practices and ethics	Improved practices. Repo market has been developing.
July 1997	FIs were permitted to invest in G-secs	To broaden the market	FIs have become important players in the market today, particularly in T-Bill segment.
December 1997	Capital Indexed Bonds were issued	To help investors hedge inflation risk	Efforts being made to revitalise this product
April 2000	PDAI was formed	To improve secondary market	This has also helped manage the overnight risk
	Sale of securities allotted in primary issues on the same day		
June 2000	Introduction of Liquidity Adjustment Facility (LAF)	To manage short term liquidity mis-matches	Emerged as an important monetary tool
May 2002	Compulsory holding of G-secs in demat form by RBI regulated entities	To improve settlement system	The progress of dematerialisation is being monitored

June 2002	PDs were brought under the BFS jurisdiction	For integrated supervision of market	The position is being reported periodically to BFS
October 2002	Trade data of NDS is being made available on RBI website	To improve transparency	The measure is helping the small investors as well.
Year	Reform Initiated	Objective	Remarks
January 2003	Trading of G-secs on stock exchanges	To facilitate easier access and wider participation	This has not taken off very well. Efforts are on to improve the position
February 2003	Regulated constituents permitted participation in repo markets	To widen the market	Activity in Repo market has improved
June 2003	Interest Rate Futures introduced	To facilitate Hedging of interest rate risk	These futures have not taken off
July 2003	Government Debt Buy-Back scheme implemented	To reduce interest burden of government and help banks offload illiquid securities	Other measures for active consolidation being considered
March 2004	Introduction of DVP III	To obtain netting efficiency and to enable rollover of repos.	Running successfully.
April 2004	Introduction of RTGS	Real time, online, Large value inter-bank payment and settlements	Running successfully

The share of Government securities in financing the fiscal deficit of the Central government, has risen from 21 per cent in 1991-92 to 80 per cent in 2004-05, illustrates the significant role of the marketable dated securities and hence the continued vigor for carrying on with the reforms in government securities market.

3. It will be observed from Table 1 below that between 1992 and 2005, the outstanding stock of central government securities has increased twelve-fold to Rs.8,953.48 billion. As a proportion of GDP, it has more than doubled from 14.7 per cent to 33.51 per cent. The average maturity of securities issued during the current year (2004-2005) has elongated to 14.13 years from around 6 years in 1996. The weighted average cost of securities issued during the year first rose from 11.8 per cent in 1992 to 13.8 per cent in 1996 and then fell to 6.11 per cent in 2004-05. Turnover which had increased to over 200 per cent of GDP in 2003 in the falling interest rate scenario has reduced considerably (Table 1).

Table 1: Snapshot of the Indian G-Sec Market

Item	1992	1996	2002	2003	2004	2005
Outstanding stock (Rs. in billion)	769	1375	5363	6739	8243	8953
Outstanding stock as ratio of GDP (per cent)	14.68	14.20	27.89	27.29	30.09	28.94
Turnover / GDP (per cent)	--	34.21	157.68	202.88	87.78	72.99
Average maturity of the securities issued	--	5.70	14.90	15.32	14.94	14.13

during the year (in Years)						
Weighted average cost of the securities issued during the year (Per cent)	11.78	13.77	9.44	7.34	5.71	6.11
Minimum and maximum maturities of stock issued during the year (in Years)	N.A.	2-10	5-25	7-30	4-29	5-30
PD share in the turnover						
A. Primary market			70.46	65.06	50.84	36.02
B. Secondary market		--	22.04	21.72	24.25	26.7

* CCIL : Clearing Corporation of India Limited.

Note : Turnover is the total of outright (volume*2) and repo (volume*4) turnover.

Sources : 1. RBI, Report on Currency and Finance, Various issues. 2. RBI (2003)

Primary Market Developments

Widening of Investor Base

4. Prior to the reforms, the investor base for government securities in India comprised banks, financial institutions, Provident Funds (PFs), insurance and pension funds primarily due to the nature of statutorily mandated investments. Diversification has taken place with the entry of cooperative banks, regional rural banks, mutual funds (especially the entry of 100 per cent Gilt Mutual Funds) and non-banking finance companies in the recent period. Even though the world over the Government securities markets has a dominant institutional holding pattern, to enable small and medium sized investors to participate in the primary auction of government securities, a "Scheme of Non Competitive Bidding" was introduced in January 2002, which is open to any person including firms, companies, corporate bodies, institutions, provident funds, trusts, and any other entity prescribed by RBI. The scheme provides for allocation of up to 5 per cent of the notified amount at the weighted average rate of accepted bids. Investors can bid through banks or PDs a minimum amount of Rs.10,000 to a maximum amount of Rs. 20 million. Screen based order-driven trading on the stock exchanges has also been introduced to encourage retail participation in the G-sec market.

Consolidation of Issues to Improve Liquidity

5. In order to increase the secondary market turnover, especially in benchmark securities across the yield curve passive consolidation through reissuance/reopenings was started in 1999 (Table 2).

Table 2 : Consolidation of G-Sec Issues

	(Per cent)						
	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05
Reissues/total borrowing	33.30	86.57	58.89	66.73	59.20	66.67	82.14

6. The larger stock size of securities in question has greatly improved market liquidity and helped the emergence of benchmark securities in the market. In view of administrative costs and legal considerations active consolidation has not been resorted to (except a one-off debt swap which involved tax benefits against provisioning by banks). The reissues are however limited by the maximum outstanding amount that is perceived as 'manageable' from the viewpoint of redemption in the year of maturity. As at the end of Feb 2005, there were 121 Central Government securities with outstanding amount of Rs. 8,953 billion. Of these, 41 securities with minimum outstanding issues of Rs. 100 billion or more accounted for 62 per cent of the total outstanding amount.

Elongation of the Maturity Profile of New Debt and Reduction in the Cost of Borrowing

7. In the early 2000s in a scenario of falling interest rates, the Reserve Bank succeeded in increasing the tenor progressively up to 30 years which had in most of the 1990s, ranged up to 10 years, thereby reducing the potential redemption pressure and refinancing risk. This, has also helped to develop the yield curve for longer tenors (Table 3). Thus, the weighted average maturity of bonds issued during a year, which was around 5.5 years in 1996-97, increased to 14.13 years by mid- March 2005.

Table 3: Weighted Average Yield and Maturity for Market Loans of Government of India

Year	Weighted Average Yield (New Loans) (Per cent)	Range of Maturity of New Loans (Years)	Weighted Average Maturity (New Loans) (Years)	Weighted Average Maturity of Outstanding Stock (Years)
1995-96	13.75	2-10	5.7	N.A.
1996-97	13.69	2-10	5.5	N.A.
1997-98	12.01	3-10	6.6	6.5
1998-99	11.86	2-20	7.7	6.3
1999-00	11.77	5-20	12.6	7.1
2000-01	10.95	3-20	10.6	7.5
2001-02	9.44	5-25	14.3	8.2
2002-03	7.34	7-30	13.8	8.9
2003-04	5.71	4-29	14.94	9.78
2004-05	6.11	5-30	14.13	9.42

Diversification of Debt Instruments

8. Plain vanilla, fixed coupon securities formed, most of the government bond issuances prior to the 1990s. To meet the diverse funding and hedging needs of its participants, instruments like zero coupon bonds, capital indexed bonds, floating rate bonds and bonds with call and put options have also been issued thereafter along with plain vanilla bonds which continue to remain the mainstay. When the enabling legislation is enacted the introduction of STRIPs will be undertaken as these instruments would enable better asset-liability management of participants and help them hedge interest rate risk, balance sheet risk and inflation risk besides reducing the unsystematic risk, by facilitating the participants to diversify their portfolio.

Secondary Market Developments

Development of an Elongated and Smooth Yield Curve

9. The issuance of 30-year bonds, after a break of 15 years - to meet the requirements of the insurance sector together with the sustained efforts of RBI to elongate the maturity profile resulted in a smooth and reliable yield curve to act as the benchmark for the other markets for pricing and valuation purposes.

However of late with the interest rate outlook no longer being soft the relative drying up of liquidity in the market has had an impact on the yield curve which has become kinky as only a few benchmark securities continue to trade in sufficient quantity to enable proper price discovery.

Development of a Deep and Liquid Market

10. Table 4 below illustrates that there after a near 20-fold increase in the volume of transactions since 1995-96. 2004-05 has, however, seen a reduction in volumes.

Table 4: Volume of Secondary Market Transactions in the G-Secs Market

Year	Share of Outright (Per cent)	Share of Repo (Per cent)	Total (Rs. billion)
1996-97	76.40	23.60	1,229
1997-98	86.74	13.26	1,857
1998-99	82.53	17.47	2,272
1999-00	84.66	15.34	5,393
2000-01	81.95	18.05	6,981
2001-02	77.00	23.00	15,739
2002-03	71.20	28.80	19,557
2003-04	63.69	36.31	24,334
2004-05	41.09	58.91	21,894

Source : NSE (2003) and Reserve Bank of India.

Development of Market Infrastructure

Securities Settlement System (SSS)

11. Settlement of government securities and funds which began in 1995 under Delivery vs. Payments (DvP) has evolved from being settled on a gross basis (both securities and funds) to settlement on a net basis. Introduction of novation and guaranteed settlement in G-Sec trades by Clearing Corporation of India Ltd (CCIL), established in February 2002 to act as clearing house and a central counterparty, has ensured resolution of the problem of gridlock of settlements. To enable wider participation banks and primary dealers have been authorized to open Constituent Subsidiary General Ledger (CSGL) in the RBI's PDO. Detailed guidelines have been issued to ensure that entities providing custodial services for their constituents employ appropriate accounting practices and safekeeping procedures. With the implementation of RTGS, SSS will also be linked to RTGS to provide intra-day liquidity to the market participants.

Negotiated Dealing System (NDS)

12. Operationalisation of Negotiated Dealing System (NDS), on February 15, 2002 has facilitated secondary market transactions in Government securities by reducing the time lag in dissemination of information on trades. It also provides an online electronic bidding facility in the primary auctions of Central/State

Government securities, and OMO auctions. This system has been developed further so that anonymous screen based, order matching trading can take place more efficiently and reduce telephone based trading. The NDS has enabled “paperless” settlement of transactions in government securities with electronic connectivity to CCIL and the DVP settlement system at the Public Debt Office through electronic SGL transfer form. All entities having SGL Accounts with RBI have joined the NDS-CCIL system. NDS was integrated with the securities settlement system and primary market operations. Further, all the regional Public Debt Offices (PDOs) were interconnected and automated which resulted in electronic maintenance of record of ownership of stock in physical and SGL form. This has facilitated electronic transfer of record of ownership to any PDO in the country.

Clearing Corporation of India Limited (CCIL)

13. The Clearing Corporation of India Limited (CCIL) started clearing of transactions in government securities and repos reported on the NDS since February 15, 2002 and clearing of Rupee/US\$ forex spot and forward deals since November 12, 2002. It currently has 154 members participating in the securities settlement. Acting as a central counterparty through novation, the CCIL provides guaranteed settlement and has in place risk management systems to limit settlement risk and operates a settlement guarantee fund backed by lines of credit from commercial banks. The netting of funds by CCIL reduces the liquidity requirements of the market and thereby liquidity risk of the system. All the transactions in government securities concluded or reported on NDS have to be necessarily settled through the CCIL. CCIL has also initiated another instrument called “Collateralised Borrowing and Lending Obligation” (CBLO) - a tripartite repo product for facilitating liquidity and cash management to other participants. There are so far 67 members participating in CCILs’ CBLO segment.

Trading in Stock Exchanges

14. To facilitate easier access and wider participation in the Government securities markets, a facility provided to buy and sell Government securities through the stock exchanges (NSE, BSE and OTCEI) with effect from January 16, 2003 has not developed markedly although the technical infrastructure is in place.

Introduction of Market Intermediaries

15. The system of Primary Dealers introduced in 1996 with privileges of liquidity support and provision of incentives for underwriting primary issuances of government securities and develop the secondary market has seen 17 PDs in operation reflecting a mix of ownership. The amount of PDs’ absorption in the primary market for government securities has been increasing over the last few years. The details of the primary purchases, both dated GOI securities and Treasury Bills by the PDs are provided in Table 5. Similarly, the performance of the PDs in the secondary market has been good as reflected in the increasing

turnover (Table 6).

Year	PDs absorption of		Total amount issued		Percentage of PD absorption to total amount issued	
	Treasury Bills	Dated GOI Securities	Treasury Bills **	Dated GOI Securities *	Treasury Bills	Dated GOI Securities
2000-01	238	447	280	690	84.95	64.76
2001-02	270	560	325	853	83.21	65.60
2002-03	339	539	461	888	73.49	60.68
2003-04	404.46	508.35	629	1000	64.30	50.84
2004-05***	332.11	379.51	1445	1053.5	22.98	36.02

*Excludes devolvement and private placements with RBI.

**Excludes Non Competitive Bids

*** includes MSS

Year	PDs turnover (both outright and repos) in		Market Turnover		Percentage of PD turnover in the total turnover	
	Treasury Bills	Dated GOI Securities	Treasury Bills	Dated GOI Securities	Treasury Bills	Dated GOI Securities
2000-01	765	3623	1877	14545	40.75	24.91
2001-02	832	7978	2370	36204	35.12	22.04
2002-03	900	9875	4457	45457	20.19	21.72
2003-04	1660	14545	4638	59978	35.80	24.25

Source: Reserve Bank of India.

16. However, besides being active investors and traders as reflected in the data above, PDs also perform a market-making function, in the course of which they are allowed access to the Reserve Bank's liquidity window in the form of the Liquidity Adjustment Facility and assured liquidity support in consonance with their commitments in primary auctions. PDs have been brought under the purview of the Board for Financial Supervision (BFS) in 2002-03 in view of their large number, highly leveraged portfolios with short-term funds, substantial share in the Government securities market, and a significant position in the money market, comparable with banks and the consequent systemic importance.

Improvements in Transparency and Data Dissemination

17. The convention of an indicative calendar for issuance of dated securities introduced since 2002 has enabled both institutional and retail investors to plan their investments better and also to provide further transparency and stability in the Government securities market. To improve the information flow to the market, the Reserve Bank announces auction results soon after the auction and all transactions settled through SGL accounts are released on the same day by way of press releases/on RBI website. Statistical information relating to both primary and secondary market for Government securities is disseminated at regular intervals to ensure transparency of debt management operations as well as of secondary market activity. This is done through either press releases or Bank's publications (*e.g.*, RBI Monthly Bulletin, Weekly Statistical Supplement, Handbook of Statistics on the Indian Economy, Report on Currency and Finance and Annual Report). The Reserve Bank is also an initial signatory of Special Data Dissemination Standards of the IMF and places substantial information and statistics on its website.

18. In order to provide wider access of the data and transparency in the Government Securities market, the data on trades in Government Securities and other data captured by the Negotiated Dealing System (NDS) has been disseminated to the general public through the RBI website since October 25, 2002. In addition, the data on transactions in government securities settled daily at the Public Debt Office (PDO), Mumbai has also been placed on the website.

Annex II

Open Market Operations - Cross Country Practices

The processes employed by various countries to undertake OMOs have been described in this Section. This information has been compiled from information made available by these countries in the public domain.

United States of America

1. The US monetary policy follows a multiple indicator approach and the transmission of the monetary policy impulses is through the federal funds rate a rate determined by the federal funds market which is a result of the Fed Reserve requiring its member banks to borrow and sell in order to maintain an average balance for a fortnight as a percentage of their net demand and time liabilities. Although the banks have access to borrowed reserves (overnight adjustment credit, seasonal credit and extended structural credit) from the Fed's discount window, they used the same at the margin as a last resort. Therefore it is the Non - borrowed reserves (reserves generated from borrowings other than borrowing from feds discount window) that creates the demand from banks to maintain the day to day minimum reserves from banks which provide the supply as they have excess reserves than required. Resultantly the Fed's OMO targets the supply of non-borrowed reserves so that the feds funds rate is maintained at levels announced by the Federal Open Market Committee (FOMC) from time to time.

2. The Federal Reserve normally conducts its OMOs in the U.S. Treasury securities market. It uses two general approaches to add or drain reserves through changes in its portfolio of securities: outright purchases or sales (and redemptions) of securities, when shortages or excesses are expected to persist, and repurchase agreement/matched - sale purchase transactions, when surplus/deficit is expected to be short-lived. The timing of outright transactions is driven primarily by the expected persistence of excesses or deficiencies in reserves; the exact timing of such operations also considers market conditions, as the Federal Reserve attempts to avoid rapidly rising or falling markets, and other possible events that may add to market volatility or impede price movements. Fed also undertakes outright transactions in Treasury securities directly with foreign official accounts on any day. Usually, the Federal Reserve replaces maturing securities in its portfolio by rolling them over at Treasury auctions so as to avoid unwanted reserve drains. Occasionally, however, if it wants to reduce reserve levels, it redeems a modest portion of maturing securities from its holdings. In fact the Fed generally keeps redemptions modest in size to avoid complicating the Treasury's debt management plans. Redemptions have the same effect on reserves as outright sales.

3. In case of Repurchase Agreements undertaken to infuse temporary liquidity the acceptable collateral is broadly based to include Treasury bills, notes and bonds and certain federal agency securities held by both dealers and their customers. The Fed is authorized to arrange the term RPs overnight basis and on term basis for up to 15 days, however most mature within seven days. To drain reserves on a temporary basis Fed arranges Matched Sale Purchase (MSPs) transactions for one to seven days. The fed In arranging an MSP, Fed selects a Treasury bill in which the System has ample holdings. Primary dealers

must be either commercial banking organizations subject to official supervision by U.S. federal bank supervisors or brokers/dealers registered with the Securities and Exchange Commission. They must meet the minimum capital standards of their primary regulators, and also must have certain minimum amounts of capital. Fed arranges its open market transactions with primary dealers through an automated processing system. For RPs and MSPs, an electronic announcement is sent to primary dealers and, typically, they are asked to respond within 10 to 15 minutes. Fed notifies all dealers of the propositions accepted and rejected, usually within about 5 minutes of the closing time for the response, again using its automated processing system. The Fed does not have a fixed time for its outright purchase and sale operations. It times its outright transactions during the day when market participants are not preoccupied with other developments, because these transactions can be somewhat more time consuming than RPs and MSPs.

4. The US has a forward market for Treasury bills. After the Treasury announces the amount of bills to be auctioned a week in advance, primary dealers begin trading forward contracts, on individual basis and on behalf of clients subject to a cap on the long position in terms of market volume. As the bills are to be delivered “when issued,” this forward market is usually referred to as the “when-issued market.” After the auction, trading continues in the when-issued market until the when-issued contracts mature, subsequent to which the bills are traded in a secondary market. If a primary dealer buys in the “when-issued market” (or in the secondary market), the uncertainty of losing in the auction is obilerated.. A short squeeze can, however, occurs when many of those who have net short positions in the “when-issued market” fail to acquire bills in the auction. In this event, they have two alternatives.

The Euro Area

5. Though the primary objective of the Euro system is to maintain price stability, the Euro system also has to support the general economic policies in the European Community. The Euro system conducts **OMOs**, offers **standing facilities** and requires credit institutions to hold average **minimum reserves** on accounts with the Euro system The most important instrument is the **reverse transaction** (applicable on the basis of repurchase agreements or collateralized loans). The instruments used by ESCB for their OMO are – main refinancing operations through reverse transactions with a weekly frequency and maturity; long term refinancing through reverse transaction operations with a monthly frequency and a maturity of normally three months; fine tuning operations executed on adhoc basis through reverse transaction, outright transactions, foreign exchange swaps and the collection of fixed deposits. Fine-tuning operations are normally executed by the national central banks through quick tenders or bilateral procedures. Liquidity-providing fine-tuning reverse transactions are normally executed through quick tenders while liquidity-absorbing fine-tuning reverse transactions are executed, as a rule, through bilateral procedures. In addition, the Eurosystem may carry out **structural operations** through the issuance of debt certificates, reverse transactions and outright transactions.

6. The interest rate on the marginal lending facility normally provides a ceiling for the overnight market interest rate while the interest rate on the deposit facility normally provides a floor Apart from the requirement to present sufficient

underlying eligible assets, there is no limit to the amount of funds that can be advanced under the marginal lending facility. The maturity of credit extended under the facility is overnight. The interest rate is announced in advance by the Euro system. There is no limit to the amount counterparty may deposit under the facility. The interest rate is announced in advance by the Euro system.

United Kingdom

7. The Bank of England's ability to influence market interest rates depends principally on it supplying the marginal liquidity required by the banking system (i.e. the liquidity shortage), rather than on the way in which liquidity is supplied. The short-term maturity of the Bank of England's lending operations ensures that its counterparties regularly need to come to it to refinance the lending. As a result, on most days the banking system is short of liquidity, which the Bank of England provides via OMOs. It seeks to provide the system's daily liquidity requirement at its principal rounds of operations at 9.45 am and 2.30 pm, which are conducted at the official repo rate, set by the MPC. Sometimes, however, liquidity may need to be provided later in the day: further rounds of operations, conducted at 3.30 pm and 4.20 pm, are designed to square-off any remaining imbalances in the banking system in as orderly a manner as possible, usually at a penal rate of interest. 4.2 In its repo operations to supply funds to market participants, the Bank of England purchases eligible securities from its counterparties and agrees to sell back equivalent securities at a pre-determined future date, around two weeks later. Bank of England also offers its counterparties the option to sell it bills on an outright basis. In its repo operations to supply funds to market participants, the Bank of England is willing to purchase (and then resell) Gilts (including gilt strips); HM Government non-sterling marketable debt; Sterling Treasury bills; Bank of England euro bills and euro notes; Eligible bank bills; Eligible local authority bills; Sterling-denominated as well as Euro denominated securities issued by European Economic Area (EEA) central governments and central banks and major international institutions. The range of securities that the Bank of England is willing to purchase on an outright basis in its OMOs is narrower - Sterling Treasury bills; Eligible bank bills; and Eligible local authority bills. The maximum residual maturity of the bills that the Bank of England is willing to purchase outright is no longer than the maturity of the longest-dated repo for which bids have been invited that day (usually around two weeks). The minimum residual maturity for outright bill purchases is one day. Any change in the stock of bank notes in circulation (or other sterling movements across the Bank of England's balance sheet) will generate an equal and offsetting financing requirement for the banking sector.

8. The Bank of England closely monitors these flows across its balance sheet in order to know how much liquidity to supply to market participants each day. The Bank of England's main daily OMOs are normally conducted at 9.45 am and 2.30 pm. At 9.45 am, it releases a forecast of the market's liquidity position for the day together with some accompanying information about the principal factors contributing to the forecast, including changes in the note issue, the amount of maturing refinancing to be repaid that day, and the deviation from target (on the previous day) of the settlement banks' balances on their accounts at the Bank of England. If, the forecast shortage exceeds a minimum threshold, it invites its counterparties to submit offers for repos and/or outright sales of bills. The Bank of England also states the interest rate at which it is prepared to operate (the

repo rate) and the maturity date normally the two-week forward date. If the Bank of England offers repos to two or more maturity dates, the total amount of funds allotted to each participant is normally split approximately equally between these dates, or at the Bank of England's discretion. Counterparties wishing to participate in the round have five minutes in which to bid for funds. No single counterparty is permitted to bid for more than the total amount of the forecast shortage.

9. The Bank of England normally announces the results within 15 minutes of the start of the round, publishing the total amounts allotted via repos and through outright purchases. At the 9.45 am round, the Bank of England normally does not relieve all of the forecast shortage (even if this amount is fully bid for) since it may need to revise slightly its forecast during the course of the day in the light of updated information. If the aggregate bids for funds exceed the amount the Bank of England wishes to allot, it pro-rates the bids. The amount by which the Bank of England seeks to leave the market short of funds after the 9.45 am round is determined principally by the likely scale of revisions to the forecast shortage, but may also be adjusted in the light of the behaviour of short-dated interest rates relative to the official repo rate. Such repos are invited with one or more specified maturity dates; the dates chosen will normally be days on which a significant liquidity shortage is forecast. Alternatively, the Bank of England can pre-empt a forecast liquidity surplus by asking the DMO to issue extra Treasury bills at its weekly tender and deposit the proceeds with it; this would drain structurally any surplus liquidity from the money market for a period. In the event of a residual liquidity shortage remaining after the 2.30 pm round of operations, the Bank of England publishes a forecast of the shortage remaining at 3.30 pm and invites bids for overnight repos. The rate applied to these overnight repos is set normally at 100 basis points above the official repo rate. This provides counterparties with a standing invitation to make (collateralised) overnight deposits with the Bank of England and so helps to moderate undue softness in overnight market interest rates. To ensure that this facility does not discourage active trading between market participants, the interest rate paid on overnight deposits is set normally at 100 basis points below the official repo rate. The deposits made by counterparties are collateralised against gilts. The 100 basis point upper and lower 'band' is designed to allow active trading in the sterling money markets but to moderate undue volatility in market interest rates, which might complicate banks' liquidity management and deter the use of money markets by non-financial companies.

10. If, after the conclusion of the above OMOs, a residual liquidity shortage remains, the Bank of England makes available an overnight repo facility to the settlement banks at the end of the day, after market trading has finished, to prevent one or more of them ending the day with a negative balance on their operational accounts. These institutions are invited to apply for funds between 4.20 pm and 4.30 pm. No settlement bank is permitted to apply for more than the amount of the residual shortage. When the 3.30 pm deposit facility has been used, the amount of refinancing available at 4.20 pm is increased by the size of the deposit(s), thereby ensuring that this liquidity is re-cycled to settlement banks. The Bank of England pro-rates bids for funds from the settlement banks if, in total, they exceed the amount of the residual shortage. On days when the residual forecast shortage reflects only a late revision to the day's forecast shortage by the Bank of England (including the re-cycling of 3.30 pm deposits),

funds are normally provided to the settlement banks at the official repo rate. However, on days when there is a remaining shortage but there has been no late change to the forecast (and, therefore, the settlement banks should reasonably have been able to take the necessary funds from the Bank of England earlier in the day) funds are provided at a higher rate, normally 150 basis points above the official repo rate. On days when a residual shortage at 4.20 pm reflects both a late forecast revision against the market and some remaining shortage from earlier rounds, a single composite rate is charged – normally a weighted average of the official repo rate (weighted by the share of the forecast revision in the residual shortage) and the official repo rate plus 150 basis points (weighted by the rest of the shortage).

11. The Counterparties are banks, building societies and securities firms that are subjected to appropriate prudential supervision and have the technical capabilities to respond to Bank of England's daily round of operations.

Japan

12. The OMOs of the BOJ can be classified in two broad categories: fund-providing and fund-absorbing operations. Several market instruments can be used for providing temporary liquidity, such as purchases of short-term government bills or commercial paper under repurchase agreements. Temporary liquidity provision also takes the form of borrowing of securities against cash collateral (so called JGB repos). In addition to these types of operations, the BOJ also conducts outright purchases of bills, against the standing collateral pool. Among all the instruments, purchases of short-term government bills under repurchase agreements are the most frequently used. The maturity of all these operations ranges, in most cases, from one week to three months, although it can be extended, except for purchases of commercial paper, to six months (operations with a maturity of less than one week are also available). As regards more permanent funds provision, the BOJ conducts outright purchases of government bonds regularly (currently twice a month), so that the amount bought is consistent with the net increase in banknotes in the long run. For short-term funds provision, there has been a shift of emphasis from OMOs using commercial bills to those using government securities. The instruments used for absorbing funds are mainly sales of short-term government bills under repurchase agreements and outright sales of bills issued by the BOJ. All operations are conducted through multiple price (American) auctions and settlement can be on the same day or on some future date. The instruments used for same day settlement are purchases or sales of government bills under repurchase agreements, outright purchases of bills, or BOJ bill sales. As the purpose of the OMOs is to guide the level of the overnight rate, there is no attempt to affect any particular market in which the operations are conducted; instead, practical considerations influence the choice of instruments to be used.

Brazil

13. Brazil, like most countries adopting an inflation targeting framework for monetary policy, uses the overnight interest rate as the instrument for conducting monetary policy. The Monetary Policy committee, therefore, sets the target for the overnight-Selic rate in its monthly meetings, and under the Committee's

directives the open market trading desk adjusts market liquidity on a daily basis to maintain the effective overnight interest rate close to the target.

14. OMOs are the main instrument for liquidity adjustment in the system. Standing facilities are not used to balance supply and demand for bank reserves. The demand for bank reserves is determined by reserve requirements on demand deposits, which, despite substantial reduction in the last two years (from 75% to 45%), are still high by international standards. On the supply side of bank reserves, factors affecting them are the usual: (i) currency held by the public;(ii) the central bank's operations in the foreign exchange market; (iii) tax revenue, government spending and budgetary endowments; (iv) placing and redemption of government securities;(v) discount window facilities; (vi) reserve requirement adjustments; and (vii) OMOs. The Central Bank has been operating its open market desk through repurchase agreements, using as collateral national treasury and central bank securities. Outright operations are less frequent, as, depending on the volumes traded, they can cause volatility in bonds prices, and hence in the yield curve. On a daily basis, the central bank forecasts the market's liquidity needs, that is, it estimates whether there is shortage or excess of bank reserves, and carries out an informal auction aimed at balancing liquidity. Repo tenures usually vary from one to three days, and government securities are priced below market prices (with a haircut) to protect the lender against credit risk. The Central Bank carries out OMOs directly with 25 primary dealers, selected twice a year among the more active institutions in the financial system. These dealers act as an interface with other market participants, and are chosen according to performance criteria, including each institution's performance in the primary and secondary markets for government bonds. As noted, OMOs are conducted only through primary dealers, but, unlike in other countries, all financial institutions can participate in the primary offerings of government securities, not just the primary dealers. Participation in auctions is restricted to financial institutions keeping an account in the Sistema Especial de Liquidação e de Custódia (Selic), which is an electronic book-entry system that controls the custody of and registers all operations regarding domestic government securities. The two parties (buyer and seller) must input every transaction into Selic and the system makes a two-sided matching of their orders. The seller's position in securities and the buyer's position in bank reserves are checked. The transaction is settled on a DvP basis, if and only if securities and cash are immediately available.

15. Since August 2001, the shortage of bank reserves has been increasing because of the following factors: (i) the net selling of government securities, in particular those dollar-indexed; (ii) the policy of daily sales of foreign exchange reserves by the central bank in the spot market; and (iii) the primary surpluses of the public sector. In December 2001, this shortage exceeded BRL 20 billion. As the initiative on whether or not to provide bank reserves through OMOs rests with the central bank, though there is a presumption that this would be the case, the shortage of reserves in the system facilitates the conduct of a tight monetary policy.

Canada

16. OMOs are conducted in the secondary market through purchase with sell-back agreement (SPRA), and sale with buy-back agreement—both overnight on tap.

17. The Bank of Canada distributes three-month, six-month and one-year Government of Canada treasury bills, and Canada bonds of various maturities, through periodic auctions. The "when-issued" market for these Treasury bills/bonds occurs in the period between the call for tenders and ultimate settlement date of the auctioned bonds. There are very limited restrictions in the ticketing of "when-issued" trades. Dealers have complete information available to ticket trade confirmations for auctions of three-month and six-month treasury bills and auctioned Canada bonds which are reopenings of existing maturities.

Italy

18. Outright purchase and sale; purchase with sell-back agreement (SPRA), and sale with buy-back agreement. Combination of discriminatory-price auction and tap transactions.

Australia

19. Reserve Bank of Australia's OMO designed to ensure that the actual cash rate remains close to target rate. The banks have no reserve requirements and OMO is conducted every business day. Bids/offers are accepted between 9:30am to 10:30 am and allotment takes place by 10:30 am to 10:45 and settlements are made on a T+0 basis. Both outright and repo transactions are conducted under OMO.

Annex III

Financial Market Integration: Empirical Evidence

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

2. In the economics and finance literature, a necessary condition for financial market integration is the convergence of risk-adjusted returns across the market continuum. The existence of a reference rate around which this convergence occurs is regarded as a sufficient condition of integration. As noted in the literature co-movement need not, however, indicate integration. Studies have found that market co-movements can also be the result of market contagion. In a world of asymmetric information about market prices, price changes in one market segment may depend on price changes in other segments through 'structural contagion coefficients'. As a consequence, markets do not absorb all information simultaneously and price movements exhibit lead/lag correlation structures.

3. Preliminary evidence of financial market integration is provided by the strength of association in the movements of rates of returns, *i.e.*, the cross correlation structure. The balance of opinion in the literature, however, does not favour the use of correlations for empirical verification of market integration. This is because financial rates of return predominantly exhibit 'random walk'

properties, *i.e.*, that today's prices cannot be used to predict future prices or that they are non-stationary with no tendency to revert to an underlying trend value. Variance is infinite under these conditions and this yields inconsistent estimates of the parameter. In India, most financial rate movements are found to be non-stationary. Accordingly, the series were differenced to make them stationary and correlation coefficients were computed on the differenced data. In the Reserve Bank's Annual Report, 2000-01, a comparison with the results of earlier studies (conducted on non-stationary data) shows a significant improvement in the correlation coefficient for call money rates and 91-day Treasury Bill rates from 0.62 in the period 1993-98 to 0.73 in 2000-01, the latter period containing the most recent episode of market volatility spread across segments. The correlation between 91-day Treasury Bill rate and the three-month forward premia improved from 0.49 to 0.87 and the correlation between call money rates and the forward premia remained high at 0.70.

4. Since differencing the data faces the disadvantage of losing information about underlying long run relationships between the rates of return, the co-movement between rates was examined in a co-integration framework in which linear combinations of non-stationary variables can be identified which are stationary. The empirical findings suggested that the simultaneous appearance of co-movement and volatility in financial markets indicated asymmetric integration. The structure of financial returns across markets continues to be differentiated by maturity, liquidity and risk, indicative of seams in the integration. In periods of orderly market conditions, the strengthening linkages between market segments suggests enhancement in the operational efficiency of markets as well as the conduct of monetary policy, the latter through the improvement in the transmission channels that integrated markets provide. On the other hand, the emerging market integration has entailed a swifter diffusion of turbulence originating in one market segment across the spectrum. Episodes of volatility have tended to unleash almost contemporaneous perturbations in several market segments, particularly the money, debt and foreign exchange markets. Even as efforts are intensified for deepening and broadening financial market segments and developing a seamless and vibrant market continuum, the policy response in the transition would rely on multiple interventions and a combination of instruments to ensure financial stability.

5. The integration of various segments of the money market has improved after the introduction of the Liquidity Adjustment Facility (LAF). In the Reserve Bank's Annual Report, 2003-04, it was found that the correlation coefficient between interest rates of CDs, CPs, 91-day Treasury Bills and repo rate with the call money rate improved steadily from 0.32, 0.54, 0.61 and 0.36, respectively, during the period April 1993 to May 2000 to 0.93, 0.90, 0.95 and 0.87 during June 2000 to June 2004. Correlation coefficients turned out to be lower after netting out the repo rate reflecting the influence of the LAF in promoting money market integration. The integration of money market segments was further validated by confirmation of the existence of cointegrated relationships among money market rates. The degree of cointegration has strengthened in the recent period, *i.e.*, June 2000 to June 2004.

6. In order to check recent trends in the integration of money, foreign exchange and government securities markets, an empirical exercise was carried out using

daily data for April 2003- February 2005. As the series are non-stationary, a multi-variate co-integration test was performed on the call money rate, 10-year Government securities yield and exchange rate indicated that no co-integrating relationship existed among financial markets on such a high frequency basis.

Annex IV

Short Sale in Government Securities Markets

What is Short Sale

Short sale is the sale of a security that the seller does not own and needs to borrow it to deliver to the buyer. There is no mention of short sale in any RBI instruction/circular/guideline; instead RBI has only been specifying the conditions subject to which any sale of a government security may take place. In terms of circular No. D.O. DBOD. FSC.46/C.469-91-92 dated July 26, 1991, RBI had advised banks that no sale transaction of Government securities (G-Secs) shall be put through without actually holding the securities in their investment account.

2. The constraint on sale provided in the RBI circular of July 26, 1991 continued till March 2004, except for a specific relaxation with regard to primary auction allotments in 2000. In March 2004, RBI permitted all SGL account holders to sell a security provided they have a confirmed purchase contract (either from RBI or, otherwise, guaranteed by CCIL) preceding such sale. No untoward transactions have been noticed following these relaxations and they have in fact had a positive impact on market efficiency, which in the long run reduces the cost of Government borrowing and helps developments of other market segments. In line with these gradual relaxations, we are in a position to take the next step of permitting short sales in Government securities.

3. Why Short Selling:

- (i) Today, in the absence of short sale, market players like banks and PDs can only maintain a long position in Government Securities. This exposes them to significant interest rate risk. Shorting of Government Securities is an appropriate risk management tool necessary to contain this risk.
 - (ii) In the absence of instruments to take two-way interest rate views, it is observed that the markets are active and liquid when rates are falling but turn lacklustre and illiquid when rates rise. Low volumes render markets shallow and prone to price manipulations. It is thus necessary to enable market participants to take two-way positions, to ensure market liquidity, irrespective of the direction of interest rates.
 - (iii) For efficient pricing in Government securities market it is necessary that the entire curve is efficient, and not just certain points in the curve. Due to relative demand and supply forces certain segments of the curve tend to get underpriced or overpriced. These are usually corrected in developed markets by participants buying the underpriced securities and selling the overpriced securities. Absence of short sales disables selling of overpriced securities as a result of which various segments of the curve remain at unnatural levels which seriously undermines the price discovery process in the market. Thus we have situations where securities of similar maturity profiles trade at very different yields, with the yield difference sometimes going as high as 50 basis points.
-

- (iv) The primary dealer (PD) system, created by RBI in 1995 to support the Government borrowing programme and to develop liquidity in the secondary market, is greatly hampered by the absence of short selling. One of the important obligations of the PD system is to fulfill their Bidding Commitments in primary auctions. When they expect interest rates to rise, their participation in primary auctions is constrained due to the interest rate risk. For example in 2004-05, when interest rates were rising, six PDs were unable to meet their bidding commitments in primary auctions. In this situation permitting short sales will enable PDs to hedge through a short position prior to an auction and they would thus be able to bid more aggressively in the primary auction, thus ensuring that the Government's borrowing programme does not suffer. This may eventually lead to lower cost to the government, as the pricing would be finer in auctions and bidding would be that much scientific as PDs (and other entities like banks as well) are able to hedge their interest rate risk
- (v) Another obligation of the PDs is market making in G-Secs, which involves making two-way prices. In the absence of short selling, they are unable to quote two-way prices for securities not held by them. Since it is not possible for PDs to carry stock of a large number of securities, a lot of entities (particularly small entities like provident funds, cooperative banks, and Trusts) are unable to get efficient prices for their requirements.

4. Thus, operationalisation of short sale would definitely benefit the financial markets in many respects viz. managing the interest rate risk, enabling pricing of a range of instruments such as bond futures, hedges for long positions on interest rates, and introduction of non-linear products like options.

5. The benefits of short sales have been recognized by various Groups/Committees that have dealt with interest rate markets. The Report of the Working Group on Derivatives (January 2003), the Report of the Group on Rupee Interest Rate Derivatives – Product Development and Rationalisation of Accounting and Risk Reporting (December 2003), the Sub-Group of TAC on Primary Dealers in India – Issues and Prospects (September 2004) have all recommended that short sales in Government securities markets should be allowed.

A Graduated Approach to Short Sales

6. Short sales can be permitted in the following stages.

a. Stage I – Intra Day Short sales

This would mean that participants can short sell any security provided these positions are covered by the end of the day.

Benefits: -

- (i) PDs as well as others can quote two-way prices, whether or not they hold the security. Any sale would be covered by buying subsequently (but before the end of the day) from anyone who holds the security.
 - (ii) Yield curve would become more efficient as intra-day sales enables participants to buy underpriced securities and sell overpriced securities.
-

- (iii) Markets would be active and liquid irrespective of the direction of interest rates.

Disadvantages:-

- (ii) Intra-day short selling would not really help PDs to cover their risk of primary bidding commitments, as they would need to run short positions in the run up to the auction to effectively hedge the risk of allotment in the auctions.
- (iii) Similarly, intra-day short selling would at best be a limited hedging tool for any participant to hedge intra-day risk of rising interest rates. They would need to carry the position for their trading horizon.

Risks:-

- (i) There could be some volatility, in the intra-day trading, more particularly towards the end of the day as participants try to cover their short positions. With experience, however, market participants would learn to manage these positions better through the day which should minimize this volatility. This is the same effect as what was experienced after the introduction of DVP III, only in the opposite direction.

b. Stage II –Short sales on Zero Net Duration basis

Under this method, the participants can short sell any security, subject to the delivery being invariably insisted upon and that is no net short duration of the portfolio at any point of time.

Benefits: -

- (iv) PDs as well as others can quote two-way prices, whether or not they hold the security. The volatility in individual securities will be minimum as participants can maintain net zero duration in a number of ways.
- (v) Yield curve would become more efficient as participants look to buy under priced securities and sell overpriced securities.
- (vi) Since curve trades are possible, yield curve will be more efficient.
- (vii) Markets would be active and liquid irrespective of the direction of interest rates.

Disadvantages:-

- (iv) The method does not allow a PD to hedge his bidding risk, since he needs to be short duration in the run up to the auction.
- (v) While curve trades are possible, since no participant can actually be short on a portfolio basis, he cannot take advantage of rising interest rates. He can at best minimize losses.
- (vi) Participants will carry a basis risk despite duration hedging. In our markets where illiquidity spreads sometimes go up to 30 bps or more, the basis risk could become substantial.
- (vii) Either regulatory or management monitoring of portfolio duration on dynamic basis may prove to be difficult, especially for banks without sophisticated skills set.
- (viii) Regulation would be very involved since we would need to specify the portfolio which will be the basis for this condition, e.g., whether HFT, or AFS or the total investment book.
- (ix) There is no known international precedence for this method.

Risks:-

- (ii) There could be a tendency to go short in the long dated securities, and cover the duration through holding of T-bills. This might lead a very steep yield curve, pushing the asset prices up to the disadvantages of long term investors like PFs and Insurance Companies.
- (iii) All the risks that apply to open short sales (discussed in next section) also apply in this case.

c. Stage III – Open Short sales

This would mean that participants can short sell a security without the requirement that these positions are covered by the end of the day. Participants can carry short positions for their trading horizon. The security sold short will be delivered by borrowing, say, through repos.

Benefits: -

- (i) PDs as well as others can quote two-way prices, whether or not they hold the security. Any sale would be covered by buying subsequently (but before the end of the day) from anyone who holds the security.
- (ii) Yield curve would become more efficient as short sales enables participants to sell overpriced securities and buy underpriced securities .
- (iii) Markets would be active and liquid irrespective of the direction of interest rates.
- (iv) PDs will be able to cover their risk of primary bidding commitments, which would improve the response at primary issuance.
- (v) Market participants will be better able to hedge their interest rate risk in a rising yield environment.
- (vi) Lower borrowing costs to the government.

Disadvantages:-

There are no obvious disadvantages but some significant risks as below.

Risks:-

- (i) In the initial phase, there could be a sharp downward pressure on prices to find a new equilibrium level. After the initial phase, however, two-way interest would appear, partly through booking of profits on earlier short positions, and partly as interest rate views get more divergent after the initial adjustment to any news/event. Conceptually, it is reasonable to believe that a market where there are no restrictions on participants' position taking ability will be less volatile than a market with such restrictions.
- (ii) There is a risk of excessive short selling which might lead to delivery problems as there would be a large demand to borrow the security. Internationally, this is reflected in repo rates for special securities, rather than in security prices. A security in demand in the repo market would be lent at lower (than normal) repo rates. This is a self-correcting mechanism.
- (iii) In an extreme case, there is a risk of a security, for which there is a large demand to borrow, being cornered by one/few players. This is a manipulated short squeeze, which could lead to a sharp rise in prices, enabling those who cornered the securities to book gains. Typically this possibility is averted if some explicit/implicit limit (in terms of percentage of outstanding stock) is imposed on holdings by any entity. Given the skewed holding pattern in Indian markets, such limits may

not be possible. US Treasury, for instance, holds the power to reopen any issue in case there is a shortage of that security. This provision has never been invoked but its existence in itself is a deterrent to indulge in cornering. Above all, it should be recognized that cornering stock is actually a market abuse, which should be dealt with sternly.

7. The risk of cornering (and short squeezes) can be indirectly controlled to a reasonable extent with the following safeguards.

- (i) Stipulate, at least in the initial phase, that no entity can hold a short position in a security beyond a limit (in terms of outstanding stock of that security), say, one per cent. Given that the average stock size varies between Rs.3000-25000 crore, the maximum amount of short sold position in a security cannot exceed Rs.250 crore, which is also a large enough size of short positions for most market participants.
- (ii) Stipulate that a security must be borrowed first before it is short sold. In other words an entity intending to short sale will first have to do the reverse repo transaction to borrow the security and then sell it. RBI will have to remove the constraint of sale of repoed stock to permit short selling.

Should short selling be permitted to PDs only

8. PDs are different from other market participants in that they have obligations to (i) bid in primary auctions, and (ii) make two-way prices. Therefore, they have more reasons to be given access to short sales than others. Permitting short sales only to PDs will also make monitoring easier. However, it may be better to permit short selling to all regulated entities for the following reasons: -

- (i) All participants have an equal need to hedge interest rate risk in a rising interest environment. It will be iniquitous to permit this facility only to one class of entities. For example, banks, who have the requirement to mandatorily hold Government securities, run a much higher interest rate risk.
- (ii) In Indian markets, apart from PDs there are many banks who also provide two-way prices and actively trade in the market. Providing short sale ability to PDs and not to these banks will adversely affect the latter's market making ability vis-à-vis PDs.

Proposal

9. In view the above, the it may be considered to implement short selling in the following stages.

Stage I - Intra-day Short Selling

- c. Eligible entities – All SGL account holders
- d. No other conditions.

Stage II - Short sale on zero net-duration basis

- a. Eligible entities – All SGL account holders
 - b. Conditions – Net portfolio duration should be positive or zero, Delivery based settlement and with limits on open postions.
-

- c. Position Limit for any entity – One per cent of outstanding stock issued of a security. This limit will apply to the entire group of related entities.
- d. Short sale must be preceded by a contract to borrow the security.

Stage III – Open Short Selling

- (a) Eligible entities – All SGL account holders
 - (b) Position Limit for any entity – One per cent of outstanding stock issued of a security.
 - (c) Short sale must be preceded by a contract to borrow the security.
-

Annex V

Organizational characteristics of PD system – International Practice

Background

The Primary Dealer (PD) system in India has been set up with the objectives of strengthening the infrastructure in the government securities market, improving secondary market trading systems, developing underwriting and market making capabilities for government securities outside the RBI and making PDs an effective conduit for conducting open market operations. The PD system consists of legally distinct entities, which are registered as NBFCs. like (i) subsidiaries of scheduled commercial bank/s and all India financial institution/s, (ii) companies incorporated under the Companies Act, 1956 and engaged predominantly in the securities business and in particular the government securities market and (iii) subsidiaries/ joint ventures set up by entities incorporated abroad under the approval of Foreign Investment Promotion Board (FIPB), This system of separate legal existence and not as part of a bank or financial institution has been favoured in India at the inception of PD system due to the then prevailing passive nature of investment by banks (due to high SLR requirements), lack of specialized skills in the areas of pricing, bidding, trading, risk management required for a primary dealer and need for a fresh approach to developing the Government Securities market. Looking at the performance of the PD system since its inception, there are no two opinions that the system has indeed played a great role in improving market liquidity. However, with the interest rate reversal and the current operating regulatory environment, the PDs have found it difficult to operate in a viable manner. In this context, suggestions have emerged that the participation in the PD system may be expanded to include banks to undertake PD activity departmentally.

International practices

A review of PD system in various countries reveal that in almost all countries, the concept of Primary Dealers is limited to an activity and not an entity. That is institutions like commercial banks and investment banks, financial institutions and broker-dealers are designated as Primary Dealers, and no separate entity need be formed for this purpose. In U.S.A banks and broker dealers are eligible to be selected as PDs by the Federal Reserve Bank. The entity applying for a PD recognition has to meet minimum capital standards. They then become eligible counterparties for OMO with Federal Reserve Bank of New York. There is no specified bidding/underwriting commitment, or secondary market obligation. All primary dealers are expected to (1) make reasonably good markets in their trading relationships with the Fed's trading desk; (2) participate meaningfully in Treasury auctions and; (3) provide the trading desk with market information and analysis that may be useful to the Federal Reserve in the formulation and implementation of monetary policy.

In France, PDs (called SVTs) are the market counterparties of choice for the Agency France Trésor and the Caisse de la dette publique. The composition of the SVTs has evolved over time. SVTs include large banking networks and capital market specialists, as well as organizations based in France and abroad. On July 7th, 2003, five French institutions and 16 non-resident institutions counted among the SVTs. These examples vindicate the point that in other countries there are no separate legal entities for undertaking Primary Dealer activities.

In UK, PDs are known as Gilt Edged Market Makers (GEMMS). In addition to being authorised by the FSA, either directly or under the terms of the EEA passport, GEMMs must satisfy certain obligations, and be members of a recognised investment exchange (RIE), such as the London Stock Exchange (LSE), registered as a market maker in gilts.

In countries like Singapore, Korea, Sweden, Portugal, South Africa etc., PDs are commercial and investment banks. A detailed Table of the entities operating as PDs in various countries, as per an IMF Survey is given in the next page.

Country	Profile of the Primary Dealer
Argentina	Commercial and Investment Banks
Armenia	Commercial Banks
Austria	Investment Banks and Foreign Institutions
Belgium	Commercial and Investment Banks
Brazil	Commercial and Investment Banks, Brokers, Foreign Institutions
Canada	Commercial and Investment Banks, Brokers
Czech Republic	Commercial and Investment Banks, Brokers
Finland	Commercial and Investment Banks, Foreign Institutions
France	Investment Banks
Ghana	Commercial and Investment Banks, Brokers
Greece	Commercial and Investment Banks, Foreign Institutions
Hungary	Commercial and Investment Banks, Brokers
Iceland	Commercial Banks
India	Subsidiaries of Commercial Banks, Foreign Institutions
Ireland	Commercial and Investment Banks, Brokers, Foreign Institutions
Italy	Commercial and Investment Banks, Foreign Institutions
Kazakastan	Commercial and Investment Banks, Foreign Institutions
Korea	Commercial Banks, Brokers, Foreign Institutions, Merchant Banks
Mexico	Commercial Banks, Brokerage houses
Morocco	Commercial Banks, Broker Dealer,
Netherlands	Commercial and Investment Banks, Foreign Institutions
Norway	Commercial Banks and Brokers
Portugal	Commercial and Investment Banks, Foreign Institutions
Singapore	Commercial Banks
Spain	Commercial and Investment Banks
Sweden	Commercial Banks and Brokers
Thailand	Commercial Banks
United Kingdom	Commercial and Investment Banks, Security houses
USA	Commercial and Investment Banks, Foreign Institutions