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Development of the Indian Debt Market

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DEVELOPMENT OF THE INDIAN DEBT MARKET

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Abstract

In tracing the evolution of the Indian debt market, this paper documents the developments in both the government securities (G-Sec) and corporate debt markets since the initiation of the economic reforms in the early 1990s. The reforms in the G-Sec market have been relatively comprehensive, touching on all aspects related to institutional development, the building of legal, payment and settlement systems, and improvements in market practices. These have been also been accompanied by changes of far-reaching significance in public finances – both at the central as well as state levels. The paper provides a quantitative evaluation of the progress made in the government securities debt market.

The progress in the corporate debt market, by contrast, has been limited. In tracing the cross-country experience of the corporate debt market we note that reforms in this sector need far more time and are far more difficult to implement, inter alia, because of the multiplicity of issuers and lack of an adequate number and size of institutional investors. The corporate debt market in India also displays a clear preference for the highest rated issuers, who typically express a preference for borrowing abroad. The suggestions for opening up the Indian debt market need to be in alignment with the calibrated approach to capital account liberalization in India that has helped in maintaining financial stability. Issues like extent of fiscal deficit, the persistence of inflation and interest rate differentials have an important bearing on this issue. Given the success in building the government securities market, however, as the Indian financial sector develops the corporate debt market can also be expected to grow in the future.

Keywords: Government securities; Corporate debt markets; Economic reform; India.

JEL Classification No.: E63; E66.

Debt and equity are both integral parts of a well developed capital market. While the specific composition of the market varies from country to country, cross-country experience seems to indicate that the debt market segment of the capital market develops more slowly than the equity market. While the debt market could be segregated into the government securities (G-Sec) and corporate bond markets, the existence of an efficient government securities debt market is usually seen as an essential precursor for the corporate debt market to function. The Indian experience of developing the government securities market followed a developmental rather than a regulatory and supervisory model and attempted to facilitate overall improvement in the strength of financial and economic system of the country. Along with the initiation of overall economic reforms in the early 1990s, the development of the government securities market was initiated in 1992. Today after almost two decades of the reforms process, it is an opportune time to take a look at the development of the debt market from a broader perspective.

In India and elsewhere in emerging market economies (EMEs) equity markets have developed much more than bond markets. Historically, however, bond markets have perhaps been the earliest components of the financial system. "From modest beginnings in the city states of Northern Italy some eight hundred years ago the market for bonds has grown to vast size" (Ferguson, 2008, p.67). These markets were essentially for sovereign bonds, and the corporate bond market had to wait for the invention of limited liability companies, as did the equity market. For a corporate bond market to come into existence, it needs the existence of an efficient and liquid government securities market to act as a benchmark.

The reforms in G-Sec markets, initiated in the early 1990s, facilitated smooth market borrowing of both central and state governments during this period. The experience gained in this process enabled passing of the Fiscal Responsibility and Budget Management Act in 2003, which*, inter alia*, prohibited the Reserve Bank from participating in the primary market henceforth. Prior to this reform, participation of the RBI in primary auctions had the potential of causing conflict of interest in its simultaneous role as the monetary authority of the country, and as debt manager of both the central and state governments. Now that the RBI can no longer influence the market interest rate contracted in auctions of government securities, the potential of such conflict of interest has been greatly minimized. The Twelfth Finance Commission's recommended that the centre shall no more act as a financial intermediary for states. Earlier, the central government's market borrowings were partly for on lending to states, which was done at a fixed administered interest rate and for a fixed long term maturity, unrelated to market conditions. Subsequent to this recommendation this role of the central government as a financial intermediary for states has ceased. States now have to access the market directly for their borrowing requirements. The interest rates faced by different state governments now reflect the view of the market on their relative creditworthiness. This significant reform became possible after the relative success in developing the G-Sec market. Development of the G-Sec market has also helped in the development of a deep and relatively liquid yield curve facilitating monetary policy transmission. The development of money markets during the process has also enabled better allocation of short term resources.

The limitations of public finances as well as the systemic risk awareness of the banking systems in developing countries have led to growing interest in developing bond markets. It is believed that well run and liquid corporate bond markets can play a critical role in supporting economic development in developing countries, both at the macroeconomic and microeconomic levels. Generally, there have been two models for developing debt markets internationally. Whereas, in developed countries like the U.S., regulators stepped in to bring about an orderly way of doing business after the markets had by themselves developed reasonably, in several developing countries such as India, the regulators have also had to assume the role of market developers. In fact, country experiences tend to indicate that the development of a debt market is a difficult and long drawn out process and requires active cooperation between different institutions.

In this paper, our primary aim is three-fold: (a) to trace the evolution of the debt market – primarily G-Sec and then the corporate debt market; (b) to evaluate the post-reform performance of the debt market; and (c) to speculate on the shape of things to come. Our broad conclusions tend to indicate that, whereas significant reforms in the G-Sec market have been effective as shown by various market-related indicators, the corporate bond market is yet to experience reforms of a similar scale. While various institutional, structural and market constraints are responsible for this uneven pace of development between the G-Sec and corporate bond markets, such an outcome is not unexpected in the current stage of India's financial development. Much work remains to be done for the corporate bond market to develop so that it also becomes a significant segment of the Indian financial sector.

The rest of the paper is organized as follows. Section I presents a review of the reforms in the G-Sec market, followed by some performance indicators in section II. Section III will be devoted to discussion on the corporate debt market. While section IV reviews some select issues and provides pointers to the road ahead, concluding observations are presented in section V.

A. I. Reforms in the Government Securities (G-Sec) Market

Until the 1990s, India had no bond market to speak of. As documented elsewhere, administered interest rates, fiscal dominance of monetary policy, automatic monetization of fiscal deficits and a high statutory liquidity ratio governing banks, led to financial repression and investment by captive investors ,and hence the absence of a liquid and transparent secondary market for G-Secs.[1] Low coupon rates were offered on Government securities to keep Government borrowing costs down, which made real rates of return negative for several years till the mid-1980s. During the 1980s, with increasing fiscal deficits the volume of Government debt expanded considerably, particularly short-term debt, due to automatic accommodation to the Central Government by the Reserve Bank of India, through the mechanism of *ad hoc* Treasury Bills.[2] With a captive investor base and low interest rates, the secondary market for Government bonds remained dormant. Artificial yields on Government securities

[1] Statutory Liquidity Ratio (SLR) is the stipulated ratio at which the commercial banks need to keep Government and other approved securities in their portfolio. SLR was progressively brought down from its high of over 38 percent in early 1990s to 25 percent currently. It was lowered temporarily to 24 percent in the wake of the global financial crisis in late 2008, but has been restored to the 25 percent level in October 2009.

[2] *Ad-hoc* Treasury bills were issued to the Reserve Bank of India for augmenting the Central Government's cash balance. RBI used to raise the cash balance of the Government whenever it fell very low by creating ad-hoc treasury bills and conversely it cancelled the ad-hoc bills when the cash balance position was favourable. These bills had also a maturity of 91 days but could be cancelled at any time even before the maturity period, if warranted by the Government's cash position.

distorted the yield structure of financial assets in the system, and led to an overall high interest rate environment in the rest of the market. Driven by these compulsions, the Reserve Bank's monetary management was characterized by a regime of administered interest rates, and rising Cash Reserve Ratio (CRR) and SLR prescriptions. High CRR and SLR left little room for monetary maneuvering.

In this perspective, reforms in the G-Sec market were crucial for overall financial system development and for making monetary policy effective. Relating government debt issuance to market related interest rates was essential for moving away from administered interest rates to market related ones in the system as a whole. In order to do so, development of appropriate market infrastructure, elongation of the maturity profile, increasing the width and depth of the markets, became extremely critical. Improving risk management practices and transparency were the other important considerations. Against this backdrop, and in the context of the overall economic reform programme, reforms in government securities markets commenced in the beginning of the 1990s. The most compelling factors for initiating reforms were: (a) increased borrowing requirements of the government due to the then burgeoning fiscal deficit; (b) the need to keep the cost of borrowing reasonable; (c) 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; (d) operate monetary policy through indirect instruments like open market operations (OMO) and repos, which requires an active secondary market for G-Secs; and (e) to improve the overall efficiency of financial markets. The salient reforms initiated in the G-Sec market since 1992 are presented in Annex 1.

While there has been some continuity in these reform measures, in some sense the period of reform in the G-Sec market can be conceptually thought of in three chronological phases. The first phase, 1992-95, was devoted to building the enabling environment: This phase included elimination of automatic monetization and bringing about fiscal discipline through the system of ways and means advances (WMA).[3] The system of administered interest rates was also given up and the issuance mechanism was restructured to reflect market prices.

The second phase, 1995-2000, was devoted to building the market and institutional infrastructure. The system of primary dealers (PDs) was established to provide support in the issuance program and also to impart liquidity in secondary markets. In more specific terms, an auction system for price discovery was introduced in 1991. Subsequently, in 1993, 91 day T- bills were introduced for managing liquidity and benchmarking. Zero Coupon Bonds were issued in 1994. The primary dealers system was set up in 1995 along with delivery versus payment (DvP) settlement system; floating rate bonds were also introduced at this time. The market was further developed through introduction of repos in G-Secs, allowing foreign institutional investors (FIIs) to invest in G-Secs within specified limits, introduction of a system of Ways and Means advances to the Government of India and introduction of capital Indexed Bonds in 1997, Subsequently, OTC interest rate derivatives like Interest Rate Swap (IRS) or Forward Rate Agreement (FRAs) were introduced in 1999. Furthermore,

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[3] While formally the WMA arrangement replaced the *ad hoc* Treasury Bills mechanism in 1997, the process was initiated in 1994.

the liquidity adjustment facility (LAF) was initiated in 2000 to manage systemic short term liquidity mismatches as a primary instrument for monetary policy operations.

The third phase, from 2001 onwards was focused on enhancing liquidity and safety, while building up of the payment infrastructure continued with renewed emphasis. To consolidate the progress made in building the primary and secondary markets till then and to further the pace of reforms, measures have been taken during this phase to enhance liquidity and safety of the system. Efficient and robust clearing and settlement systems have been established, consolidation of securities has been taken up, new participants have been permitted, newer processes like short sales and when issued have been introduced and an anonymous trading platform has been introduced during this phase. In 2002, the Negotiated Dealing System (NDS) and Clearing Corporation of India Ltd (CCIL) were operationalized followed by introduction of trading of G-Secs on stock exchanges, permitting non-banks to participate in the repo market, and the first (largely unsuccessful) attempt to introduce exchange traded interest rate futures.

A major development in this period was the enactment of the Government Securities Act, 2006, which replaced both the Public Debt Act, 1944 and the Indian Securities Act, 1920, thereby modernizing the legal infrastructure of the government securities market. The Government Securities Act was effective in terms of consolidating and amending the laws relating to issue and management of Government securities. The Act, *inter alia*, provides for the following major elements:

- Definition of terms such as ‘bond ledger account’, ‘constituent subsidiary ledger account’ and ‘Government security’;

- Acceptance of micro films, facsimile copies of documents, magnetic tapes and computer printouts as documents of evidence;
- Suspension of the holders of subsidiary general ledger account from trading with the facility of that account in the event of misuse of the said facility;
- Stripping of a Government security separately for interest and principal;
- Creation of pledge, hypothecation or lien in respect of Government securities.

Many practices that had already been in existence now received firm legislative backing, which removed some potential sources of legal risk. Another significant development was the passing of the Reserve Bank of India (Amendment) Act, 2006. While the amendment had far reaching changes in terms of instruments of monetary policy, as far the securities market is concerned, two aspects of the Act deserve special mention. The definition of "repo" and "reverse repo" provided under the amended Act would serve to further facilitate transactions of market participants/banks in these instruments. The amendment also provides the Reserve Bank with clear statutory backing for regulating the money market currency and interest rate derivatives. Whereas the Reserve Bank would govern the trading of over the counter (OTC) derivatives, SEBI would continue to regulate all exchange traded activities. This amendment has removed the extant ambiguity related to regulation of these derivatives between the two regulatory agencies. Although there can be discussion as to where these regulatory powers should reside, there is now little regulatory ambiguity in this area.

This period also witnessed developments relating to various instruments:

- A "when-issued market" was introduced in May 2006. Initially, it was only permitted when the issue was a re-opening of an existing bond, the rules were subsequently relaxed to allow when-issued trading in selected new issuances

- The RBI has experimented over the years with a number of different types of bonds, such as, (i) zero coupon bonds; (ii) capital-indexed bonds (inflation-linked principal); and (iii) floating-rate bonds.[4]
- In April 2006. Short selling was introduced by allowing primary dealers and scheduled commercial banks to run intraday short positions. In January 2007, this was further relaxed to allow short positions to run for 5 days.
- The government bond has an active repo market, which is open to primary dealers and banks. Repo-eligible securities are government bonds, Treasury bills and state government bonds.
- The Clearing Corporation of India Ltd. (CCIL) introduced a new product, called, Collateralized Borrowing and Lending Obligations (CBLOs). CBLOs are sort of tripartite repo that allows market participants to create borrowing facilities by placing collateral securities at the CCIL. CBLOs are an innovative technique unique to India (Wells and Schou-Zibell, 2008).

This period has also witnessed developments of far-reaching significance in trading and settlement structure. Following developments relating to the G-Sec market deserve special mention (RBI, 2005):

- Operationalisation of Real Time Gross Settlement (RTGS) System
- Risk mitigation in wholesale payment systems through creation of Clearing Corporation of India Limited (CCIL) as a central counter party and settlement guarantee organization for settlement of Government Securities trading among the NDS members and inter-bank Foreign Exchange transactions.
- Introduction of Negotiated Dealing System (NDS) for government securities and migrating to D*v*P-III mode of settlement. Subsequently an anonymous order matching trading system on NDS, called NDS-OM, was launched from August 1, 2005 to supplement the telephone trading.

[4] So far none of these instruments have generated much interest, and are not being issued at present.

- Implementation of Structured Financial Messaging Solution (SFMS) and Centralised Funds Management System (CFMS).

Thus, considerable amount of legal, regulatory, payment infrastructure and market development actions have been to make the bond market function. These reforms have already taken about a decade and a half and more needs to be done to make the government securities market more efficient and liquid.

What has been the outcome of all these measures?

II. Impact of Reforms on the G-Sec Market

As just documented the debt market reforms process has encompassed important developments in active policy making, institutions, clearing and settlement systems, trading expansion, diversification of participants and instruments, better regulatory systems, introduction of new technology and appropriate enabling legislation. These reforms enabled a systematic process for integration of the different segments of the domestic markets as well as some integration of the domestic financial markets with the international markets. What has been the impact of these reforms? It would be appropriate at this stage to look at certain specific achievements in the last 18 years.

The Indian government securities market has been transformed since the early 1990s. A snapshot of the market would reveal that between 1992 and 2009, the outstanding stock of central government securities has increased more than 17 times in nominal terms to Rs.13,589 billion. As a proportion of GDP, it has increased substantially from 14.7 per cent to 25.5 per cent. The average maturity of securities issued during the year has elongated from around 6 years in 1996 to 14 years in 2009. 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 as interest rates became market related, and then fell to 7.7 per cent in 2009, as inflation expectations feel over this period and hence interest rates. Turnover has increased to over 300 per cent of GDP in 2009 (Table 1).

Table 1: Snapshot of the Indian G-Sec Market

		1992	1996	2002	2003	2009
1	Outstanding stock (Rs. in billion)	769	1375	5363	6739	13589
2	Outstanding stock as ratio of GDP (percent)	14.68	14.20	27.89	27.29	25.54
3	Turnover / GDP (percent)	--	34.21	157.68	202.88	332.61
4	Average maturity of the securities issued during the year (in Years)	--	5.7	14.90	15.32	13.81
5	Weighted average cost of the securities issued during the year (percent)	11.78	13.77	9.44	7.34	7.69
6	Minimum and maximum maturities of stock issued during the year (Years)	N.A.	2-10	5-25	7-30	4.30
7	PDs' share in the turnover					
	A. Primary market	--	--	70.46	65.06	45.40
	B. Secondary market*	--	--	22.04	21.72	18.77
8	Transactions on CCIL*	--	--	548	15,323	62.545
	(Face value Rs. in Billion)					

Note: Outstanding stock represents the total market loans of Central Government
Turnover is the total of outright and repo turnover in G secs. Outright turnover and repo turnover are calculated as twice and four times the transactions volume respectively
Data exclude devolvement but include MSS and Non-Competitive Bids.
Sources: 1. RBI, Report on Currency and Finance, Various issues
2. CCIL: Clearing Corporation of India Limited

2.1 How does the Indian Bond Market stand internationally?

Private versus Public Sector

At the very outset it may be pertinent to note a key feature of the Indian bond market in the global setting in terms of ownership. If we take bond market capitalization[5] as a percentage of GDP, and calculate it separately for private and public bonds, as might be expected India's bond market is clearly dominated by the public sector bond market (Table 2). In fact, among the major emerging market economies, India's public bond market capitalization – GDP ratio is next to Brazil (Korea being in OECD). This is, however, comparable to advanced countries like Italy, Canada or France. As may be seen, India's public debt to GDP ratio is among the highest in EMEs (Table 3) so one might have expected the public bond market capitalization to GDP ratio to be even higher than it is. This is explained by the fact that, until recently a significant portion of the fiscal deficit was financed by means other than the bond market (Table 6).

[5] These data are from the World Bank, in which domestic debt securities issued by financial institutions and corporations, calculated using the following deflation method: {(0.5)*[Ft/P_et + Ft-1/P_et-1]}/[GDPt/P_at] where F is amount outstanding of private / public domestic debt securities, P_e is end-of period CPI, and P_a is average annual CPI.

Table 2: Public versus Private Bond Market (percent of GDP)

	Private Bond Market			Public Bond Market		
Country	1991	2001	2007	1991	2001	2007
Argentina	0.1	5.0	5.6	5.6	10.8	23.7
Brazil	0.0	9.4	16.9	0.0	48.7	46.1
China	3.1	7.5	14.5	2.4	9.3	29.4
Indonesia	0.1	1.4	2.0	0.0	31.0	17.0
India	**0.7**	**0.4**	**2.7**	**20.6**	**25.3**	**31.0**
Mexico	1.6	9.7	17.1	17.2	14.3	20.3
Korea	30.2	60.0	58.8	13.0	25.5	48.1
Australia	14.1	28.7	57.4	22.1	18.1	13.1
Canada	12.9	27.3	29.6	69.3	60.0	51.3
Germany	38.6	54.1	34.5	20.2	31.9	39.9
France	55.4	39.8	48.5	22.8	44.9	51.4
United Kingdom	14.0	18.3	15.8	24.8	29.5	32.1
Italy	28.0	34.3	54.8	80.8	86.2	79.1
Japan	40.4	48.5	38.8	44.0	89.4	159.9
United States	72.3	105.7	125.1	55.8	--	--

Source: World Bank

Structure of Public Debt

Some of the features of Indian public debt market deserve special mention. First, India has no foreign currency denominated public debt. This is in sharp contrast to the experience of a number of emerging market economies. Given the current configurations of fiscal deficit, inflation and domestic interest rates, for reasons of prudence and from a financial stability point of view, it makes ample sense for India not to incur external public debt, contrary to much advice that has been proffered recently to open the government securities market to foreign investment. Second, in recent years, India's short term domestic debt has undergone significant reduction as a proportion to total domestic debt. This is also noticeable in a number of countries barring exceptions like Hungary and Thailand. Finally, while the gross general government-debt GDP ratio

in a number of countries (including India) has also gone up, India's debt-GDP ratio is the highest among major EMEs (Table 3).

Table 3: Level and Structure of Public Debt in Selected Countries

	Gross General Government debt - GDP Ratio		Foreign-currency-denominated debt (as percent of total marketable debt)		Short-term domestic debt (in percent of total domestic marketable debt)	
	1996	2005	1996	2005	1996	2005
Brazil	33	71	48	14	57	22
Colombia	28	46	30	25	0	6
Czech Republic	n.a.	26	13	13	56	16
Hungary	72	61	30	26	15	22
India	**69**	**83**	**0**	**0**	**19**	**3**
Indonesia	n.a.	47	n.a.	6	0	0
Malaysia	36	44	5	7	5	2
Mexico	56	44	67	29	29	23
Philippines	n.a.	63	16	34	55	29
Poland	42	48	27	22	42	8
South Africa	44	34	3	10	6	6
Thailand	14	46	49	7	0	24
Turkey	n.a.	72	31	27	60	7

Source: IMF (2007)

2.2 Savings Pattern and Government Borrowing

India's gross domestic saving rates have been driven mainly by household and corporate savings (Table 4). The most important development to have taken place in recent years was first the marked deterioration in public sector savings, which fell from a level of 1.3 per cent of GDP in 1997-98 to (-) 2.5 per cent in 2001-02, and then recovered markedly to 4.5 per cent by 2007-08, as compared with an average of 1.8 per cent of GDP during the high growth phase of 1995-1997 and 1.5 per cent in 1990-92. This reflected deteriorating fiscal performance during the period 1997 – 2002 along with the slow overall economic growth during that period, which was also compounded by inadequate returns to past public investment financed by borrowing. Following

implementation of the Fiscal Responsibility and Budget Management Act, 2003, and resumption of high economic growth there was a significant improvement in the fiscal scenario with the public sector saving moving up as high as 4.5 per cent of GDP, prior to the onset of the global economic crisis, which has again resulted in deterioration in public finances as in rest of the world.

Table 4: Saving Patterns in the Economy

(Per cent of GDP)

	1981-82	1991-92	2001-02	2007-08
Gross Domestic Saving Rate	18.6	22.0	24.0	37.7
Household Saving	12.6	17.0	22.5	24.3
Private Corporate Saving	1.5	3.1	4.0	8.8
Public Sector Saving	4.5	2.0	(-) 2.5	4.5

Source: Annual Reports, RBI, various Issues.

The primary issuance of both Central Government debt as well as state governments debt increased manifold during the decade of the 1990s The increasing funds requirement of the government was met through an increasing domestic private savings rate which predominantly funded the growing borrowing needs of the government.

The increasing share of market borrowing in financing the fiscal deficit of the Central government, from 18 per cent in 1990-91 to more than 80 per cent in 2008-09, illustrates how significant the role of marketable dated securities has become (Table 5).[6] This indicates how successful the programme of debt market development has

[6] As far as fiscal indicators are concerned, the year 2008-09 is, however, an aberration, as in order to counter the knock-on effects of the global recessionary conditions; the Government has undertaken a sizeable fiscal stimulus.

been for government securities. With increasing reliance on market borrowing as a source of deficit financing over the years, the level of gross market borrowing exceeded the fiscal deficit for the first time in 2002-03. The high fiscal deficit and revenue deficits have necessitated large borrowing by the central government, leading to an appreciable increase in the total stock of outstanding securities. This level of domestic market borrowing is unusual among developing countries. Although the Indian (Centre and States combined) fiscal deficit has been among the highest in the world, India has not had to resort to substantial external borrowing, except from bilateral and multilateral sources. This has imparted stability to the system.

Table 5: Increasing Gross Market Borrowing

Year	Percent of GDP			Percent of GFD			
	Gross Fiscal deficit	Market borrowings	Revenue deficit	Market borrowing	External Finance	Other borrowings	Drawdown of cash balances
1990-91	7.8	1.4	3.3	17.9	7.1	49.5	25.4
1995-96	5.1	2.9	2.5	56.4	0.5	26.8	16.3
2000-01	5.7	3.5	4.1	61.8	6.3	32.9	-1.0
2005-06	4.1	3.0	2.6	72.6	5.1	36.6	-14.3
2006-07	3.5	2.8	1.9	80.5	5.9	10.4	3.2
2007-08	2.7	2.8	1.1	102.9	7.3	-31.2	21.0
2008-09	6.1	5.0	4.5	81.6	2.9	33.9	-18.5

Note GFD : Gross fiscal deficit

Source: Handbook of Statistics on the Indian Economy, 2008-09, RBI.

2.3 Primary Market Developments

Widening of Investor Base

Traditionally, the investor base for government securities in India has been banks, financial institutions, provident funds (PFs), insurance and pension funds. At

present commercial banks (47 per cent) and the Life Insurance Corporation (LIC) (22 per cent) are the largest holders. Most of the holdings of these investors are in the nature of statutorily mandated investments. This category has been further diversified by the entry of co-operative banks, regional rural banks, mutual funds and non-banking finance companies in the recent period. In addition, the entry of 100 per cent Gilt Mutual Funds has broadened the retail investor base indirectly. Further, policy initiatives have been taken to develop the retail segment of the market. 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. A few PDs have introduced schemes for retail marketing of Government securities using the network of bank branches and post offices. Screen based order-driven trading on the stock exchanges has also been introduced to encourage retail participation in the G-Sec market, although this scheme has not been successful so far. To improve liquidity for retail investors in the secondary market, RBI has been encouraging PDs to offer two-way quotes to retail investors and to become members of stock exchanges for this purpose. All these measure have collectively resulted in more diversified holding of G-Secs among market participants (Table 6). However, it is necessary to induce further development of institutional investors in India so that there is greater diversity in the bond market investor base. Retail investors can only be at the margin, and cannot be expected to play a major role, as in other bond markets.

Table 6: Composition of Holding of Government Securities

(per cent)

Year	RBI	Banks	LIC	Others
1991	20.3	59.4	12.3	8.0
1995	2.0	69.6	16.2	12.2
2000	7.0	60.9	18.1	14.1
2001	7.7	61.0	18.3	13.1
2005	5.2	52.4	20.5	21.9
2006	5.0	46.5	22.2	26.4
2007	7.5	46.9	22.8	22.8

Source: Handbook of Statistics on the Indian Economy, 2008-09, RBI.

An interesting feature of the market borrowing process has been the minimal devolvement on the RBI since 2000-01, much before the implementation of FRBM. As development of the debt market proceeded it became possible for the Reserve Bank to voluntarily reduce, and then eliminate, its presence in the primary market. This experience provided confidence that the enactment of FRBM would not disrupt the government borrowing programme, and nor would it cause excessive volatility in interest rates which could otherwise have had the potential for compromising monetary policy. The timely introduction of Primary Dealers into the system prepared the ground for eventual withdrawal of the RBI from the primary market. Whereas earlier, when necessary, there had to be devolvement of a treasury auction on the Reserve Bank, now the Primary Dealers have the obligation to underwrite the entire auction issue (after introduction of the Fiscal Responsibility and Budget Management Act 2003 during 2006-07). Devolvement, if any, now has to take place on them. By warehousing new securities temporarily the Primary Dealers effectively act as market makers and subscribe to a significant portion of every issuance (including devolvement). As part of the reform process in the primary issuance of Government Securities, only a few

securities were initially issued through auctions. Gradually the portion of market borrowing raised through auctions was increased. Simultaneously, RBI's participation in auctions with devolvement declined as did private placement with RBI (Shankar and Bose, 2008). Juridically, the primary auctions become fully market determined with withdrawal of the RBI from auctions with effect from April 1, 2006 on implementation of the FRBM Act. But effectively this had already taken place since 2003-04. The entire market borrowing of Government of India is now being raised at market-determined rates (Table 8). As in other countries the Reserve Bank of India can still influence market behaviour through open market operations (OMOs) in either direction, as it has done in 2008-09 and in 2009-10 in response to the very substantial increase in market borrowing that the government has had to undertake in the wake of the global financial crisis.

Table 7: Devolvement of Government Securities on the RBI

(Rs. Billion)

Year	Gross Market Borrowings (Dated securities)	Dated Securities raised through Auctions	Amount of Devolvement on Reserve Bank
1996-97	279.1	279.1	37.0
1997-98	433.9	373.9	70.3
1998-99	837.5	537.5	82.1
1999-00	866.3	596.3	-
2000-01	1001.8	821.8	131.5
2001-02	1142.1	860.0	6.8
2002-03	1250.0*	940.0	51.8
2003-04	1215.0*	1000.0	0.0
2004-05	803.5	800.0	8.5
2005-06	1310.0	1210.0	0.0
2006-07	1460.0	1460.0	0.0

* : Includes borrowings for pre-payment of external debt.
Source : Shankar and Bose (2008), p. 60.

Consolidation of Issues to Improve Liquidity

A policy of passive consolidation through reissuance/ reopenings was started in 1999 in order to improve fungibility among the securities and to facilitate consolidation of debt. The larger stock size of securities in question has helped to improve market liquidity, and aided the emergence of benchmark securities in the market. Active consolidation has not been resorted to (except a one-off debt swap which involved tax benefits against provisioning by banks) in view of administrative costs and legal considerations. Since interest rates in recent years have been lower than in those in the past, buying back older securities also involves payment of premiums, which have to be provide for in the central budget. Banks and other institutional investors often hold the high yield securities in their “held to maturity” (HTM) portfolios and are therefore not often available for buyback. The drop in yields and resultant steep premia, in many cases, deters ‘buy and hold’ investors from subscribing to existing securities. The process of passive consolidation itself has, however, helped in containing the number of bonds around the level that prevailed at the end of 1998-99. While increasing re-issuance of bonds has been resorted to, this ability to ‘reissue’ or ‘reopen’ loans is limited by the maximum outstanding amount that is perceived as ‘manageable’ from the viewpoint of redemption in the year of maturity (Table 8). The fiscal years 2007/08 and 2008/09 saw the retirement of 14 separate bonds for the addition of four new bonds reducing the number of bonds outstanding by 10 to 95. However, of the four new bonds, only one was over Rs 100 billion, representing an international benchmark bond, while the other three ranged from about Rs 12 billion to Rs 25 billion (Wells and Schou-Zibell, 2008).

Table 8: Consolidation of G-Sec Issues

	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08
Reissues / Total borrowing (per cent)	33.30	86.57	58.89	66.73	59.20	66.67	82.1	97.7	90.41	96.15

Source: RBI

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

For most of the 1990s, the maturity of Central government issuance ranged up to 10 years. This led to potential redemption pressure and refinancing risk. This, as also the need to develop the yield curve for longer tenors, has necessitated elongation of maturity of government bond issuance. In the early 2000s the Reserve Bank has succeeded in increasing the tenor progressively up to 30 years. Thus, the weighted average maturity of bonds issued during a year, which was around 5.7 years in 1995-96, increased to 16.9 years by end-2005-06 (Table 9), but has since declined to 13.8 years. This average duration of treasury bond issuance is among the highest for any country, including advanced economies (Blommestein and Santiso, 2007).

Table 9: Weighted Average Yield and Maturity for Market Loans of Government of India

Years	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	4-30	14.9	9.8
2004-05	6.11	5-30	14.1	9.6
2005-06	7.34	5-30	16.9	9.9
2006-07	7.89	4-30	14.7	9.9
2007-08	8.12	6-29	14.9	10.6
2008-09	7.69	4-30	13.8	10.4

Source: RBI Annual Report, various Issues

As a debt manager, the Reserve Bank has the obligation of minimizing the cost of borrowing to the Government. Normally, with an upward sloping yield curve, longer the maturity of the security, higher is the cost; thus there is a trade-off between tenor of borrowing and its cost. However, the falling interest rate scenario and the comfortable liquidity position helped the Reserve Bank achieve the twin objectives of elongating the maturity profile of new debt, and reducing the cost of borrowing at the same time. This reflects both depth and resilience of the market, facilitated by easy monetary conditions in the recent past. This also reflects a transition from passive to active debt management by RBI, As interest rates rose during 2006-08 and policy tightened liquidity, there was some hardening of interest rates on government securities (Table 10).

Table 10: Interest Rates On Central And State Government Dated Securities

(Per cent per Annum)

Year	Central Government Securities		State Government Securities	
	Range	Weighted Average	Range	Weighted Average
1990-91	10.50 - 11.50	11.41	11.50	11.50
1995-96	13.25 - 14.00	13.75	14.00	14.00
2000-01	9.47 - 11.70	10.95	10.50 - 12.00	10.99
2005-06	6.70 - 7.79	7.34	7.32 - 7.85	7.63
2006-07	7.69 - 8.75	7.89	7.65 - 8.66	8.10
2007-08	7.55 - 8.64	8.12	7.84 - 8.90	8.25

Source : Handbook on Indian Economy, 2008-09, Reserve Bank of India.

Diversification of Debt Instruments

Prior to the 1990s, most of the government bond issuances were in the form of plain vanilla, fixed coupon securities. For a market to meet the diverse funding and hedging needs of its participants, there is need for a wider array of instruments. needs. Through the 1990s, various types of instruments have been introduced, like zero coupon bonds, capital indexed bonds, floating rate bonds and bonds with call and put options. But, plain vanilla bonds remain the mainstay. The market has yet to display any appetite for more complex instruments. Subsequent to the enactment of the Government Securities Act draft norms for issuance of “Separate Trading of Registered Interest and Principal of Securities” (STRIPS) [7] have been issued. STRIPS are expected to provide institutional investors an additional instrument for asset-liability management and should also improve liquidity for the buying and selling of government bonds. The minimum amount of securities that needs to be submitted for stripping and

[7] Stripping is the process of separating a standard coupon-bearing bond into its individual coupon and principal components. For example, a 5 year coupon bearing bond can be stripped into 10 coupon and one principal instruments, all of which thenceforth would become zero coupon bonds.

reconstitution will be Rs 10 million (face value) and multiples. STRIPS can also be used for meeting Statutory Liquidity Ratio norms. They could also be used for market repo as well as repo under the liquidity adjustment facility, but with appropriate haircuts. Initially, STRIPS will be tradable only in over-the-counter (OTC) market. Hence, trades in STRIPS will have to be struck in the OTC market and reported on the NDS for clearing and settlement through CCIL.

These instruments would enable better asset-liability management of participants and help them hedge interest rate risk, balance sheet risk and inflation risk. Besides, they also offer diversity in the portfolio, which would reduce the unsystematic risk.

A number of measures have been taken in recent years to develop the market further. First, the repo market was widened by expanding the participant base. From March 2003, certain specified categories of non-bank entities like mutual funds, insurance companies, housing companies, non-banking financial companies (NBFCs), who were earlier not eligible to participate in the repo market, were made eligible. In so doing, safeguards were prescribed to ensure transparency and delivery-versus-payment. Second, all RBI regulated entities were directed to maintain (as well as trade in) their investment portfolio in government securities in demat form, from May 2003. Third, in order to ensure uniform accounting treatment by all RBI-regulated entities for repo / reverse repo transactions and to impart an element of transparency to such transactions, uniform accounting norms were stipulated by RBI for the market repo/reverse repo transactions to be followed by all the RBI- regulated entities from the current financial year. Fourth, limited purpose 'Government Securities Lending' was

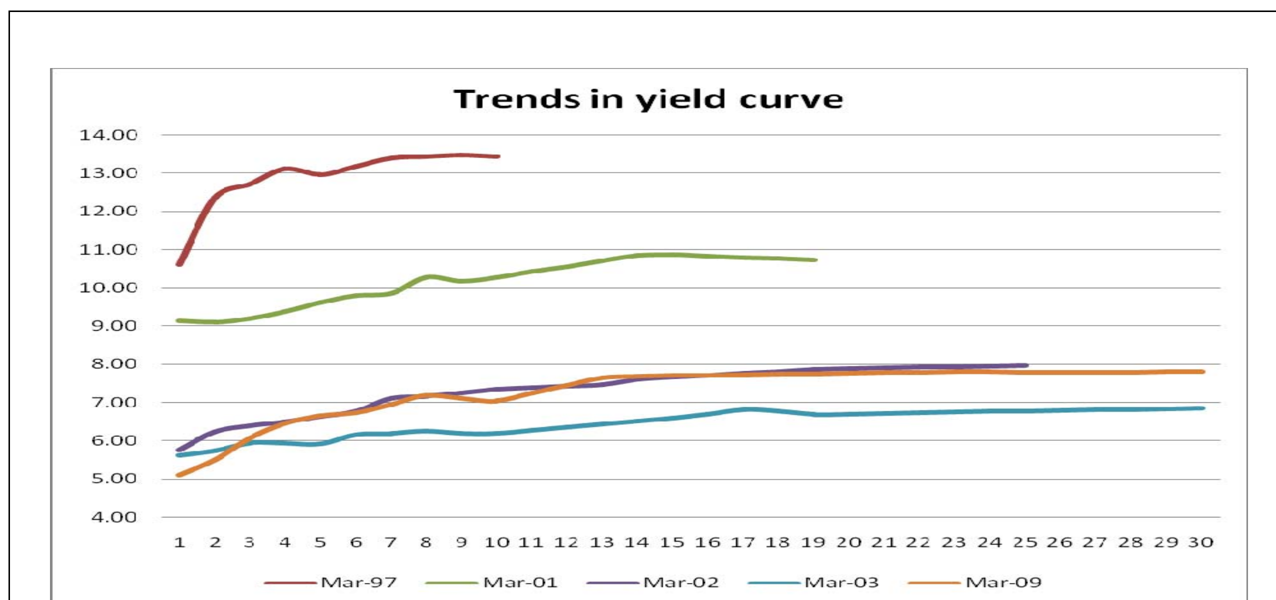
permitted by the Reserve Bank of India, for the exclusive purpose of enabling CCIL to complete settlement of government securities transactions.

3.4 Secondary Market Developments

Development of an Elongated and Smooth Yield Curve

The sustained efforts of RBI to elongate the maturity profile resulted in a relatively smooth and reliable yield curve to act as the benchmark for the other markets for pricing and valuation purposes. The maximum maturity was extended to 30 years (Chart 1 and Table 11). The 30-year bonds, issued in 2003 after a break of 15 years, were mainly to meet the investment needs of the insurance sector. In fact, the Indian yield curve today compares well with not only the emerging economies, but also with those in the developed world.

Chart 1: Elongation of the G-Sec Yield Curve and Fall in Yields during 1997-2009

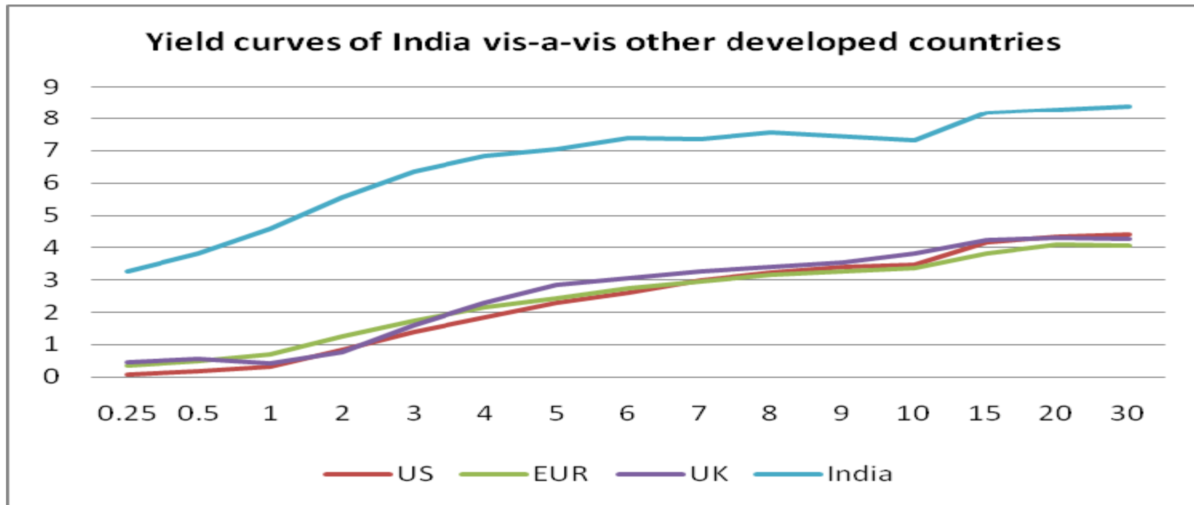


Source: CEIC Database

How does the Indian yield curve look vis-à-vis the developed countries? A look at Chart 2 shows that the yields in India have been consistently higher than in the advanced countries, but the curve is similar in shape. The consistent difference in yield reflects both the difference in expected inflation and perceived higher risk. In

parenthesis, we may also note that it is this persistent difference in inflation and interest rates between advanced economies and EMEs that makes it difficult to have completely open capital accounts in EMEs (Mohan and Kapur, 2009a).

Chart 2: Yield Curves of India and Developed Countries : November 11, 2009



Data Source: Bloomberg

Table 11: Yield and Maturity Profile of G-Sec

(Per cent)

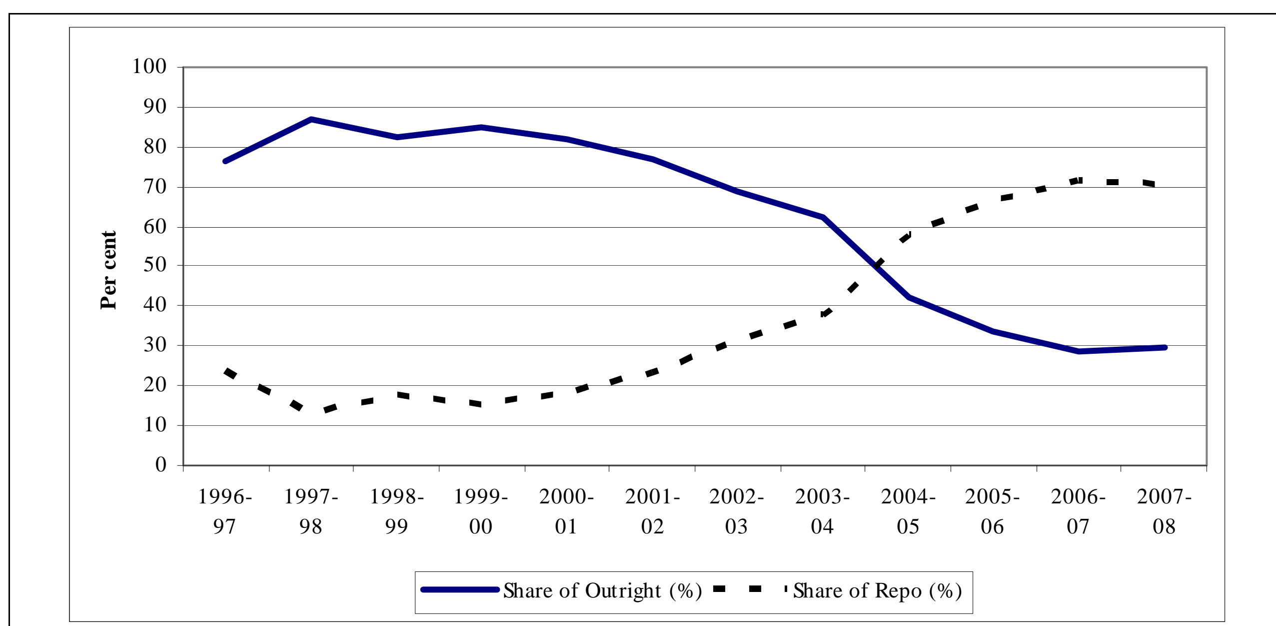
Year	April 2001	April 2002	April 2003	April 2004	April 2005	April 2006	April 2007	April 2008	April 2009
1	8.85	6.32	4.98	4.43	5.68	6.06	7.93	7.73	4.01
2	8.92	6.33	5.11	4.51	6.00	6.34	8.08	7.81	4.80
3	9.15	6.50	5.33	4.59	6.32	6.61	8.13	7.89	5.43
4	9.29	6.57	5.42	4.67	6.50	6.88	8.12	7.92	5.81
5	9.40	6.73	5.54	4.87	6.69	6.96	8.11	7.92	6.00
6	9.60	6.89	5.74	5.08	6.82	7.10	8.10	7.92	6.22
7	9.72	7.09	5.90	5.09	6.98	7.25	8.09	7.93	6.55
8	9.85	7.30	5.96	5.08	7.15	7.32	8.10	7.96	6.56
9	9.99	7.37	5.99	5.11	7.18	7.36	8.11	7.97	6.40
10	10.08	7.40	5.91	5.15	7.19	7.39	8.13	8.02	6.29
11	10.18	7.45	5.98	5.36	7.31	7.49	8.16	8.09	6.55
12	10.49	7.63	6.08	5.31	7.49	7.56	8.18	8.16	6.80
13	10.60	7.71	6.15	5.41	7.51	7.58	8.20	8.24	7.02
14	10.48	7.78	6.19	5.48	7.52	7.61	8.23	8.30	7.07
15	10.57	7.47	6.23	5.53	7.54	7.63	8.25	8.30	7.12
16	10.52	7.97	6.29	5.63	7.55	7.66	8.26	8.31	7.16
17	10.41	7.92	6.34	5.67	7.56	7.69	8.27	8.32	7.21
18	10.51	7.87	6.39	5.71	7.58	7.73	8.29	8.33	7.25
19	10.60		6.34	5.75	7.59	7.76	8.30	8.33	7.27
20			6.35	5.77	7.61	7.79	8.31	8.34	7.28
21			6.35	5.79	7.62	7.82	8.32	8.35	7.30
22			6.35	5.81	7.63	7.85	8.34	8.36	7.31
23			6.36	5.83	7.65	7.89	8.35	8.36	7.32
24			6.36	5.85	7.66	7.92	8.36	8.37	7.30
25			6.37		7.68	7.95	8.38	8.38	7.27
26			6.37		7.69	7.98	8.39	8.38	7.26
27			6.38		7.70	8.02	8.40	8.39	7.26
28			6.38		7.72		8.41	8.40	7.25
29			6.38		7.73		8.43	8.41	7.25
30			6.39		7.74		8.44		7.25

Source: CEIC Database

Development of a Deep and Liquid Market

An important and creditable aspect of the efforts made by RBI to develop the Government Securities market is reflected in increasing activity in the secondary market. There has been a near 45 fold increase in the volume of transactions since 1995-96. It is indeed a great achievement in the sense that trading in government securities has exceeded the combined trading in equity segments of all the exchanges in the country since 2002-03. The share of repo in market transactions has exceeded the share of outright transactions since 2004-05. This kind of turnover which reflects increased activity among market participants demonstrates the extent of deepening that has taken place in this market. (Chart 3)

Chart 3: Share of Outright vis-à-vis repo in Market Transactions in the G-Secs Market



Source: CCIL

Increasing liquidity in the market has also helped price discovery as reflected in finer bidding patterns emerging in auctions and the narrow spreads in the secondary

market quotes. The activity in the secondary market in a way facilitated the elongation of the maturity of the yield curve. As a corollary of the secondary market activity, issues such as valuation of securities and risk management strategies like cutting the positions have become more market savvy and reliable. Another important measure of liquidity is bid-ask spreads, on which also India is comparable with most liquid markets in the world.

Business Growth in the Wholesale Debt Market (WDM) Segment

An indicator of the increasing activity in the debt market in India is reflected in the wholesale debt market. The Wholesale Debt Market (WDM) segment of the National Stock Exchange commenced operations on June 30, 1994. This provided the first formal screen-based trading facility for the debt market in the country. This segment provides trading facilities for a variety of debt instruments. [8] Large investors and a high average trade value characterize this segment. Till recently, the market was purely an informal market with most of the trades directly negotiated and struck between various participants. The commencement of this segment by NSE has brought about transparency and efficiency to the debt market, along with effective monitoring and surveillance to the market (Table 12).

[8] These include Government Securities, Treasury Bills and Bonds issued by Public Sector Undertakings/ Corporates/ Banks like Floating Rate Bonds, Zero Coupon Bonds, Commercial Papers, Certificate of Deposits, Corporate Debentures, State Government loans, SLR and Non-SLR Bonds issued by Financial Institutions, Units of Mutual Funds and Securitized debt by banks, financial institutions, corporate bodies, trusts and others.

Table 12: Business Growth on the Wholesale Debt Market Segment of NSE

Month/Year	No. of Trades	Net Traded Value (Rs. Billion)	Average Daily Traded Value (Rs. Billion)
2006-07	19,575	2,191	8.9
2007-08	16,179	2,823	11.3
2008-09	16,129	3,359	14.2

Source: SEBI (2009)

In summary, as a consequence of the efforts made to develop the government securities market over the past decade and a half, the outcomes suggest that a good degree of success has been achieved. In view of the continued relatively high levels of fiscal deficits of the central and state governments combined, now made worse after the global financial crisis, there are certain rigidities in the market that inhibit the full development of this market. But these measures mandating compulsory investment in government securities by banks and other institutional investors are necessary for sustained financial stability.

We now turn to the corporate bond market whose development still has a long way to go in India. As financial development takes place it is expected that the large corporate entities can disintermediate and go to the market directly for their financing needs, rather than borrowing from banks. Commercial banks then largely serve working capital needs of large companies and the overall financial requirements of small and medium enterprises and retail borrowers.

III. Corporate Debt Market

Corporate bond markets are a very important segment of the financial system and an efficient and well integrated financial system presupposes well developed corporate bond markets in addition to the other segments like G-Secs, derivatives etc.

For an economy growing at above 9 per cent, the funding requirements of its various sectors can be expected to increase rapidly and meeting such requirements without disrupting the equilibrium of the system would be a difficult task. As the economy traverses a high growth path, the financing of its infrastructural needs assumes critical importance. The financial system will need to be developed so that such funding can take place. In the absence of a well developed corporate bond market, the task would be difficult.

3.1 Features of the Corporate Bond Market

Size

We have already noted that India is dominated by a bank-based financial system and that the size of the G-Sec market is much larger than the corporate bond market. Interestingly, with the sole of exception of Malaysia and Thailand, the size of the Indian corporate debt market (as percentage of GDP) is comparable to other countries in Asia like China or Indonesia (Table 13).

Table 13: G-Sec and Corporate Bond Markets in Select Asian Countries: March 2008

(Percentage of GDP)

	Government	Corporate	Total
China	46.1	4.7	50.8
Indonesia	17.1	2.0	19.1
Malaysia	48.1	37.5	85.6
Philippines	33.3	3.5	36.8
Thailand	40.7	15.9	56.6
Vietnam	14.6	2.1	16.7
India	36.1	3.9	40.0

Source: Wells and Schou-Zibell (2008)

Foreign Exposure of the Debt Market

In recent years, there has been tremendous growth in the international debt of emerging market economies' corporate sector. In less than 8 years, the international

debt of corporations of EMEs rose by more than $500 billion (Table 14). Substantial issuance by Russian, Korean and Brazilian corporates appears to have created significant forex exposures. In the Indian case the extent of foreign exchange debt exposure of the corporate sector is still low, though it increased substantially in 2006 and 2007, when credit was available liberally in international markets at very favourable nominal rates. It appears that exchange rate expectations were very optimistic during that period prior to the global financial crisis.

Table 14: Amounts outstanding of international debt securities – developing countries

(US $ billions)

	End-2000		End-2006		End-2007		Sep-2008	
	Govt	**Corp**	**Govt**	**Corp**	**Govt**	**Corp**	**Govt**	**Corp**
Developing Countries	365	223	455	542	482	702	481	753
Russia	37	1	32	61	29	102	28	117
Brazil	58	30	54	57	55	65	52	69
United Arab Emirates	0	0	1	31	2	50	4	61
Mexico	61	33	43	49	42	54	40	53
India	0	4	0	21	0	38	0	40
China	5	12	6	24	6	33	6	39
Kazakhstan	1	0	0	19	0	30	0	34
Malaysia	3	13	4	28	4	29	4	30

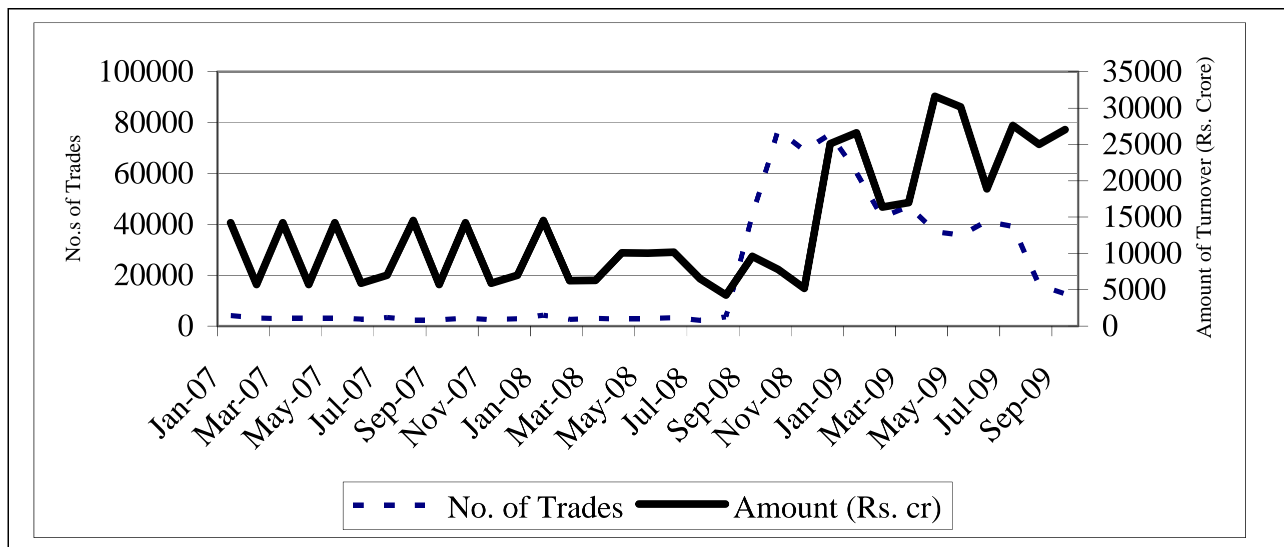
Source: BIS (2009).

Turnover

Information on corporate bonds was scant prior to 2007. In 2006-07, SEBI permitted BSE and NSE to set up reporting platforms to capture all information related to trading in corporate bonds as accurately and as close to execution as possible. BSE and NSE would coordinate among themselves to ensure that the information reported with BSE and NSE is aggregated, checked for redundancy and disseminated on their websites in a homogenous manner. Further, the Fixed Income Money Market and

Derivatives Association of India (FIMMDA) also set up a third reporting platform for corporate bonds. This platform was originally designed to report all the trades on the other platforms as well so that transparent information is available on all trades in one place, in order to aid in efficient price discovery. All these three platforms put together tend to indicate that current trade volumes are at low levels – around 140 transactions amounting to $80 million per day (Chart 4). However, the illiquidity of Indian corporate bond market appears to be similar to trends elsewhere in the world.. In fact, India's corporate turnover ratio is quite high in comparison with most other East Asian corporate bond market (Wells and Schou-Zibell, 2008).

Chart 4: Turnover in the Indian Corporate Bond Market



Source: Securities and Exchange Board of India

The increase in the number of trades during 2008-09 is very significant. It has increased from 35,573 in 2007-08 to 4,29,642 in 2008-09. This increase is mainly attributed to increase in the number of trades at BSE, that has gone up from 27,697 to 4,17,376. The reason for this significant increase is primarily retail participation in 'F'

group category. It may be noted that BSE data on corporate bond trades and volumes include data for both the Indian Corporate Debt Market (ICDM) reporting platform and 'F' group trading platform. The ICDM reporting platform has only corporate bonds dealt between entities who sought access from BSE from this platform and the settlement is between the entities. The 'F' group trading platform is where corporate bonds and debentures are dealt in an anonymous manner by investors through members, and settlement is through a clearing house mechanism (SEBI, 2009).

Predominance of Private Placement

Private placements appear to have dominated the mobilization of resources in the corporate primary debt market. In 2005-06 or 2006-07, for example, the whole amount of debt issuance was done through private placement. Public offering of bonds being expensive, time consuming and procedure oriented, corporates have been finding it easier to either borrow from banks or make a private placement of their bonds. (Table 15).

Table 15: Resource mobilization by the Corporate Sector

	Public Equity Issues (Rs. bn)	Debt Issues			Total Resource Mobili-zation (Rs. bn)	Share of Private Placement in		Share of Debt in Total Resource Mobili-zation (percent)
		Public Issues (Rs. bn)	Private Placements (Rs. bn)	Total (Rs. bn)		Total Debt (%)	Total Resource Mobili-zation (percent)	
1995-96	89	29	100	130	219	77.34	45.91	59.36
1996-97	47	70	184	254	300	72.50	61.22	84.45
1997-98	11	19	310	329	340	94.14	91.01	96.67
1998-99	5	74	387	462	467	83.95	83.05	98.92
1999-00	30	47	547	594	624	92.09	87.70	95.23
2000-01	25	41	524	566	591	92.68	88.79	95.80
2001-02	11	53	462	516	526	89.64	87.80	97.94
2002-03	10	47	484	531	542	91.16	89.42	98.08
2003-04	178	43	484	528	706	91.80	68.62	74.75
2004-05	214	41	552	593	807	93.09	68.37	73.45
2005-06	237	0	818	818	1055	100.00	77.56	77.56
2006-07	250	0	924	924	1173	100.00	78.70	78.70
2007-08	522	10	1153	1163	1685	99.14	68.41	69.01

Source: National Stock Exchange, India

Predominate of Safety as a Consideration

There is a clear predominance of safe issues in the issuance of corporate bonds in India. More than 70 percent of the value of corporate bonds issued is concentrated in the AAA rating segment. The proportion of issues in the investment grade appears to be negligible (Table 16). The appetite for lower rated bonds in India is clearly very low.

Table 16: Distribution of Corporate Bonds by Rating

(Per cent)

	Highest Safety (AAA)		High Safety (AA)		Adequate Safety (A)		Moderate Safety (BBB)		Non-investment Grade	
	Number	Value	Number	Value	Number	Value	Number	Value	Number	Value
1999-00	35.0	83.0	25.9	9.4	25.0	6.1	7.7	0.8	6.4	0.6
2000-01	38.3	76.6	33.6	10.1	21.4	11.6	3.1	1.3	3.7	0.3
2001-02	31.7	61.6	33.5	27.8	24.0	9.3	7.8	1.1	3.0	0.2
2002-03	45.6	76.0	27.1	13.8	18.2	7.5	6.3	1.6	2.8	1.0
2003-04	50.4	77.5	24.8	14.9	17.3	6.1	6.5	1.1	1.0	0.4
2004-05	56.7	72.2	22.4	22.0	11.8	3.7	7.1	1.9	1.8	0.3
2005-06	54.6	75.1	30.8	16.7	9.4	7.8	4.4	0.3	0.8	0.0
2006-07	57.4	79.5	26.5	16.0	9.7	1.8	6.1	2.7	0.4	0.0
2007-08	39.5	73.1	30.3	19.4	19.7	5.7	7.4	1.5	3.2	0.3

Source: Security and Exchange Board of India

3.2 Issues in Development of the Corporate Debt Market

It is clear that the corporate debt market in India has been far less developed than the G-Sec market in India. Though much can be learnt from the experience of developing the G-Sec market there is a fundamental difference between structures of both the markets. While the G-Sec market has the advantage of a single issuer, and large issue sizes that are fungible, the corporate bond market has multiple issuers with each issuance being relatively small in size. Consequently, the corporate bond market has a large number of issues each with sub optimal issue sizes which adversely affects potential liquidity in the market.

The fact that even the G-Sec market, with its inherent advantage of zero risk largest single issuer, took about a decade to come to the stage where it is now, indicates how long drawn out the process of development of debt markets can be. Notwithstanding the structural differences existing between the two markets, the process of development in G-Sec market can still be used to inform development of the corporate bond market. There should be no illusion, however, that this process will be easy or fast. The issue has been addressed by a few official committees.

Patil Committee Report, 2005

The Government had set up a High-Level Expert Committee on Corporate Bonds and Securitisation (Chairman, R. H. Patil; hereafter referred to as Patil Committee) to look in to legal, regulatory, tax and market design issues in the development of the corporate bond market.

This Committee examined the issues comprehensively and suggested various measures to develop the corporate bond market. The recommended institutional

developments include those related to market infrastructure such as setting up of reporting and trading platforms, establishing efficient clearing and settlement systems, and enhancing transparency through real time data dissemination.. These, coupled with other measures like enhancing the issuer and investor base, removing structural rigidities in terms of tax and duties etc in addition to having a robust regulation and surveillance systems, would definitely spur the development of corporate bond markets. Annex II gives a summary of the major recommendations of the Patil Committee.

The recommendations of the Patil Committee Report were broadly accepted. A number of measures have already been initiated in respect of implementation of the recommendations of the Patil Committee. Illustratively, the Securities Contracts (Regulation) Act, 1956 has been amended to include securitized instruments within the ambit of "securities". The RBI Act has been amended to empower RBI to develop and regulate the market for repos in corporate bonds. The limit of FII Investment in corporate debt has been increased from US$ 0.5 billion to US$ to $15 billion. The trade reporting platform for corporate bonds has been operationalized since January 2007. The trading platforms for corporate bonds at the major exchanges have been operationalized from July 1, 2007. Annex III gives a rundown of the recent measures in respect of the corporate debt market.

Rajan Committee Report, 2008

More recently the Committee on Financial Sector Reforms (Chairman: Raghuram Rajan) has probed, *inter alia*, into the causes of the lack of take-off in the corporate debt market. According to the Rajan Committee, which submitted its report in end 2008, the reasons for the near-absence of a corporate bond market can be divided into: (a)

constraints that limit the demand for the bonds, and (b) constraints that limit the issuance of the bonds. These include:

- Pension funds are constrained by their prudential norms and conservative investment policies.
- Mutual Funds, and to a some extent insurance companies, are buyers of higher yield debt, but do not create enough demand for the market to grow.
- Banks tend to prefer loans to bonds, because loans can be carried on the books without being marked to market, thus, reducing the possibility of unexpected demands on bank capital.
- Foreign investors are allowed only to a very limited extent into the market. Given the very limited liquidity, they are not always eager to even take up the available quota.
- Finally, the absence of a reliable system of resolving financial distress could explain as to why investors are reluctant to buy unsecured bonds (in contrast to lending secured debt), especially those of high risk firms.
- Until the recent credit crisis, larger corporate issuers had access to much cheaper funds in the offshore debt capital markets. Even after hedging their currency risks, the total cost of borrowing offshore is much lower than the cost of borrowing in the domestic market. This is reflected in the strong growth of External Commercial Borrowings (ECB) in recent years.

From this diagnosis, the Rajan committee recommended the following to help revive the corporate bond market:

- Allowing domestic financial institutions to have greater leeway to invest in corporate bonds;
- Steadily raise the limit on foreign investment in corporate bonds;
- Amend the bankruptcy code so that the rights of unsecured creditors are protected;

- Reduce the transactions costs in issuing and trading corporate bonds, including repeated onerous disclosures (move instead to a shelf-registration scheme), as well as high stamp duties;
- Reduce the artificial preference of banks for loans by subjecting loans and bonds to similar mark-to-market requirements, especially for aspects such as interest rate exposure that are easily measured.

Their analysis and recommendations related to constraints limiting both the investor and issuer base are well taken, as is their observation related to the larger corporate issuers preferring the offshore market. Similarly, their recommendations related to the reduction of transaction costs in the issuance and trading of corporate bonds are also consistent with those of the Patil Committee. They have also drawn pointed attention to the existing problems in the bankruptcy code that also constrains development of the corporate bond market.

There are two issues, however, that need reconsideration. First is the recommendation to treat bonds and loans alike in bank portfolios for mark to market requirements. this can cause unnecessary volatility in bank balance sheets. Moreover, market valuations are not readily available for many of these assets on a regular basis, and as the recent financial crisis has shown, valuation for certain complex products can indeed become problematic under certain market conditions. Second, opening of the corporate bond market to foreign investment needs to be done with great care, and needs to be consistent with the overall policy stance on capital account convertibility.[9]

[9] It is not that the Committee was unaware of the implications. In fact, it may be pertinent to quote from the Report:

> *"Reports on why India does not have a sizeable corporate bond market point out that many natural investors, such as banks and insurance companies, have restrictions placed on them, forcing them to invest large amounts in government securities. Foreigners are strictly limited in*

(continued)

As we will argue in the next section, the development of corporate debt market cannot be seen in isolation, and has to be consistent with the Indian monetary-fiscal framework.

The Committee on Financial Sector Assessment (CFSA)

The Committee on Financial Sector Assessment (Chairman: Rakesh Mohan; Government of India and Reserve Bank of India, 2009), which submitted its report in March 2009, also looked into the issues related to the corporate debt market. The CFSA noted that the corporate debt market has failed to take off in India largely because of lack of buying interest, poor transparency and an absence of pricing of spreads against the benchmark yield curve. An inadequate supply of paper from corporates, increased access to the offshore market for Indian corporates, large issuance of credit-risk-free government securities and low-risk subordinated debts by banks as part of their Tier II capital at attractive interest rates, and the absence of delivery versus payment (DVP) and tax deducted at source (TDS) systems for corporate bonds have also acted as impediments to the development of secondary market activities. It, thus, recommended that effective and concerted regulatory and legislative initiatives are needed so that the market can develop to its full potential. These measures include: (a) the need to develop institutional investors; (b) making corporate bonds repoable in a phased manner; (c) the introduction of D*v*P in corporate bonds and ensuring that settlement

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how much government debt they can buy. A straightforward recommendation seems to be to remove these restrictions. But why do regulators impose them in the first place? In part, it is because regulators know the government deficit needs funding, in part they are overly conservative because their reward structure penalizes any failures on their watch far more than it penalizes lost growth, and in part corporate bonds are indeed risky given weak creditor protection. So a solution needs to address issues ranging from how the government deficit will be financed, to regulator incentive structures, to fixing the credit infrastructure. Similarly, if we wonder why foreign participation is so restricted, we have to address issues ranging from how open the capital account should be to whether the monetary framework should target the exchange rate at all. The point is that both analyeis and recommendations have to ensure consistency across a number of policy areas, which this report attempts" (pp 1-2).

takes place through a clearing corporation; (d) the consolidation of all trades reported in different reporting platforms and dissemination of the same to enhance transparency; (e) the rationalization of stamp duty; (f) the abolition of tax deduction at source; (g) reforms in pension and insurance sectors; and (h) having timely, efficient bankruptcy procedures. In fact, the one area where the Indian regulatory system is assessed to be among the worst performing in the world is that of bankruptcy procedures. As far as the question of allowing foreign investors into the corporate bond market, the CFSA noted that given the interest rate differentials in India vis-à-vis international rates, without corresponding expectations related to the evolving inflation and exchange rates, opening up the Indian debt market to foreign investment could raise issues of financial stability. It, thus, preferred to follow a follow a cautious approach in this regard.

The broad path for development of the corporate debt market is therefore clear. The trading market infrastructure needs to be developed; the issuance process needs to be streamlined and transaction costs reduced; domestic institutional investors need to be developed considerably through reforms in the insurance and pensions sectors; and the bankruptcy process needs significant reform.

Unresolved Issues

Development of the corporate bond market has been difficult even elsewhere in the world. As the Patil Committee documented, just under half the world's corporate bond market is in the US, and another 15 per cent in Japan. Among other countries, the UK has a long standing bond market, but the European market is still developing, with financing in many countries still being bank dominated. Among developing

countries, it is perhaps only South Korea that has a reasonably well developed bond market.

The three developmental phases that were delineated in section I in the context of G-Sec reforms hold equally good for the development of corporate bond markets as well. While building an enabling environment (phase 1) and building the technical infrastructure (phase 2) can be done fairly easily, considering the experience we have gained in developing the G-Sec markets, the most critical and difficult task would in enhancing liquidity, safety and efficiency of the system. Enhancing liquidity is a major concern in development of any market. If, despite the decade long reforms that the G-Sec markets have been through, liquidity remains of some concern in these markets, illiquidity in corporate bond markets can be easily understood. Sub critical issue sizes and multiplicity of issuers further compounds the problems. The illiquidity in the Indian corporate bond markets can be attributed to the apparent preference of the corporates to finance their requirements through private placement and external borrowing by large issuers. Internationally, in many developed markets, there is a marked preference by corporates to tap the bond market rather than to seek bank loans for meeting their resource requirements. However, in India, the reliance on bank credit is still significant. Besides, the tendency of corporates to issue small amounts through repeated private placements dampens secondary market activity.

US markets have huge diversity in their issuer base along with the availability of a large issuer base. Of the outstanding bonds in 2006, Treasuries accounted for 16 per cent, mortgage related securities about 24 per cent, followed by corporate debt (20 per cent), Money market instruments (15 per cent), federal agency securities (10 per cent),

and municipal securities (9 per cent) and asset backed securities (8 per cent) (Patil Committee Report, 2005). The pure corporate bond market constituted only about 20 percent of the total US bond market. The markets for municipal bonds, mortgage related securities and federal agency securities owe much to the government related actions that supported the creation of these instruments. The market for asset backed securities develops along with further financial sector development and deepening, and is particularly dependent on clear and fast bankruptcy procedures.

At present,, the issuer base is very thin in India, with the Governments (Centre and the State) being the dominant issuers and a handful of others like large corporates and PSUs. In the long term, however, there is a huge potential for development of the Induan bond market. As urbanization proceeds, and municipal corporations become credit worthy it should be possible to develop a large municipal bond market. Other public sector infrastructure related agencies such as public utilities could also become credit worthy if their cash flows are secure with reforms in user charge policies.[10] The housing finance market also, with its increasing growth, affords a huge opportunity for developing mortgage backed securities markets, but conveyance of mortgages will need to become easier than it is at present.. Credit card receivables and auto loans are the other areas that could supplement the issuer base. Finally, the increasing number of large public authorities can also issue securities in the market.

[10] According to the 2001 census, there were 35 cities with more than 1 million population and nearly 400 cities with about 100, 000 population, developmental requirements of which point to a huge potential of issuances.

The point to be noted is that the “corporate” bond market as a whole includes much more than core corporate bonds. A great deal of work therefore needs to be done after the initial institutional building, for such markets to develop.

As the corporate bond market does develop and expands, diversifying and expanding investor interest will need institutional measures for credit enhancement. We are fortunate in India to have built up first rate credit rating institutions. So the first step in credit enhancement has already been taken. Credit risk can also be addressed by developing bond insurance institutions, but the recent developments in the United States suggest that this would need to be done with great care.. Institutional investors who have superior risk assessment capacity along with investment capacity can also act as credit enhancers. All this takes time to develop and does not happen on its own.

To summarize: the existing bias of household financial savings towards bank deposits and government paper; the dominant role of government bonds in the local debt market; the heavy reliance of the corporate sector on bank borrowing; the predominance of private placements over public offerings; and an illiquid secondary market - all seem to be the dominant features of the Indian debt market. What have been the impediments to development of the corporate bond market in India? Presence of too few institutional investors on the demand side and too few quality issuers on the supply side seems to be the major constraint, along with other structural constraints as described above.

Another issue in this sphere is the predominance of G-Sec in the portfolio of pension funds and life insurance companies. For example, existing guidelines mandate

incremental accretions by Non-government Provident Funds, Superannuation Funds and Gratuity Funds shall be invested as follows:

- 40 percent in Central and State Government securities and/or units of gilt funds regulated by SEBI and any other negotiable securities fully and unconditionally guaranteed by the Central/State Government or any State Government, provided that exposure of a trust to any individual gilt fund should not be more than 5% of its total portfolio at any point of time;
- 25 percent in bonds/securities of public financial institutions and public sector companies including public sector banks provided that these instruments have an investment grade rating from at least two credit rating agencies; and/or term deposit receipts up to three years issued by public sector banks; and Collateral Borrowing and Lending Obligations (CBLOs) issued by Clearing Corporation of India Limited and approved by RBI;
- Another 30 percent can be invested in any of the above categories as decided by the Trustees. Up to 10 percent of this can be invested in private sector debt instruments which have an investment grade rating from at least two credit rating agencies and/or in equity-linked schemes of mutual funds regulated by SEBI;
- Up to 5 percent can be invested in shares of companies that have an investment grade debt rating from at least two credit rating agencies.

Similarly for insurance companies, the investment guidelines are specified as follows:

- Government securities – not less than 25 per cent of the Fund
- Government securities or other approved securities – not less than 50 per cent of the Fund, including the above
- Investment in housing and Infrastructure – Not less than 15 percent

It could be argued that the requirement to hold government bonds could constrain liquidity by restricting the main liquidity traders to arbitrage transactions rather than directional trading. This could lead to a situation that the market could dry up in

anticipation of a fall in interest rates (Wells and Schou-Zibell, 2008). In the Indian context, one may note that the bulk of the investors in insurance and pension products fall in the the low and middle income groups and hence are risk averse. Thus, in view of its volatility they may not prefer to go into the equity market.[11] Hence these investment norms may be reflecting the preferences of pensioners and insurance subscribers. Given the low levels of income in India, the ability of households to bear downside risk is low, and hence the preference for risk free instruments.

Thus, while the corporate bond market lagged somewhat, the G-/sec market has experienced sufficient dynamism. To conclude, it is useful to quote from Blommestein and Santiso (2007):

> " …Public debt management and government securities market operations have a direct effect on the securities markets as a whole because governments play a key role in supporting the development of fixed-income securities markets. Governments are usually the largest supplier of this kind of instrument, while they are also the regulators of the market and its infrastructure such as clearing and settlement arrangements. Also transparency and adequate disclosure requirements are important elements of the financial infrastructure. Well-functioning government securities markets give public support to private fixed-income market (both cash and derivatives) in the form of a pricing benchmark, while they also provide a tool for interest rate risk management. *For these reasons, the development of a well-functioning government bond market will often precede, and very much facilitate, the development of a private-sector corporate bond market.* The focus on a risk-based approach to debt management with the establishment of interest rate-, liquidity- and currency benchmarks, have helped to improved the transparency, predictability, and liquidity of fixed income debt markets more in general (emphasis added)" (p. 41).

[11] The experience of the scheme called Unit Scheme 64 (US 64) run by the Unit Trust of India may be recalled in this connection. The US-64 was an open ended, non-assured income scheme and was considered an essential investment by most middle-class Indians. It had as many as 20 million investors at its peak. In the 1970s and 1980s, a combination of favourable circumstances allowed UTI (Unit Trust of India) to flourish, and enabled it to pay high dividends to its unit holders. But in the late 1990s, UTI went into a deep crisis. In 1998, the reserves of US-64 turned negative. But the fund became healthy within a year due to the surge in equity markets. However, it experienced a second crisis in 2002 and the government repealed the UTI Act in October 2002 and launched a new scheme, Unit Scheme-2002.

5. The Road Ahead

How do we see the future? Instead of speculating on any futuristic scenario, six issues are flagged, viz., (i) securitization of state government paper; (ii) FRBM and its impact on the debt markets; (iii) the derivatives market and (iv) corporate governance and risk management, (v) separation of debt management from the RBI, and (vi) issues relating to further opening up of the debt market to foreign investors.

Securitizing State Government Paper

We have not addressed the issue of state government borrowing in any detail in this paper. With the implementation of the recommendations of the Twelfth Finance Commission, the central government is no longer acting as an intermediary for states' borrowing requirements. Now states have to borrow directly from the market. The likelihood is that their market borrowing will, in the aggregate, approach central government borrowing in the years to come. Promoting liquidity in state government papers is therefore a crucial issue. One way of solving this issue could be to securitize the various state government papers. Such securitizing of state government paper and issuing units based on these underlying state government papers, could address the issues of fungibility, transferability etc., besides improving liquidity in state government papers. Much more focused work needs to be done on this issue, since state government paper is largely illiquid at present.

Fiscal Responsibility and Budget Management (FRBM) Act and the Debt Markets

Over the last two decades, sustained budget deficits produced large issuance of government securities in India. Taking advantage of this, we were able to develop a

relatively deep and liquid government securities market. Improvements in the fiscal position during 2006-08 resulted in a lower than budgeted fiscal deficit. The government had embarked on a process of fiscal consolidation through the Fiscal Responsibility and Budget Management Act through which the improvement in the fiscal position (zero revenue deficit) was projected to be achieved and the fiscal deficit was sought to be brought down to 3.0 per cent by 2009-10. These targets were expected to be achieved before the onset of the global economic and financial crisis. However, the financial crisis has led to adoption of a significant stimulus package in India, as elsewhere and achievement of the targets under the RRBM has had to be delayed.. Nevertheless as fiscal responsibility returns it could lead to a significant decline in the share of government securities in the total assets of the financial system, releasing the availability of resources in the country for the private sector.

Another reason for the G-Sec trading volumes getting constrained is existence of the statutory liquidity ratio (SLR) in India. However, the need for SLR emanates from two specific sources: (a) for financial stability considerations in the presence of high fiscal deficits; and (b) for prudential reasons. In fact, in the current context of the global financial crisis, regulators all over the world are talking about putting such prudential ratios, though not as high as in India, for liquidity reasons.

The challenge facing the Indian economy is acceleration of the growth process. The availability of adequate infrastructure facilities is vital for the acceleration of the economic development of a country. However, the financing of infrastructure projects is a highly challenging task. Banks are hesitant to finance infrastructure projects partly because they lack the requisite skills in project appraisal and partly on consideration of

asset liability mismatches. The gap between increasing demand for financing infrastructure activity and lower budgetary support has led to a wave of deregulation and privatization of infrastructure in a number of countries. The huge gap between investment demand and the supply of finances provides complex challenges to the different constituents of the financial system, which compel a search for alternative ways of financing these investments. With the development of an active and liquid market for securitized corporate debt, mutual funds, pension and insurance funds could also emerge as potentially large investors. Thus, in the context of infrastructure financing, the prevalence of a long-term debt market becomes critical. A vibrant debt market assumes importance in the context of providing mechanisms for greater liquidity as also for risk minimization. In India, while equity markets have developed faster in terms of liquidity, infrastructure and regulatory framework, the debt market has lagged behind. As the fiscal consolidation process proceeds resources with financial institutions of different kinds will increasingly become available for investment in corporate debt for financing productive activities.

Third, with the decline of development finance institutions, one of the sources of finance for corporates, viz., project loans has been falling. Corporates will therefore have to increasingly source their debt financing directly from the market. This underscores the importance of a transparent, deep and liquid corporate debt market.

Derivatives Market

The need for a well developed interest rate derivatives market for providing effective hedging tools for interest rate risk is well understood. Deregulation of interest rates, which helped in making financial market operations efficient and cost effective,

has brought to the fore a wide array of risks faced by market participants. To manage and control these risks, several instruments such as Forward Rate Agreements (FRA) and Interest Rate Swaps (IRS) were introduced which could provide effective hedges against interest rate risks. Further, the guidelines to banks/primary dealers/FIs for transacting in exchange traded interest rate futures have been issued, which were introduced on the exchanges. There has also been a sharp increase in the volume of transactions in the OTC products. Though there has been a significant increase in the number and amount of contracts, participation in the markets continues to remain limited mainly to select foreign and private sector banks and PDs.

The introduction of exchange based interest rate futures, along with the clarification now available on the legality of OTC derivatives is expected to give a thrust to the interest rate derivatives market in India. In this connection, the need and importance of sound and adequate risk management practices by market participants in the derivatives market need to be emphasized. International experience teaches us the need for greater care in handling these instruments and also the need for introducing transparency and safety in the OTC market. It is expected that the market players not only put in place an appropriate risk management policy and procedures for these products, but would also give equal importance to the skills development of their human resources to handle these instruments and to appreciate the underlying risks.

Risk Management and Corporate Governance

Presently, PDs measure market risk of their portfolios based on the internal VaR model and/or standardized model, while the banks are required to use a flat charge. In order to implement the BIS guidelines on measuring and managing market risk, banks

have also been advised to measure their market risk in a phased manner. It is of paramount importance that market participants ensure sound and reliable risk management system to handle credit, market and operational risks. How well we guard the system against the various risks would decide the future direction of the market. We would also like to emphasize that the need for good corporate governance in all the institutions is some thing which we need to ensure in letter and spirit.[12] Corporate governance is conducting business in a transparent manner that meets the ever changing needs of the customers, society, regulators, investors and other stake holders.

Separation of Debt Management from the Central Bank[13]

There has been a great deal of discussion in recent years on the desirability of separating the function of government debt management from the Reserve Bank of India as an important component of debt market reforms. It is argued that the lack of separation has inhibited debt market development in the country. We have, however, documented in this paper how the Reserve Bank, as the debt manager, was able to develop the government securities market in a carefully sequenced manner over the past decade or so. In view of the specific characteristics of the Indian fiscal situation and the prior existence of generalized fiscal dominance over the years this process has had to be a carefully calibrated one. The outcomes seem to suggest that the process has

[12] One if reminded of *George Bernard Shaw* who said, *"The only man who behaved sensibly was my tailor; he took my measurement anew every time he saw me, while all the rest went on with their old measurements and expected them to fit me."*

[13] This section draws on Government of India and Reserve Bank of India (2009): *Report of the Committee on Financial Sector Assessment* (Chairman: Rakesh Mohan), March 2009, available at http://rbi.org.in (accessed in October 2009).

been relatively successful, though there is need for greater diversification in the investor base.

The Reserve Bank of India, as banker to the Government is mandated to manage internal debt of the Central government by the statute (RBI Act), whereas management of State governments' debt is based on mutual formal agreement between the Reserve Bank and each of the State governments. In this role the Reserve Bank acts as the agent of the respective governments and also advises the Central Government during the formulation of the annual borrowing programme. [14] The objectives of public debt management policy are the minimization of the cost of borrowing and of refinance risk.[15] The main activity of the RBI as the government's debt manager has been:

- Floatation of Central/State Government loans – preparation of calendar for issuances of Government of India dated securities and Treasury Bills, introduction of new instruments for Government's market borrowings;
- Fixing of limits on Ways and Means advances (WMA) for both Central and State Governments and monitoring the use of these limits on a daily basis;
- Authorization, regulation and supervision of the Primary Dealer system;
- Market development activities like the introduction of new instruments, development of trading platform, clearing and settlement systems and widening of investor base;

[14] Organizationally this is handled in the Internal Debt Management Department (IDMD) of the RBI. The IDMD, was originally created as a cell in April, 1992 comprising the Public Borrowing, Open Market Operations and Ways and Means sections, was fully constituted as an independent unit called Internal Debt Management Cell (IDMC) on October 1, 1992 and later renamed as the Internal Debt Management Department (IDMD) in May 2003.

[15] External debt is managed by the Ministry of Finance.

- Facilitating State Governments' investment of their surplus cash balances in Treasury Bills and dated securities under various funds.

In performing these functions the role of the Reserve Bank is very similar to those of the New York Federal Reserve Bank in acting as the agent of the US Treasury in its debt management functions. The New York Fed essentially acts as the Front Office of the US Treasury, and the Federal Reserve System as the Back Office, while the Debt Management Office (DMO) within the US Treasury essentially performs the Middle Office function. The New York Fed is also in charge of all the money market operations of the US Federal Reserve. Consequently all monetary policy operations of the US Fed are carried out by the New York Fed. Because of its role in the money market the New York Fed has to maintain close daily working relationships with the main market participants in New York, the financial centre of the United States. This arrangement has been maintained because of the great synergy found between the New York Fed's money market operations, which mainly involve the buying and selling of government securities, and its role as the Front Office for debt management on behalf of the US Treasury. A good understanding of the daily operations of financial markets is essential for an agency to act effectively as the government's front office in its debt management functions. Conversely, since large government debt operations affect interest rate determination in the debt market and the money markets it is useful for these functions to be vested in the central bank. This is particularly important when the government securities market is the main component of the debt market as a whole, as it is in India.

In this context it is useful to examine the reasons why a number of important committees and influential commentators have been recommending the separation of

government debt management from the Reserve Bank. The original suggestions for such separation emanated from the Reserve Bank itself in the early part of this decade, and this view has then been endorsed by others subsequently. The experience of fiscal dominance had been a very difficult one for the Reserve Bank in conducting monetary policy for a long period of time. There was obvious conflict of interest with monetary policy when there was automatic monetization of fiscal deficits through the generation of ad hoc treasury bills, and there was the constant possibility of devolvement of unsuccessful auctions on the RBI. Thus monetary policy operations of the RBI were compromised by its role as the government's debt manager. Direct monetization or devolvement affected the interest rate, and these actions could also give signals to the market on the monetary policy stance of the Reserve Bank. Enactment of the FRBM Act has now prohibited the Reserve Bank from participating in the primary market, and hence this has removed this main source of conflict of interest. As documented, in preparation of the FRBM the RBI had minimized devolvement since the early part of this decade and almost none since 2003. Government borrowing has therefore been at market interest rates over this period.

On the contrary, what remains is a confluence of interest, which has been demonstrated in late 2008-09 and in 2009-10. As there was a sudden need for a vastly expanded government borrowing programme in the last two quarters of 2008-09, followed by a similar sized borrowing programme in 2009-10, the Reserve Bank could coordinate its open market operations with that of the borrowing programme. The open market operations were consistent with its monetary policy in terms of the need to keep base money expansion in accord with desired monetary expansion. In previous periods

base money expansion had taken place mainly through the accretion of foreign assets; in the wake of the global crisis in 2008-09 foreign exchange reserves had to be used to maintain stability in the foreign exchange market and hence there was a loss in foreign assets. Thus it had to do open market operations to expand domestic liquidity, and also replenish its balance sheet with domestic assets (Mohan and Kapur, 2009b)). All this could be done smoothly along with the vastly expanded government borrowing programme because the Reserve bank is both the monetary authority and the government's debt manager; and in these roles has a deep understanding of the daily operations in financial markets through its own operations and through its constant contact with market participants.

Under the FRBM the Central Government's fiscal deficit was to come down to 3 percent of GDP by 2009-10; and the state governments were to also follow suit within the stipulations of their respective legislations. Before the onset of the global crisis these targets were on track to be met in 2009-10. Even if they had been met the combined fiscal deficit would have been in the order of 6 percent of GDP, which would still have been among the highest in the world, though a considerable improvement over the India's fiscal record of the past 30 years. With the current expansion of fiscal deficits it will take time for such a target to be met again. In the context of such fiscal deficits it has been difficult to reduce the Statutory Liquidity Ratio (SLR) mandating banks to invest 25 percent of their net demand and time liabilities (NDTL). However, this requirement also provides for financial stability by providing banks with a stable liquidity cushion. In the wake of the severe liquidity crisis experienced in late 2008 by leading financial institutions in the world, discussions are now on in various jurisdictions to

impose similar liquidity requirements on banks, though at a lower level. The SLR requirement clearly affects the operation of debt markets: government interest rates could presumably be higher if such a stipulation did not exist, or if it was significantly lower. Thus there is a further need for coordination by the RBI between its different roles as the monetary authority, the government's debt manager and as the banking regulator: again a confluence of interest rather than a conflict of interest. It will take quite some time for Indian combined fiscal deficits to come down to sustainable levels that are comparable with other leading countries. When they do and the weight of the government securities market reduces as a component of the overall debt market such considerations will have less relevance.

There a number of other considerations that suggest that it may not be advisable to separate the debt management function completely from the Reserve Bank at present.

First, in a situation of volatile capital flows, sometimes as excess inflows and other times as outflows, foreign exchange intervention from the Reserve Bank is necessary on a relatively continuous basis. For consequent sterilization through issuance of MSS or its reverse, the co-ordination of the debt management with these operations will need to continue. In 2007-08, the volume of issuance of securities under MSS had been comparable to those issued for the market borrowing programme. In 2008-09, there has been significant unwinding. Separation of the DMO from the Reserve Bank will make it very difficult to harmonize these operations as is done at present.

Second, on the issue of conflict of interest, in the current Indian context where 70 per cent of the banking assets remain in the public sector banks, and among life insurance companies the public sector Life Insurance Company (LIC) remains dominant, setting up of a DMO under the Ministry of Finance may, in fact, exacerbate the conflict between Governments role as a debt manager and its status as the owner of a substantial portion of the banking ad insurance sector. In such a situation, the Government can bring in undue influence on the public sector banks and insurance companies to buy government securities in auctions and, thereby, could distort the price discovery process and emergence of a market-based, risk-free yield curve. This could eventually undermine the very edifice of the microstructure of the government securities market which has been so carefully and assiduously built up over a period of time. Since the Government in its capacity as the major stakeholder of banks can, theoretically, influence their investment decisions, unless robust corporate governance standards are put in place, the transparency of debt management would be the first casualty. In fact, the Tarapore Committee conditioned its recommendation for separation of debt management from the Reserve Bank with the prior privatization of banks.

Third, government debt management requires further development of the government securities market through both institutional and market development activities including diversification of debt instruments, development of derivatives and widening of the investor base. Thus, there is a continuing need for these activities to be coordinated by the Reserve Bank in such a way that monetary and financial stability is maintained along with such financial deepening in the government securities market.

Fourth, the Reserve Bank also acts as the debt manager for State Governments. Consequent to the recommendation of the Twelfth Finance Commission, the Central Government no longer acts as an intermediary for State Government borrowings. There has also been an increase in the volume of State Government debt issuance. In such a situation, it will become increasingly important to harmonize the market borrowing programme of the Central and State Governments. Hence, separation of the Central Government DMO will make such harmonization difficult. Furthermore, it may not be appropriate for a Central Government authority to also do State Government debt management.

Fifth, as a practical issue, it has always been difficult to set up new Government authorities. The experience in setting up infrastructure regulatory authorities like Telecom Regulatory Authority of India, Tariff Authority of Major Ports and Central Electricity Regulatory Commission, and financial sector regulators like SEBI, IRDA and PFRDA has thrown up a number of issues. Problems have arisen, with respect to staffing of these institutions and the operation of the government rules in their service. The consequence has been that these institutions have been staffed to a significant extent by the officers on deputation from different government departments making it difficult to develop appropriate expertise. A similar problem will arise if a separate DMO is attempted to be set up under the direct control of the Government.

Finally, the Reserve Bank is able to handle the debt management operations in view of the large size of its staff and expertise developed in managing regulation and supervision of the banks, money market operations and debt market operations. The staff of the DMO will need to be conversant with financial markets and also be able to

interact with market players continuously. Moreover, technical infrastructure for issuance, trading, etc., will also have to be set up, which will involve avoidable expenses.

Following the announcement in the Union Budget 2007-08, the Central Government has proceeded with the establishment of a Middle Office, as a prelude to setting up of a full-fledged Debt Management Office (DMO). The responsibility for overall debt – both internal and external – rests very appropriately with the Central Government which has to frame policies pertaining to external debt and internal liabilities other than market borrowings. Thus the setting up of a DMO as the Middle Office in the Ministry of Finance is very desirable in order to frame overall policies pertaining to debt management. The Reserve Bank should act only as an agent of the Central Government, and of the state governments, in its debt management functions as it conducts all market borrowing operations, in a fashion very similar to the functions of the Federal Reserve Bank of New York on behalf of the US Treasury.

Thus, while acknowledging that there could still be some potential conflicts in objectives and operations between debt management and monetary management and, therefore, for effective discharge of both, functional separation could eventually be desirable, we feel that the time is not yet ripe for the complete separation of debt management from the Reserve Bank. A well-structured Middle Office in the Ministry of Finance is, however, certainly a move in the right direction.

Bankruptcy System

A major hindrance in development of the bond market has been the time-consuming and inefficient bankruptcy system in India. Political interference and delays in the judiciary process are often cited as major obstacles. In order to achieve a more transparent financial system, the CFSA Report too emphasized the need for establishing a predictable and sound insolvency system, and noted that ideally, there is a need to consolidate all the separate laws dealing with insolvencies into a single, uniform and comprehensive bankruptcy code with a common forum, irrespective of the entity involved in such insolvency. This would, however, require amendments to the Constitution and various other laws (GoI and RBI, 2009). Nevertheless, as we have already noted most of the securities in the corporate bond market are in the highly rated category, bankruptcy is hardly an issue in the corporate bond market. Besides, the predominance of private placement implies that it is easier to renegotiate terms, rather than to go through the legal processes for insolvency (Wells and Schou-Zibell, 2008)

Opening up the Indian Corporate Debt Market to Foreign Investment

If one considers the extent of foreign shares within debt and equity market separately, then foreign presence in the debt market is distinctly lower than its counterpart in the equity market. Debt flows – foreign borrowings by corporate entities, foreign investment in domestic debt securities (both government and corporate) and banks' access to foreign borrowings – are subject to prudential controls through a system of overall ceilings on the amounts that can be borrowed, maturity prescriptions and ceilings on interest rate spreads. In particular, foreign investment in government securities is subject to overall ceilings (US $ 5.0 billion at present) (Mohan and Kapur,

2009). As in the case of government securities, investments by non-residents in local corporate bonds are subject to overall ceilings (at present US $ 15 billion at present) (Table 17).

Table17: Ceilings on Investments by Foreign Institutional Investors (FIIs) in Debt Instruments

(US $ billion)

Government Securities		Corporate Debt Securities	
Date	**Ceiling**	**Date**	**Ceiling**
April 1998	1.0	December 2, 2004	0.5
November 2, 2004	1.75	April 5, 2006	1.5
April 5, 2006	2.0	June 6, 2008	3.0
January 19, 2007	2.6	October 16, 2008	6.0
January 31, 2008	3.2	January 2, 2009	15.0
June 6, 2008	5.0		

Source: Mohan and Kapur (2009b), p. 18

While in part this could be due to absence of foreign denominated sovereign debt in India, absence of foreign investors in the corporate debt market is often seen as a major feature of Indian debt market (Table 18). The existence of ceiling of investment by foreign institutional investors separately on debt and equity are often seen as major impediment for development of corporate debt market in India.

Table 18: Size of capital markets and foreign participation

	Equities				Domestic Debt Securities			
	Market capitalization (percent of GDP)		Foreign share (percent of market capitalization)		Amounts outstanding (percent of GDP)		Foreign share (percent of amounts outstanding	
	2001	2007	2001	2006	2001	2007	2001	2006
Asia	63	195	12.8	17.3	37.3	57.4	7.6	6.9
China	40	138	2.5	23.2	18.0	51.9	2.9	1.3
India	43	317	6.6	10.0	27.5	41.7	1.5	6.2
Latin America	24	70	19.4	20.5	33.7	52.3	22.8	15.0
Brazil	34	104	18.2	21.6	58.0	72.5	14.8	10.8
Mexico	20	45	32.1	32.3	27.0	39.8	26.5	19.0
Central Europe	15	49	19.2	18.7	31.3	45.9	20.7	40.1
Others	34	117	13.7	11.2	21.0	17.1	26.5	32.8
Russia	25	117	14.4	11.1	1.7	3.1	288.2	123.5
South Africa	71	293	15.4	9.4	33.6	42.7	16.5	16.1

Source: BIS (2009)

Three distinct issues need to be considered in this context.

First, Indian policy makers have shown a consistent preference for equity over debt in the hierarchy of foreign fund flows. After all, equity forms of investment serve to transfer risk to the supplier of funds and away from the user of funds, while debt has to be serviced irrespective of the returns earned on the investment financed by borrowing. The servicing of equity liabilities, on the other hand, depends on the returns actually earned (BIS, 2009).

Second, large inflows of foreign capital can complicate monetary policy. Several countries have used controls on capital inflows to give them somewhat greater independence in setting monetary policy. There are in fact, good grounds for a phased liberalization of capital controls – for freeing foreign direct investment and portfolio

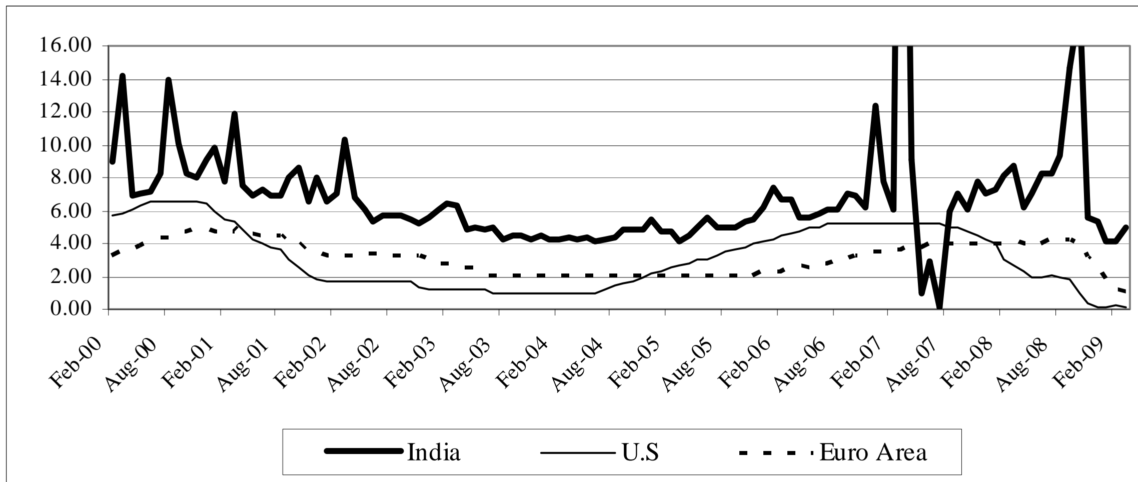
equity flows before allowing nonresidents to conduct debt-related transactions such as portfolio flows into domestic debt securities and international debt issuance by local firms. In addition, there are grounds for limiting short-term flows; hence restrictions on short-term instruments are frequently maintained longer than other restrictions (BIS, 2009, Mohan and Kapur 2009a)

Finally, it is in this context that the current configuration of interest rate and inflation rate in India via-a-vis a number of developed countries seems to justify the extent of restrictions in the debt market (Chart 4). In the backdrop of the current financial crisis, there are reasons to believe that the suggestions for further opening up of the corporate bond could have emanated from taking a view on the exchange rate in absence of capital account convertibility. Let the path towards increasing capital account convertibility be dictated by overall macro policy consideration, and need not be pushed through a back door of some isolated instances of foreign participation in domestic debt market.

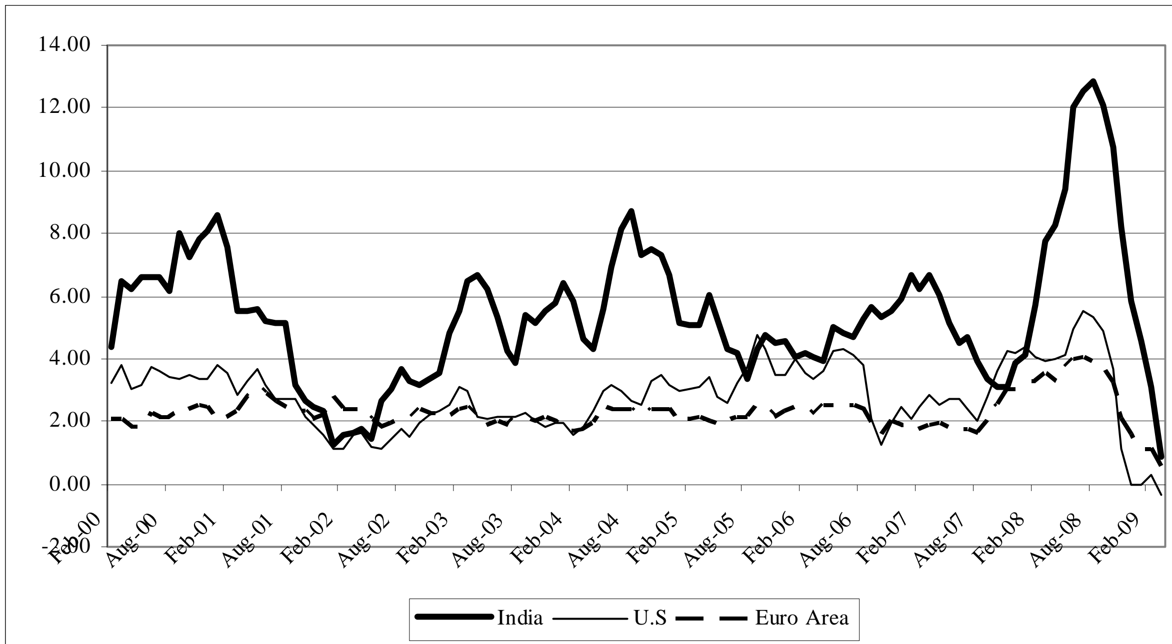
There is now a growing consensus that a fully open capital account does not necessarily lead to higher growth. Rather, it increases vulnerabilities to financial crisis. As the current global financial crisis has shown, this is as true for EMEs as for advanced economies. Accordingly, capital account opening needs to be well-sequenced contingent upon developments in both the real sector and financial sector, and in fiscal policy. Greater caution is needed in liberalisation of debt flows. Non-resident investments in risk-free sovereign debt instruments also need to be restricted since interest rate differentials favour EMEs and these differentials can encourage hot money (Mohan and Kapur, 2009).

Chart 5: Interest Rate and Inflation in India, U.S and Euro Area[16]

Interest Rate



Inflation Rates



[16] Interest Rates refers to the following: For India, it is call money rate, for the U.S it is federal funds rate and for the Euro Area it is overnight inter-bank rate.

6. Concluding Observations

As a bank-based financial system, Indian debt market has come a long way since the initiation of reforms in 1991. While the progress in the government debt has been impressive, lot needs to be done in case of corporate bond market. With the prior example of a successful reform in the G-Sec market, reforming the corporate debt market should not prove to be difficult. Considering the necessity of infrastructure investment, development of corporate debt market is going to be of paramount importance. Infrastructural constraints need to be tackled.

What is the future agenda then? To conclude, we can do no better but to quote from a recent address of the Indian Prime Minister, who in commenting on the shape of things to come in the Indian financial sector, went on say:

> *"We need to ensure that the financial system can provide the finance needed for our development, and especially for infrastructure development. This opens up a broad agenda for reform. We need to develop long-term debt markets and to deepen corporate bond markets. This in turn calls for a strong insurance and pension sub-sectors. Some of the reforms needed, especially in insurance, involve legislative changes. We have taken initiatives in this area and will strive to build the political consensus needed for these legislative actions to be completed. We need to improve futures markets for better price discovery and regulation. We also need to remove institutional hurdles to facilitate better intermediation. All these issues will be addressed through gradual but steady progress in financial sector reforms to make the sector more competitive while ensuring an efficient regulatory and oversight system" (Singh, 2009).*

Annex 1: Reforms in the G-Sec Market

Year	Reform initiated
June 1992	Commenced auction of Central Government Securities at market determined rates for the first time.
January 1993	91 day Treasury Bills offered through auctions at market determined rates.
January 1994	Issued Zero coupon Bond for the first time. Securities Trading Corporation of India (STCI) commenced operations.
August 1994	An Agreement was signed between RBI and the government to limit borrowing through issue of *ad hoc* treasury bills.
March 1995	Guidelines and procedures for enlistment of Primary Dealers were issued.
July 1995	Delivery-versus-Payment (D*v*P) in G-Secs was introduced.
September 1995	Floating Rate Bonds (FRBs) were introduced.
January 1997	Technical Advisory Committee (TAC) for government securities and a Standing Committee on Money Market were set up.
March 1997	Agreement between Government and RBI to, inter alia, discontinue *ad-hoc* T-Bills.
April 1997	The Fixed Income Money Market and Derivatives Association of India (FIMMDA), an association of Scheduled Commercial Banks, Public Financial Institutions, Primary Dealers and Insurance Companies was incorporated as a Company under section 25 of the Companies Act,1956 on June 3rd, 1998; Repo was permitted in all G-Secs to SGL a/c holders.
July 1997	FIIs were permitted to invest in G-Secs.
December 1997	Capital Indexed Bonds were issued and Primary Dealers Association of India (PDAI) was formed.
April 2000	Sale of securities allotted in primary issues on the same day.
June 2000	Introduction of Liquidity Adjustment Facility (LAF).
February 2002	Negotiated Dealing System (NDS) (Phase I) operationalised; Clearing Corporation of India Ltd. (CCIL) was operationalised.
May 2002	Compulsory holding of G-Secs in demat form by RBI regulated

	entities.
June 2002	PDs were brought under the jurisdiction of the Board for Financial Supervision (BFS).
July 2002	G-Secs with call and put option was introduced.
October 2002	Trade data of NDS is being made available on RBI website.
January 2003	Trading of G-Secs on stock exchanges.
February 2003	Eligibility to participate in the repo market was extended to non-banks.
June 2003	Interest Rate Derivatives have been introduced.
July 2003	Government Debt Buy-Back scheme was successfully implemented.
March 2004	RTGS system trial run.
August 2005	NDS-OM trading module introduced.
February 2006	Guidelines were issued permitting banks to undertake PD business departmentally.
April 2006	Mutual Funds which are NDS members were permitted to access the NDS-OM module.
May 2006	Guidelines were issued permitting NDS-OM members to enter into “when issued” transactions in central government securities that have been notified but not actually issued.
August 2006	Government Securities Act, 2006 received the assent of the President of India.
May 2007	Qualified CSGL custodians were permitted to trade on NDS-OM through their custodians.
May 2008	Indirect access to the NDS-OM was extended to other segments of investors, such as, non-deposit taking non-bank financial companies.

Source: RBI, *Annual Reports*, Various issues

Annex II

Major Recommendations of the Patil Committee[17]

1) Development of Primary Market
    a. **Stamp Duty:** There is an urgent need to address the issue of differential stamp duties levied by various State Governments on debt instruments.
    b. **TDS:** TDS rules for corporate bonds should be similar to the ones applicable to Government Securities.
    c. **Enhancing Issuer Base:** In order to incentivize corporates to raise a part of their requirements through bonds, the time and cost for public issuance and the disclosure and listing requirements for private placements should be reduced and made simpler. Banks should be allowed to issue bonds of maturities of over 5 years for ALM purpose and not only for the infrastructure sector as at present;
    d. **Market-Makers:** A market-making scheme for corporate bonds should be evolved by the market participant(s) willing to do so, including large intermediaries – such as banks, primary dealers and investment banks.
    e. **Listing of Issues:** For already listed entities, there is a strong case for disclosures to be substantially abridged. Companies, that have no securities listed at the exchanges or have listed only privately placed bonds but which wish to make a public issue, should be subjected to stringent disclosure requirements.
    f. **Enhancing Investor Base:** Investment guidelines issued to such entities should provide for fungible/common limits in respect of different issuer categories such as PSUs and private sector corporate entities. One of the ways to enhance the investor base is through allowing a separate higher limit for FIIs on a yearly basis in corporate bonds. However, since this has implications for managing the capital account, RBI may review this matter at an appropriate stage.
    g. **Consolidation of Privately Placed Bonds:** Issuers should be encouraged to consolidate their various existing issues into a few large issues which can then serve as benchmarks.

2) Development of Secondary Market:
    a. **Trade Reporting System:** Steps should be taken to immediately establish a system to capture all information related to trading in corporate bonds as accurately and as close to execution as possible, and disseminate it to the entire market in real time.

[17] This Annex lists only the major recommendations; see Chapter V of the Patil Committee Report for the full listing of recommendations.

b. **Clearing and Settlement System:** The clearing and settlement of trades in this market must follow the IOSCO standards and the global best practices by way of well established clearing and settlement procedures through recognized clearing and settlement agencies.
c. **Order Matching Trading System:** Efforts should be made to develop online order matching platforms for corporate bonds. Such trading platforms can be set up by the stock exchanges or jointly by regulated institutions like banks, financial institutions, mutual funds, or insurance companies.
d. **Reduction of Shut Period:** The current shut period in corporate bonds is very high and needs to be reduced and aligned to that for Government Securities.
e. **Unified Market Convention:** FIMMDA, being the representative of the banks and institutions, should take a lead role to put in place unified market conventions to be followed for corporate bonds.
f. **Repos in Corporate Bonds:** RBI may allow Repos in corporate bonds.
g. **Introduction of Interest Rate Derivatives:** Currently, the interest rate derivatives market is confined to the OTC market with only a handful of participants. Steps may be taken to introduce reporting system in the market and ensure real time dissemination of information. Simultaneously steps may be taken to immediately introduce the revised and approved exchange traded derivative products which have been pending for a long time.
h. **Reduction in Market Lot:** The minimum market lot criteria of Rs.10 lakh for trading in corporate bonds at the stock exchanges should be reduced to Rs.1 lakh to enable better access to smaller investors.

3) Development of Securitized Debt Market

a. **Stamp Duty on Securitized Debt:** To promote healthy growth of securitization market, the Central Government should consider establishing an appropriate institutional process to evolve a consensus across the States on the affordable rates and levels of stamp duty on debt assignment, pass through certificates (PTCs) and security receipts (SRs).
b. **Taxation:** In order to resolve the uncertainty in taxation issues pertaining to securitized papers, it has been suggested that the Central Government should provide an explicit tax pass through treatment to securitization SPVs and NPA Securitisation SPVs (namely, trust SPVs set up by ARCs registered with RBI under SARFAESI) on par with the tax pass through treatment.
c. **Listing of Securitized Debt:** The Central Government should consider notifying PTCs and other securities issued by securitization SPVs / Trust as "securities" under SCRA.
d. **Issues under SARFAESI and Suggestions:** The Central Government may consider possibility of proposing an appropriate amendment to the definition of "Security Receipt" in Sec.2(zg) of SARFAESI Act. The amendment should enable the SR to also be an evidence of the right of its

holder to the cashflows from realization of the financial asset involved in securitization (as differentiated from a right in the financial asset itself).

e. **Credit Enhancement Mechanism:** Steps should be taken to introduce credit enhancement in India for corporate bonds.

4) Specialized Debt Funds for Infrastructure Financing

   a. There exists a strong case for creation of specialised Debt Funds to cater to the needs of the infrastructure sector.

   b. **Fiscal Concession for Municipal Bonds and Infrastructure SPVs:** The recommendations submitted by the various Committees appointed by the Government to review interest rates on small savings instruments need to be implemented to ensure that interest rates paid on small savings instruments are aligned with market rates.

Annex III

Major Developments in the Corporate Bonds and Securitization Markets

- **December 2005:** the High Level Expert Committee on Corporate Bonds and Securitization submits its report.
- **July 2006:** RBI's "Working Group to examine recommendations of High Level Expert Committee on Corporate Bonds and Securitization involving RBI and suggest a roadmap for implementation" submits its Report.
- **December 2006:** SEBI permits BSE to set up a reporting platform from January 1, 2007 to capture all information related to trading in corporate bonds as accurately and as close to execution as possible.
- **January 2007**, Government discusses the relevant issues of regulatory jurisdiction and market design further and decides the following on clarity on the agency responsible for different segments of the corporate debt market:
    - SEBI will be responsible for primary market (public issues as well as private placement by listed companies) for corporate debt;
    - RBI will be responsible for the market for repo/reverse repo transactions in corporate debt. However. If it is traded on exchanges, trading and settlement procedure would be determined by SEBI.
    - SEBI will be responsible for the secondary market (OTC as well as Exchange) for the corporate debt;
- **January 2007:** BSE operationalized its reporting platform to capture information related to trading in corporate bond market.
- **March 2007:** SEBI permits NSE also to set up and maintain a reporting platform on the lines of BSE.
- **April 2007:** SEBI permits both BSE and NSE to have in place corporate bond trading platforms to enable efficient price discovery and reliable clearing and settlement facility in a gradual manner.
- **April 2007**, SEBI decides to reduce the shut period in corporate bonds to align it with that applicable for Government Securities.
- **July 2007:** BSE and NSE trading platforms become operational.
- **August 2007:** SEBI starts placing information on secondary market trades (both exchange and OTC trades)on its website on the basis of data provided by the two Exchanges.

- **August 2007:** SEBI grants approval to FIMMDA for starting Corporate Bond Trade Reporting Platform.
- **January 2008:** SEBI frames Draft Regulations on Issue and Listing of Debt Securities and the places on same on the SEBI website along with a consultative paper for Public Comments.
- **April-May 2008:** SEBI discussed with the stock exchanges BSE and NSE on introduction of mandatory clearing and settlement for trades in corporate bonds. This is in line with the discussions had with RBI in December 2007 towards preparing the market for introduction of Repos. The policy is under consideration of SEBI.
- **May 2008:** The SEBI (Public Offer and Listing of Securitized Debt Instruments) Regulations, 2008 are notified in the Official Gazette dated May 26, 2008.
- **June 2008:** The SEBI (Issue and Listing of Debt Securities) Regulations, 2008 are notified in the Official Gazette dated June 06, 2008.
- **June 2009:** SEBI issued a circular clarifying the applicability of regulations/ guidelines of SEBI on privately placed convertible debt securities.
- **July 2009:** SEBI issued a circular to all Mutual Funds, AMFI, Stock Exchanges and FIMMDA, making it mandatory to report inter-scheme transfers of Corporate Bonds by Mutual funds on either of the reporting platforms of BSE, NSE or FIMMDA.

Source: SEBI (2009): "Developments in the Corporate Bonds and Securitization Markets", available at http://www.sebi.gov.in (accessed in November 2009).

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