Corporate Bond Market in India: Lessons from Abroad and Road Ahead

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Abstract—**This study is a pioneering study on the factors influencing the corporate bond market in India. Important aims of this study are to trace the development of corporate bond markets in other countries, identify factors which have influenced its development and suggest policy reforms to enhance the development of corporate bond markets in India. Multivariate regression analysis is used to analyze the factors that have influenced the development of the corporate bond markets in India. Our results show that while the growth of the government bond market has been a major positive influence in the development of the corporate bond markets in India, bank lending in India may have slowed the development of the corporate bond market. Other factors such as the size of the economy, openness, size of the stock market and institutional factors like corruption have had little or no impact on the development of the corporate bond market. Based on our study we suggest policy reforms to improve the corporate bond market in India. Suggested policy reforms includes improving the retail investment markets through issue of Swadeshi or patriotic bonds, encouraging foreign participation by relaxing regulations and providing tax incentives, providing credit enhancements and introduction of new instruments such as credit default swaps and corporate repos.**

Index Terms—**Capital markets, corporate bond market, emerging markets, India.**

I. Introduction

A well-developed domestic capital market consists of the equity market and the bond market. A well-developed bond market with a significant role for the corporate bond market segment is considered important for an efficient capital market. A vibrant corporate bond market ensures that funds flow towards productive investments and market forces exerts competitive pressures on lending to the private sector. While India boasts of a world-class equity market its bond market is still underdeveloped and is dominated by the government bond market. The value of outstanding government bonds in India was 39.5% of GDP as of 2010 and compares favorably with other Asian countries such as China (27.6%) and South Korea (47.2%). The value of corporate bond outstanding in India (Table 1) however was only 1.6% of GDP compared to Malaysia (27%) and South Korea (37.8%) at the end of 2010.

Jiang, Tang and Law point out that one of the principal benefits of a well developed corporate bond market is to provide an effective alternative source of financing to bank financing [1]. Further, Luengnaruemitchai and Ong in their IMF working paper feel that core aspects such as benchmarking, corporate governance and disclosure, credit risk pricing, the availability of reliable trading systems, and the development of hedging instruments are fundamental for improving the breadth and depth of corporate debt markets [2]. A well-developed domestic capital market consists of the equity market and the bond market. While India boasts of a world-class equity market its bond market is still underdeveloped and is dominated by the government bond market. For instance, the value of outstanding government bonds in India was 39.5% of GDP as of 2010 and compares favorably with other Asian countries such as China (27.6%) and South Korea (47.2%). The value of corporate bond outstanding in India however was only 1.6% of GDP in 2010 compared to Malaysia (27%) and South Korea (37.8%) at the end of 2010. Torre, Gozzi and Schmulker argue that there are two basic approaches to develop capital markets in general in emerging markets [3]. The first view explains the gap between expectations and observed outcomes due to the combination of impatience with imperfect and incomplete reform efforts. The second view; is similar to the view taken by the Committee for Financial Sector Reform in India (CSFR), which is to get a number of other policy developments and missing markets need to be created before the corporate bond markets can develop in a country [4]. The objective of this policy paper is twofold. First it traces the development of the corporate bond market in India and conducts an empirical analysis of the factors influencing these developments. Second it seeks to make policy recommendations based on the experience of other emerging markets in developing their corporate bond markets. The paper is organized as follows. This introductory section is followed by capital market reforms which have been put in place and suggestions by various on committees aimed at developing the corporate bond markets in India. It is followed by a discussion of the results of the multivariate analysis looking at factors which have hindered or contributed to development of the corporate bond markets in India. Next the paper discusses some of the lessons India could learn from the development of corporate bond markets around the world. Finally the paper offers some suggestions for future reforms.

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II. Policy Reforms and Suggestions

Capital market reforms in India involved the creation of the Securities and Exchange Board of India (SEBI) in 1992 and National Stock Exchange of India (NSE) in mid 1990s. Other reforms include auction methods for government securities, introduction of primary dealers to support the auction, introduction of interest rate futures and introduction of Real Time Gross Settlement system (RTGS) to facilitate wider participation in the government securities market. Several committees such as the High powered expert committee on the corporate bond market (Patil) committee and CSFR have made recommendations to improve the corporate bond market [5]. SEBI and Reserve Bank of India (RBI) have implemented many of the reforms suggested, such as, reduction in cost and length of bond issuance process, improving the transparency in secondary market trades and introduction of corporate repos. The results of the implementation of these reforms have been encouraging, with resource mobilization from the primary debt markets increasing over the years, and standing at Rs 175826cr for 2008-2009. In the secondary markets, trading activities under the three platforms of Bombay Stock Exchange (BSE), NSE and Fixed Income Money Market and Derivatives Association of India (FIMMDA) have increased more than 300% in the span of the last 3 years with value now standing at 401198. Trades have also doubled recently compared to 2007-2008 fiscal year.

TABLE I: VALUE OF OUTSTANDING CORPORATE BOND (IN USD BILLIONS) AND VALUE AS A PERCENTAGE OF GDP

Country	2005	2006	2007	2008	2009	2010
ASIA						
China	39.429 (1.7%)	70.416 (2.6%)	104.389 (3.0%)	165.505 (4.1%)	353.735 (7.1%)	522.089 (8.9%)
INDIA	**3.812 (0.5%)**	**5.315 (0.6%)**	**10.207 (0.9%)**	**7.854 (0.6%)**	**19.346 (1.5%)**	**24.995 (1.6%)**
Malaysia	27.086 (19.6%)	32.500 (20.7%)	52.113 (27.9%)	55.684 (25.1%)	54.929 (28.5%)	64.334 (27.0%)
Singapore	4.532 (3.6%)	6.031 (4.1%)	3.716 (2.1%)	5.527 (2.9%)	2.799 (1.5%)	2.653 (1.2%)
South Korea	225.202 (26.7%)	230.896 (24.3%)	230.964 (22.0%)	216.105 (23.4%)	309.538 (37.2%)	380.619 (37.8%)
LATIN AMERICA						
Brazil	4.777 (0.5%)	5.695 (0.5%)	7.848 (0.6%)	6.746 (0.4%)	9.799 (0.6%)	10.743 (0.5%)
Chile	13.756 (11.6%)	15.063 (10.3%)	16.685 (11.4%)	16.429 (10.8%)	27.559 (17.1%)	29.709 (14.6%)
MATURE MARKETS						
Australia	33.697 (4.6%)	42.048 (5.4%)	43.561 (4.6%)	29.819 (2.8%)	38.341 (3.9%)	44.127 (3.6%)
Japan	704.763 (15.5%)	671.859 (15.4%)	728.221 (16.6%)	766.623 (15.7%)	782.675 (15.6%)	900.886 (16.5%)
USA	2649.014 (21.0%)	2748.770 (20.5%)	2885.930 (20.5%)	2917.350 (20.3%)	2792.361 (19.8%)	2896.345 (19.8%)

Source: Bank for International Settlements (BIS) and International Monetary Fund (IMF).
Outstanding value as a percentage of GDP in parenthesis.

However a closer analysis of the data reveals that further reforms and policy changes still need to be implemented to grow the corporate bond markets. For example, private placements rather than public issues still dominate the debt markets and stands at 99% of total resources mobilized. Corporations still tend to borrow from banks. External borrowings from bank loans stand at roughly 70% versus the 5% financed through debentures. Stamp duties and disclosure requirements have discouraged companies from borrowing from the public markets. Mitra (2009) points to demand, supply and market structure related issues as to why the Indian corporate bond market is still undeveloped despite the reforms and progress in implementing the recommendation of various committees [6].

Analysis of trends in the sources of funds from non-government non-financial public limited companies from the company finances statistics for the period 1990-1991 to 2009-2010 in Table III shows that companies in India tend not to follow the pecking order theory and have instead tended to finance more via external sources rather than through internal sources. Amongst the external sources bank loans seem to dominate the external borrowings for these companies. For example for the latest period 2006-2010, 65.3% of the total borrowings were financed through bank loans and only 8.9% were financed through debentures. This shows that privately placed bank loans continues to be the major borrowing source for companies. One of the reasons for the bank finance being preferred by corporations is due to the prevalence of the cash credit system in the banks in which the cash management of the corporations is actually done by the banks. The implication of the cash credit system is that that corporate bond market has still a long way to go before becoming a viable source for companies to finance their investments.

TABLE II: AVERAGE OF SOURCES OF FUNDS BY NON-GOVERNMENT NON-FINANCIAL LIMITED PUBLIC COMPANIES (PERCENT OF TOTAL)

SOURCES OF FUNDS	1981-1985	1986-1990	1991-1995	1996-2000	2001-2005	2006-2010
Number of companies	1642	1983	1795	1696	2301	3168
INTERNAL SOURCES	34.2	32.0	29.9	41.4	56.4	38.0
Paid-up capital	1.9	2.3	1.3	0.8	0.7	0.51
Reserves and Surplus	8.7	5.8	13.5	11.3	12.2	24.3
Provisions	23.5	23.9	15.0	29.3	43.4	13.2
EXTERNAL SOURCES	65.8	68.0	70.1	58.6	43.6	62.0
Paid-up capital	2.8	8.3	20.0	12.1	10.2	16.0
Net issues	2.0	3.2	4.4	4.2	3.8	1.5
Premium on shares	0.8	5.1	15.6	7.9	6.4	14.5
Borrowings	37.5	37.2	32.4	31.0	13.6	27.6
Debentures	9.2	9.9	6.7	6.8	-2.5	2.5
Loans and advances	22.4	25.3	24.8	23.1	16.1	24.4
From banks	12.2	13.0	9.6	9.5	22.0	16.1
From other financial institutions	7.8	9.4	10.8	10.5	-5.6	0.1
From others	8.3	5.0	5.4	4.1	-0.4	7.0
Trade dues & other current liabilities	25.3	22.3	17.6	15.2	19.3	17.8
TOTAL	**100**	**100**	**100**	**100**	**100**	**100**

Source: Bank for International Settlements (BIS) and International Monetary Fund (IMF).
Outstanding value as a percentage of GDP in parenthesis.

The reform process in the corporate bond market has been in the right direction but the implementation of the reforms has proceed slowly. Though policies have been implemented to encourage retail and institutional participation, streamline the issuance process and create new and missing markets, our analysis reveals that companies continue to finance their investments via private placement and bank loans rather than through public issues and corporate bonds.

III. Lessons from Other Countries

A. Development of Corporate Bond Market in Japan

Heavily regulated until 1985, Japan's bond market was undeveloped and dominated by Banks. However in the second half of 1980s there were important developments which helped the development of the primary market for corporate bonds. These measures included simplification of issuance procedures, deregulation of private placement, incorporation of 3 credit rating agencies, issuance of dual currency bonds and reduction of underwriting fees and trust fees. These developments were followed by the removal of corporate bond financing ceiling from 1990-93. The rationalization of the primary market for corporate bonds lead to a drastic decline in the influence of banks in corporate bond issuance from 40% in 1985 to zero by the end of 1989. Further the development of the JASDAQ over the counter program helped to increase investor interest in corporate bond trading. The development of the corporate bond markets was also helped by the introduction of Futures and Options market during the second half of the 1980s. The development of Futures and Options market helped to put in place a full-fledged price discovery mechanism, issue price commitment for corporate bond issues and auction mechanism which all helped in the development of an efficient primary market.

According to Endo (2002) developing countries like India should draw the following lessons from the Japanese experience [200]:

1) A healthy and vibrant government bond market is important for the development of corporate bond markets.
2) The development of the corporate bond market should be complemented by the development of the banking system.
3) The corporate bond market should be integrated with the global economy.

B. Corporate Bond Market Development in Korea

The Korean bond market is one of the most robust bond markets in Asia. In order to build investor confidence and build an investor base the Korean government developed a bond guarantee scheme. Under this scheme the Korean Investment Corporation (KIC) was selected as the sole guarantor of bonds in 1972. Korea Guarantee Insurance Company was allowed to start guaranteeing bonds to cope with increasing demands for bond guarantees in 1978. In 1989 the government established the Hankook Fidelity and Surety Company to increase financial support for individuals and small businesses. The government bond guarantee scheme included the explicit guarantees of financial institutions such as banks and securities firms. By the 1980s banks were the major guarantors accounting for more than 50% of all guaranteed bonds. Banks and other Non-Bank Financial Intermediaries entered the corporate bond guarantee business because the business was considered to be low-risk and high return given the robust economic growth in the 1980s.

The 1997 financial crisis and the resultant economic crisis resulted in the increase in bankruptcies which resulted in increased risks to bond guarantors. Most guarantors left the market after 1997. As private sector bond guarantors came to better understand the risk involved in guaranteeing bonds they realized that guarantee fees were inadequate reward for the risks they were undertaking. Some tried to offer bond guarantees at much higher fees which were not acceptable to bond issuers. This resulted in the collapse of the guaranteed market in South Korea after 1997.

The Korean experience and experiment with the bond guarantee scheme and how it has evolved after the crisis has important implications for India. We would like to caution policy makers in India to be careful not to repeat the failure of the bond guarantee system as in Korea but learn from other positive developments such as the importance of the development of credit rating system, credit enhancements and asset backed securities in its endeavor to develop its corporate bond market.

C. Corporate Bond Market Development in Brazil

The shape of the current financial system in Brazil can be traced to 1976 with the establishment of Brazilian Securities and Exchange Commission (CVM) which transferred the responsibilities to oversee the stock and corporate bond markets from the central bank to the CVM. In the 1980s steps were taken to further strengthen the financial system. These steps involved the separation of the Central Bank from Bank do Brazil and the creation of the National Treasury Secretariat. Futures and options trading were established in 1979 and derivatives trading were established in the 1980s. In the 1990s high inflation rates led to the introduction of Real Plan for economic stabilization. In 1995, there were bank insolvencies, with failures avoided by Central Bank intervention to merge these intermediaries with stronger ones. A law allowing ABS to be more easily traded was introduced in 2000.

Despite these developments, the Brazilian corporate bond market appears to be small relative to markets in Asia such as Korea and Malaysia but there are still important lessons for India. A thriving mutual fund industry in Brazil has been an important tool in mobilizing household savings and channeling it to the capital market. In 2003 the domestic mutual fund industry gathered more than $150 billion in assets under management (or 30% of GDP) and suggests that the mutual funds have played an important role in developing and bringing stability to local bond markets in Brazil.

D. Corporate Bond Market Developments in Singapore and Malaysia

Malaysia has found a novel way to address the problems with the growth of corporate bond market. Over the past decade, Malaysia has developed a burgeoning market in *Sukuk* or Shari'ah- complaint bonds. Unlike conventional bonds with fixed coupon payments, *Sukuk* are structured as participation certificated that provide investors with a share of asset returns, making them compatible with the Islamic prohibition of interest payments. As a result they have been increasingly popular both domestically as well as investors from Islamic nations. The issue of Sukuk bonds was backed by other policy initiatives by the Malaysian government such as the creation of a ten-year capital Market Master Plan for developing the bond market, both Sukuk and conventional. Tax exemption were granted for banks until 2016 on income earned from international banking and takaful (Islamic insurance) operations in foreign currencies. *Sukuk* have accounted for more than half the private securities outstanding in 2004. From 2005 to 2010 the value of outstanding bonds in absolute terms in Malaysia has steadily increased from \$27 billion in 2005 to \$64 billion in 2010 and from 19.6% of GDP in 2005 to 27% of GDP in 2010.

What lesson can India learn from the experience of Malaysia? The Malaysian experience shows that it is important to find innovative ways of drawing investors into the bond market. Corporate bond issue should address the concern of Indians for safety of their investments while assuring an adequate return. One way to address this concern is to structure the bond so that investors feel that they are contributing to the infrastructure development of the country. Companies for example can issue *Swadeshi* bonds which will appeal to the patriotic feeling of contributing to India's Infrastructure development by investing in the corporate sector. This will help channel savings which are currently invested in post office savings accounts or similar safe investments into corporate bonds. Further as in the case of the recent experience in Europe these Swadeshi or patriotic bonds can be issued at a lower interest cost to citizens than to risk-averse institutional investors.

Singapore has developed an active corporate bond market by encouraging foreign based firms to issue locally, compensating for the narrow domestic issuer base. Domestic issuance of Singapore dollar based bonds exceeded \$16 billion in 2009 of which one-quarter was attributable to offshore-based companies. This is a significant achievement as the real problem has been that foreign investors have been reluctant to invest abroad.

A number of factors in Singapore have encouraged issuance by offshore companies. Legal and regulatory impediments are virtually nonexistent. Disclosure documents are quite simple as most are marketed to wholesale buyers. Further issues undertaken locally have no local tax filing requirements other than to file a tax return to the Monetary Authority of Singapore (MAS) and Inland Revenue Authority of Singapore after the issue date. Singapore market therefore has been very cost competitive compared to alternatives such as U.S. Regulation S or 144A issues. Regulatory measures adopted in 2009 have helped as well. For example AAA rated Singapore dollar debt securities issued by sovereigns, supranational and sovereign-backed corporate would be accepted as collateral under the MAS standing facility. Further banks would be allowed to treat these securities as regulatory liquid assets, applying the same haircut as Singapore government securities. Following the implementation of the framework Singapore dollar debt market saw a surge in supranational issuances in 2009 totaling S\$1.4 billion. Finally foreign issuers are attracted to Singapore because it is an international financial center.

The important implication for India is to recognize the importance of foreign investor participation to address its narrow investor base. India has been taking steps in this direction. The government of India increased the current limit of foreign institutional investment in corporate bonds from \$15 billion to US \$40 billion. However increasing the limit of foreign investment alone will not be sufficient to ensure flow of foreign investment into the country. In fact, GOI has been monitoring FIIs subscription under the scheme and as of 31 August 2011, against a ceiling limit of USD 25 billion, or Rs 112,095 crores, investments by FIIs under this scheme were only USD 109 million or RS 500 crores. It was concluded that the three-year lock-in period and doubts regarding the interpretation of the requirement of residual maturity of five years were discouraging FIIs from investing in this scheme. The Government of India has since reduced the lock-in period to 1 year for investments up to \$5 billion. India however needs to do more to solve the "original sin" problem by creating conducive policies like simple disclosure and tax filing requirements.

IV. Results and Analysis

In this section we test the importance of factors influencing the corporate bond market using multivariate regression analysis of annual data from 1990 to 2008. The dependent variable in this regression analysis is the total number of outstanding corporate bonds. The Independent variables included in the analysis are development stage of the economy, natural openness, the size of the banking system, the size of the government bond market, the development of the stock market and corruption index. All equations are estimated using Generalized Least Squares (GLS) with corrections for autocorrelation and heteroskedasticity.

Rationale for using the independent variables in our regressions are as follows and our preliminary regressions are reported in Table 1.

A. Development Stage of the Economy

In general development of corporate bond market in a country would be positively correlated with the overall development of the economy. This is because development brings with it a less volatile investment environment, less government involvement in commercial activity and strong creditor rights, transparency and good corporate governance. We use GDP per capita to capture the overall development of the economy.

B. Natural Openess

Rajan and Zingales (1995) point out that open economies do less to suppress securities market [8]. This is because entrenched interests will be less able to adopt policies that suppress competing sources of supply when the economy is exposed to international competition. We use the ratio of exports to GDP as a measure of openness and the expected sign is positive.

C. Size of the Banking System

On the one hand, banks and bond markets compete in providing external finance and thus a well developed banking system may be a deterrent to the development of the corporate bond market. On the other hand, banks serve as dealers and market makers, whose presence is needed for the development of a liquid and well-functioning bond market. The expected impact of banking sector development on the corporate bond market is therefore expected to be positive if they are complementary and negative if they compete in providing funds.

D. Size of the Government Bond Market

Park, Fabella and Madhur believe that for the Corporate bond to develop in a country it is important to first develop the sovereign bond market [9] [10. Their argument is that sovereign bond market provide benchmark yield curve against which to value corporate bonds and therefore serve as a catalyst to develop a country's corporate bond market. However, the introduction of government securities may also prevent price discovery, crowding out the trading of all or a fraction of the existing securities [11], [12]. This is a real possibility in countries like India where government securities typically tend to have a higher credit rating than their counterparts. As a result, government securities may be more attractive to foreign investors as a substitute to corporate bonds, reducing the liquidity in the corporate bond market. We use the total number of government bonds outstanding to examine the impact on the corporate bond market. If the expected sign is positive then we can conclude that government bond market has a positive impact on the corporate bond market if the impact is negative then it is possible that the development of the government bond market is crowding out the issue of corporate bonds in India.

E. Development of the Stock Market

India has a well developed equity market but its bond market is underdeveloped and dominated by the government bond market. As in the case of the impact of government market on the development of corporate bond market, the equity market can either complement or compete with the bond market development. By providing alternative sources of external finance to companies the bond market can complement the development of the equity market. It is also possible that companies may favor to finance their investments from the equity market rather than bond market due to lesser regulations and ease of raising funds. We use the stock market capitalization to capture the development of the stock market. The impact of the stock market is expected to be positive if the equity market complements the bond market as a source of financing for the companies. The impact would be negative if the stock market competes with the corporate bond market.

F. Corruption Index

A country where corruption is high undermines law enforcement and corporate bond markets in these countries are less attractive to investors. Corruption and bond market development therefore should be negatively correlated. We use the corruption perception index published by transparency international to capture corruption [13]. According to this index, lesser the corruption, higher the score for the index and the expected sign is therefore positive between bond market development and the corruption index.

From model 1 (column 1, Table 1) one can see that GDP per capita, our proxy for development stage of the economy and exports, our proxy for openness are not significant and in fact have the wrong sign. Government bond market development (total outstanding government bonds) is however positive and significant at the 1% level. Model 2 (column 2, Table 1) looks at the effect of the government bond market development (total outstanding government bonds), banking sector development (domestic credit provided by the banking sector as a percentage of GDP) and stock market development (total value of stocks traded) on the corporate bond market. The government bond market has a positive effect on the corporate bond market. The coefficient is positive and significant at the 1% level. This shows that in India like in the case of Korea, government bond market development has helped the corporate bond development and is not crowding out the corporate bond market. On the contrary we see that banking sector development has a negative impact on the development of the corporate bond market. The coefficient is negative and significant at the 1% level. This supports the hypothesis, that in India bank loans compete with corporate bond markets in providing funds to companies. Companies have in general preferred to finance through bank loans and have been reluctant to finance through the corporate bond markets. Model 3 (column 3, Table 1) shows that government bond market and banking sector development have had the major impact on the corporate bond market. Finally Model 4 (column 4, Table 1) includes a corruption perception index obtained from Transparency International. Model 4 shows that though the corruption index has the expected positive sign (a higher value for the index implies a lower level of corruption) it is not significant. Model 4 once gain shows that the crucial factors influencing the development of the corporate bond market in India are the development of the government bond market and the banking sector.

TABLE III: MULTIVARIATE ANALYSIS OF FACTORS INFLUENCING CORPORATE BONDS OUTSTANDING

Independent Variable	(1)	(2)	(3)	(4)
Constant	2594.008 (.6170)	-961.600 (.1628)	-912.794 (.1620)	3726.843 (.5540)
GDP per capita (Constant 2000 US$)	-8.989 (.6146)			-12.993 (.5523)
Total Exports	-.020 (.5191)			
Stocks Traded, Total Value		9.136 (.3766)		
Bank Domestic Credit (% of GDP)	-28.948 (.1256)	-35.073 (.0006)***	-26.674 (.0000)***	-58.350 (.7287)***
Outstanding Government Domestic Debt	41.858 (.0000)***	25.829 (.0000)***	26.640 (.0000)***	41.760 (.0000)***
Corruption Perception Index				34.415 (.8195)
Adjusted R^2	.90	.90	.90	.92

The dependent variables in all the regressions is outstanding domestic debt securities by corporate issuers

Absolute value of ρ statistics are shown in parentheses
* indicates significant at 10%
** indicates significant at 5%
*** indicates significant at 1%

Based on our multivariate regression analysis we conclude that the growth of the government bond market has been a major positive influence on the development of the corporate bond markets in India. This conclusion is similar to the factors which have helped develop other countries like South Korea's corporate bond market. On the other hand the predominance of banking sector lending in India may have inhibited the corporate bond market from developing. Other factors such as the size of the economy, openness, size of the stock market and institutional factors like corruption have had little or no impact on the development of the corporate bond market.

V. FUTURE REFORMS

In conclusion the study suggests some areas for future reforms to develop the corporate bond markets in India. These are as follows:

1. Encouraging retail investment through credit enhancements, encouraging growth of the mutual fund industry and foreign investor participation.
2. Encouraging foreign investor participation by increasing foreign investor limits, providing tax incentives and easing regulations.
3. Encouraging institutional investor participation by easing restrictions on holding investments grade securities and revamping the cash credit system and Statutory liquidity requirements of banks.
4. Measures such as simplifying listing requirements for debt securities by SEBI and exemption of TDS for corporate debt instruments by the Government of India have been aimed at reducing the cost and length of the issuance process and encouraging public issue of debt securities. Significant work however needs to be done towards rationalizing stamp duty structure across the country and to fix stamp duties based on tenor and issuance value to encourage public offerings of corporate debt.
5. Development of credit enhancements such as collateralized bond and loan obligations. The recent announcement by the National Housing Bank (NHB) that it will issue credit enhancement to Residential Mortgage Backed Securities (RMBS) is a step in the right direction.
6. Measures have been undertaken recently to create new instruments such as the introduction of corporate repos and credit default swaps which are to be introduced shortly. These instruments would prove helpful for primary dealers and banks to manage risk exposure and are steps in the right direction. Further India needs to find innovative ways such as the issue of *Sukuk* bonds as in the case of Malaysia. One suggestion is to issue *Swadeshi* bonds.

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