

DISCUSSION PAPER ON FINANCING REQUIREMENTS OF INFRASTRUCTURE AND INDUSTRY

This discussion paper makes an assessment of the requirement of funds for infrastructure and industry. It surveys the various sources/ options/ channels available and the inadequacies of the present regime.

In order to sustain a GDP growth of 9 – 10%, the country will have to find solutions to the issues brought out in the discussion paper.

While no questions have been framed unlike other discussion papers, this paper is expected to generate an informed debate to address the issues brought out.

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OF
INFRASTRUCTURE AND INDUSTRY

Requirements of Infrastructure and Industry

1. Infrastructure is a critical determinant of investments, manufacturing depth, logistics, productivity, inclusive development, national integration and poverty reduction. Insufficient capacity across infrastructure sectors leads to a widening infrastructure gap, resulting in lower productivity, higher transport and logistics costs, reduced competitiveness, and slower growth.
2. In order to sustain a GDP growth rate of 9-10%, the manufacturing sector needs to grow at 13-14% per annum. To achieve this, India needs to rapidly attract global investors through the creation of world class infrastructure and reduced logistics costs, supported by an enabling policy framework. This is particularly significant in the context of the National Manufacturing Policy and the Delhi Mumbai Industrial Corridor Project which are aimed at creation of futuristic integrated industrial cities with world class infrastructure which can compete with the best manufacturing and investment destinations in the world.
3. Infrastructure projects are complex, capital intensive, and have long gestation periods that involve multiple and often unique risks to project financiers. Due to its non-recourse or limited recourse financing characteristic (i.e., lenders can only be repaid from the revenues generated by the project), and the scale and complexity, infrastructure financing requires a complex and varied mix of financial and contractual arrangements amongst multiple parties including the project sponsors, commercial banks, domestic and international financial institutions (FIs), and government agencies. The risk assessment for a project and its allocation will depend on the conditions including the type and location of

the project, the sector, feedstock supply and off-take arrangement, and the proposed technology etc. Insufficient knowledge and appraisal skills related to infrastructure projects also add to the risk.

4. The Infrastructure finance market in India is characterized by the absence of an active longterm corporate debt market, asymmetric information on infrastructure projects, and inherent risks in financing infrastructure projects. Adding to the problem of inadequate long-term funds is the conversion of development finance institutions (DFIs), which had been the major source of long-term finance earlier, into commercial banks which face asset liability mismatch issues and are rapidly nearing their limits for sectoral and group exposure in infrastructure.
5. The following table summarizes the available financing sources in infrastructure:

Table 1: Financing Sources for Infrastructure Projects	
Domestic Sources	External Sources
<p>Equity</p> <ul style="list-style-type: none"> • Domestic investors (independently or in collaboration with international investors) • Public utilities • Dedicated Government Funds • Other institutional investors 	<p>Equity</p> <ul style="list-style-type: none"> • Foreign investors (independently or in collaboration with domestic investors) • Equipment suppliers (in collaboration with domestic or international developers) • Dedicated infrastructure funds • Other international equity investors • Multilateral agencies
<p>Debt</p> <ul style="list-style-type: none"> • Domestic commercial banks (3–5 year tenor) • Domestic term lending institutions (7–10 year tenor) • Domestic bond markets (7–10 year tenor) • Specialized infrastructure financing institutions such as Infrastructure Debt Funds 	<p>Debt</p> <ul style="list-style-type: none"> • International commercial banks (7–10 year tenor) • Export credit agencies (7–10 year tenor) • International bond markets (10–30 year tenor) • Multilateral agencies (over 20 year tenor)

Source: Asian Development Bank: Proposed Multitranches Financing Facility India: India Infrastructure Project Financing Facility, November, 2007

6. Development Finance Institutions:

- 6.1. Historically, low-cost funds were made available to DFIs to ensure that the spread on their lending operations did not come under pressure. DFIs had access to soft window of Long Term Operation (LTO) funds from RBI at concessional rates. They also had access to cheap funds from multilateral and bilateral agencies duly guaranteed by the Government. They were also allowed to issue bonds, which qualified for SLR investment by banks. For deployment of funds, they faced little competition as the banking system mainly concentrated on working capital finance. With initiation of financial sector reforms, the operating environment for DFIs changed substantially. The supply of low-cost funds was withdrawn forcing DFIs to raise resources at market-related rates. On the other hand, they had to face competition in the areas of term finance from banks offering lower rates. The change in operating environment coupled with high accumulation of nonperforming assets due to a combination of factors caused serious financial stress to the term-lending institutions.
- 6.2. As it generally happens in the evolution of all dynamic systems, the Indian financial system has also come of age. The capital market, both equity and debt taken together, began providing significantly larger resources to the corporate sector in the 1990s. The banking system is well diversified with public, private and foreign banks of varying sizes operating efficiently and has acquired the skills of managing risks involved in extending finance to different sectors of the economy including long term finance. Thus the DFIs are no longer the exclusive providers of development finance.
- 6.3. The withering away of DFIs should have prompted corporations to approach the market for resources, leading to a vibrant corporate debt

market. However, domestic firms still rely more on banks and internal resources than on market borrowings, indicating weakness in debt markets especially secondary markets. A weak secondary market leads to an absence of benchmarks and an illiquid market for interest rate derivatives and hedging mechanisms does not provide investors the opportunity to exit investments. In response to these constraints, the commercial banks generally charge floating rates which effectively makes a loan a short duration instrument and infrastructure providers pass on hedging costs to the end-users. In addition, commercial banks largely depend on short-term deposits for funding and do not undertake long-term market borrowings.

6.4. The issues related to Development Finance Institutions are summarised in **Annexure-1**.

7. **Financing requirements for infrastructure and industry:** While the quantum of investment in infrastructure in India has increased from 5% of GDP during the 10th five year plan (2002-07) to the current level of about 8% of GDP, it is still not enough. Comparing the same with other countries, it is observed that while it is significantly lower than China (20%), the extent of investment is higher than Brazil (3.3%), East Asia (6.2%), Europe (5%) and US (2.4%)¹. However, in terms of access to basic infrastructure parameters, it is evident that India has lagged behind most of its Asian peers as well as UK and US and has a lot of ground to cover as indicated in the table below:

	Electric Power consumption (kWh per capita)	Telephone mainlines (per 100 people)	Roads paved (% of total roads)
China	2,332	26	70.7
Hong Kong	5,899	59	100

¹ RBI report on Infrastructure Financing –Global Pattern And The Indian Experience, 2010

	Electric Power consumption (kWh per capita)	Telephone mainlines (per 100 people)	Roads paved (% of total roads)
India	542	3	47.4
Indonesia	566	13	55.4
Malaysia	3,667	16	79.8
Singapore	8,514	38	100
South Korea	8,502		77.6
Thailand	2,055	10	98.5
UK	6,120	54	100
US	13,652	51	65.3

Source: World Development Indicator, World Bank, 2010

8. An analysis of the projected demand-supply scenario for the individual sectors highlights the fact that India has been and will remain a supply constrained economy in the foreseeable future in terms of access to infrastructure. Hence, substantial investments will have to be made to augment the existing capacities in order to meet the projected demand for creation of manufacturing and industrial infrastructure. Some representative demand and supply projections have been listed below which underscore the enormity of the task ahead:

8.1. **Power:** Power requirement in India registered a growth of 3.7% during 2010-11, which led to a 8.5% energy shortage (73,236 MU). Peak demand for power registered a growth of 2.6% during 2010-11, resulting in 12,031 MW of power shortage (at 9.8% of the total requirement). Given the existing peak and energy shortages, additional capacity of 1, 00,000 MW has been envisaged during the 12th five year plan.

8.2. **Roads:** In line with 9% annual economic growth, annual growth in passenger traffic is projected to increase at 12%-15% and for cargo traffic, 15-18% of annual growth has been envisaged. Given that 65,590 km of National Highways (only 12% 4-laned and 50% 2- laned) comprises only 2% of the aggregate road network and carries 40% of

traffic, the case for rapid construction and upgradation of roads and highways to meet the growth going forward is evident.²

- 8.3. **Ports:** Port sector is also poised to grow with the increase in international trade volume and the expected growth is projected at 15.5% (CAGR) over the next 7 years. Taking cognizance of inadequate berths handling requisite trade volume, the 11th five plan year targeted setting up minor ports (345 mn MT)³ as well as container terminals, dry-bulk and liquid handling facilities in the major ports, of which 50% is likely to be completed during the 11th five year plan.⁴
- 8.4. **Airports:** With the increase in economic activity, aircraft passenger traffic movement is expected to increase by at a CAGR of over 15% in the next 5 years, while air cargo traffic is envisaged to grow at over 20% per annum over the next five years. Given the constraints in existing airport infrastructure in terms of runways, aircraft handling capacity, parking space and terminal building, the 11th five year targeted modernization of the airport infrastructure in metro airports as well as 35 non-metro airports to meet the increasing traffic demand. In addition there exist many mid-sized towns of strategic and commercial importance, which are scheduled to be provided air connectivity in the 12th five year plan.⁵
- 8.5. **Railways:** Freight traffic has increased at a compound annual growth rate (CAGR) of 7.4% between 2005–06 and 2009–2010, while passenger traffic has increased at a CAGR of 6.7% during the same period. Considering that the slow average speed of rakes impacts the

² Report on Eleventh Five Year Plan, Planning Commission

³ RBI report on Infrastructure Financing –Global Pattern And The Indian Experience, 2010

⁴ Approach to the Twelfth Five Year Plan, Planning Commission of India

⁵ Approach to the Twelfth Five Year Plan, Planning Commission of India

efficiency of rail freight transport, dedicated freight corridors are targeted to be introduced during 11th five year plan and going forward. Further, inadequate rail connectivity linking ports as well as remote places has necessitated expansion of railway network (8132 km new line in 11th five year plan) in 12th five year plan.

8.6. Given the envisaged demand supply mismatch in key infrastructure sectors, Planning Commission of India has estimated investment requirement in the Infrastructure sector amounting to Rs. 45 lakh crore for 12th five year plan (2012-17) as compared to an estimated investment of Rs. 20.56 lakh crore for the 11th five year plan. Considering the target GDP growth of 9% set for the 12th five year plan, an increase in investment in infrastructure from the level of about 8% of GDP in 2011-12 (terminal year of 11th five year plan) to about 10% in 2016-17 (terminal year of 12th five year plan) is envisaged.⁶

8.7. Based on mid-term appraisal of 11th five year plan it is observed that among the sub-sectors, investment in power sector was highest in 10th and 11th five year plan periods with its share accounting for more than 30% of total investment. Other key sectors securing significant investment during 11th five year plan included roads and bridges, telecommunications, railways and irrigation with their shares recording 13.6%, 16.8%, 9.8% and 12% respectively (please refer table below).⁷

	10th five year plan*	11th Five year Plan**
Power	340,237	658,630
Roads & bridges	127,107	278,658
Telecommunications	101,889	345,134
Railways	102,091	200,802
Irrigation	119,894	246,234
Water supply & sanitation	60,108	111,689

⁶ Approach to the Twelfth Five Year Plan, Planning Commission of India

⁷ Mid-Term Appraisal of the Eleventh Five Year Plan, Planning Commission of India

	10th five year plan*	11th Five year Plan**
Ports	22,997	40,647
Airports	6,893	36,138
Storage	5643	8,966
Oil & gas pipelines	32,367	127,306
Total	9,19,226	20,54,204

* Actual Investments, ** Revised estimates

Source: Mid-Term Appraisal of the Eleventh Five Year Plan

9. The Public sector has been the major source for infrastructure investments till date, with the private sector playing an increasingly important role. Around 75% of the investment was contributed by the Government / public sector during 10th five year plan, which has decreased to around 63% of the total investment in 11th five year plan on account of increase in the proportion of investments funded by the private sector. However, in value terms, total public sector investment has increased from Rs. 6.9 lakh crores to Rs. 13.1 lakh crores over the two five year plan periods. Of the total public sector investment, investment made by Central Government (Rs. 6.9 lakh crore) and State Government (Rs. 6.2 lakh crore) account for around 33% and 30% of total investment. Public sector investment includes the i) budgetary support from Central and State Government, and ii) Internal Generation and Extra Budgetary Resources (IEBR) through the Public Sector Undertakings (PSUs).
10. Primarily led by growth in power and telecommunication sectors which accounted for 77% of the total investment during 11th five year plan, private sector investment has increased by around Rs. 3.94 lakh crore between 10th and 11th five year plans.⁸ However, at the time of mid-term appraisal of 11th plan, it was observed that incremental private sector investment has further moved up by Rs. 1.23 lakh crore from its earlier Rs. 3.94 lakh crore. This is on account of 55% and 60% higher investment commitment in the power (Rs. 2.87 lakh crore) and telecommunication sector (Rs. 2.83 lakh

⁸ Mid-Term Appraisal of the Eleventh Five Year Plan, Planning Commission of India

crore) respectively compared to the original projections of 11th five year plan. Private sector investment is driven by Public Private Partnership (PPP) projects (in roads, ports, airports etc.) as well as pure private sector projects (in case of power, SEZs etc.).

11. The 11th Five Year Plan has projected the investment requirement for infrastructure sector at Rs. 20.5 lakh crore at 2006-07 prices, equivalent to US \$ 514 billion. The mid-term appraisal of the 11th Five Year Plan indicated that while the physical targets may not be met, the financial outlays would be close to the original projections. The investments in manufacturing sector during 2005-10 at current prices were Rs. 27.9 lakh crore⁹. This investment averaged 11.25% of the GDP at market prices. The manufacturing and infrastructure together accounted for more than half of total investments during this period.
12. The Working Group constituted by the Planning Commission for estimating the resource needs for the infrastructure sector have estimated infrastructure investment for the 12th Plan (2012-13 to 2016-17) at 2006-07 prices to aggregate Rs. 41 lakh crore. At current prices, assuming an inflation of 5%, the investment would roughly amount to Rs. 65.8 lakh crore¹⁰.
13. For the manufacturing sector, the investment requirements have been projected on the following assumptions. During 2004-2010, as per the National accounts Statistics, the investment in manufacturing averaged 11.25% of GDP. Since the share of manufacturing is proposed to be raised from existing 16% to 25% in next 10 years, higher relative allocation to this sector may be necessary. Assuming that the investment GDP ratio in the manufacturing would improve by 0.5% each year, this could broadly amount to Rs.51.8 lakh crore at 2006-07 prices. At the current prices, with

⁹ Ministry of Statistics and Programme Implementation, Quick Estimates of GDP for 2009-10

¹⁰ Draft Report of the Sub group on Infrastructure funding requirements and sources for the 12th Plan

the inflation assumed at 5% as in the case of infrastructure sector, this would amount to Rs 83.2 lakh core.

14. The combined investment at constant 2006-07, prices for the manufacturing and the infrastructure sectors is estimated to be 24.2% of GDP in the terminal year of the plan (2016-17), increasing from 19.4% of GDP in 2010-11 (Base year for the 12th Five Year Plan) and average 22.5% of GDP during the plan period.
15. The annual investment at 2006-07 prices for infrastructure and manufacturing sector is indicated below:

Table: Investments in Infrastructure and Manufacturing sector at 2006-07 prices (Rs crore)

	GDP	Investment in infrastructure	Investment in Manufacturing	Investment to GDP	Net requirement from Market at	Requirement as % of GDP
Base Year 2011-12	6,314,265	528,316	694,569	19.4	541,986	8.6
2012-2013	6,882,549	619,429	791,493	20.5	626,312	9.1
2013-2014	7,501,978	712,688	900,237	21.5	716,439	9.6
2014-2015	8,177,156	809,538	1,022,145	22.4	813,627	9.9
2015-2016	8,913,100	918,049	1,158,703	23.3	922,506	10.3
2016-2017	9,715,279	1,039,535	1,311,563	24.2	1,044,393	10.8
2012-2017	41,190,063	4,099,239	5,184,141	22.5	4,123,276	10.0

Note: GDP numbers are as per the Report of the Working Group on Investment in Infrastructure

16. The Working Group on Infrastructure Financing has also estimated that half of the total investment would probably be made available through budgetary support. In case of the manufacturing sector, National Accounts data indicate that during 2004-2009, internal savings had accounted for roughly 58.6% of the total investment¹¹.

¹¹ Internal accruals are taken as the gross domestic savings of the corporate sector. The ratio of internal accruals to investment during 2004-05 to 2008-09 averaged 58.6%.

17. If we assume that half of infrastructure would come from GBS and 60% of the funds for manufacturing investment would be internally generated, the remaining funds to the tune of Rs 41,23,276 crore would have to be sourced from the market. While savings rate in India is as high as 37%, the draft on household sectors' financial savings is estimated at 10.0% of GDP during the 12th Plan period. Household financial savings in India are plateauing. The working groups on estimates of savings for the 12th Plan have estimated the financial savings of the household sector at 11.8% of GDP. Even the gross savings, without netting the financial liabilities are estimated to average 18% of GDP, inclusive of currency, deposits, PF and claims on government, etc. Assuming a debt equity ratio of 70:30, the total requirement for equity for infrastructure and industry comes to Rs 12,36,983 crore and that of debt to Rs 28,86,293 crore.
18. **Mobilisation of capital from the primary market, FDI and ECB:** The corporate sector in India enjoys one of the highest returns on equity globally which ensures that a significant part of their capital requirements for manufacturing can be met through internal accruals. In FY 2011, Rs 46,701 crore was raised through Initial Public Offers (IPOs), Follow on Public Offers (FPOs) and rights issues compared to Rs 46,737 crore in 2009-2010. During 2010-11, 40 new companies (IPOs) were listed both at the NSE and BSE amounting to Rs 33,068 crore as against 39 companies amounting to Rs 24,696 crore in 2009. The mean IPO size for the current financial year was Rs 827 crore as compared to Rs 633 crore in the previous financial year, showing an increase of 30.6 per cent. The market capitalization of Indian equities is about 80% of the country's GDP but less than 1% of the households own equities. Further, Rs 2197 crore was mobilized through debt issue as compared to Rs 2500 crore in 2009-10. The amount of capital mobilized through private placement in 2010-11 (as on

30 November 2010) is Rs 1,47,400 crore as compared to Rs 2,12,635 crore in 2009-10. Thus the total amount mobilised from the primary market in 2010-2011 was Rs 2,30,233 crore . Based on available information on drawals schedule, capital expenditure which would have been incurred in 2010-11 by the companies contracting ECBs during any year between 2005-06 and 2010-11 worked out to be Rs 31,841 crore. Further if FDI amounting to Rs 89,240 crore (US \$ 19.4 bn received in the year 2010-2011) is added, then the capital mobilised from internal and external market sources stands at Rs 3,51,314 crore. At this rate, the capital mobilised will be only about 42.6% of the gap of Rs 41,23,276 crore during the 12th Plan period. (Source: Economic Survey 2010-2011, RBI Monthly Bulletin, September, 2011 and FDI statistics, DIPP)

19. **Private Equity (PE) and Venture Capital (VC):**

19.1. Venture capital is particularly important for the small and medium enterprises (SMEs) in India since venture capital has the potential to provide finance to companies with promising but untested business models that are confronted with high levels of uncertainty as regards their future prospects. In these circumstances, companies often face difficulties to find access to other more traditional sources of funding. Venture capital thus helps to drive innovation, economic growth and job creation. It has a lasting effect on the economy as it mobilises stable investment. Moreover, venture capital backed companies often create high-quality jobs as venture capital supports the creation of the most successful and innovative businesses. According to recent research, an increase in venture capital investments is associated with an increase in real GDP growth and the impact of an early-stage investments in SMEs has even more pronounced impact on the real economic growth. Venture capital funding is critical in this context. In

the life-cycle of almost every business, in any sector, venture capital funds can play a very useful role in solving the problem of the pre-initial public offering (IPO) financing. The tech sector alone has seen an investment of US \$ 3.7 billion in the last six years in 262 instances.

19.2. PE Investments over the past six years have touched about US\$50 bn which is a significant proportion of the total investment into India Inc. In comparison, capital raised through Initial Public Offering in this period is about US\$31bn. PE investors have played a significant role in the development of several sectors in India over the past decade, e.g., Telecom, Healthcare, Technology, Retail, Education etc. PE investments have grown from US \$ 2.0 billion in 2005 to US \$ 19 billion in 2007. Thereafter investment value fell to around US \$ 6.2 billion in 2010 registering a CAGR of 25% over the last six years. Private equity investors have not restricted their investments to a handful of sectors, but have in fact diversified their investments over the years into sectors like Hospitality, Education, Consumer Goods and the like. The favoured sectors have been real state (26% of PE investments) followed by Telecom, Banking, Power and Energy. It is expected that PE and VC investments in India will be to the tune of US \$ 70-75 billion during 2010-2015. (Source: Fourth Wheel, Grant Thornton)

20. **Foreign Direct Investment:** The FDI from April to August in FY 2011-2012 was US \$ 17.37 billion compared to US \$ 8.89 billion during the same period last year which is an increase of 95.4%. The Care Ratings expects FDI to touch US \$ 35 bn in 2011-12 against US \$ 19.4 bn last fiscal. India can continue to be an attractive destination for FDI only when it can successfully compete with other countries on a range of revenue and cost related drivers of FDI. (Source: FDI statistics, DIPP)

21. **Commercial paper:** Commercial papers can be issued by companies to raise money for funding working capital and cannot be a source of project finance.
22. **Flow of bank credit:** The Indian Corporate sector received bank credit worth Rs 1,51,072 crore in the first six months of 2011-2012 compared with Rs 1,80,440 crore in the first six months last year and raised Rs 11,185 crore against Rs 32,585 crore last year through credit linked instruments. The deposits raised by banks during the first six months of this financial year was Rs 3,22,298 crore which translates into a credit deposit ratio of 46.87%. It may be noted that rapid credit growth without a commensurate increase in deposits is not sustainable. (Source: Economic Times, October 12 and October, 18, 2011)
23. The flow of bank credit, aggregate demand and time deposits and investment by banks is detailed in the following table:

Flow of bank credit									
As on 17 December, 2010									
	Outstanding as in end-March			Outstanding as on		Percentage Variation			
	Rs. Crore					Financial Year so far		Year-on-year	
	2008	2009	2010	17-Dec-10	18-Dec-09	2009-10	2010-11	2009-10	2010-11
1. Bank Credit	23,61,914	27,75,549	32,44,788	36,39,866	29,42,279	6.0	12.2	11.3	23.7
a) Food Credit	44,399	46,211	48,489	62,521	45,037	-2.5	28.9	-13.6	38.8
b) Non-food Credit	23,17,515	27,29,338	31,96,299	35,77,345	28,97,242	6.2	11.9	11.8	23.5
2. Aggregate Deposit	31,96,940	38,34,110	44,92,826	47,99,789	41,84,358	9.1	6.8	17.9	14.7
(a) Demand Deposits	5,24,310	5,23,085	6,45,610	5,84,713	5,25,516	0.5	-9.4	19.9	11.3
(b) Time Deposits	26,72,630	33,11,025	38,47,216	42,15,076	36,58,842	10.5	9.6	17.6	15.2
3. Investment	9,71,715	11,66,410	13,84,752	14,43,303	13,49,540	15.7	4.2	24.6	6.9

(a) Govt Securities	9,58,662	11,55,785	13,78,395	14,38,268	13,42,383	16.1	4.3	25.2	7.1
(b) Other Approved	13,053	10,625	6,358	5,035	7,156	-32.6	-20.8	-34.5	-29.6
<i>Source: Economic Survey, 2010-2011</i>									

24. While the existing sources of funds have limitations which makes bridging this gap difficult, this gap provides significant opportunities for funding by both domestic and foreign investors.

25. Apart from the plateauing rate of savings, the inadequacy of intermediation required to channelize the savings into investments is a major challenge.

26. The key challenges of funding through banks are:

26.1. Banks have dominated debt funding during the last decade

26.2. 80% of the infrastructure projects have been financed by banks. In the first three years of the 11th plan, the source wise funding was: Banks (56%), NBFCs (24%), Insurance companies (9%) and ECB and others (11%). Infrastructure funding by banks as a percentage of gross bank credit rose from 1.7% in 2000 to 11.7% in FY 2010. It will not be possible to follow a similar trend in view of the huge funding deficit in the 12th Plan. (Source: KPMG Advisory Services)

26.3. Banks face the issue of asset liability mismatch as the projects usually have a gestation period of 10-15 years and bank deposits typically have tenures of 3 years or less. Floating rate loans with short reset periods escalates cost through higher interest burden especially in a rising interest rate regime. The infrastructure sector in India is thus largely characterized with inadequate flow of long-term funds despite a large and diversified financial sector. The tenor of available funds from the domestic market is typically 10 years or less with a 2–3 year re-set clause, effectively making such funding short-term. This typically leads to front-loading of tariffs during the initial years of the project cycle

which adversely affects affordability of the services for the low income end-users. Since user tariffs are required to provide for debt repayments, return on equity, and depreciation costs, tariff affordability depends on amortizing debt through smaller repayments over a longer period of time. In the absence of long-term fixed rate financing, stability of cash flows are difficult to achieve.

26.4. The banks and infrastructure financiers are expected to hit their sector caps and group limits especially with a limited number of large developers. In order to further lend to a particular sector and / or a particular developer, banks can either raise more resources or seek take out of existing loans. The take out financing from IIFCL has not really taken off.

26.5. As true limited recourse project financing is not a developed market in India and banks typically require strong sponsor support for projects, sponsors will have limited ability to support project debt financing.

27. The key challenges faced by domestic insurance and pension funds are:

27.1. Highly regulated investment norms:

27.1.1. Life insurers have to make 50% investment in Gsecs with 75% of non-Gsec investments in AAA rated paper. It has been reported that the Insurance Regulatory and Development Authority (IRDA) plans to allow life insurers to buy a greater amount of non-AAA corporate debt, which could lead to higher returns for insurance policy holders. If the guidelines allow government bonds to be included as part of AAA rated investment requirements, the insurance firms will be able to take additional exposure to non AAA-rated securities, including A+ and A papers. Besides generating more returns for bond

holders, it will also widen the investment horizon for insurers and make more funds available to companies that don't have the highest rating, but are credit worthy.

27.1.2. Life insurance (traditional plans) have to invest minimum of 15% in infrastructure

27.1.3. There are company and group level limits

27.1.4. The Employee Provident Fund can invest only up to 10% of the investments in private sector bonds/securities which have minimum investment grade rating

27.1.5. Life insurer's investment is restricted to 20% of investee companies capital

27.2. **Underdeveloped corporate bond market:** Apart from highly regulated investment norms, the lack of liquidity (immediacy, depth and resilience) acts as a dampener for insurance companies to invest in infrastructure company bonds by further increasing the risk perception

27.3. **Limited access to long term funds:** Most of the life insurance players (except LIC) have limited non-ULIP liabilities that they can deploy in infrastructure. They will thus face asset liability mismatch in investing long term. It is, however, expected that over a period of time, this trend will change.

27.4. **Lack of expertise in risk appraisal of infrastructure projects:** Lack of understanding with regard to the infrastructure sector leads to a heightened perception of risk and excessive risk aversion. It is extremely difficult for insurance and pension funds to do SPV level risk assessment

27.5. **Underdeveloped BCD markets:** Lack of a credit derivative market and interest rate derivative markets imply that investors are unable to

manage risks efficiently. The lack of an efficient price discovery mechanism in the secondary market and regulatory bottlenecks restricts the primary issue volume, putting further pressure on the banks & NBFCs to lend to infrastructure. Further, long term foreign exchange hedging is not available

28. The key challenges faced by global insurance, pension and sovereign wealth funds are:

28.1. Sovereign credit rating

- 28.1.1. Sovereign credit rating of BBB- (S&P Jan 2010) limits investments from foreign funds
- 28.1.2. There is a need for a mechanism to pierce the country rating ceiling

28.2. Low ratings of infrastructure SPVs

- 28.2.1. The level of ratings typically achieved by the infrastructure SPVs further restricts the flow of foreign funds in the form of debt
- 28.2.2. Such high levels of risks tilt the scales towards equity investments and deprives the SPV of debt financing.

28.3. Foreign exchange hedging

- 28.3.1. Long term foreign exchange hedging is not available
- 28.3.2. Foreign debt investors are uncomfortable betting on an emerging market economy for long tenures
- 28.3.3. Issuing foreign currency denominated debt is also an option, thereby bundling the hedge with the security

28.4. **Lack of local knowledge and understanding:** Lack of local knowledge and understanding makes it extremely difficult for insurance and pension funds to do SPV level risk assessment

29. Recent reforms in ECB and the limitations of ECB:

29.1. The following reforms have been recently announced regarding ECB:

29.1.1. Automatic approval limit increased to \$750 mn from \$500 mn

29.1.2. \$30 billion overall ceiling can be increased later, if needed

29.1.3. Refinancing of rupee loans allowed through ECB

29.1.4. ECB can be raised in Chinese currency Renminbi

29.1.5. Refinance of buyer's/ supplier's credit permitted through ECB

29.1.6. Interest during construction under ECB permitted

29.1.7. Allowed availing of ECB denominated in rupee

29.1.8. High networth individuals can invest in infra debt fund

29.1.9. Inclusion of infra finance companies as eligible issuers for FII's debt limit

29.1.10. Tax exemption on interest on withholding tax to be taken up with revenue department

29.2. The key limitation of ECB is the imposition of all-in-cost ceiling on

External Commercial Borrowing (ECB). The cost ceiling on ECB will allow only the highly rated companies to have access to ECB.

Moreover, financial intermediaries, such as banks, financial institutions (FIs), Housing Finance Companies (HFCs) and Non-Banking Financial Companies (NBFCs) are not eligible to raise sums through ECB.

30. Challenges faced by PE and VC funds:

30.1. Tax pass through for venture capital restrictions *which have now been addressed under the National Manufacturing Policy approved by the Cabinet on 25/10/2011.*

30.2. Prohibitions on purchasing secondary shares and convertible instruments and investments in non-banking finance companies for SEBI registered funds.

31. Key interventions required to remove the handicaps or bottlenecks:

31.1. Credit enhancement through guarantees: This can address issues related to credit gap rating and risk perceptions and can also help in the development of the corporate bond market. One of the major impediments in attracting foreign debt capital for infrastructure is the sovereign credit rating ceiling. A credit enhancement mechanism can bridge the rating gap between the regulated investment norms and / or risk perceptions and the actual ratings of Indian entities. This mechanism will also be useful in attracting the domestic insurance and pension funds. The credit enhancement should be done at the level of the banks and infrastructure finance companies and not the project SPVs for international investors. This is because the SPVs generally have non-investment grade ratings on the domestic scale and thus it will be almost impossible and certainly inefficient to credit enhance their ratings to internationally high investment grade levels. Banks and IFCs can raise larger amounts of funds, from newer sources and at better terms in the global markets on the back of a credit enhancement mechanisms. Besides, providing guarantees on pre-Commercial Operation Date (COD) stage projects will require duplicating project financing skill sets. Also, involving foreign or domestic insurance and pension funds as investors at the SPV level or pre-COD stage may not be prudential and / or possible.

31.2. Developing the Bond, Currency, Derivative (BCD) market:

31.2.1. **Bond Market:** A deep and liquid secondary market enabling a proper price discovery is essential to create a robust primary market. The supply of longer tenure finance is critical for the infrastructure sector. The current regulatory framework ensures that private placement of debt is more attractive than public issue. The Government had allowed issue of Rs 30,000 crore tax free bonds for infrastructure developments during the FY 2011-2012. However, the quantum of investment per individual per year has been limited to Rs 20,000. Taking a conservative estimate that 50% of India's 34 million taxpayers invest in such a scheme, this would lead to resource generation of about US \$ 8 billion per annum when the required annual infrastructure investment as per 12th Plan projections would be US \$ 200 billion. Raising of the cap will allow a higher fraction of household savings to be channelized into infrastructure. The following table summarises the status of the corporate bond market in India and in other countries as on March, 2011:

Country	Sector-wise			Total (in \$ Billions)
	Government	Financial Institutions	Corporate Issuers	
China	1,500.80 (49%)	974.60 (32%)	572.20 (19%)	3,047.60
France	1,834.00 (54%)	1,300.60 (38%)	286.90 (8%)	3,421.50
Germany	1,817.70 (65%)	593.60 (21%)	403.30 (14%)	2,814.60
India	610.40 (86%)	75.50 (11%)	25.10 (4%)	711.00

Country	Sector-wise			Total (in \$ Billions)
	Government	Financial Institutions	Corporate Issuers	
Japan	11,579.90 (85%)	1,127.50 (8%)	867.70 (6%)	13,575.10
Singapore	105.50 (81%)	23.20 (18%)	2.00 (2%)	130.70
South Korea	512.80 (44%)	257.70 (22%)	404.60 (34%)	1,175.10
UK	1,394.80 (81%)	311.60 (18%)	20.70 (1%)	1,727.10
USA	11,403.40 (45%)	11,134.70 (44%)	2,937.20 (12%)	25,475.30

Source: Domestic Debt Securities: Bank for International Settlements

The issues related to the Infrastructure Development Fund and the development of a corporate bond market are enclosed at **Annexure-2.**

- 31.2.2. **Currency Market:** In order to attract and sustain a large inflow of foreign debt capital into the sector, currency markets need to be further developed. Availability of foreign exchange hedging instruments need to be strengthened as foreign debt investors are wary of betting on the currency of a developing economy for long tenure.
- 31.2.3. **Derivatives:** While credit derivatives are needed to ensure sharing, transfer and pricing of risk, regulatory safeguards need to be put in place considering the experience of the recent financial crisis. There is a need to deepen the interest rate futures market. Market based lending (MIBOR linked loans) will attract issuers and investors to hedge in the futures market.

31.3. Take out financing:

- 31.3.1. Take-out finance is a good way to manage ALM as well as exposure norms for the banking sector
- 31.3.2. Current attempts to provide take-out have met with limited success
- 31.3.3. The scheme contours need to be worked out in a way to make it win-win for all stakeholders – Developer, Bank as well as Take-out financier.
- 31.3.4. The banking sector is well-positioned to take the construction risk and post-that can be ‘taken-out’ by another investor
- 31.3.5. The pooled ‘taken-out’ loans can also be securitized to bring in long term investors with appropriate safeguards

31.4. Infrastructure Debt Fund:

- 31.4.1. Has been announced recently by Ministry of Finance.
- 31.4.2. The objectives of the fund are to (i) Bring in new sources of long-term providers of debt (domestic and foreign) viz. insurance companies, pension funds and (ii) Free-up commercial banks balance sheet either by buying infra-portfolios from banks through what is called ‘take-out’ financing or funding project SPVs directly
- 31.4.3. The Fund structure is the key to attract long term investors with appropriate credit enhancement and regulatory changes to facilitate fund flow
- 31.4.4. The 2011-2012 budget had raised the limit for FII investment in long-term bonds issues by infrastructure companies from \$ 5 billion to \$ 25 billion. But FIIs invested just Rs 600 crore by

August. The scheme was then reworked to reduce the lock-in period and the residual maturity of the bond to one year from three years and to allow the FIIs to trade among themselves even in that one-year lock in period. Furthermore, \$ 3 billion was set aside for infrastructure debt funds while leaving \$ 17 billion for others. The result was encouraging and FII bids for Rs 22,500 crore (\$ 5 billion) worth of bonds of infrastructure companies had crossed Rs 35,000 crore at an auction in October, 2011. (Source: Economic Times, October 17, 2011)

31.4.5. As stated earlier, the issues related to the Infrastructure Development Fund and the development of a corporate bond market are enclosed at Annexure-2.

31.5. **Deployment of a part of the Foreign Exchange Reserves to portfolios maintained by Sovereign Wealth Funds:** In the last decade or so, some of the Asian countries (China, Korea, Singapore, etc.) managed to accumulate huge Foreign Exchange Reserves (FER) on account of their large current account surpluses and huge capital inflows. In some of these countries, the amount of reserves accumulation was far in excess than what was needed for ‘liquidity’ purposes and for providing ‘cushion’ against external shocks. This led these countries to deploy a part of their foreign exchange reserves to ‘aggressively managed portfolios’ maintained by the Sovereign Wealth Funds (SWFs). While RBI has reservations about the issue, this option needs to be explored.

32. **History of bond issues with tax incentives:**

32.1. DTC and tax free bonds: Some of the bond issues were very successful as they were able to attract investments with tax incentives. One example is the Rural Electrification Corporation Long Term

Infrastructure Bond. The bond issued by REC was a success as they were launched with a tax benefit under Section 80CCF. The Government had allowed issue of Rs 30,000 crore tax free bonds for infrastructure developments during the FY 2011-2012. The following organisations have been allowed to raise resources through tax free bonds: (i) Power Finance Corporation (ii) IIFCL (iii) the National Highways Authority of India (NHAI) (iv) the Ministry of Railways and (v) Ministry of Shipping for the port sector.

32.2. Under the proposed Direct Tax code to be implemented from 2012 (tentative), investment in infrastructure bonds will not be eligible for tax deduction. This might act as a detriment for the infrastructure funding companies to raise capital.

33. **Handling of infrastructure finance requirements by other countries:**

33.1. An analysis was carried out by IMF, on how various countries financed their infrastructure growth. The study looks at a broad sample of advanced and emerging economies and assesses whether rapid investment in two areas of crucial importance for infrastructure, roads and energy, have coincided, led or followed significant changes in national savings, fiscal and current account deficits, and financial depth indicators. In general, however, the results show that country experiences are quite heterogeneous. The four countries chosen, viz., India, Brazil, China and Korea have pursued quite different paths to mobilizing capital for infrastructure finance. Along with India, Brazil, China and Korea are among the largest emerging markets, while Chile has been unusually successful at catalyzing private sector involvement in infrastructure finance.. The following is a brief description on how various countries financed their infrastructure development as brought on in the report by IMF:

33.2. 'Chile and Korea have been relatively successful in developing local bond markets to support relatively long-term issuances by infrastructure companies. In Chile's case the development of the country's pension system was crucial: the growing pension system of the 1990s created a market for local currency-denominated long term securities, minimizing the need for bank finance. In Korea, foreign and individual investors are now relatively important, but in earlier stages banks also purchased infrastructure debt. Finally, in China and Brazil, bank loans have been instrumental. In China public banks have provided long-term financing, while in Brazil, BNDES, the main public development bank, has proved to be a major source of finance.

33.3. Second, motivating institutional investors to buy into long-term debt markets is difficult without some form of credit enhancement. Only Chile has been successful at encouraging institutional investors to buy bonds issued by fully private companies. Chilean pension funds are only able to invest in investment-grade securities, but private (and largely foreign) insurance companies have insured infrastructure bonds, allowing the pension funds to buy into these markets.

33.4. In Korea, private infrastructure funds operate with extensive background public guarantees. In Brazil and China, public sector banks finance a great deal of infrastructure projects: through BNDES in Brazil, and through a range of options in China, including implicit local government guarantees and bond insurance provided by publicly owned banks. Finally, mobilizing foreign savings for infrastructure has been undertaken in a variety of ways across countries. Multilateral lenders have been important in quite a few countries, but encouraging private finance has been more challenging, though prospects have improved over time. In Korea and Brazil, large public sector electricity

companies are able to issue debt in international credit markets. The ratings of those companies, however, depend on the rating of the sovereign that investors assume would stand behind the company. Both countries have also been reasonably successful at encouraging foreign companies to invest in publicly guaranteed infrastructure funds (Korea) and in public-private partnerships (Brazil).

33.5. China and Chile represent opposite extremes: in China, foreign participation in infrastructure is minimal, while in Chile, a competitive electricity sector is operated to a large extent by foreign owned multinationals and foreign companies bid for and buy road construction and operation PPPs along with domestically owned companies. Korea's framework for foreign infrastructure funds had to be repeatedly adjusted in the 1990s, but has now resulted in a relatively large pool for foreign investors, albeit one with public guarantees. Chile and to a lesser extent Brazil have been open to foreign companies bidding on road projects, but in both cases a pro-business environment and transparency in policy administration have been crucial.

33.6. Finally, in Brazil, Chile and Korea energy companies have issued shares and bonds in international markets, but those companies have had investment-grade ratings and have benefited implicitly from sovereign guarantees. This might be practical for some larger Indian corporates or public utilities, but the fiscal risks will have to be carefully monitored and managed.' (Source: IMF Report – 'Financing Infrastructure in India: Macro-economic lessons and Emerging market Case-studies' - August 2011)

Development Finance Institutions:

1. An efficient and robust financial system acts as a powerful engine of economic development by mobilising resources and allocating the same to their productive uses. It reduces the transaction cost of the economy through provision of an efficient payment mechanism, helps in pooling of risks and making available long-term capital through maturity transformation. By making funds available for entrepreneurial activity and through its impact on economic efficiency and growth, a well functioning financial sector also helps alleviate poverty both directly and indirectly.
2. In a developing country, however, financial sectors are usually incomplete in as much as they lack a full range of markets and institutions that meet all the financing needs of the economy. For example, there is generally a lack of availability of long-term finance for infrastructure and industry, finance for agriculture and small and medium enterprises (SME) development and financial products for certain sections of the people. The role of development finance is to identify the gaps in institutions and markets in a country's financial sector and act as a 'gap-filler'. The principal motivation for developmental finance is, therefore, to make up for the failure of financial markets and institutions to provide certain kinds of finance to certain kinds of economic agents. The failure may arise because the expected return to the provider of finance is lower than the market-related return (notwithstanding the higher social return) or the credit risk involved cannot be covered by high risk premium as economic activity to be financed becomes unviable at such risk-based price. Development finance is, thus, targeted at economic activities or agents, which are rationed out of market. The vehicle for extending development finance is called development financial institution (DFI) or development bank.

3. A DFI is defined as "an institution promoted or assisted by Government mainly to provide development finance to one or more sectors or sub-sectors of the economy. The institution distinguishes itself by a judicious balance as between commercial norms of operation, as adopted by any private financial institution, and developmental obligations; it emphasizes the "project approach" - meaning the viability of the project to be financed – against the "collateral approach"; apart from provision of long-term loans, equity capital, guarantees and underwriting functions, a development bank normally is also expected to upgrade the managerial and the other operational pre-requisites of the assisted projects. Its insurance against default is the integrity, competence and resourcefulness of the management, the commercial and technical viability of the project and above all the speed of implementation and efficiency of operations of the assisted projects. Its relationship with its clients is of a continuing nature and of being a "partner" in the project than that of a mere "financier".
4. Thus, the basic emphasis of a DFI is on long-term finance and on assistance for activities or sectors of the economy where the risks may be higher than that the ordinary financial system is willing to bear. DFIs may also play a large role in stimulating equity and debt markets by (i) selling their own stocks and bonds; (ii) helping the assisted enterprises float or place their securities and (iii) selling from their own portfolio of investments.
5. There is no specific use of the term 'DFI' in either the RBI Act, 1934 or the Companies Act, 1956 or various statutes establishing DFIs. While the RBI Act defines the term 'Financial Institution' (FI), the Companies Act has categorised certain institutions as Public Financial Institutions (PFIs). While the various FIs including PFIs vary from each other in terms of their business specifications, some of them perform the role of DFIs in the broadest sense of the term as mentioned above.

6. The DFIs played a very significant role in rapid industrialisation of the Continental Europe. Many of the DFIs were sponsored by national governments and international agencies. The first government sponsored DFI was created in Netherlands in 1822. In France, significant developments in long-term financing took place after establishment of DFIs such as Credit Foncier and Credit Mobiliser, over the period 1848-1852. In Asia, establishment of Japan Development Bank and other term-lending institution fostered rapid industrialisation of Japan. The success of these institutions, provided strong impetus for creation of DFIs in India after independence, in the context of the felt need for raising the investment rate. RBI was entrusted with the task of developing an appropriate financial architecture through institution building so as to mobilise and direct resources to preferred sectors as per the plan priorities. While the reach of the banking system was expanded to mobilise resources and extend working capital finance on an ever-increasing scale, to different sectors of the economy, the DFIs were established mainly to cater to the demand for long-term finance by the industrial sector.
7. The first DFI established in India in 1948 was Industrial Finance Corporation of India (IFCI) followed by setting up of State Financial Corporations (SFCs) at the State level after passing of the SFCs Act, 1951. Besides IFCI and SFCs, in the early phase of planned economic development in India, a number of other financial institutions were set up between 1948 and 1974 which included the following. ICICI Ltd. was set up in 1955, LIC in 1956, Refinance Corporation for Industries Ltd. in 1958 (later taken over by IDBI), Agriculture Refinance Corporation (precursor of ARDC and NABARD) in 1963, UTI and IDBI in 1964, Rural Electrification Corporation Ltd. and HUDCO Ltd. in 1969-70, Industrial Reconstruction Corporation of India Ltd. (precursor of IIBI Ltd.) in 1971 and GIC in 1972.

It may be noted here that although the powers to regulate financial institutions had been made available to RBI in 1964 under the newly inserted Chapter IIIB of RBI Act, the definition of term ‘financial institution’ was made precise and comprehensive by amendment to the RBI Act Section 45-I (c) in 1974. Another important change that took place in 1974 was the insertion of Section 4A to the Companies Act, 1956 whereunder certain existing institutions were categorised as ‘Public Financial Institutions’ (PFI) and the powers of Central Government to notify any other institution as PFI were laid down. In exercise of these powers GOI has been notifying from time to time certain institutions as PFIs. The FIs set up after 1974 have been as follows: NABARD was set up in 1981, EXIM Bank (functions carved out of IDBI) in 1982, SCICI Ltd. in 1986 (set up by ICICI Ltd. in 1986 and later merged into ICICI Ltd. in 1997), PFC Ltd. and IRFC Ltd. In 1986, IREDA Ltd. in 1987, RCTC Ltd. and TDICI Ltd. (later known as IFCI Venture Capital Funds Ltd. and ICICI Venture Funds Management Ltd.) in 1988, NHB in 1988, TFCI Ltd. (set up by IFCI) in 1989, SIDBI (functions carved out of IDBI) in 1989, NEDFi Ltd. in 1995 and IDFC Ltd. in 1997.

8. As may be observed from the foregoing, over the years, a wide variety of DFIs have come into existence and they perform the developmental role in their respective sectors. Apart from the fact that they cater to the financial needs of different sectors, there are some significant differences among them. While most of them extend direct finance, some extend indirect finance and are mainly refinancing institutions viz., SIDBI, NABARD and NHB which also have a regulatory / supervisory role.

9. International Experience:

- 9.1. Two distinct models of development financing have been followed internationally at different times. At one end of the spectrum is the Anglo-American model, which is purely market based, financial

markets playing an important role in allocating resources for competing uses, including the industry and long term projects. At the other end is the model adopted by Continental Europe and South East Asian Economies, in which financial savings were channelised and allocated through financial intermediaries like banks and DFIs. In Germany and Japan, development banks have successfully contributed to the reconstruction and industrialisation after the World War II. Their initial mission could be said to have ended by the 1980s and their focus and role have been since redefined. Most drastic changes have been observed in Japan in the area of Development Banking, where the Government owned Japan Development Bank (JDB) and three private long term lending banks had successfully helped the industrialisation in the 1950s and 1960s. JDB, which existed for almost fifty years and played an important role in supplying long term finance for investment was dissolved in 1999 and in its place, a new institution called Development Bank of Japan was established with a new mandate, focussing on regional development, improvement of living standards (such as environment protection and disaster prevention) and strategically important industries. The other three term lending institutions, namely, Industrial Bank of Japan (IBJ), the Long Term Credit Bank of Japan (LTCB) and Nippon Credit Bank Ltd. (NCB) went bankrupt under the onslaught of competition from other banks and development of capital market since 1980s and were restructured in 1998-99 by putting LTCB and NCB under Government control and merging IBJ with two private sector banks (Fuji Bank and Daichi Kangyo Bank). Thus, the long term credit banks, which partly, but eloquently characterised Japan's financial system during the period of industrialisation and high economic growth, have come to an end and disappeared from the scene.

- 9.2. In Korea also, the policy based loans through DFIs, namely, Korean Development Bank (KDB) and Korea Exim Bank (KEXIM), have been used as principal means of industrialisation. KDB was established in 1953 by a special law and its main task was to lend equipment capital for postwar recovery. Since 1960s, KDB has functioned as a body for implementing Government's development plans, which were aimed to encourage strategic industries like steel, electronics and petro chemicals. It played a nuclear role in developing heavy and chemical industry in 1970s. Its focus has been constantly shifting, with the change in priorities as enumerated by the policies of the Government and currently it has been repositioned by amendment to the KDB Act, separating it from its role as a public interest corporation and it is now pursuing profit more aggressively.
- 9.3. Development Bank of Singapore (DBS) was established in 1968, succeeding some of the development finance functions of Economic Development Board (EDB), such as industrial park construction (Jurong Town Corporation) and export promotion. DBS was listed as a public company with foreign capital participation. Since the demand for development finance in the city state was very limited, it went into commercial banking very early and has become a full-fledged commercial bank and accordingly has deposits as its main source of funds. At the initial stage, however, DBS primarily utilised Government borrowing to provide medium and long term loans to priority areas, such as, manufacturing, marine transport and real estate. The Government's holding in DBS has dropped to a lower level.

10. Emerging Indian Scenario:

- 10.1. India has, historically, followed a financial intermediation-based system where banks, DFIs and other intermediaries have played a

dominant role. However, in recent years resources are increasingly being mobilised through capital markets (both debt and equity).

- 10.2. As it generally happens in the evolution of all dynamic systems, the Indian financial system has also come of age. The capital market, both equity and debt taken together, began providing significantly larger resources to the corporate sector in the 1990s. The banking system is well diversified with public, private and foreign banks of varying sizes operating efficiently and has acquired the skills of managing risks involved in extending finance to different sectors of the economy including long term finance. Thus the need for DFIs as the exclusive providers of development finance has diminished.
- 10.3. The current thinking is that the banks may be encouraged to extend high risk project finance, with suitable Central Government support, with a view to distributing risk and funding sources as also developing appropriate credit appraisal and monitoring skills across the financial system. It is envisaged that banks may also be permitted to raise long term resources through issuance of development bonds, for the purpose of long term project finance, so that problems of asset liability management can also be taken care of. Banks enjoy the natural advantage of low cost funds and are, therefore, capable of providing long term finance at lower rates despite higher intermediation cost and can derive at the same time the benefit of risk diversification across a wide spectrum of assets of varying maturities, subject, of course, to the limitations imposed by their ALM considerations.
- 10.4. With the change in the operating environment, the supply of low cost funds has dried up for the DFIs forcing them to raise resources at market related rates. The DFIs are unable to withstand the competition from banks due to their higher cost of their funds. A suggestion has

been made that banks may share with DFIs, the benefits of their lower cost funds by earmarking their funds for lending at lower rates to DFIs, for on lending by the DFIs to the infrastructure sector, either on the lines of priority sector lending mandated for the banks or by way of placement of deposits by banks with DFIs. It was felt that such sharing is not workable because firstly, the banks would like to load term premium and risk premium, besides reasonable margin on the rates at which funds will be lent to the FIs, thus resulting in cost of funds increasing to a level not attractive to the FIs. Further, this arrangement would lead to two layers of intermediation and with additional margin loaded by the FIs for second level of intermediation the perceived cost advantage on the funds sourced from the banks would be neutralised for the ultimate user of funds.

- 10.5. Besides higher cost of funds, DFIs are also burdened with large NPAs due to exposure to certain sectors, which have not performed well due to downturn in the business cycle, further adding to their cost of doing business. Further, their portfolio is almost entirely composed of long-term high risk project finance and consequently the viability of their business model has come under strain. In a purely market-driven situation, the business model of any DFI which raises long-term resources from the market, at rates governed by the market forces and extends only very long-term credit to fund capital formation of long gestation, is unlikely to succeed on account of threat to its spread from higher cost of funds and higher propensity to accumulate non-performing assets, owing to exposure to very high credit risks, notwithstanding lower operating expenses vis-a-vis banks. DFIs are, therefore, crucially dependent for their continued existence on government commitment for continued support. It was felt that as

support from the government has a social cost, Central Government needs to decide, after a detailed social cost-benefit analysis, on the areas of activities which require developmental financing and only those DFIs, which the Central Government decide to support for the time being may continue as DFIs. It was, therefore, felt that the rest of the DFIs must convert to either a bank or a regular NBFC, as recommended by the Narasimham Committee and should be subject to full rigor of RBI regulations as applicable to the respective category. Further, no DFI should be established in future without the Central Government support.

11. History of long term Finance Institutions in India:

11.1. **Industrial Finance Corporation of India (IFCI):** At the time of independence in 1947, India's capital market was relatively under-developed. Although there was significant demand for new capital, there was a dearth of providers. Merchant bankers and underwriting firms were almost non-existent and commercial banks were not equipped to provide long-term industrial finance in any significant manner. It is against this backdrop that the government established The Industrial Finance Corporation of India (IFCI) on July 1, 1948, as the first Development Financial Institution in the country to cater to the long-term finance needs of the industrial sector. The newly-established DFI was provided access to low-cost funds through the central bank's Statutory Liquidity Ratio or SLR which in turn enabled it to provide loans and advances to corporate borrowers at concessional rates. By the early 1990s, it was recognized that there was need for greater flexibility to respond to the changing financial system. It was also felt that IFCI should directly access the capital markets for its funds needs. It is with this objective that the

constitution of IFCI was changed in 1993 from a statutory corporation to a company under the Indian Companies Act, 1956. Subsequently, the name of the company was also changed to "IFCI Limited" with effect from October 1999.

11.2. Industrial Credit and Investment Corporation of India (ICICI): It

was set up in 1955 for providing long-term loans to companies for a period upto 15 years and subscribe to their shares and debentures. However, the proprietary and partnership firms were also entitled to secure loans from ICICI. Like IFCI, the ICICI also guarantees loans raised by companies from other sources besides underwriting their issue of shares and debentures. Foreign currency loans could also be secured by companies from ICICI. In the context of the emerging competitive scenario in the finance sector, ICICI merged with ICICI Bank Ltd., with effect from 3 May 2002. Consequent upon the merger, the ICICI group's financing and banking operations have been integrated into a single full service banking company. ICICI Bank is India's second-largest bank with total assets of Rs. 4,062.34 billion (US\$ 91 billion) at March 31, 2011 and profit after tax Rs. 51.51 billion (US\$ 1,155 million) for the year ended March 31, 2011. The Bank has a network of 2,538 branches and about 6,810 ATMs in India, and has a presence in 19 countries, including India.

11.3. Industrial Development Bank of India: The Industrial Development

Bank of India (IDBI) was established on 1 July 1964 under an Act of Parliament as a wholly owned subsidiary of the Reserve Bank of India. In 16 February 1976, the ownership of IDBI was transferred to the Government of India and it was made the principal financial institution for coordinating the activities of institutions engaged in financing, promoting and developing industry in the country.

Although Government shareholding in the Bank came down below 100% following IDBI's public issue in July 1995, the former continues to be the major shareholder (current shareholding: 65.14%). IDBI provides financial assistance, both in rupee and foreign currencies, for green-field projects as also for expansion, modernisation and diversification purposes. In the wake of financial sector reforms unveiled by the government since 1992, IDBI also provides indirect financial assistance by way of refinancing of loans extended by State-level financial institutions and banks and by way of rediscounting of bills of exchange arising out of sale of indigenous machinery on deferred payment terms. IDBI, like ICICI, has also transformed into a commercial bank and has been renamed as IDBI Ltd. with effect from 1 October 2004 with IDBI Bank merged with it. As on March 31, 2011, the Bank had a network of 816 Branches and 1372 ATMs. The Bank's total business, during Fy 2010-11, reached Rs. 3,37,584 crore, the total assets reached a figure of Rs. 2,53,377 crore while it earned a net profit of Rs. 1650 Crore (up by 60 %).

11.4. India Infrastructure Finance Company Limited: India

Infrastructure Finance Company Ltd (IIFCL) was established in January 2006 as a wholly owned Government of India company and commenced its operations from April 2006. It was set up for financing 'Viable Infrastructure Projects'. India Infrastructure Finance Company Ltd (IIFCL) is providing long term financial assistance to various viable infrastructure projects in the country in terms of the SIFTI. SIFTI means Scheme for Financing Viable Infrastructure Projects through a Special Purpose Vehicle called India Infrastructure Finance Co Ltd (IIFCL) and implemented by IIFCL. The authorized capital of the company is Rs20 billion and the Paid-Up capital is

currently Rs10 billion. Apart from equity, IIFCL raises long term debt from the domestic market, debt from bilateral and multilateral institutions and in foreign currency through external commercial borrowings. The borrowings of the company are backed by sovereign guarantee.

11.5. Business Performance of IIFCL (as on 31st March 2011):

- After its inception in April 2006, the company has sanctioned loans to the tune of Rs 317.78 billion to 176 infrastructure projects involving a project cost of Rs 2709.20 billion
- Of the 176 projects which have been sanctioned, 158 projects i.e. 90% have achieved financial closure.
- The 176 assisted projects are spread across 24 states of the country.
- In 133 cases , disbursement have been made to the tune of Rs159.65 billion involving a project cost of Rs 1947.45 billion
- At the end of March 2011, Commercial Operation Date (COD) has been achieved in 26 projects which include, 21 road projects, 1 airport, 2 power projects and 2 port projects

**The Infrastructure Debt Fund and Development of a Corporate Bond
Market for Infrastructure and Industry**

3. Historically, bonds were a natural outgrowth of the loans that early bankers provided to finance wars starting in the Middle Ages. As governments' financial requirements grew, bankers found it increasingly difficult to come up with as much money as the borrowers wanted. Bond offered a way for governments to borrow from many individuals rather than just a handful of bankers. The earliest known bond was issued by the Bank of Venice in 1157, to fund a war with Constantinople.
4. The principal reason for issuing bonds is to diversify sources of funding. The amount any bank will lend to a single borrower is limited. By tapping the vastly larger base of bond market investors, the issuer can raise far more money without exhausting its traditional credit lines with direct lenders. Bonds also help issuers carry out specific financial-management strategies. These include the following:
 - 4.1. Minimizing financing costs: Leverage enables profit-making businesses to expand and earn more profit than they could using only the funds invested by shareholders. Globally, firms generally prefer bonds to other forms of leverage, such as bank loans, because the cost is lower and the funds can be repaid over a longer period. A liquid corporate bond market can play a critical role in supporting economic development as it supplements the banking system to meet the requirements of the corporate sector for long-term capital investment

and asset creation. It provides a stable source of finance for corporates and also a stable source of income to investors when the equity market is volatile.

- 4.2. Matching revenues and expenses: Many capital investments, particularly in the infrastructure sector, take years to complete but then are expected to produce revenue over a lengthy period. Bonds offer a way of linking the repayment of borrowings for such projects to anticipated revenue. As India looks for a big push in infrastructure investments, the corporate bond market will play a vital role in providing funding avenues. Many countries like South Korea, Malaysia and Thailand have relied on corporate bond market to fund their infrastructure development. With a large number of infrastructure projects coming up in PPP mode, the deepening of the corporate bond market will also work to the benefit of banks as this will release the banks of the burden of long term lending which is constrained by regulations relating to debt issuance and asset-liability management.
- 4.3. Promoting inter-generational equity: Governments often undertake projects which create long lasting benefits. Bonds offer a means of requiring future tax-payers to pay for the benefits they enjoy, rather than putting the burden on current tax-payers.
- 4.4. Controlling risk: The obligation to repay a bond can be tied to a specific project or agency. This can insulate the parent corporation or agency from responsibility if the bond payments are not made as required.
- 4.5. Avoiding short term financial constraints: Governments may turn to bond markets to tide over short term constraints

- 4.6. Stable returns for investors: Bonds are less volatile as compared to equity and provide a relatively more stable rate of return

5. Infrastructure Debt Fund (IDF):

- 5.1. It is well recognized that significant improvement in infrastructure is required not only to sustain the growth momentum but also to distribute the benefits of higher growth to a larger population. Infrastructure creates certain special demands on the financing system. Infrastructure projects are capital intensive with long gestation periods; their revenues accrue over a long period of time; they involve higher sunk costs; and their output is non-tradable (except electricity and telecommunications etc). These characteristics translate into certain demands on the financial system (in terms of scale, tenor, and risk) that are very different from those of other goods and services.
- 5.2. The size of some infrastructure projects such as power plants are so large that no bank can take a reasonable stake without breaching concentration limits. These projects require substantial amounts of bond market financing. Some institutions such as NBFCs offering longterm finance will also need financing themselves. By borrowing from bond markets rather than from banks, they can achieve a better asset liability match, as well as reduce the risks the banking system is exposed to. Corporate bond markets can work as effective buffers here. Unfortunately, the corporate bond market is still miniscule and will need to develop to meet these needs. Effective infrastructure finance would also depend on the existence of deep and liquid derivative markets where the specific risks associated with infrastructure projects can be managed. The government will also need a vibrant government bond market to provide it lowcost financing, as it relies less on forcing banks through statutory requirements to hold

its debt. A deep government debt market across all maturities will provide the benchmarks that the private sector needs for pricing corporate debt, and various kinds of hedging instruments.¹²

5.3. The Government of India has been laying special emphasis on development of infrastructure to increase investments and to ensure a sustained level of high economic growth. Participation of private sector is being encouraged through several policy initiatives including the Public Private Partnerships (PPPs) as a means of harnessing private sector investment and operational efficiencies in the provision of public assets and services. The Planning Commission has emphasised the need to invest US \$ 1 trillion in infrastructure during the 12th Plan to achieve the targeted growth rate of 9% during the plan period. As part of these efforts, Government of India has announced setting up of Infrastructure Debt Funds (IDFs) to accelerate and enhance the flow of long term debt in infrastructure projects. Ministry of Finance has recently issued a press release containing broad structure of the IDFs. As per the press release, IDFs could be set up either as a Trust to be regulated by SEBI as a registered Mutual Fund scheme or as a Company to be regulated by RBI.

5.4. SEBI has recently approved framework for setting up IDF-MFs as a Trust by inserting Chapter VI-B to the mutual fund regulations. Any existing mutual fund can set up an IDF. Companies engaged in business of infrastructure financing for a period of not less than 5 years and fulfilling the eligibility criteria provided in Regulation 7 of Mutual Fund Regulations can also submit applications for setting up mutual funds exclusively for the purpose of launching IDF scheme.

¹²Report of the Raghuram G. Rajan Committee on Financial Sector Reforms, September 12, 2008

- 5.5. In a press release dated 23/9/2011, the RBI has laid down parameters for setting up of IDFs under MF and NBFC structures by banks and NBFCs
- 5.6. Parameters for setting up of IDFs as MFs by banks and NBFCs: Banks and NBFCs would be eligible to sponsor (as defined by SEBI Regulations for Mutual Funds) IDFs as Mutual Funds with prior approval of RBI subject to the following conditions in addition to those prescribed by SEBI:
- 5.6.1. Banks as sponsors: Banks acting as sponsors to IDF-MFs would be subject to existing prudential limits including limits on investments in financial services companies and limits on capital market exposure.
- 5.6.2. NBFCs as sponsors: A NBFC sponsoring IDF-Mutual Fund will have to fulfill the following eligibility criteria:
- 5.6.2.1. It should have a minimum Net Owned Funds (NOF) of Rs. 300 crore and Capital Risk Asset Ratio (CRAR) of 15%;
- 5.6.2.2. Its net NPAs should be less than 3% of net advances;
- 5.6.2.3. It should have been in existence for at least 5 years and should be earning profits for the last three years and its performance should be satisfactory;
- 5.6.2.4. The CRAR of the NBFC post investment in the IDF-MF should not be less than that prescribed; and
- 5.6.2.5. The NBFC should continue to maintain the required level of NOF after accounting for investment in the proposed IDF.
- 5.6.3.** Parameters for setting up IDF – NBFC by banks and NBFCs: Sponsors of NBFC- IDFs will have to contribute a minimum equity

of 30% and a maximum equity of 49% of the IDF-NBFC. Banks and NBFC-Infrastructure Finance Company (NBFC-IFCs) may sponsor IDFs as NBFCs with prior approval by RBI subject to the following conditions:

5.6.3.1. Banks as sponsors: Banks acting as sponsors to IDF-NBFCs would be subject to existing prudential limits including limits on investments in financial services companies and limits on capital market exposure.

5.6.3.2. NBFC-IFC as sponsor: Post investment in the IDF, the sponsor must maintain minimum CRAR and NOF prescribed for IFCs.

5.6.4. Criteria for IDF-NBFC

5.6.4.1. The IDF must have NOF of Rs. 300 crore or above;

5.6.4.2. The IDF should be assigned a minimum credit rating 'A' or equivalent of CRISIL, FITCH, CARE, ICRA or equivalent rating by any other accredited rating agencies;

5.6.4.3. Tier II capital cannot exceed Tier I. Minimum CRAR should be 15% of risk weighted assets;

5.6.4.4. The IDF shall invest only in PPP and post COD infrastructure projects which have completed at least one year of satisfactory commercial operation and are a party to a Tripartite Agreement with the concessionaire and the Project Authority for ensuring a compulsory buyout with termination payment;

5.6.4.5. For the purpose of computing capital adequacy of the IDF, bonds covering PPP and post COD projects in existence over

a year of commercial operation shall be assigned a risk weight of 50%;

5.6.4.6. The exposure norms for IDF –NBFC will be linked to its total capital funds (Tier I and Tier II).

5.6.4.7. The maximum exposure that an IDF can take to a borrower or a group of borrowers will be at 50% of its total capital funds. Additional exposure up to 10% would be allowed at the discretion of the Board of the IDF-NBFC. Boards of IDFs will be required to frame appropriate policies governing risk, exposure etc. Limited additional exposure over 60% could be taken with RBI's prior approval.

5.6.5. Detailed guidelines for setting up IDFs by banks and NBFCs would be issued separately by the RBI.

5.7. **Advantages of IDF:** Most of the recent Private and PPP infrastructure projects in India have been financed by domestic banks and institutions. However, the banks are now approaching their exposure limits and hence it has become necessary to develop alternative sources of infrastructure funding. Additionally, this will release the banks of the burden of long term lending which is constrained by regulations relating to debt issuance and asset-liability management. IDFs would seek to channelize funds from insurance companies, pension funds, high net worth individuals and other such sources into infrastructure sector. Off-shore funds would also be in a position to invest in Indian infrastructure sector through these IDFs. This will provide alternative sources of foreign currency funds. To attract off-shore funds into IDFs, withholding tax on interest payments on the borrowings by the IDFs would be reduced from 20% to 5%. Income of IDFs would also be exempt from income tax.

5.8. **Likely challenges in implementation of IDF:** Certain aspects would need to be kept in mind while assessing the workability of IDFs. The key challenges in implementation of IDFs under the proposed structure and suggestions to mitigate these challenges are discussed below:

5.8.1. Infrastructure financing has certain unique challenges viz. no or little tangible security (except few sectors like power generation projects etc and annuities and toll collection rights under certain conditions), high debt equity ratio, low Debt Service Coverage Ratio (DSCR), limited concession period, long implementation and repayment periods, etc. A few Banks and Financial Institutions have over the years developed expertise in assessing the risks associated with such projects before financing and in close monitoring during project implementation stage. Banks' ability to provide other services particularly Trust and Retention Account (TRA) and Escrow account also helps in this close monitoring. An IDF set up in the form of Trust may not have the expertise to properly assess project risks before providing financial assistance for project implementation. They may also not be able to raise long term funds needed to finance project implementation. Further, in case of Trust structure, the risk and return will be a pass through to the investors. While there will be some reduction in risk from pooling of assets, it is unclear if this will be enough to reduce the risk from a typical infrastructure project rating of BBB- to AA/AA+ and if it is unable to do so, this structure may not succeed in attracting domestic long term investors like insurance companies and pension funds who may perceive these units as too risky. International investors being more risk averse than domestic

investors will have even larger issues with this expected rating level. Hence, risk-averse investors may not be willing to invest in schemes meant for project finance assistance. Thus, under the Trust structure, practically IDFs may not be in a position to provide financial assistance for projects under implementation.

5.8.2. It has been stated that IDF as a company would raise resources through issue of either rupee or dollar denominated bonds of minimum five year maturity. It is felt that this may not work as the ability of investors to liquidate the debt bonds in the market would be an essential prerequisite for attracting investors. While there may be domestic investors who will hold the paper to maturity, it is unlikely that foreign investors would be interested in investing without the ability to exit. Development of a secondary market with adequate liquidity will be necessary for generating institutional investor interest in infrastructure opportunities.

5.8.3. It is not clear how the following risks will be addressed:

5.8.3.1. Refinancing risk: There can be a scenario where the loans given by commercial banks are not taken out by the NBFC. In that case, the commercial banks will continue to book debts of long tenor thereby tying up capacity.

5.8.3.2. Pricing risk: At the time of refinancing, the project will carry a pricing risk equal to the difference between the pricing of commercial bank debt and the bonds which refinance this debt. If the overall cost is lower than the commercial debt based on which the revenue stream is derived, there would not be an issue. However, if the cost of debt is higher than the commercial debt, the refinancing would normally not occur

unless suitable mechanisms for addressing the issue are spelt out.

5.8.3.3. Interest rate risk and exchange rate risk: One option is to hedge these risks but it will have a cost associated with it. This needs to be addressed to encourage foreign investors to invest in IDF.

5.8.3.4. The arrangement should, therefore, be flexible i.e. IDF-NBFC should be allowed to finance any infrastructure project of any type at any stage and under the Trust structure, IDFs - MF may normally be allowed to finance projects one year after Commercial Operation Date (COD) or if so desired even new projects subject to mechanisms for addressing the risks mentioned above. An IDF-NBFC could co-finance an infrastructure project to the extent of 80-85% after appraisal by a commercial bank which can take exposure to the extent of 15-20%. This of course, assumes that the IDF-NBFC will be able to raise adequate long term resources through the Corporate Bond Market. However, the constraint of insurance companies not being allowed to invest more than a certain percentage of the investees capital may limit the scale of domestic investment in this kind of fund. Also, it may not be able to attract foreign long term investors as it will be constrained by India's sovereign rating of BBB- and further credit enhancement mechanisms may need to be put in place to deal with this issue.

5.8.4. Most infrastructure projects are structured as standalone entity and funded on 'nonrecourse' basis. Even today, therefore, most of the investor stakeholders are associated with holding companies and

not at project company level. Most infrastructure projects have revenue streams from only a few activities and their project life is also limited by the concession agreement. In such situation, only a few infrastructure projects (even after completion) would be able to get AA or better credit rating. In this scenario, it may be practically difficult for IDFs investing only in completed projects to get AA rating.

5.8.5. Currently, most of the infrastructure projects are bid aggressively. In order to achieve viability and provide a good equity return, the companies are looking to reduce the cost of funds through different means including ECB loans, borrowing short-term loans as bridge finance during implementation, delay in disbursement of project loans by availing buyers' credit, refinance of debt after project completion at lower rate of interest, etc. Thus, rate of interest is an important criterion for infrastructure projects while availing finance. While no tax on the income of IDFs and lower withholding tax of 5% in IDF investments are proposed, IDFs' dependency on bond issuances for funding sources would keep their cost structure somewhat high vis-à-vis banks which have access to cheaper funds through CASA. Therefore, tax benefits in the form of tax exemption on interest income from investments in the IDFs and treating such investments as tax savings should be provided to the investors to ensure large scale participation and lower cost to IDFs. Retail investors should also be encouraged to participate in IDFs. The tax benefits might help to jump start the scheme. Additionally, reducing the withholding tax to 0% for the first 3-5 years might make the scheme attractive.

5.8.6. Currently, most of the banks provide loans to infrastructure sector on floating rate basis linked to their base rates. This reduces the market risk of adverse interest rate movement for the banks. Infrastructure companies might expect IDFs to provide fixed rate interest loans, which might create market risk for IDFs and its investors in a rising interest rate scenario. However, if the subscribing investors are mainly long-term investors like insurance companies/PF/Gratuity trusts who are likely to be satisfied with fixed returns, then this risk would be mitigated.

6. **The Corporate Bond Market in India**

6.1. While the Indian equity market has witnessed significant improvements in size and liquidity, transparency, stability and efficiency since the reform process in early 1990s, the Indian corporate bond market has not kept pace with the development in the equity market. The total amount outstanding against domestic debt securities at the end of March, 2011 is US \$ 711.1 billion (Bank for International Settlements), which is about 44% of India's GDP. Out of this, the amount outstanding against the corporate bonds is US \$ 25.1 billion which is about 1.6% of the GDP. Out of the total outstanding domestic debt of US \$ 711.1 billion, the share of the Government is US \$ 610.4 billion (85.84%), that of Financial Institutions is US \$ 75.5 (10.62%) and that of Corporate issuers is US \$ 25.1 billion (3.53%). The total corporate issue as a percentage of outstanding domestic debt is 6.39% for Japan and 34.43% for South Korea. The data on private placement of corporate bonds on the National Stock Exchange (NSE) and the Bombay Stock Exchange (BSE) shows that there were 929 issues during 2010-2011 (till Nov, 2010) for an amount of Rs 147,000 crore or about US \$ 29.4 billion (Economic

Survey 2010-2011). In contrast, the total size of the Indian stock market was US \$ 598.3 billion in March, 2009 (Asian Development Bank: Asia Capital Markets Monitoring Report) which was about 53.6% of the GDP for 2008-2009.

- 6.2. The outstanding domestic debt attributable to corporate issuers is only about 3.53% per cent of the total outstanding domestic debt in India. The Corporate Debt Market in India is in its infancy, both in terms of microstructure as well as market outcomes. Primary issuance market is dominated by non-banking finance companies and relatively small amount of funds are raised through issuance of debt papers by manufacturing and other service industries. Bank finance is the most sought after path to fulfill the funding requirement of these companies. Secondary market activities in corporate bonds have not picked up. Efforts of Securities Exchange Board of India (SEBI) and the stock exchanges to bring the trading to stock exchange platforms have not yielded desired results. On the other hand, the government securities market has grown exponentially during last decade due to many structural changes introduced by the Government and Reserve Bank of India to improve transparency in the market dealings, method of primary auctions, deepening the market with new market participants like Primary Dealers, borrowings at market determined rates, and creating technology platforms like Negotiated Deal Settlement (NDS) to recognize the institutional characteristics of the market.¹³
- 6.3. Since the inception of the Planning era in India in 1951, project funding for Indian corporate sector was increasingly provided by Development Financial Institutions (DFIs) because Government

¹³ Dr R.H. Patil Report, December 23, 2005

encouraged setting up of a large number of development financing institutions to provide term finance at concessional rates to projects in industry. There emerged a well-knit structure of national and state level DFIs for meeting requirements of medium and long-term finance of a full range of industrial units, from the smallest to the very large ones. Reserve Bank of India and Government of India nurtured DFIs through various types of financial incentives and other supportive measures. The main objective of all these measures was to provide much needed long-term finance to the industry, which the then existing commercial banks were not keen to provide because of the fear of asset-liability mismatch as also absence of project appraisal skills especially in relation to large and technologically complex projects. As the liability side with the banks was mainly short/medium term, extending term loans was considered by the banks to be relatively risky.¹⁴

- 6.4. To enable term-lending institutions to finance industry at subsidized concessional rates, Government and RBI gave them access to low cost funds. They were allowed to issue bonds with government guarantee, given funds through the budget and RBI allocated a sizeable part of RBI's National Industrial Credit (Long Term Operations) funds to Industrial Development Bank of India, the largest DFI of the country. Through an appropriate RBI fiat, the turf of the DFIs was also protected by keeping commercial banks away from extending large sized term loans to industrial units. Banks were expected to provide small term loans to small-scale industrial units on a priority basis. The withdrawal of budgetary support and government guarantee to raise funds from the market through SLR-eligible bonds at concessional

¹⁴ Dr R.H. Patil Report, December 23, 2005

rates as well as the other policy changes introduced after onset of economic reforms resulted in DFIs slowly converting themselves into commercial banks to have access to the public deposit mechanism as also enjoy freedom to lend both on a short term as well as long term basis. With most of the commercial banks keenly competing in the term loan market there is very little incentive for corporates to tap the market primary market for borrowing through long term debt. Banks generally prefer providing loans rather than invest in bonds as there currently is no mark-to-market requirement in their case while investment in bonds are subject to mark-to-market requirements and making provisions for valuation losses.¹⁵

7. Constraints on growth of Corporate Bond Market in India

- 7.1. Predominance of bank loans possibly due to mark to market requirements: Unlike bank loans, money raised by issuing bonds will be subject to mark to market requirements and making provisions for valuation losses, thereby making the process of raising finances through bonds relatively unattractive. Over a period of time, corporates resorted to their growing internal resources, raised resources through low cost equity taking advantage of the rapid development of the equity market, borrowed abroad taking advantage of the low interest rates and wherever possible, approached the long term debt market through the private placement route.
- 7.2. Crowding out by Government Bonds
- 7.3. Limited participation by pension/ provident fund and insurance companies

¹⁵ Dr R.H. Patil Report, December 23, 2005

- 7.4. Lack of adequate risk management structures and lack of a complete set of well-functioning markets: In a well-functioning financial system, all prices—exchange rates, interest rates for government bonds and interest rates for corporate bonds—are tightly linked through arbitrage. The key policy goal in this area lies in fully linking the markets, and for these markets to (in turn) be linked to other financial markets such as the equity market. When India achieves a well-functioning Bond, Currency, Derivatives (BCD) Nexus, this would have a number of implications. It would enable funding the fiscal deficit at a lower cost and with reduced distortions. It would produce sound information about interest rates at various maturities and credit qualities, which would shape investment plans of firms and give them access to debt financing. In particular, this would strengthen financing for debt-heavy infrastructure projects. Monetary policy involves changes in the short-term interest rate by the central bank; the BCD Nexus would enable the ‘monetary policy transmission’ through which changes in the short-term policy rate reach out and influence the economy through the market process of changes in all other interest rates for government bonds and corporate bonds. Finally, the currency spot and derivatives market would link up the Indian bond market to the world economy and reduce excessive price or interest rate differentials.¹⁶
- 7.5. Underdeveloped secondary market: Due to dominance of the private placement segment, secondary market for corporate debt has not developed.

¹⁶ Report of the Raghuram G. Rajan Committee on Financial Sector Reforms, September 12, 2008

- 7.6. Low issuance leading to illiquidity in the secondary market: Corporates prefer raising fund through private placement rather than from debt market as the entire process of listing etc. including compliance with the disclosure norms takes time.
- 7.7. Fragmentation of issues: Under the extant guidelines, if a bond issue is to be sold to 50 or more investors, the issuer has to follow the public issue route which is cumbersome, costly and time consuming. This results in fragmentation of issues and is not conducive for the development of a liquid bond market.
- 7.8. Lack of infrastructure for making available critical information: Bonds with the same rating but issued by different issuers trade at different prices making it difficult to price a bond based on its probability of default. Also, there is no central database for issuers and investors for tracking the change in spreads and prices of bonds.
- 7.9. Narrow investor base: Due to lack of proper infrastructure, regulatory framework and lack of awareness about debt products, investors prefer to invest mainly in bank deposits and post office schemes.
- 7.10. Absence of effective market making mechanisms
- 7.11. Non-existence of standardised instruments and uniform market practices
- 7.12. Under-developed market for securitized products
- 7.13. Stamp Duty: Stamp duty differs across States and duty is leviable on financial instruments both at the time of issuance or on transfer or on both depending on the nature of the instrument, issuer etc. These duties are perceived to be very high and act as a deterrent to the development of bond markets.

7.14. Tax deducted at Source (TDS): In the case of corporate bonds, TDS is carried out on accrued interest at the end of every fiscal year and a TDS certificate is issued to the registered owner. While insurance companies and mutual funds are exempt from the provisions of TDS, other market participants are subject to TDS in respect of interest paid on the corporate bonds. It may be noted that TDS was abolished when the RBI pointed out to the Government how TDS was making trading in Government securities inefficient and cumbersome.

7.15. Clearing & Settlement: A proper clearing and settlement structure does not exist for corporate bond market as it does for gilt securities in the secondary market. There is a time-lag between pay-in and pay-out in corporate debt market transactions and TDS makes the entire process inefficient and cumbersome. Absence of novation is also adding to the risk of settlement to both buyers and sellers.

7.16. Taxation issues: The taxes levied on investors in case of investment in equity market is more favourable than for investors who have invested in debt market. The table below may be seen:

Particulars	Equity	Debt
Long Term >1 year	Nil	Lower of: 10% without indexation or 20% with indexation
Short Term <1year	15%	As per Income Tax slabs

8. **How Singapore developed its corporate debt market:** Singapore has one of the more developed debt markets in Asia. Despite the small size of economy, the authorities made attempts to attract non-resident issuers in both local and foreign currencies to enhance the size and depth of the corporate bond market. Singapore took various steps to encourage foreign

investors and issuers, which included removal of restrictions on Singapore-based financial institutions trading with non-financial institutions, and on trading of interest rate swaps (IRS), asset swaps, cross-currency swaps and options. Issue of bonds was also encouraged by streamlining of prospectus requirements. Under a debenture issuance programme, an issuer in Singapore can make multiple offers of separate tranches of debentures, by issuing a base prospectus that is applicable for the entire programme and by lodging a brief pricing statement for subsequent offers under the programme. The validity of the base prospectus has been extended from six months from the date of initial registration to 24 months. Financial institutions offering continuously issued structured notes have been exempted from the requirement to lodge and register a pricing statement as there were practical difficulties for the issuer of these notes in lodging a pricing statement before such an offer. These streamlined disclosure requirements have ensured that proper risk and product disclosures are made available to investors. There has been a sharp surge in foreign entities issuing Singapore dollar-denominated bonds. Local institutions, particularly quasi-government entities, were also encouraged to issue bonds. In Singapore, key issues that were designated as benchmarks were augmented by re-opening these issues and buying back others. This was done based on market feedback about minimum issue size that is needed for active trading. Therefore, issues that were smaller in size were bought back to concentrate liquidity in the larger issues. For faster processing of applications, an internet based facility was created for primary dealers to submit bids. An electronic trading platform, which publishes details of transactions on a real time basis, also helped in improving the transparency of the yield curve. Singapore introduced investor tax exemptions on interest income derived from infrastructure bonds to diversify the range of attractive debt products. Singapore experimented with a short-term interest rate futures contract and a five-year futures contract in

government securities in 2001, but the response was poor. Market participants in Singapore exhibited a preference for the IRS market.¹⁷

9. Earlier initiatives taken for development of corporate bond market in India as per Economic Survey 2010-2011¹⁸:

- 9.1. Regulatory jurisdiction over corporate bond market has been clearly defined and placed under SEBI. SEBI (Issue and Listing of Debt Securities) Regulations, 2008 simplified disclosures and listing requirements. A minimum market lot criterion has been reduced from Rs 10 lakhs to Rs 1 lakh to encourage retail investors.
- 9.2. The limit of FIIs investment in corporate bonds has been increased to USD 20 billion from the existing limit of USD 15 billion and the incremental limit of USD 5 billion has to be invested in corporate bonds with residual maturity of over five years.
- 9.3. Bombay Stock Exchange (BSE), National Stock Exchange (NSE) and Fixed Income Money Market and Derivatives Association (FIMMDA) have set up reporting platforms. Aggregate data reported on these platforms is disseminated to the public. Summary data is available on SEBI website. Repos in corporate bonds have been permitted, following RBI guidelines, since March 2010. Exchange traded interest rates futures were introduced in August 2009.
- 9.4. Draft Credit Default Swap, (CDS) guidelines have been released by RBI in July, 2010.

¹⁷ Bank for International Settlements. 2006. "Developing Corporate Bond Markets in Asia." BIS Papers No.26, February

¹⁸ Economic Survey, 2010-2011

9.5. The Finance Act, 2008 (with effect from 01/06/2008) mandated that no TDS (tax deduction at source) would be deducted from any interest payable on any security issued by a company, where such security is issued in dematerialised form and is listed on a recognised stock exchange in India. The stamp duty on items in central list (debentures and bonds in the nature of promissory note) have been brought down and made uniform.

9.6. Clearing and settlement through clearing corporations have been mandated for trades between specified entities namely mutual funds, foresight institutional investors, venture capital funds etc. Clearing and settlement is on (Delivery versus Payment) DvP I basis.

10. Suggested initiatives to be taken for further development of corporate bond market as per Economic Survey, 2010-2011:¹⁹

10.1. Clearing and settlement on DvP III basis. Market making with primary dealers. Enabling Credit Default Swap. Allowing banks to do credit enhancement -Guaranteeing of corporate bonds by banks. Relaxing norms on short selling of Government bonds .(RBI).

10.2. Relaxing norms for use of shelf prospectus -requires amendment to Section 60 of Companies Act (MCA).

10.3. Empowering bond holder under The Securitisation and Reconstruction of Financial Assets and Enforcement of Security Interest Act, 2002 (SARFAESI). (Department of Financial Services, RBI).

10.4. Creating a comprehensive bond data base (RBI, SEBI, FIMMDA).

10.5. Amendment to Section 9 of the Stamp Act to lower stamp duties across states and make them uniform (Department of Revenue).

¹⁹ Economic Survey, 2010-2011