Working Sub-Group on Infrastructure

Infrastructure Funding Requirements and its Sources over the implementation period of the Twelfth Five Year Plan (2012- 2017)

Prepared for

Working Sub-Group on Infrastructure

Under

Working Group on Savings

Formulation of the Twelfth Five Year Plan

(Strictly Private & Confidential)

Contents

Executive Summary

Contained in the ensuing sections of this report, is an analysis of the possible sources of funding the investment envisaged in infrastructure during the Twelfth Five Year Plan.

India's Domestic Savings rate is high and can finance much of the infrastructure investment needs but financial intermediations of these savings on a large enough scale needs a well diversified and complex financial system with diverse investors, financial products together with depth and liquidity of the capital markets providing long term funding.

Based on projections provided in the Mid-Term Appraisal of the Eleventh Five Year Plan, in order to attain a 9% real GDP growth rate, infrastructure investment should be on average almost 10% of GDP during the Twelfth Plan. This translates into Rs. 41 Lakh Crs. in 2006-07 prices (real terms), as estimated by the Planning Commission. Converting this investment requirement into nominal terms (based on expected inflation of 5%) would imply an equivalent to Rs. 65 Lakh Crs. in current prices.

Assuming 50 percent of the investment will be met by budgetary resources, Rs. 32.5 Lakh Crs. needs to be met through debt and equity.

The projected funding by various sources amounts to Rs. 17.89 Lakh Crs., leaving a funding gap of around Rs. 14.60 Lakh Crs. (in nominal prices). However, various policy and regulatory recommendations have been made that will enable a greater flow of funds into the infrastructure sector. Some of the specific measures have been quantified and are estimated at Rs. 8.72 Lakh Crs. Implementing these measures would reduce the funding gap to Rs. 5.89 Lakh Crs.

However, it may be mentioned that Budgetary support assumed at Rs.32.5 lakh crore (50% of the requirement), if not available to that extent, would further increase the above mentioned gap in resources.

The table below summarises the funds available from various sources as well as an estimate of the additional funds possible through the specific measures suggested in this report.

Summary of Funds available through various Channels of Funding

(Rs. Crs.)

Particulars	Funds Estimated#	Additional Funds	Funds estimated (revised)
Commercial Banks	7,43,511	1,45,000	8,88,511
NBFCs	3,84,477	53,300	4,37,777
Insurance	1,50,766	4,52,298	6,03,064
ECBs	54,957	-	54,957
Equity & FDI	4,55,414	2,22,155	6,77,569
Total	**17,89,126**	**8,72,753#**	**26,61,878**

#*Budget Support is additional to these sources; estimated to be 50% of Rs. 65 Lakh Crs. i.e. Rs. 32.5 Lakh Crs.*
@ with the new Infrastructure Debt Funds coming up, incremental Rs 50,000 Crs to R.s 1 Lakh Crs may be available over the 12th Five Year Plan

1. Introduction

In the context of the formulation of the Twelfth Five Year Plan (2012-2017), the Planning Commission has set up a Working Group on Savings which, in turn, constituted a few Sub-Groups. One among them was the Sub-Group on Infrastructure which has been constituted for the first time. The composition of the Sub-Group and its terms of reference are as given below.

1.1 Composition

The composition of the subgroup is as follows:

Sh. Santosh Nayar DMD, SBI, Mumbai	Convener
Sh. U.K. Sharma Joint Adviser, Planning Commission, New Delhi	Member
Sh. H. K. Sharma ADG, Economic Statistics Division, CSO, New Delhi	Member
Ms. Aparna Bhatia, Director (PPP), Ministry of Finance, New Delhi	Member
Prof. Susan Thomas, IGIDR, Mumbai	Member
Sh. D.K. Joshi, Chief Economist, CRISIL, Mumbai	Member
E. Sankara Rao CGM, IIFCL, New Delhi	Member
Ms. Ritu Anand Group Head Policy and Chief Economist, IDFC, Mumbai	Member
Sh. S.B. Mainak ED,LIC of India, Mumbai	Member

1.2 Terms of reference

The broad terms of reference as finalized by the subgroup are as follows:

- Underlying assumptions on the path of economy and infrastructure sector
- To estimate resources available for investment in infrastructure, broken up into various sources like bank finance, private investments etc.
- Resource requirement for the Twelfth Plan for infrastructure.
- Issues relating to infrastructure

2 Estimating the Sources of Funds

2.1 Investment Projections for the Twelfth Five Year Plan

The Eleventh Five Year Plan (FYP) had projected investment requirements in infrastructure to be about Rs. 20.5 lakh Crs (at 2006-7 prices), equivalent to $514 billion. The Mid-Term Appraisal of the Eleventh FYP indicated that, although the physical capacity targets would not be met, the overall financial investment would be close to the original projection.

At the same time, the Planning Commission provided initial estimates of infrastructure investment for the Twelfth Five Year Plan (see Table 1). According to these projections, an investment of Rs 41 lakh Crs.[1] is targeted over the duration of the Twelfth Five Year Plan in order to sustain a real GDP growth rate of 9 per cent. This is almost double the amount proposed under the Eleventh Plan in real terms. Taking this investment requirement as a starting point and converting these estimates into nominal terms (based on expected inflation of 5% p.a.), yields a target investment of about Rs. 65 lakh Crs for the Twelfth FYP.[2]

Table 1: Projected Investment in Infrastructure during the Twelfth Five Year Plan

Year	Base Year FY12	FY13	FY14	FY15	FY16	FY17	Total 12th Plan
GDP at FY07 Prices (Rs. Crs.)	6,314,265	6,882,549	7,501,978	8,177,156	8,913,100	9,715,280	41,190,063
Infrastructure Investment as % of GDP	8.37%	9.00%	9.50%	9.90%	10.30%	10.70%	9.95%
Infrastructure Investment (Rs. Crs. in FY07 prices)	528,316	619,429	712,688	809,538	918,049	1,039,535	4,099,239
Infrastructure Investment (Rs. Crs. in current prices)	721,781	888,572	1,073,470	1,280,315	1,524,526	1,812,581	6,579,463

Source: Mid-Term Appraisal Eleventh Five Year Plan, Planning Commission, GOI; WPI inflation used to convert to current prices; FY12 inflation based on PMEAC projection

The above projections provide a starting point, but a detailed bottom-up exercise is needed to establish more firm investment requirements. The total investment need is not likely to

[1] In 2006-07 prices. As much as 50% of the total investment is envisaged to be by the private sector.
[2] The members of this Sub-Group on Infrastructure agreed that the estimates should be made in current prices as financial flows were more readily interpreted and used in nominal terms.

be as high in the telecom sector as seen in the past, given the large investments made in recent years, and large-scale power sector investments may not be possible until the urgent issues of fuel supply and state distribution companies' finances are resolved. Since these are also the sectors in which the private sector plays a major role, the share of the private sector may not be as high as envisaged in the Twelfth FYP. Conversely, urban infrastructure needs are huge. Urban infrastructure investments, together with the need for investing in rural infrastructure, will entail a greater reliance on budgetary resources. Accordingly, it has been assumed that 50% of the total funding needs would be required from budgetary allocations.

2.2 Funding Infrastructure in the Twelfth Plan

While the infrastructure investment targets are ambitious, India's domestic savings rate is very high and projected to grow (see Table 2). So, much of the infrastructure investment need can be financed domestically. Still, such high rates of infrastructure investment constitute over one-third of India's financial savings and would entail as much as 21% of the incremental financial savings being directed to infrastructure.

Table 2: Savings and Infrastructure Investment Needs

(as % of GDP)

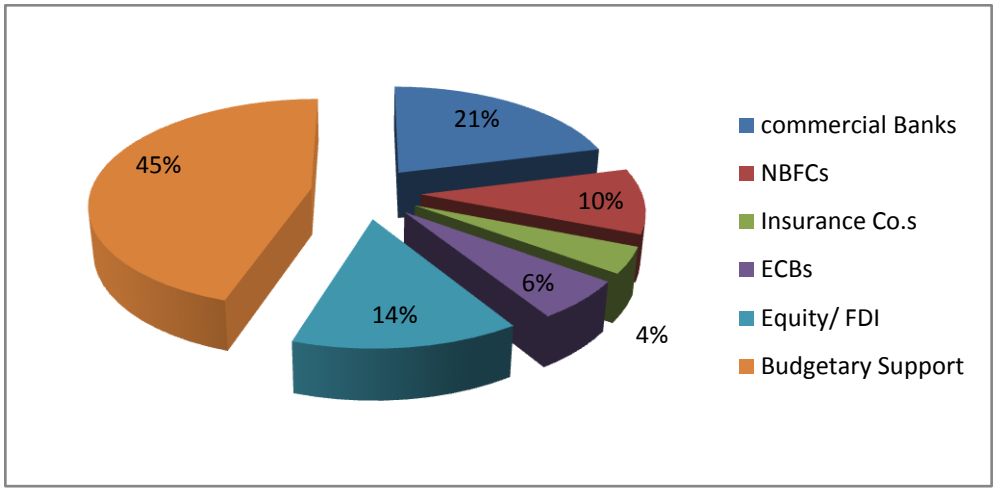
	FY10	FY13	FY14	FY15	FY16	FY17
Infra Investment	7.5	9.0	9.5	9.9	10.3	10.7
Gross Domestic Savings	33.7	37.8	40.6	42.9	45.5	48.2
o/w financial savings	22.0	24.8	27.2	29.1	31.1	33.4
Incremental Infra Investment	0.3	0.6	0.5	0.4	0.4	0.4
Incremental Financial Savings	2.8		2.4	1.9	2.0	2.3
Infra Investment as % of Financial Savings	34%	36%	35%	34%	33%	32%
% share of incremental infra in incremental financial savings			21%	21%	20%	17%

Source: Mid-Term Appraisal Eleventh Five Year Plan, Reports submitted by Sub-Groups on Household Savings, Private Sector Corporate Savings & Public Sector Savings for 9% p.a. real growth and 5% p.a. inflation scenario

Yet, it is not just the adequacy of domestic financial savings that matters. These savings have to be intermediated into infrastructure to achieve these targets.

During the first three years of 11th five year plan, the infrastructure funding requirement has broadly been met from the above mentioned channels in the proportion given below:

Figure 1: Sources of funds during first three years of 11th FYP



Source: Infrastructure.gov.in

As evident from the above, the major funding was through budgetary support which constituted ~45 per cent of the total infrastructure spending. The debt from Commercial banks, NBFCs, Insurance Companies and the external sources constituted ~41 per cent of the funding while the balance 14 per cent was through Equity and FDI.

2.2.1 Debt funding

Until the mid-2000s, there was no major demand from the financial system to fund infrastructure investment as it was fairly low – (around 3-5% of GDP) and financed largely by budgetary allocations and the internal resources of public sector enterprises engaged in infrastructure. In the Eleventh Five Year Plan, however, infrastructure spending picked up substantially with an important role played by the private sector and greater recourse to the financial system. Most of the debt financing came from banks, non-bank finance companies (NBFCs), and external commercial borrowing (ECB), followed by insurance companies.

2.2.1.1 Commercial Banks

The financial system was able to respond to the rapidly rising demand for credit by infrastructure companies largely because banks stepped up lending by unwinding their excess investments in government securities maintained as SLR. SLR investments as a share of deposit came down from 47.3% in FY05 to 29% in 2011 as the credit-deposit ratio increased. Credit to infrastructure grew at a faster pace than total credit and the share of infrastructure in gross bank credit rose from 6% in March 2007 to 11% in March 2011 and to almost 15% as a share of non-food credit (see Table 3). As a result, it is estimated that banks were able to provide about half the debt finance needs of infrastructure investment.

Table 3: Commercial Banks- Lending to Infrastructure during FY07-11

(Rs. Crs.)

As on	Mar 07	Mar 08	Mar 09	Mar 10	Mar 11	Jun 11
Gross Bank Credit Outstanding	23,79,985	29,52,874	35,34,284	41,32,186	49,12,012	
Non-food credit	17,56,051	22,04,801	26,01,825	30,40,007	36,77,429	37,08,927
Credit to Infrastructure sector	1,44,531	2,05,336	2,69,972	3,79,888	5,40,390	5,52,682
Share of Infra as a % of Non Food credit	8.23%	9.31%	10.38%	12.50%	14.69%	14.90%
Share of Infra as a percent of Gross Bank Credit in overall lending	6.07%	6.95%	7.64%	9.19%	11.00%	

Source: RBI

This rapid growth in bank credit to infrastructure has resulted in a greater concentration of risks in banks, due to ALM mismatch and reaching exposure ceilings. The banks have prudential exposure caps for infrastructure sector lending as a whole as well as for individual sectors.[3] As per the information available, most of the banks have almost reached the prudential caps for power sector; other sectors like roads may not be far behind.

Going forward, credit growth will be mainly determined by retained earnings and increase in banks' capital. However, as most of the infrastructure lending is by public sector banks (PSBs), raising capital can only take place if the government dilutes its shareholding or infuses capital into the PSBs. In the projections given below (in Table 4), we assume that infrastructure credit growth is determined by only retained earnings. Assuming that retained earnings grow at 20% p.a. for PSBs, and at 25% p.a. for private banks, and infrastructure credit rises to 15% of total credit, then the net incremental bank credit to infrastructure over the 12th Plan would be about Rs. 7.4 lakh Crs

Table 4: Commercial Banks- Projections for Bank lending to Infrastructure Sector

(Rs. Crs.)

As on	Mar12	Mar13	Mar14	Mar15	Mar16	Mar17	Total

[3] As per the current RBI instructions, 'exposure' shall include credit (funded working capital, term loans etc.) and non-funded investments including underwriting & similar commitments), and off balance sheet exposures like forex forward contracts & other derivative products.

Gross Bank Credit Outstanding	58,87,497	70,56,706	84,58,110	1,01,37,821	1,21,51,109	1,45,64,220	
Yearly availability of funds		98,895	1,19,201	143,654	173,123	2,08,638	**7,43,511**

Assumption: CAGR of ~20%p.a. of gross bank credit based on past trends and future expectations
Based on a study by IDFC of 21 PSBs and 5 Private Banks conducted in February 2011

As pointed out earlier, power and road sector will face significant constraints as the exposure is already high. However, it may be worthwhile to point out that the funding gap will not be felt universally. Some of the smaller sectors will be able to get adequate funding subject to availability of commercially viable, bankable projects, but the funding gap will be much larger for power, roads etc.

2.2.1.2 Infrastructure Non Banking Finance Companies (NBFCs)

Non-bank finance companies (NBFCs) also increased their lending sharply as the credit demand for power, telecoms and roads expanded. The major Infrastructure Finance Companies considered are PFC, REC, IDFC, IIFCL, L&T infra and IFCI. The outstanding credit from IFCs to infrastructure sector has increased from Rs 1,10,549 Crs. in FY08 to Rs 1,81,595 Crs. in FY10 at a CAGR of ~28 per cent(see Table 5). The PFC and REC which together constitute ~ 80 per cent of the lending by IFCs have had their outstanding credit grown at ~27 per cent p.a.

Table 5*:* NBFCs- Outstanding credit during FY08-10

(Rs. Crs.)

	FY08	FY09	FY10
IFCs- Outstanding Credit to Infrastructure Sector	1,10,549	1,40,355	1,81,595

Source: Companies' Annual Reports

Going forward, the high historical growth rates observed in the past may not be feasible as NBFCs would need to take up further capital raising exercise to be able to lend significant amounts. Hence, for the purpose of estimation the growth rate for FY11-17 has been assumed at ~20 per cent p.a. which is at the same levels as commercial banks (see Table 6).

Table 6*:* NBFCs- Projections for infrastructure lending

(Rs. Crs.)

	FY 11	FY 12	FY 13	FY 14	FY 15	FY 16	FY 17	Total
Credit (Infra.) –	2,17,658	2,60,883	3,12,692	3,74,790	4,49,221	5,38,432	6,45,361	

	FY 11	FY 12	FY 13	FY 14	FY 15	FY 16	FY 17	Total
total outstanding								
Credit (Infra.) – yearly growth			51,809	62,098	74,430	89,212	1,06,928	**3,84,477**

Thus, as seen from above, the gross credit available from the IFCs towards infrastructure sector during FY 13-17 is likely to be ~ Rs 4 lakh Crs. However, it will be pertinent to point out that the IFCs like PFC and REC will fund only power sector projects.

2.2.1.3 Insurance Companies

Life insurance companies are required to invest 15% of their Life Fund in infrastructure and housing. Although the Asset Under Management (AUM) of life insurers in the Life Fund increased at a CAGR of 16.31 per cent p.a., the share of infrastructure investments during the same period increased only marginally from Rs 69,837 Crs. to Rs 72,439 Crs. at a CAGR of ~1.25 per cent p.a. (see Table 7).[4] As a result the share of Infrastructure investments in the Life Fund has come down to 10 per cent in FY11 vis-a-vis 15 per cent in FY07. For Non life insurers, the AUM increased at a rate of 9.62 per cent p.a. from Rs 50,383 Crs. in FY07 to Rs 66,372 in FY10 whereas the share of infrastructure investments increased continually from 12 per cent in FY07 to 16 per cent in FY10

Table 7: Insurance- Investment in Infrastructure during FY07-10

(Rs. Crs.)

	Mar 07	Mar 08	Mar 09	Mar 10
Life Insurers (Life Fund)				
Asset Under Management as on	4,65,555	5,41,630	6,29,650	7,32,613
Infrastructure Investments (per cent share)	69,837 (15 %)	63,262 (12 %)	66,673 (11 %)	72,439 (10 %)
Non Life Insurers				
Asset Under Management as on	50,383	56,280	58,893	66,372
Infrastructure Investments (per cent share)	6,102 (12 %)	7,660 (14 %)	8,980 (15 %)	10,373 (16 %)

Source: IRDA

Insurance penetration is estimated to continue to rise, with the insurance premium growing from the current approximate 4% of GDP to 6.4% of GDP by the end of the Twelfth Plan. Investment in infrastructure by the insurance sector has been projected in Table 8 based on the past few years average investment by insurance companies (about 63% of premium

[4] Besides the Life Fund, life insurance companies have the Pension and Annuity Fund and Unit Linked Fund.

income) after deducting commissions and expenses, and the infrastructure investment as a share of the total insurance investment flows (of 6.2%). While there is much greater scope for channelizing insurance funds for infrastructure (which needs long-term funding) there are various prudential and regulatory constraints in the sector precluding this.

Table 8: Insurance- Projections for Infrastructure Financing

(Rs. Crs.)

	Mar-11	Mar-12	Mar-13	Mar-14	Mar-15	Mar-16	Mar-17
GDP Projections	78,77,947	90,16,310	1,03,19,167	1,18,10,287	1,35,16,873	1,54,70,061	1,77,05,485
Premium % of GDP	4.10%	4.40%	4.70%	5.10%	5.50%	5.90%	6.40%
Total premium	3,22,996	3,96,718	4,85,001	6,02,325	7,43,428	9,12,734	11,33,151
Total Investment	2,04,586	2,51,281	3,07,200	3,81,513	4,70,888	5,78,126	7,17,738
Infra Investment	12,562	15,429	18,862	23,425	28,913	35,497	44,069

Sources: IRDA; Subgroup Household Sector Savings

Assumptions:-

1. *Advanced Estimates of GDP for FY11 based on Economic survey 2011*
2. *Premium as a % of GDP for Mar 11- 17 based on estimates of Subgroup on Household Sector Savings*
3. *Investments estimates based on assumption of 63.14% of total premium collected towards investments*
4. *Investments into infrastructure based on assumption of 6.14% of total investments towards infrastructure*

Thus, going forward combined funds of Rs 1,50,766 Crs. may be available from insurers towards the infrastructure investments during FY13-17, if insurance penetration grows rapidly but the pattern of investment in infrastructure of the past few years continues.

2.2.1.4 Overseas Market: ECB

Infrastructure companies also tapped external credit markets. The share of infrastructure investments in overall ECB borrowings has gradually coming down. The estimates of the external borrowings during 12th Five Year Plan are based on the five year averages (FY07-11) of the actual external borrowings.

Table 9: ECB Inflows to Infrastructure during FY07-11

(USD Mn.)

	FY07	FY08	FY09	FY10	FY 11
Total ECB inflow (USD Mn)	25,353	30,967	18,363	21,669	25,776
ECB flow to infrastructure (USD Mn)	6,211	10,156	5,223	2735@	
ECB flow to infrastructure as % of total ECB	(24%)	(33%)	(28%)	(26%#)	

Source: RBI; Economic Survey 2010, MoF
@ Data available only for first half of FY10
 # half yearly data annualized for estimating yearly % share

However, the classification for infrastructure as per Ministry of Finance includes air transport (airplanes), and power equipments, which are not classified as Infrastructure Projects under the definition of either Planning Commission or RBI. Further most of the infrastructure financing is of long tenor, where ECB availability is lower. Therefore, for the purpose of 12th FYP, 10% of ECBs are assumed to be channelized towards infrastructure investments.

Based on the above the total ECB/ FCCB borrowings are estimated at Rs 5,49,574 Crs. and the external funds towards infrastructure funding is estimated at Rs 54,957 Crs.

2.2.1.5 Equity & FDI

The equity/ FDI during the first three years of 11th FYP were approximately 14 per cent of the total investments made towards the infrastructure building whereas the overall debt contribution was 41 per cent implying a debt equity ratio of 2.93:1.

Assuming that the proposed infrastructure spending gets funded in the same ratio, the equity/ FDI available is estimated at Rs 4,55,414 crs. However, it would be pertinent to mention that Equity funding will be a key constraint going forward – possibly even bigger than debt funding. A large part of equity investments relies on foreign investments with domestic investment institutions not coming in majorly at primary level for taking equity in Infrastructure projects. Regulatory changes which will make projects commercially attractive are needed to draw adequate equity capital to infrastructure sectors. Also other changes like amendment in pension/PF regulations to allow investments in equity markets will be critical.

2.2.2 Total Equity & Debt funds available

Based on the above analysis, the total funds available from different sources apart from budgetary support is as given below in Table 10.

Table 10: Total Equity & Debt funds available

(Rs. Crs.)

Sources	Funds Available
Debt	
Commercial Banks	*7,43,511*
IFCs	*3,84,477*
ECBs	*54,957*
Insurance Funds	*1,50,766*

Total debt funds	**13,33,712**
Equity & FDI	4,55,414
Total Funds	**17,89,126**

2.3 Funding Gap

The funds required during the 12th FYP to finance the infrastructure sector have been estimated at 65 Lakh Crs. At least 50 per cent of this will have to come from budgetary support (central and state governments) with the balance being funded from equity and debt (Table 11).

Table 11: Requirement of funds through various sources

(Rs. Crs.)

Particulars	Requirement (Rs. Crs.)
Budgetary Support	32,50,000
Debt and Equity	32,50,000
Total	**65,00,000**

Thus, the gap in the various sources of funds viz. Commercial Banks, NBFCs, Insurance funds, ECBs and Equity & FDI vis-a-vis the required funds under the 12th plan is as depicted below in Table 12:

Table 12: Estimation of funding gap

(Rs. Crs.)

Source of Funds	Estimated resources Available	Fund Requirement	Funding Gap
Commercial Banks	7,43,511	32,50,000	
NBFCs	3,84,477		
Insurance/Pension Funds	1,50,766		
ECBs	54,957		
Equity & FDI	4,81,686		
Total	**17,89,126**	**32,50,000**	**14,60,874**

Thus, as observed from above, during the 12th five year plan the funding gap in the Public & Private sources is expected to be ~ Rs 14,60,874 Crs. Key actions needed to bridge this gap are discussed in the next section.

It may be mentioned that in addition to the constraints regarding availability of equity as mentioned earlier, 50% Budgetary support for the 12th FYP at Rs.32,50,000 crore is quite large. In case the Budgetary support is lower that that assumed above, the funding gap forecasted above would also increase by corresponding amount.

3 Recommendations

As observed in the previous section, there is expected to be a shortfall in the available resources vis-a-vis the requirement under different growth scenarios. The quantum of the funding gap is estimated at ~ Rs 14,60,874 Crs.

Infrastructure financing needs urgent reforms. The focus of these reforms should be on the following three "general focus areas" followed by few "specific focus areas".

(1) **Supplementing/widening the channels of infrastructure funding**:

a. Regulatory reforms for Insurance companies and Pension Funds so that more savings through these important channels gets mobilized into infrastructure.
b. Reforms which ensure higher ECB & other forms of foreign capital inflows.

(2) **Development of financial products and markets**

a. Reforms that ensure infrastructure funding is not limited by depth and width of the financial market.
b. Reforms in the area of development of newer financial products for infrastructure financing such that a wider variety of investor is attracted.

(3) Creation of a growth enabling eco-system

a. Regulatory changes addressing replacement of committed but unutilized debt capital extended by the commercial banks with other forms of financing.
b. Reforms that lead to development of a frame work that helps reduce the market risk in infrastructure financing and asset liability mismatch of banks.
c. Reforms that give commercial banks more flexibility to churn their portfolio of Infrastructure assets at shorter tenors by way of increasing asset classes.
d. Revitalising the market for takeout financing, refinancing and securitisation.

Having the focus areas mentioned above as guiding principles, described below are some regulatory, policy and financial stimuli required in immediate to medium term. The success of these reforms will depend on execution but a quick adoption of these will certainly help in bridging of the funding gap. It will also help in attaining a 9% GDP growth.

3.1 Deepen and strengthen the Indian bond markets

1. In many countries across the world, long-term bonds form a major share of infrastructure finance. However, the Indian corporate bond market is less than 5% of GDP. While several committees have suggested reforms for the domestic bond market and steps have been initiated, this market is yet to take off. Specifically, some measures that need to be undertaken for the deepening the corporate bonds markets in India may include:
    a. Policy Initiatives
        i. Financial:
            1. Implement uniform stamp duty across the states
        ii. Regulatory:
            1. Allow banks and domestic FIs to provide credit enhancement for the infrastructure bonds
            2. Develop regulatory framework for multi-asset CDOs

    b. Creating Robust Market Infrastructure
        i. Establish an integrated trading and settlement system (like NDS order matching system for G-Secs.)
        ii. Move from a DVP I to DVP III system for corporate bonds

The corporate Repo market hasn't really taken off as SEBI and IRDA are yet to issue circulars on allowing MFs and Insurance Companies to participate in the Corporate Repo market. These entities are the natural investors, which is very much needed. Also corporate repo deals in the CBLO platform should be allowed.

2. International bonds can provide access to term financing (can be up to 30 year plus tenor) to an extent not available in the bank market. However, even the companies with large operating assets in the infrastructure space, which are typically highly rated and have a relatively easy access to capital markets, have been unable to tap the international bond markets for funding their long term investments in the infrastructure sector.

3. One of the reasons for lack of investor appetite for long term infra bonds is Withholding Tax. While a reduction in withholding taxes payable for overseas

borrowing by infrastructure funds has already been announced, the same withholding tax cap needs to be in place for infrastructure investments (with tenor exceeding 7 years) made either through IFCs or directly in the infrastructure companies.

4. In the US, the Municipal Bond Market is US $2.7 trillion. However, the municipal bond market (*"munis")* in India has remained underdeveloped and relatively untapped. There have been exceptions in the past, for example, municipal bonds were issued by Municipal Corporation of Ahmedabad (Rs 1 Billion in 1998). Assuming India manages to achieve only 10% of US number over the 12th FYP, for various reasons including its GDP size, still there is a potential of US$ 270 Billion being generated.

5. This would, however, also require critical pre-conditions like transparency of corporate governance within Municipal Corporations, levy and collection of appropriate user charges, innovative project structuring, supporting tax regime, better framework for security creation and enforcement is equally or more critical. This together with the PPP model could drive urban infrastructure and spur a new growth area. Like PPP, was well appreciated and important development of the 11th FYP, "*Munis*" and urban infrastructure growth could be the most important theme of the 12th Five Year Plan.

3.1.1 Infrastructure Debt Fund and long-term resources

- It is suggested that the Government should facilitate expeditious issuance of Draft guidelines for IDF through Mutual Fund route and also implementation of recent draft guidelines issued in respect of IDF through NBFC route.
- PFRDA & IRDA should amend regulations to enable Insurance companies and Pension Funds to invest in this fund.
- Allow IIFCL to provide refinancing & takeout finance to IFCs.

3.1.2 New Financial Instruments

Create a single Regulatory Window for clearing Innovative Debt Products typically in the Mezzanine space. For instance, products such as Rupee denominated convertible bonds or Optional Convertible Debentures (OCD) can help develop the corporate debt market. FII participation in this security could help kick-start the market. It could be introduced initially within the current ceiling of corporate debt permissible for FIIs.

3.2 Measures For Banks

Over the past few years, there has been strong growth in credit by the banking system to infrastructure. As it stands today, sectoral lending limits have been reached, increasing the systemic risks to the Banking System. There is an urgent need to develop take out financing schemes to ameliorate the stress. Some of the more specific suggestions are as under:

3.2.1 Allow commercial banks to reduce burden of Infrastructure debt financing

- Infrastructure NBFCs are allowed to raise infrastructure bonds which qualify for exemption of Income tax under Section 80CCf upto Rs 20,000. Allow Banks also to raise these Bonds and increase the exemption limit to Rs.100,000.
- RBI has permitted raising of Long-term infra bonds with residual maturity of over 5 years. These however have not found takers on account of the CRR/SLR costs that the funds attract. In order to make this instrument attractive, amount raised by this instrument may be exempted from CRR/SLR requirements.
- Refinancing Scheme with matching tenor needs to be devised. Current IIFCL scheme has only 10 year tenor and other restrictions making it unattractive for Banks.

3.2.2 Provide banks more flexibility to churn their Infra Loan portfolio

- In the current scenario, for most of the commercial banks, the sectoral cap for lending to infrastructure has been reached, which is preventing the banks from granting the fresh sanctions. To this extent, large lenders such as SBI can start quoting two way quotes and make market in the infrastructure receivables space.
- Regulatory framework for multi-asset CDOs allowing securitization to happen need to be implemented as soon as possible. While there were early adopters like ICICI, TELCO and Citibank, almost all transaction in the markets are privately placed. Lack of

appropriate legislation/legal clarity and unclear accounting treatment exacerbate the problem. The ICICI banks CDO in 2002 failed to take off because of these same issues.

3.2.3 Need for banks to raise more capital

In order to be able to fund a growing economy, the public sector banks need to raise further capital, especially if infrastructure lending by Banks is to be kept intact for the 12th Five Year Plan. According to an independent study carried out by IDFC in February 2011, diluting government stakes in all major PSBs to 51% by raising capital in 2013 could yield Rs. 1.45 lakh Crs. more funds to lend to infrastructure from commercial banks.[5] The study assumes that the equity raised by dilution of government stakes to 51% in 21 PSBs would allow the banks to extend incremental advances which are over and above that provided using internal accruals. The advances to infrastructure as a % of total advances has been assumed at 15% for sample PSBs in FY13 &14.

Adding to that, the dilution of government stakes to 51% in two major NBFCs viz. REC and PFC, 67% and 73.72% held by government (Quarter Ending June 2011), works out to about Rs 7994 Crs at current prices which may result in additional increase in lending assets of IFCs by ~ Rs 53,300 crore. Table 13 below summarizes the calculations:

Table 13: Capital raising by PFC and REC

	Government Holding as on 30th June 2011	Market Cap As on 30th June 2011 (Rs Crs)	Dilution up to 51%	Capital Raised (Rs Crs)
PFC	73.72%	18300	22.72%	4157.8
REC	66.80%	24286	15.80%	3837.2
Total		42586		7994.9

1. *Websites of REC and PFC, based on consolidated bank balance sheets and shareholding structure as on 30th June 2011.*
2. *Assumes the stakes dilution happens in one year down to the minimum controlling stake (51%), these prices are at 2011-2012 (current) prices.*

3.3 Regulatory reforms for Insurance Companies

[5] Dilution of PSBs is taken on assumed share prices for FY13 at 20% annual increase from 31st March 2010. This is based on consolidated bank balance sheets, P&L, and shareholding structure as on March 2010.

Infrastructure financing is long term in nature. The depository profile of insurance companies is more in tune with the funding requirement of infrastructure. Banks, as discussed, face asset liability mismatch issues because their depository base is short term against long term nature of infrastructure loans assets. It is therefore essential that some regulatory changes are given effect so that a greater participation by insurance companies in infrastructure funding mix is ensured.

Similarly, pension funds are key investors in long term infrastructure bonds, in India both are jointly expected to contribute around 5 per cent to the total investment in infrastructure in the 11th Five Year Plan. Insurance/Pension funds have the ability to invest for longer terms due to long term nature of their liabilities and are not faced with asset-liability mismatch issue. However, presently these institutions are restricted by their respective regulatory bodies (IRDA etc.) which limit their exposure to the infrastructure sector even when they have sufficient funds available to invest. India, though has the largest growing middle class population, has very small proportion of its population investing in insurance and pension schemes. However, this can be changed by introducing proper incentives and suitable schemes, thereby generating additional long term funds for infrastructure investments by these institutions.

Some of the suggestions as mentioned as under:

- The IRDA (Investment) Regulations 2000, as amended from time to time, stipulate that "not less than 75 per cent of debt instruments excluding Government and Other approved Securities shall have a rating of AAA or equivalent rating for long term instruments and not less than P1+ or equivalent for short term instruments".
- In order to have a higher quantum of investment by Life Insurance companies in Infrastructure related facilities it is suggested that the stipulation of "not less than 75 per cent" may be re-looked into and say "not less than 50 per cent in "AAA" rated and "AA+" rated debt instruments may be incorporated.
- The tenor of Investments in Infrastructure related facilities may be revised to "not less than 5 years" from the present "not less than 10 years" to enable life insurance companies to invest in brown field infrastructure companies/projects and also to enable the life insurance companies to fund the "take-out finance" arrangements.
- Insurance company investments into the SPVs of infrastructure projects, debentures of private limited companies and non-dividend track record companies in infrastructure should be included with in the ambit of "approved investments".

- The current IRDA (Investment) Regulations and clarifications issued there under , provide for debt/loan investment in Infrastructure companies to the extent of 25 per cent of the project equity/capital employed which in real terms works out to only 5 to 8.75 per cent of the total project cost depending on the equity brought in by the promoters. (Debt equity ratio 80:20 to 65:35). In order to have a higher investment by the Life Insurance companies the exposure can be considered for revision to "20 per cent of the total project" cost as being done by IIFCL. For example:

  Project Cost: Rs. 5000 Crs.

  Equity: Rs. 1000 Crs.

  Debt: Rs. 4000 Crs. Debt equity ratio 4:1

Under the present guidelines, LIC can provide rupee term loan assistance to the extent of only Rs. 250 Crs. (5 per cent of the project cost), whereas, if the suggested change above is implemented, LIC can provide assistance to an extent of Rs. 1000 Crs. i.e. 20 per cent of the project cost. A multiple of 4 times the current capability. Given the capital base of large insurance players like LIC of India, it could bridge the funding gap by a substantial amount (by roughly 4.5 Lakh Crs.).

3.4 Recommendations for ECBS

As per the previous RBI norms, refinancing of domestic Rupee loans with ECB was not permitted. However, keeping in view the special funding needs of the infrastructure sector, it has been decided to review the ECB policy and put in place a scheme of take-out finance. Accordingly, it has been decided to permit take-out financing arrangement through ECB, **under the approval route**, for refinancing of Rupee loans availed of from the domestic banks by eligible borrowers in the **sea port and airport, roads including bridges and power sectors** for the development of new projects. However there is a need to simplify the process of take-out financing/refinancing Rupee loans through ECBs for infrastructure companies:

- Timelines to engage foreign lenders for takeout are limited. It is difficult for foreign lenders to come to an agreement at the initial stage itself and assume the execution risk at the time of take out. Moreover, foreign lenders may not be comfortable with an agreement that subjects them to Indian Jurisdiction, while Indian borrowers and banks would not want foreign jurisdiction

- This condition of entering into Tri-partite may be dispensed away with and RBI could announce an amount for such Take-out financing through ECB automatic route on annually basis and put it in Approval Route to address any concerns.
- There is a need to relax the all-in-price ceiling for ECBs for infrastructure projects with average maturity exceeding 7 years. The interest rate ceilings set by RBI on ECBs put constraints in availing foreign currency loans for domestic infrastructure projects. Presently the all-in ceiling cap is 500 basis points over the 6 month Libor. At least this cap may be removed for companies with good track record.
- Relaxation of the ECB ceiling of USD 500 Million per annum per company for automatic route will help make ECB stable source of financing and ensure increased ECB funding. This may be increased to $1 billion for Infrastructure financing.

International Investments:

International investors looking to invest in any emerging market with a low credit rating would always be constrained and also the emerging market is competing with other markets for funding. Given the huge investment requirement in the infrastructure sector, which cannot be met only from domestic savings, there is therefore a strong need to facilitate flow of funds from the international market with flexible but prudent regulatory framework.

Currently, the international debt funds could be channelized into the domestic market, either through (1) ECB borrowings or (2) FII inflows into domestic corporate debt.

- Bring IFCs in the infrastructure sector under the automatic route in line with other corporate as any initial exposure by international investor in the infrastructure sector would be through IFCs, which are better rated.
- Exempt the interest and other payments on ECBs by infrastructure sector, including IFCs from withholding tax.
- Also exempt from withholding tax, the interest payment to be made to FIIs on the Rupee denominated bonds in line with domestic investors.
- As a precursor to get international investors comfortable with Rupee. Investments, allow within a certain limit, Indian corporates in the infrastructure sector, including IFCs to issue Rupee denominated bonds in the international market.
- Facilitate FII registration, especially for debt with simpler registration norms

3.5 Equity Markets

- *Definition of infrastructure*:
  - Government needs to widen the definition of infrastructure under S.10- 23(FB), S. 80-IA of the Income Tax Act to include areas that have a strong demand-supply imbalance and therefore need huge quantum of investment. Some of the sectors that could be included are logistics, educational institutions, healthcare services, shipping etc.
  - Additionally, there is a need for making the definition of infrastructure consistent across government agencies (e.g. RBI, Income Tax Department, IRDA etc).
- *Increase the funding pool*: Increased domestic funding for infrastructure can be facilitated by suitable policy amendments (with prudential limits) which would enable greater participation in PE from domestic entities such as pension & provident funds, banks, insurance companies etc.
- *Listing of funds*: SEBI to facilitate listing of infrastructure funds. Ability to list such funds would provide greater liquidity to the investors of such funds thereby making such vehicles more attractive to a larger set of investors.
- *Tax treatment for unlisted equity*: Tax treatment on unlisted equity shares especially for approved infrastructure sectors may be brought on par with listed shares. Most often each project is executed through a SPV, which would typically be an unlisted entity. This move can also bring down the effective cost for such projects.

It is difficult to quantify the impact of all the measures indicated. But just based on the capital raising for the public sector banks and public sector NBFCs and the relaxation of regulations/prudential norms for insurance companies, the non budgetary funds available for infrastructure sector may go up to Rs 26.61 lakh Crs. which could result in reduction of funding gap to ~ 5.89 lakh Crs. (see Table 14).

Table 14*:* Impact of suggested measures on availability of non budgetary funds

(Rs. Crs.)

Particulars	Funds Estimated	Additional Funds	Funds estimated (revised)

Particulars	Funds Estimated	Additional Funds	Funds estimated (revised)
Commercial Banks	7,43,511	1,45,000	8,88,511
NBFCs	3,84,477	53,300	4,37,777
Insurance	1,50,766	4,52,298	6,03,064
ECBs	54,957	-	54,957
Equity & FDI*	4,55,414	2,22,155	6,77,569
Total	**17,89,126**	**8,72,753#**	**26,61,878**

 # Another ~Rs 50,000 – 1,00,000 Crs. can be assumed if Infrastructure debt funds take off.
** Additional equity has been assumed to be available corresponding to pro-rata (2.93:1) increase in availability of Debt funds.*

We solicited responses from the top corporate houses engaged in infrastructure development in India. The corporates were requested to provide responses to the following set of questions:

- What are the top five measures that must be undertaken to ensure a higher quantum of domestic savings getting channelized into infrastructure development of the country than already is?
- What should be done to ensure higher quantum foreign savings getting channelized into infrastructure development of the country than already is?
- What are the major regulatory and policy changes required to ensure that the infrastructure spending targets as envisaged in the five year plans of the country are actually met?
- What according to you/ your institution are the top five roadblocks facing infrastructure development in India?

It is clear from the responses that currently, due to unclear environment & land acquisition policies, many projects get delayed, resulting in higher costs and impacting the project viability adversely. Most of the respondents also point out that fuel supply issues in case of energy generation business and long winded bid process in case of PPP projects are major road blocks faced while financing these projects. A majority of respondents concur that development of the corporate bond markets is crucial for ensuring sustained funding while almost everyone agrees that regulatory changes leading to a greater participation of insurance companies and pension funds has almost become inevitable given the current

stress commercial banks' balance sheets are under. These issues need to be addressed by evolving stable and pragmatic policy initiatives. These are discussed in detail sector-wise in **Annexure I**.

4 Conclusion

- The projected investment requirement for Infrastructure for the 12th Five Year Plan for 9 per cent real GDP growth is Rs. ~65 lakh Crs. in nominal terms.

- We assume 50 per cent of the funding requirement or, Rs. 32.5 lakh Crs will be met by budgetary resources.

- During the period of the 12th Five Year Plan, total funds available from debt and equity/ FDI for the 12th Five year Plan is estimated to be Rs 18.92 lakh Crs. (see Table 15).

Table 15: Projected Non-Budgetary resources for infrastructure over 12th FYP

(Rs. Crs.)

Particulars	FY13	FY14	FY15	FY16	FY17	Total
Commercial Banks	98,895	1,19,201	1,43,654	1,73,123	2,08,638	**7,43,511**
NBFCs	51,809	62,098	74,430	89,212	1,06,928	**3,84,477**
Insurance	18,862	23,425	28,913	35,497	44,069	**1,50,766**
ECBs	10,991	10,991	10,991	10,991	10,991	**54,957**
Equity & FDI	61,654	73,659	88,094	1,05,452	1,26,555	**4,55,414**
Total	**2,42,211**	**2,89,374**	**3,46,082**	**4,14,275**	**4,97,182**	**17,89,126**

- That leaves a funding gap of Rs 14.60 Lakh Crs. If some of the specific measures suggested above are taken, this funding gap can be reduced to Rs. ~5.89 Lakh crores.

- It may be mentioned that 50% Budgetary support for the 12th FYP at Rs.32,50,000 crore is quite large. In case the Budgetary support is lower that that assumed above, the funding gap forecasted above would also increase by corresponding amount.

- In order to fund this gap, concrete policy and regulatory measures need to be undertaken. Some of the most important include measures taken to increase the breadth and the depth of the corporate bond markets in India, higher involvement of Insurance and pension fund companies in infrastructure funding, and providing an environment that is attractive to foreign investors.

- Over 12th five year plan, Equity funding is likely to be a bigger constraint than debt funding.

- Urgent need for increase in refinancing alternatives as opposed to limited measures of opportunities in form of IIFCL / ECB take out financing. Retail and institutional

investor classes can be tapped into by developing free and vibrant market based mechanisms.

- Measures resulting in freeing up of infrastructure debt from the balance sheet of commercial banks by stimulating the demand for infrastructure receivables asset class across various investor profiles are of utmost importance.

- Land Acquisition, Environmental clearance and Fuel supply issues remain the top three critical pain areas impeding the infrastructure growth in India. Individual sectors have unique issues which may be paid a focussed attention. However, these three issues need to be addressed urgently and policy and regulatory changes as required for their early resolution should be implemented on urgent footing. A slowdown in new investment in projects is being seen particularly in sectors like power.

Annexure I

Issues in Infrastructure Development

A. The importance of infrastructure for sustained economic development is well recognized. Planning commission in its midterm review of the 11th Five Year plan noted that India has been adversely impacted on an average by 1 to 2 percentage points due to infrastructure bottlenecks. High transactions costs arising from inadequate and inefficient infrastructure prevents the economy from realizing its full growth potential regardless of the progress on other fronts. As seen in section 1, for a GDP growth rate of 9 per cent, an investment of Rs.41 lakh crore (2006-07 prices) in infrastructure sector is required over the 12th Five Year Plan. The same when translated into nominal terms assuming 5% inflation works out to Rs.65 lakh crores. However, as has been the case with the previous five year plans, the planned targets are rarely achieved. A set of inter-related reasons causes this slippage. Whether it be in terms of time overruns, cost overruns or be it non achievements in terms of the installed capacity for respective sectors, an inter-play of issues common to all the sectors is main reason for non achievements of the targets. In this context, some of the challenges faced by the infrastructure sector, in general, are delineated as under:

i) **Speedy Implementation of projects**

Land acquisition and environmental clearances continue to remain critical concerns for infrastructure developers. Both these issues have been prevalent since a long time, and are the prime most reasons why infrastructure projects invariably get delayed. One way to alleviate this situation is that land acquisition be done by the government prior to the project bidding stage and project commences only after land acquisition. Advanced technology micro-siting and data warehousing is required to create Land banks and ascertain appraisal values and historical ownership. Since land ownership is in question, a national level congruent state-centre institution needs to be set up in collaboration between the state and central governments and be staffed with personnel of high integrity to over-see the task of land management. Once needs have been identified, and data is available, associated infrastructure should be promptly set up. Finally, allocation can be done to the project developers in a much quicker time via such mechanisms as competitive bidding. While in some states like Gujarat, solar parks development and wind site allocations have been

done with an unusual alacrity, the same example needs to be followed across the nation as a whole.

Additionally, scope, terms of reference and obligatory process of environmental clearance need to be standardized and suitable body or independent consulting companies should be fostered to help bidders and developers in obtaining such clearances at a faster pace. Environmental and land acquisition issues should be addressed proactively to balance the interests of all the stakeholders. The ambitious target of $ 1trillion plus investment in infrastructure is only achievable when these two concerns are addressed on war footing.

ii) Co-ordination between Government agencies

Currently, at least 7-8 clearances, in some cases even more, are required to set up power projects. The situation in other sectors is equally grave. The process currently takes around 1.5 to 2 years with substantial transaction costs. Instead of this, a single window clearance system should be implemented with specific guidelines for time bound approvals. The actions and policies of different Centre and State government bodies and even central ministries need to be better coordinated

iii) Short tender process

A reduction in time lag between bid for a project and the commencement of construction would reduce the project costs and expedite implementation. The rise in material costs due to inflation would also be then controlled. Frequent changes in the important agreements such as the model concession agreement, Request for Proposal (RFP), Request for Quotation (RFQ) norms should be avoided as it makes the project implementation difficult and results in bidders spending a lot of time effort and money in performing due diligence

iv) Limited depth of the Indian Debt markets for long term funding requirement

India is heavily reliant on budgetary support and bank credit for funding its infrastructure needs. In many countries across the world, long term debt in form of corporate/ sovereign or municipal bonds forms a major share of infrastructure finance. However, in India, we are constrained by lack of depth and breadth of the secondary debt markets. Infrastructure projects have a long pay-back period and

require long-term financing in order to be sustainable and cost effective. There is a need to improve depth and liquidity of the corporate bond market to provide additional source of funding for infrastructure companies. The risk of infrastructure development could do well by getting sliced and diced across different investor appetites and not be assumed only by banks and equity stake holders. This will stimulate supply of much needed capital towards envisaged infrastructure spending. Though measures such as increasing FII investment limit for corporate bonds by $20 billion and creation of special vehicles in form of notified infrastructure debt funds with reduced withholding tax and tax exempt income, continuation of additional deduction of Rs. 20,000 for investment in infrastructure bonds, etc. are a step in the right direction, it should be noted that requirement as envisaged in the 12th five Year Plan is more than double the amount of spending that has taken place over the last five years. This calls for further development of the Indian Debt market because the funding gap will have to be filled up by permitting the financial products necessary to be floated in the Indian markets in both fixed income and equity product offerings. Since financial leverage represents almost 70 per cent of the requirements there is an urgent need for infrastructure borrowings based fixed income products. Not only shall it increase the capital inflow for asset formation in the infrastructure space, but it shall also create a more equitable distribution of the sectoral risk. Though it is true to some extent that some of the vulnerable investor classes would be exposed to systemic risk, with a proper regulatory oversight it is not something that cannot be monitored.

While mentioned above are some of the issues common across all infrastructure sub sectors, presented below are sector specific issues in some of the main infrastructure sub sectors.

B. Issues in Power Sector

1. **Fuel Supply**

- Securing a firm fuel supply for power projects is critical for the projects. It is estimated that the total coal requirement for the thermal power plants shall be 614 MT in the year 2013-14. The total domestic coal production in India is expected to be in range of 450 MT thereby resulting in a deficit of around 165 MT. In order to bridge this deficit, either captive mining needs to be done domestically or importing coal from other coal producing countries is required. Longer duration between subsequent standing linkage committee meetings poses uncertainty on allocation of coal linkages to new projects.
- Of around 90 blocks allocated to the power sector for captive consumption only 14 blocks are currently under development. The delay in time taken is in account of obtaining statutory clearances, approval of mining plans, approval and resolution of issues. As result of which many of the allocated coal blocks remain unutilized.
- Due to uncertainty in obtaining coal linkage and unavailability of captive coal blocks, power projects have to depend upon imported coal for power production. The imported coal is costlier and higher transaction costs associated with raw material and transportation render the imported coal based projects financially unattractive.
- Further a large number of gas based power projects are facing similar crisis in terms of securing long term gas supply for power projects. Proper gas allocation policy needs to be in place to address such issues

2. **Land acquisition**

- Difficulty in acquiring land in rural and forest areas is cited as the major reason for delay of power projects. Due to lack of proper implementation of Acts and Rules relating to land acquisition as well as difficulty in approaching the concerned Department / Ministry/ Organisation at the right time, it becomes difficult to acquire required land. Further, given the population density and the type of land use in the country, there is more problem in land acquisition in India than probably elsewhere in the world. Thus, it is a big challenge for Government, both Central and State, to generate greater access of land to the people and corporate at large, including landless rural poor and foreign investors/ non-resident Indians, at the same time balancing the needs of one and all.

- In numerous cases, acquisition of land for the project by developers has posed a problem which in the last two three years has assumed a much larger proportion. There have been instances where developers in spite of having spent considerable funds and time on the development of the project, had to move to another site because of extreme resistance and protests by land owners and other local people.
- Land acquisition and Resettlement and Rehabilitation were one of the major issues encountered in Ultra Mega Power Projects as these continue to remain the responsibilities of developer. Similar issues are there for almost all the major power projects planning to come up in the 12th Five Year Plan. Most of the projects which have achieved financial closure are paying up additional interest in debt servicing as their land acquisitions have been delayed. Similar issues are faced while developing roads and highways, laying down railway tracks, development of urban infrastructure in metropolises, for setting up cold storages, warehouses and almost every other infrastructure subsector.

3. <u>Environmental Clearance</u>

- Environmental clearances have become a major hurdle in setting up power generation plants. We encounter many projects which have got stuck due to delay in environmental clearances. Even more damaging is the uncertainty associated with the process. The Ministry of environment has issued guidelines for clearances to projects, which at best serve as a starting point. Every project, however, needs to be cleared by the ministry. This increases the regulatory burden on the developmental process and investors do not have an understanding of the likelihood of clearance or the time that it is likely to take for the clearance to come through.
- The criteria fixed also have a lot of subjectivity embedded. The GOI needs to break down all the conditionalities imposed into easily understood criteria and the compliance or likelihood of compliance should be easily judgeable. This would enable the functionality to be delegated to regional offices, which would make the process more understood and accessible.

4. <u>Funding issues for Wind/other renewable projects</u>

- Power projects based on renewable technologies which are implemented by independent power producers are plagued by a large number of issues, ranging from

high cost of generation, grid instability, and lack of authentic technical data to comfort of lenders in financing these projects on a non recourse basis. In a high interest rate regime, any cost/time overruns on account of combination of the above mentioned factors severely impacts the debt servicing and returns generating capability of these projects.

- Most of the renewable energy projects are driven by the renewable energy purchase obligation of the state electricity boards which provide preferential feed-in tariffs under long term power purchase agreements. Since the financial health of most state electricity boards is very weak, these is an inherent revenue risk perceived by the lenders which makes extending credit difficult, or renders the pricing unviable. While REC mechanism is suggested as an alternative power selling arrangements, the market is still in its infancy stage and it remains to be seen how robust it grows to be. Till that time, funding renewable projects remains an issue.

C. Issues in Ports Sector

1. Regulatory Regime

- As per the extant policy on private sector monopoly prevention in Major Ports, if there is only one private terminal operator in a port for a specific cargo then it cannot bid for the next project in the same cargo, which is too restrictive. Hence, the operators should be permitted to bid for adjacent berths in a port as there are few players in the market and would also provide economies of scale to the operators.
- Expedite the formation of the State Maritime Boards to facilitate and expedite resolution of issues pertaining to various key clearances/approvals and transfers of titles required for private sector participation in minor port projects.
- As we are shifting from conventional port set up to more mechanized port development, the labour legislation requires to be taken into consideration.
- Tariff Authority for Major Ports (TAMP) like any other regulator should have a sunset clause, and withdraw from regulation when adequate competition emerges in the sector.

2. Model Concession Agreement framework

- As per the Model Concession Agreement (MCA) for Major Ports, the ownership of the Project Site and Port's Assets shall always remain vested with the Concessioning Authority. The rights of the Concessionaire in the Project Site and Port's Assets shall only be that of a bare licensee of such assets and the Concessionaire shall neither assign, transfer, sublet, create any charge or Encumbrance, nor shall the Concessionaire create or permit creation of any third party rights whatsoever, on whole or any part of the Port's Assets or Project Site. No leasehold charge on land, poses an issue in security perfection since charge on fixed immovable assets alone is not enough in case of enforcement of security.
- Deadline for Financial Closure (FC) is 3- 6 months, which can pose a problem as FC definition refers to date of access of funds. The date of award of Concession is subject to FC and as such cannot commence construction with own partial equity contribution unless the debt funds are also accessible. Further, in most instances certain clearances and approvals are pending at the time of appraisal by Lenders, which generally need to be obtained prior to disbursement. Further CA requires execution of an Escrow Agreement as a Condition Precedent to award of Contract; whereas the Escrow Agreement can be signed only post financial close.
- The Project capacity defined in the MCA poses a problem, as bidding is generally stretched based on higher capacities. The MCA should instead limit Project Capacity to only minimum capacity generation requirement.
- The Estimated project cost should clarify that it refers to cost entailed to handle a certain capacity since quite often the total estimated project cost financed exceeds the cost mentioned in the MCA due to varied valid reasons. A deemed provision for ratification to be included in CA.
- While the Concession Period fixed by the Government in most projects is 30 years (extendable up to next 20 years) the MCA should have an option to extend the Concession Period based on fulfilment of certain conditions by the Concessionaire. Longer concession period shall make the Port concessions more lucrative and aid to tap newer avenues of funding.
- Payments on Termination due to Concessionaire Event of Default during construction should be to the extent of at least the debt due. Presently—no compensation is payable.

- Concession Agreements should follow a similar framework whether being used by Major Ports or Minor Ports. The economic terms of concession may be decided by the individual state maritime board or relevant concessioning authority. Certain CA (like GMB Model Concession Agreement) does not refer to termination of the Concession due to Force Majeure. This is a concern for lenders as if the force majeure event persists for an extended period of time; the concessionaire may become a non performing asset. In such a case, the lender must have a right to terminate the concession and recover any dues by enforcement of security, if it wishes to do so.
- The concession agreement needs to have flexibility (criteria based) so as to allow new shareholders, change in project development to reflect the funding requirement or change in cargo profile etc.

2) <u>Other requirements/issues</u>

- **Poor Hinterland Connectivity**

  Weak hinterland connectivity is a challenge for most Indian ports, reducing accessibility and leading to sub-optimal utilisation of the port facilities.

  To mitigate the problem, Ministry of Shipping /Maritime Boards in association with Ministry of Railways / Roads could form a JV with the private party to develop the infrastructure simultaneously. Rail road connectivity should form an integral part of the Government/Licensor's responsibility as these are key support infrastructure requirements for Port Projects. Particularly, for minor ports the responsibility for hinterland connectivity must lie with NHAI and/or Indian Railways so as to render projects more viable financially.

- **Administration**

  The major ports are governed by the Major Port Trusts Act, 1963 and the minor ports by the Indian Ports Act 1908. The Board of Trustees are appointed by the Government of India to administer the port represent government departments involved with port operations, labour and service providers such as stevedores, shipping agents etc. Sometimes the interest of different parties may be at cross purpose, which may not be in interest of the port operations.

Hence, all new ports may be set up as companies under the Indian Companies Act and the existing Port Trusts may also be gradually corporatized and set up as companies to make ports operate on commercial principles and make it possible to evaluate their performance on the basis of their profitability.

D. Issues in Telecommunications Sector

The robust current growth in GDP has exposed the grave inadequacies in the country's infrastructure sectors. The strong population growth in India and its booming economy are generating enormous pressures to modernize and expand India's infrastructure. The creation of world class infrastructure would require large investments in addressing the deficit in quality and quantity.

Telecom Sector plans in 12th plan (2012-17)

Estimated Telecom sector investment plans and fund requirement is as follows.

Expansion Plans:

	At the end of 11th Plan (Estimated)	**At the end of 12th Plan (Planned)**
Subscribers (2G)	780 mn	900 mn
Subscribers (3G/4G)	10 mn	300 mn
Total Subs	**780 mn**	**1200 mn**
Telecom Towers	350,000	550,000
Broadband Coverage	Limited to big cities	Pan-India

Means of Finance:

Since the country faces huge funding constraint in infrastructure sector, the access to bank finance and public funds could be challenging for relatively new companies in telecom sector. However, with alternate sources of funding viz. vendor credit, ECA/ECB, infrastructure NBFCs funding need could be bridged substantially.

Moreover, to make socially relevant projects (Rural broadband, rural telephony etc.) viable, government could offer funds from Rs. 18,000 Crs. USO fund as well.

Challenges:

- **Regulatory & Policy uncertainty in areas viz. Spectrum allocation, cost, roll-out obligations, etc.**

Lack of clarity in policy for spectrum allocation and indications of potential rise in upfront costs would raise concerns on viability of operations. Further, there is lack of clarity in roll-out obligations as defined in license agreements, which adversely affects the business case of operators.

- **M&A Guidelines**

The present M&A guidelines pose restrictions pertaining to acquired spectrum retention in certain cases, making consolidation less attractive

- **Uncertainties in assignment of Telecom Licenses by Government**

There have been substantial delays and uncertainty regarding execution of Tripartite Agreements for assignment of Telecom Licenses in favour of lenders in recent financing cases. As the licenses are an integral part of the security mechanism for lenders enabling them to substitute a delinquent borrower with a more suitable party, delay in creation of assignment rights in favour of lenders would act as deterrent to their participation in financing of telecom projects.

- **Extant regulatory guidelines do not permit accounting for value of telecom licenses and spectrum for the purpose of computing security cover for bank loans**

Telecom operator companies are moving towards asset light business models envisaging increased sharing of physical and radio infrastructure assets, thereby maximising asset utilization and reducing cost of services. As such, there is lesser tangible asset cover for bank lending to telecom operators, which is further aggravated by regulatory exclusion of license/spectrum value while computing security cover for loans.

E. Issues in the Roads and Bridges Sector

While land acquisition and governmental clearances still remain the top issues, some of the more sector specific issues are as follows:

1. **Issues related to costing of the concession**

   Disagreement of estimates of Total Project Cost (TPC) between NHAI and the Concessionaire and its impact on the linked Termination Payments, VGF/Grant remains an issue. Apart from information asymmetry between the principal (NHAI)

and the agent (Concessionaire), different valuation expectations of parties and different risk return profiles of the two, further add to uncertainty of the bid process. To mitigate risks at this end, the following two approaches could be adopted.

a. The TPC estimated by NHAI can be considered as basis for calculation of grant at the time of bidding.
b. The actual cost expended by the Concessionaire for completion of the project which is vetted and certified by Independent Engineer appointed by NHAI should be considered for calculation of Termination Payments to cover the entire debt of project.

2. **Regulatory Issues**

Roads and bridges development remains to be a domain of the Government through its nodal agency NHAI, which has its own limitations due to its technical, project management, consultancy expertise, and accountability deficit and has by and large failed to deliver the results as was expected. Public Private Partnership (PPP) in the road sector has always been a successful story but, of late, its own problems are coming to fore as demand for faster and more intense implementation is increasing. Some of these problems are as under:

a) New Premium Based Bidding Leading to the Requirement of Long Tenor Loans

The new premium based bidding adopted by NHAI for Toll based road projects with concession period extending to 25-30 years was leading to developers quoting aggressive bids, The same was on account of the fact that cash flows during the latter half of the concessions are usually very healthy due to compounding growth expected in traffic volume coupled with toll rates having a fixed as well as WPI growth linked escalation component. The compounding nature of cash flow stream, although healthy over the life of concession and leading to aggressive bidding, generally is creating a situation, in which, the cash-flows during the initial 5-6 years of operations are not sufficient to service the debt obligations.

This is not only leading to increased risk profile for the project especially in the initial years but also necessitating longer tenor loans of 18-20 years to be able to service the debt. During the meeting, strong reservation was expressed on this

emerging requirement, as it would not be possible to fund projects with such long tenor loans owing to Asset-Liability mismatches for the bank.

Considering this, the following way forward is suggested:

- The concession period may be aligned to the debt providing capacity of the banks, ideally with an average loan maturity period of say 10 years for a typical road project. Accordingly, the concession period for a project can be reduced from the current range of 25-30 years

- Specialized financial institutions, devise a scheme to provide debt facility, which are back ended though carry pari-passu charge for the purpose of security and cash-flows. The repayment of principal portion of said debt could commence only after say 15 years. In such a scenario, the developers can meet their requirement of 18-20 year debt facility, with banks getting repaid in first 15 years of the facility and the specialized financial institutions getting repaid during the balance period.

b) Ambiguity on Classification of Toll Road Project Advances by RBI as Secured

It may be mentioned that RBI on the reference made by a Bank in respect of BOT Toll based projects, had clarified that only those advances can be classified as "Secured" where an extension of concession period is allowed as compensation for fall in traffic (with enforceability and irrevocability of toll collection rights) and this extension of concession period is not limited/ restricted. Further, such a compensation clause should be a part of the Concession Agreement.

While Concession Agreement does provide for extension of concession period as compensation for fall in traffic which is enumerated below:

In the event that the Actual Average Traffic shall have fallen short of the Target Traffic by more than 2.5% , then for every 1% shortfall as compared to the Target Traffic, the Concession Period shall, subject to payment of Concession Fee in accordance with this Agreement, be increased by 1.5% thereof; provided that such increase in Concession Period shall not in any case exceed 20% (twenty per cent) of the Concession Period".

It can be observed from the above that the aforesaid clause is restrictive in nature as it limits the extension of concession period to a maximum of 20% of the Concession period.

Accordingly, in the light of RBI clarification and the restrictive provisions for extension of Concession Period under the Concession Agreement, Banks would

not be able to classify the toll road projects as "Secured". There is a need to resolve the issue in order to ensure that the road projects can be classified as "Secured" advances.

c) Assignment of Project Agreements

As per the Model Concession Agreement (CA), definition of "Project Assets" includes "Project Agreements", which in turn include EPC Contract, O&M Contract, and Tolling Contract etc.

As per the CA, assignment of Project Agreements is not permitted except through the substitution route. On account of NHAI's stand of not permitting assignment of Project Agreements, the lenders are exposed to credit risk, in case the concession agreement is terminated during the construction period, for default of the concessionaire, as CA states that no termination payment shall be due or payable on account of a concessionaire default occurring prior to Commercial Operation Date (COD).

In this scenario, if the concessionaire defaults during the Construction Period, the only option left with the Lenders is to substitute the Concessionaire. Since major project implementation contracts (EPC in particular) are often awarded to Group companies / related parties and considering that project agreements are not assigned to the Lenders, enforcement of completion of project implementation, invocation of guarantees / indemnities claiming liquidated damages becomes difficult and the lenders would not have any control on the timelines or expeditious decision making for safeguarding and protecting the loan investment in the project.

Further, post COD, the non- performance of Tolling and Operation and Maintenance Contract (O&M) also exposes the Lenders' to credit risk as termination payment does not cover the entire dues of the Lenders' in all cirucmstances.

In view of the foregoing, suitable amendments are required to facilitate assignment of critical project agreements, like, EPC contract, Tolling Contract, O&M contract etc.; in favor of lenders.

d) Charge on Receivables

As per the CA, NHAI is currently permitting charge on Escrow and not on receivables and wherein charge on Escrow is different from charge on Receivables. In any project financing structure, charge on receivables is one of

the key securities for the Lenders; Escrow Account is the operational mechanism for prioritization of flow of funds derived from receivables.

Since any dues to Government/ NHAI are protected by way of waterfall mechanism defined in the Concession Agreement governing the priority of usage of funds received, allowing charge on receivables would not jeopardize NHAI's interest and at the same time provide due comfort to the Lenders to the projects as receivables represent the claim amount in the correct legal perspective.e)

Currently, there is no standard method prescribed for calculation of equity IRR which is necessary for awarding Annuity projects. Instead, the bidding criteria should be maximum discount to the annuities amount which NHAI prescribes for the project

f) Research estimates Road sector to require Rs. 6.3 trillion funds during FY11 to FY 15, in order to achieve such difficult targets a streamlined approach and regulatory clarity towards Securitization by auto approval and simplified procedures would augur well for the sector.

3. **Financing Issues**

As regards to the refinancing scheme of IIFCL, following are some of the suggestions which if implemented could pave way for huge demand surge in refinancing of annuity based projects via take out financing route, this accompanied with widening of the corporate debt market will be the next growth driver in this sector. Additionally, Government could consider setting up Transport Finance Corporation in line with PFC/REC for Power sector to serve the dedicated growth needs of the sector.

- The rate of interest to be charged by IIFCL should be fixed at a particular rate as it will be swapping receivables with a Bank having good credit ratings (AAA). Pricing by IIFCL should be tied directly to the project cash flows without it being a function of the pricing as charged by the bank. The tenor should match the tenor of other loans and not be restricted to 10 years. Similarly, the cap of funding a project should be increased to 90 per cent of the total residual loan.
- IIFCL take-out fee should be payable only at the time of take-out and that too if the take- out actually happens

- In Scheme for Financing Viable Infrastructure Projects by IIFCL of direct lending, the cap on financing a project should also be increased to 50 per cent from current level of 20 per cent of TPC.
- IIFCL as a Special Infra Company may come with Credit Enhancement Product to develop the Corporate/Infra Bond Market

Bibliography

1. *Mid Term Appraisal for the 11th Five Year Plan*
2. *http://infrastructure.gov.in/*
3. *The 11th Five Year Plan*
4. *Projections of Investment in Infrastructure During the Eleventh Plan*
5. *The Economic Survey of India 2011*
6. *The Planning Commission website http://planningcommission.nic.in/*
7. *The RBI website http://www.rbi.org.in/home.aspx*
8. *FICII Banking and Finance Digest, Issue No 6, March 2011.*
9. *Websites of all company names mentioned in the report.*