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Infrastructure Financing

Emerging Options in India



THEME PAPER

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FOREWORD BY FICCI



Dr. A. Didar Singh
Secretary General
FICCI

I am happy to share with you the FICCI-Centrum Report on 'Infrastructure Financing' to be released at the 'Infrastructure Financing Conclave' jointly organized by FICCI and Centrum.

In the last few years, Government has taken several measures for promoting investment in infrastructure sector, however, there are still various challenges faced by the sector. Inadequate availability of funding is widely recognized as one of the major roadblocks in implementation of infrastructure projects.

Infrastructure which is one of the core sectors essential to revitalize growth is facing sluggishness in financing due to the unprecedented level of NPAs witnessed by Banks and reluctance of Equity Investors to fund greenfield projects and reconcile their investment philosophy with the prevalent policy and regulatory framework issues.

To discuss some of the substantive issues relating to infrastructure financing, the conclave is being held at an opportune time. It will provide a platform to elicit stakeholders' inputs on alternative solutions of infrastructure funding and highlight the prospects of innovative financing instruments based on emerging trends in the sector.

As 'Knowledge Partner' for the event, Centrum Infrastructure Advisory Limited (CIAL) has prepared a comprehensive background paper covering a large number of important areas relating to funding infrastructure projects. The report has been prepared through detailed analysis of several factors influencing the sector in India. I take this opportunity to thank the Centrum team for its efforts.

I hope you will find this report useful and as always, your suggestions and feedback are welcome.

FOREWORD BY CENTRUM



Jaspal Bindra
Executive Chairman
Centrum

The Global economy is going through a turbulent phase as the world is facing economic challenges on multiple fronts. While the US Federal Reserve has reluctantly begun its monetary tightening, Europe is struggling to manage the migrant influx and rising debt crisis. China including other BRICS counties such as Brazil and Russia are facing economic slowdown. India with improving economic conditions and series of reforms has become an attractive and reliable investment market. Creation of adequate and affordable infrastructure is likely to define the growth trajectory for its GDP as well as its relative growth in the region as well as world economy. The domestic Infrastructure funding and finance is in a state of flux. On both sides of the equation — supply and demand — there are positive and negative influences resulting from the economic slowdown as well as credit scarcity. While demand remains strong from the users of finance, the sources of supply have reduced due to multiple reasons.

Lack of depth in the financing market, current stress level in the banking sector, lack of innovation in financial instruments, slow development of alternate sources of finance as well as project quality have continued to remain the top Industry challenges over the last decade. Uncertainty in the credit markets is impacting the ability of infrastructure developers to raise finance for infrastructure projects and undermining confidence in private finance models.

Emphasis should be given on the public – private collaboration to bring in efficient system in place and promote a competitive environment which would help in setting up world class infrastructure in the country.

This is possible only through an investor friendly regulatory regime that encourages investment in developing infrastructure that is a stepping stone for every developing nation. This theme paper analyses the challenges in infrastructure financing and given the existing trends suggests the possible alternatives which could be explored.

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ACRONYMS

AIF	Alternate Investment Fund
AIIB	Asian Infrastructure Investment Bank
BT	Business Trust
CDC	Commonwealth Development Corporation
COD	Commercial Operations Date
CPPIB	Canada Pension Plan Investment Board
DDT	Dividend Distribution tax
DEA	Department of Economic Affairs
ECB	External Commercial Borrowings
EPC	Engineering, Procurement, Construction
EPFO	Employee Provident Fund Organisation
FDI	Foreign Direct Investment
FII	Foreign Institutional Investor
FPI	Foreign Portfolio Investor
FVCI	Foreign Venture Capital Investor
GAAR	General Anti Avoidance Rule
GBI	Generation Based Incentive
GDP	Gross Domestic Product
GNPA	Gross Non-Performing Asset
GST	Goods and Service Tax
HAM	Hybrid Annuity Model
HLC	High Level Committee
IDF	Infrastructure Debt Funds
IIFCL	India Infrastructure Finance Company Limited
IMF	International Monetary Fund
InvIT	Infrastructure Investment Trust
IPRC	Infrastructure PPP Project Review Committee
MAT	Minimum Alternate Tax
MCA	Model Concession Agreement
MRTS	Mass Rapid Transport System
NDA	National Democratic Alliance
NIIF	National Investment and Infrastructure Fund
NPA	Non-Performing Assets
NNPA	Net Non-Performing Advances
PE	Private Equity
PPP	Public Private Partnership
PSU	Public Sector Undertaking
PSP	Public Sector Pension
RBI	Reserve Bank of India
REIT	Real Estate Investment Trust
RMB	Renminbi
RoCE	Return on Capital Employed
RoE	Return on Equity
SCB	Scheduled Commercial Bank
VAT	Value Added Tax

Executive Summary

India has scaled up the investment in infrastructure sector since the Tenth Five Year Plan (2002-07) to support the needs of the growing economy. The investment in the sector has doubled from INR 9 Trillion in the Tenth Plan to INR 19 Trillion [1](2006-07 prices) in the Eleventh Plan. As a percentage of GDP, investments in the infrastructure sector increased from 5% to 7%. The proportion of private sector investments has also increased from 22% in the Tenth Plan to 37% in the Eleventh Plan. In the Twelfth Plan, based on revised estimates, investment in the infrastructure sector as per the High Level Committee (HLC) on Financing Infrastructure is expected to reach INR 30.9 Trillion [1] (2011-12 prices) which would be about 5.7% of the GDP. The proportion of private sector investments is expected to marginally increase from 37% to 39%.

As per Industry estimates networked economic infrastructure (consisting of transport, water, power and telecom systems) in India needs an investment of USD 6 Trillion in the period 2016-2030. The targeted investment by the Government as per the original estimates in the Twelfth Five Year Plan was about INR 56 Trillion. However, in the Twelfth Plan Period, Indian Infrastructure sector has faced several challenges such as cost and time over runs in projects, inappropriate risks sharing through PPP framework, uncertainty in the policy and regulatory frameworks, prolonged disputes between Government and Private players, as well as sectoral issues including poor financial health of public sector counter party entities such as the power discoms etc. These issues have adversely impacted the commercial viability of the projects. As a result, the sector is marred with sluggishness in financing with further aggravation due to the unprecedented stress levels in the banking sector on account of increasing Net Non-Performing Advances (NNPAs) which reached a level of 4.6%.

Indian Infrastructure sector faces critical financing issues in terms of high cost of capital, challenges in obtaining non-recourse funding and dearth of long term funding sources due to the asset liability mismatch. Further, significant investment in the Indian Infrastructure sector by domestic investors is also stuck due to well documented challenges and problems persistent in the sector. It is of paramount importance to enable unlocking of the invested capital through strategic investments, develop capital market avenues and enable reinvestment in new projects.

In the last two years, NDA Government has increased capital expenditure outlay in infrastructure (INR 2.2 Trillion in FY 2017), introduced innovative models like Hybrid Annuity in the road sector, promoted new avenues like Infrastructure Investment Trusts (InvIT) to raise funds, initiated policy reforms including relaxation of exit clause in concession allowing asset monetization, set up National Investment and Infrastructure Fund (NIIF) with a target corpus of INR 400 billion to enhance the infrastructure financing. The Ministry of Power has recently announced two funds each with a corpus of USD 1 billion within the ambit of NIIF to enable alternative financing options for stressed assets in the power sector and renewable energy projects. These are commendable initiatives certainly hinting course correction however the momentum with which these initiatives are driven and the execution of these ideas within stipulated timelines holds the key. Balancing out the risks sharing mechanism in the PPP format, provision for re-negotiation of contracts, impartial and quicker dispute redressal

[1] Deepak Parekh Report

mechanism, encouraging project finance based on prudent project appraisal and structuring expertise are some of the areas which still require massive improvement.

In terms of the potential to attract global investment, India is in a sweet spot when compared to other emerging economies. India is not only the seventh largest economy in terms of nominal GDP, but is also the fastest growing among the large economies with a GDP growth of 7.1%. In 2016, India is ranked 9th in the A.T. Kearney FDI Confidence Index 2016. However, the cost of the capital in India is significantly higher than other emerging economies. This is attributed to the higher level of perceived risk especially in sectors such as infrastructure. The Arcadis Global Infrastructure investment Index – 2016 measures the long term attractiveness of countries as destinations for infrastructure investment. India is ranked 23rd on the attractiveness index

Government and the corporate world should work together to iron out structural issues and develop frameworks that allow transparent and flexible risk sharing mechanism to attract investments in the infrastructure sector. Given huge NPA issues with which the banks are grappling with the infrastructure financing market is at an inflection point seeking solutions around application of innovative products such as Masala Bonds, InvIT and Infrastructure Debt Funds (IDF) and sources such as Pension Funds and unexplored routes such as Covered Bonds.

There is a need for implementing a comprehensive strategy for addressing the issue of infrastructure financing in India involving efficient and innovative financing mechanisms based on the emerging sectoral trends.



1. INFRASTRUCTURE - SECTOR DYNAMICS

1.1 Macroeconomic Environment

Globally USD 2.5 Trillion is invested every year in the transportation, power, water, and telecom systems. Yet this amount continues to prove inadequate vis-à-vis the ever expanding needs, which results in lower economic growth and deprives citizens of essential services across the world. Infrastructure investment has declined as a share of GDP in 11 of the G20 economies since the global financial crisis, cutbacks have occurred in the European Union, the United States, Russia, and Mexico. As per Industry estimates, the investment in India into networked economic infrastructure would need to double to USD 6 Trillion in the period 2016-2030 vis-a-vis last 15 years to meet the growing demands of the economy. While this estimate may sound grandiose, in our view it may seem a bit more realistic if seen in the context that currently India ranks a dismal 81st amongst 140 countries[2] on the Global Competitiveness Index for Infrastructure as per a recent survey conducted by World Economic Forum suggesting scope for phenomenal upgradation in the near future.

India is currently the seventh largest economy in the world measured by nominal GDP (USD 2.2 Trillion) and the third largest by PPP (USD 7.9 Trillion)[2]. India has maintained its position as the fastest growing among the large economies in the world even though the GDP growth rate has slightly decreased to 7.1% in the quarter ending June 2016. Recent developments such as dip in the inflation, improved foreign relations and increasing investor comfort level are helping revive India's overall economic growth. FDI investment in FY 2016 reached USD 55 Trillion thereby achieving a significant growth of 23% over the previous financial year. [3]

The current NDA Government has demonstrated the intent to take up politically tough reforms to encourage investments and promote economic growth however, the implementation of these reforms needs to be expedited.

1.2 Overview of Infrastructure Investments

Developing infrastructure of a country is imperative for its economic growth. The World Economic Forum has estimated a gap of more than USD 1 Trillion per annum against global demand of about USD 3.7 Trillion for investment in infrastructure[4]. According to Industry estimates, the global spending on networked economic infrastructure (consisting of transport, water, power and telecom systems) is about 3.5%[5] of the global GDP in the period 1992-2013. In this period, Infrastructure investment as a percentage of GDP was the highest in China at 8.6% while was at 4.9% in India. The Arcadis Global Infrastructure investment Index – 2016 measures the long term attractiveness of countries as destinations for infrastructure investment. India is ranked 23rd on the attractiveness index which is based on scores given under five categories. India is rated very high in the Economic environment category, which is understandable in the context of fast growing economy. However, we are rated relatively low when compared to other emerging economies on the other four categories which are business environment, risk, infrastructure quality and overall infrastructure capacity and financial environment.

After a promising growth in investment in the infrastructure sector which doubled from the tenth plan to the eleventh plan, infrastructure sector has hit a road block in the Twelfth plan which will invariably impact the GDP growth prospects potentially to the tune of 2-3%

Historical investment in India in the networked economic infrastructure during the period 2000-2015 was estimated at USD 3 Trillion. Factoring in the current level of inefficiencies, historical growth trends and assuming significant improvements in areas such as professionalizing business environment, efficient risk management and creating conducive financial environment we think India is comfortably placed to see approximately USD 4.5 Trillion investment over the next 15 years against the target requirement of USD 6 Trillion.

[2] IMF World Economic Outlook (April-2016)
[3] Department of Industrial Policy & Promotion – FDI Factsheet
[4] Arcadis – Third Global Infrastructure Investment Index 2016n – Bridging the Gap
[5] McKinsey & Co – Bridging Global Infrastructure Gaps

India has scaled up the investment in infrastructure sector since the Tenth Plan Period. The investment in the sector was about INR 9 Trillion and INR 19 Trillion[6] (2006-07 prices) respectively in the Tenth and Eleventh Five Year Plan periods. Significant investment was made in segments such as roads, power, ports and airports by both Government as well as the private sector. This resulted in substantial expansion of infrastructure facilities in India. However, the historical deficiencies in the physical infrastructure coupled with growing needs of the expanding Indian economy calls for further acceleration of the infrastructure creation. As per revised estimates the investment during Twelfth plan, as estimated by the HLC on Financing Infrastructure chaired by Mr. Deepak Parekh is expected to reach INR 30.9 Trillion (2011-12 prices) which would be about 5.7% of the GDP while the proportion of private sector investments is expected to marginally increase from 37% to 39%.

The original targeted investment as per the Twelfth Plan was about INR 56 Trillion. However, in the Twelfth Plan Period, Indian infrastructure sector has faced several challenges such as cost and time over runs in projects, inappropriate risks sharing through PPP framework, uncertainty in the policy and regulatory frameworks, prolonged disputes between Government and private players, as well as sectoral issues including poor financial health of public sector counter party entities such as the power discoms etc. These issues have adversely impacted the commercial viability of the projects. As a result, the sector is marred with sluggishness in financing with further aggravation due to the unprecedented stress levels in the banking sector on account of increasing NNPAs which reached a level of 4.6% (March 2016), subdued PPP investments and fading interest from international investors.

Reviving investment cycle in the infrastructure sector would require a collaborative effort between the Government and private sector. While the challenges in the sector and high level solutions are well documented, we believe that there is a need to identify and implement specific corrective actions that are required to clear the bottlenecks in each segment of infrastructure. These actions may be in terms of the policy and regulatory initiatives specific to the segment or even project level interventions.

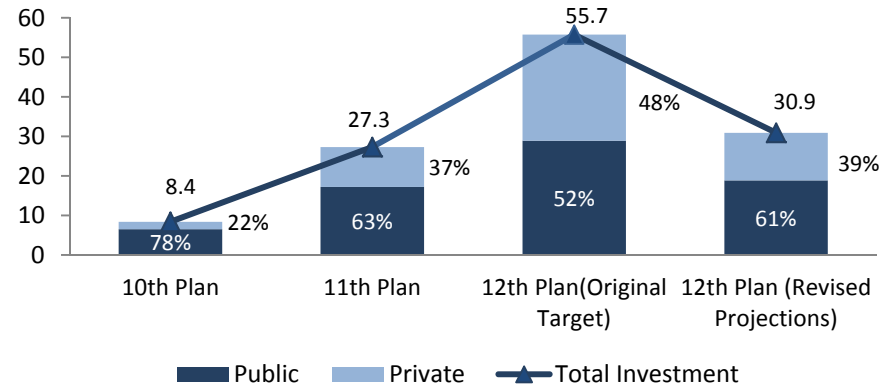
Based on the string of much needed, well thought through reforms and partial revival of capital expenditure cycle after 2014, we believe the revised estimates as per Mr. Deepak Parekh Committee would be comfortably over achieved.

1.3 Trends in Capital Expenditure

As the country underwent rapid urbanization coupled with capacity creation across various sectors, it was imperative that the Government addressed the various bottlenecks in the infrastructure sector. This led to a spurt in infrastructure spending between the tenth and Eleventh five year plan. The Twelfth five plan year was slated to continue on the same growth trajectory, however due to various macro factors the targets were tapered down as shown in Exhibit 1.1

[6] Deepak Parekh Report

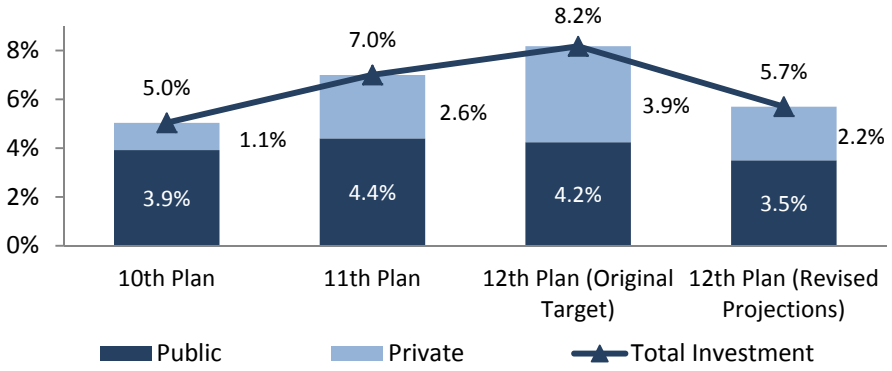
Exhibit 1.1 – Investment in Infrastructure in INR Trillions



Source: Second Report of the High Level Committee on Financing Infrastructure (Deepak Parekh Report) and Twelfth Five Year Plan (2012–2017) Volume 1

While India has consistently experienced Y-o-Y GDP growth in the range of 6%-8% over the last few years, the infrastructure spending for the revised Twelfth five year plan is not commensurate as a percentage of GDP. There has been a substantial reduction in the infrastructure spending from 7% to 5.7%.The same is evident in Exhibit 1.2.

Exhibit 1.2 – Investment in Infrastructure as a % of GDP



Source: Second Report of the High Level Committee on Financing Infrastructure (Deepak Parekh Report) and Twelfth Five Year Plan (2012–2017) Volume 1

To support the sustained growth of the economy and meet the Government's targets, investment in infrastructure should significantly increase as a percentage of GDP. For example, to meet the 175 GW target of Renewable Energy capacity, investments in the segment would need to increase from INR 1 Trillion in the twelfth plan to more than INR 8 Trillion in the next five years, with a lion's share coming from the private sector.

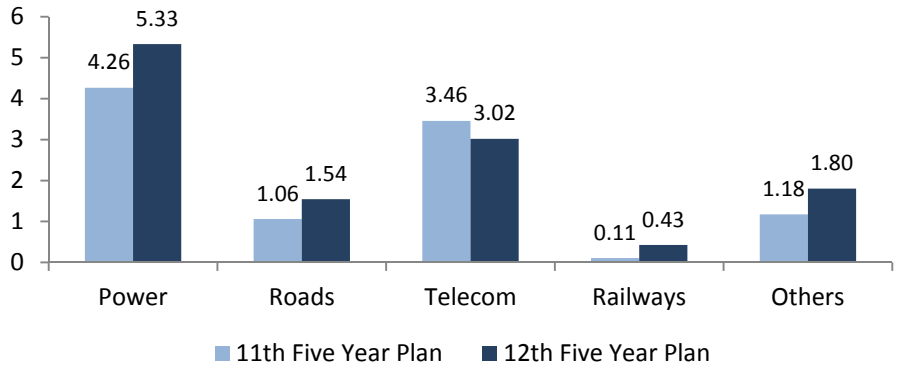
1.4 Trends in Private Sector Investments

The private sector investment is the highest in the power sector with a contribution of about 35% of the total investment of about INR 12 Trillion in the Twelfth Plan. Investment in renewable energy is estimated to be only about 10% of the investments in power sector. However in our view, this is bound to change and the renewable energy shall lead the pack by growing exponentially. Government's revised plan to achieve a cumulative renewable energy capacity of 175 GW by FY

2022 makes it even more evident. We estimate the additional investment in the next five years to be more than INR 8 Trillion. Encouraging participation by the private sector and conducive environment laid down by the Government will ensure that renewable energy will dominate the private sector spending in the next 5 years within the power sector. It is expected that the contribution from the private sector would be nearly INR 7 Trillion in the next five years.

As shown in the exhibits below the private sector participation is the highest in sectors like power, roads and telecom in both Eleventh and Twelfth Five Year Plan periods. It is evident that there is an increase in private sector participation in these sectors as they are user charge driven and hence perceived to be less risky. The other sectors shown in the exhibits below include MRTS, water supply and sanitation, ports, airports, oil & gas pipelines and storage. Given the current subdued investment sentiment, it is pragmatic for the Government to encourage execution of projects on its balance sheet or support annuity based schemes as the lending community may still not be completely certain about supporting the largely stressed private sector Infrastructure players for greenfield projects.

Exhibit 1.3 – Growth in Private Sector Investment in Infrastructure in INR Trillion

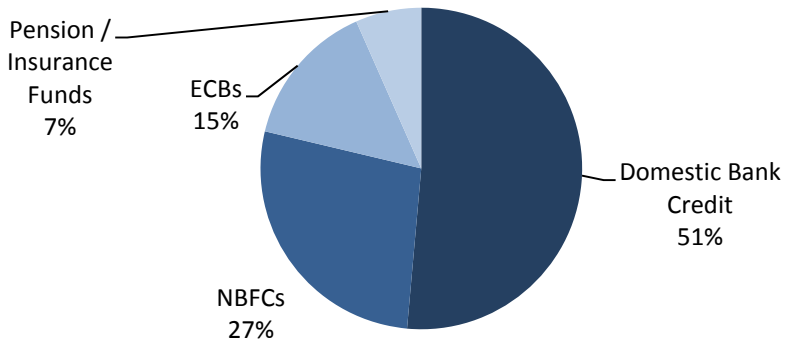


Source: Second Report of the High Level Committee on Financing Infrastructure (Deepak Parekh Report)

1.5 Financing Infrastructure Sector

The likely total debt resources are INR 22.66 Trillion in the Twelfth Plan and the estimated breakup of the sources of debt funding is shown in the Exhibit below.

Exhibit 1.4 – Identified Sources of Debt Financing in the 12th Plan



Source: Twelfth Five Year Plan (2012–2017) Volume 1

The projected sources of debt financing indicates that there is heavy reliance on domestic bank credit contribution (51%), followed by NBFCs contribution (27%) and least amount of reliance on pension/insurance funds with its contribution at merely (7%).

In the recent years the banking sector experienced unprecedented stress levels due to high level of NPAs leading to reduced credit availability from the domestic banks. The Gross NPA with the SCBs currently stands at an alarming 7.6% and is expected to worsen to about 8.5-9.3% by March 2017 leading to further stress on the Capital Reserve Adequacy Ratios of the banks. This highlights the need to diversify the sources of funding for infrastructure financing.

Given the prevailing challenges in funding the infrastructure gap, Asian Investment and Infrastructure Bank (AIIB) can enable in partially bridging the gap. As per recent government statements India looks to raise capital towards project funding of USD 2-3 Billion to fund projects across urban development (including smart cities), energy, urban transport, railways, inland waterways and water supply.

As mentioned earlier, while the original target of investment in the Twelfth plan was about INR 56 Trillion, the revised estimate of the investment in the infrastructure sector in the Twelfth Plan would be much lower at about INR 30.9 Trillion as per the revised projections made by Deepak Parekh committee. Several issues that adversely impacted the commercial viability and the financing challenges are the main reasons for the shortfall.

While revision of total investment in the infrastructure from INR 55 Trillion to 30.9 Trillion was partially on the account of global meltdown and persistent sectoral issues, lack of adequate financing is the single biggest challenge going forward and hence alternate sources of funding should be cultivated to reduce the over dependence on domestic banks to fund infrastructure projects



2. KEY CHALLENGES IN INFRASTRUCTURE FINANCING

The gap between projects approved for award, the projects actually awarded and those actually completed - is testimony of the challenges with which the infrastructure sector is currently grappling in India. Challenges in land acquisition, speedy approvals and clearances for projects prove to be a significant impediment on infrastructure development.

While some of the issues highlighted below are specific and will need to be addressed on an individual basis or as part of broader economic, social or other reforms, the focus should be on undertaking extensive capacity building initiatives at the administrative level. The framework needs to give the comfort and confidence to the private sector that the PPP model is a genuine partnership and risks (as well as upsides) will be shared equitably.

2.1 Issues Related to Policy & Regulation

In the recent past, the uncertainties and fluidity with regards to the Policy and Regulatory framework related to DDT, applicability of MAT to foreign companies, availability of section 80 IA, introduction of GAAR, GST, InvIT, evolving new PPP models, land acquisition, accelerated depreciation and Generation Based Incentive (GBI) in the case of Renewable Energy has increased

the perceived risk in various segments in the Indian Infrastructure sector. Some of these issues are in the process of being resolved by the Government. For example, after a protracted period of uncertainty related to GST, the Government has made significant progress in terms of enactment of GST bill. However the industry still awaits clarity on the rollout plan along with the timelines associated with it.

2.2 Subdued Investments in PPP Projects

After having seen a peak in the wave of PPP investments in infrastructure sector, the capex cycle has now reached a trough. Private sector investment is yet to revive in the back drop of subdued interest from potential stakeholders. Legacy issues and weak balance sheets have led to limited participation from existing infrastructure players in India. This led to higher dependence on Government spending through EPC and other annuity based models.

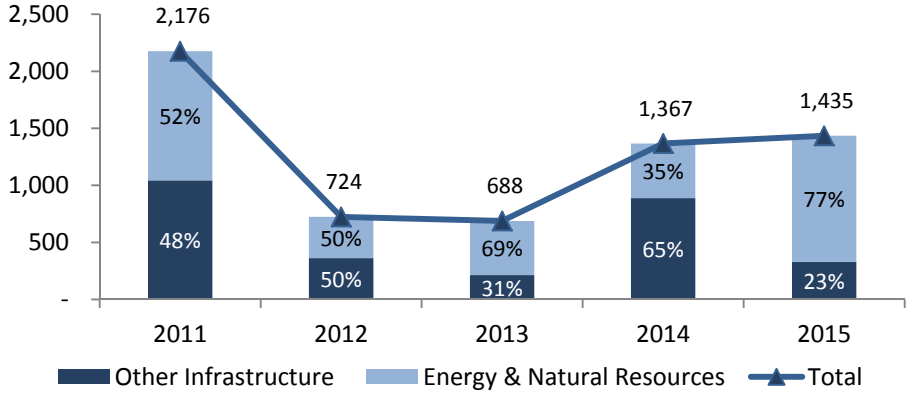
India's PPP investments continued to shrink for the sixth consecutive year in 2015 reaching a 10 year low according to World Bank estimates

2.3 Limited Appetite of Equity Investors

Experience in the last decade has not been very encouraging for equity investors in the infrastructure sector. There were limited cases of successful exits due to sluggish capital markets for infrastructure players. Nature of the PE investment has changed with a clear inclination towards specific operational assets rather than portfolio level investments. Exhibit 2.1 shows that PE investments have decreased in the infrastructure sector in the last five years with some recovery in the last two years as per the estimates by Grant Thornton[7]. In FY 2016, 22 firms raised INR 145 Billion from the primary markets. Out of the lot only 33% companies belonged to the infrastructure sector. Companies like Sadhbhav Infrastructure, Power Mech, PNC Infratech and Dilip Buildcon have listed recently. PEs which have invested in infrastructure companies are increasingly finding it difficult to exit from the investment. The stocks of recently listed Companies like Dilip Buildcon and Power Mech are trading below their listing price as on 23rd September 2016.

[7] Grant Thornon: The Fourth Wheel 2016

Exhibit 2.1 – PE Investment in USD mn in Infrastructure (excluding telecom)

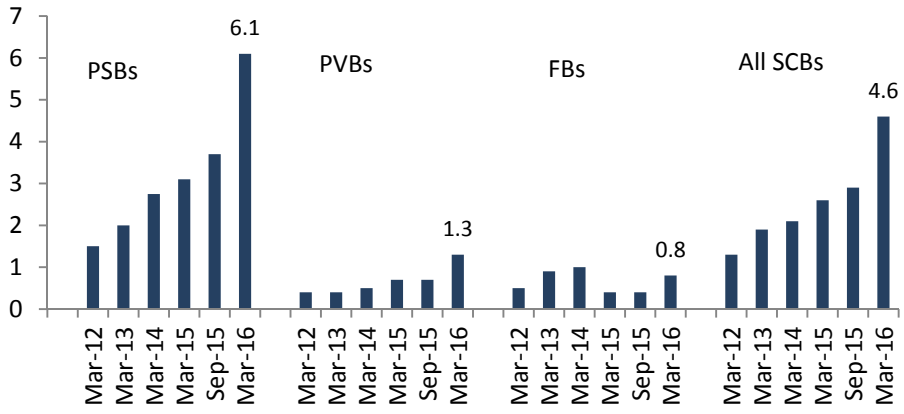


Source: GT – The Fourth Wheel 2016 – Private Equity in the Corporate Landscape

2.4 Negative Sentiment in the Lending Community

Gross Non-Performing Assets (GNPAs) of banks stood at nearly INR 6 Trillion as on March 2016. According to RBI, the macro stress tests suggest that under extreme scenario, the GNPA ratio may rise upto 9.3 per cent by March 2017 from 7.6 per cent in March 2016. The NNPA of banks stood at 4.6% in March 2016 as shown in the exhibit below. However, the NNPA ratio of PSBs is even higher at about 6.1%. After a phase of rapid recognition of NPAs we foresee, the pace of NPA addition to slow down in the near term resulting in a stable outlook for the Indian banking sector over the next 18-24 months.

Exhibit 2.2 – Net NPAs (Ratio) in Indian Banks



Source: Financial Stability Report – June 2016 - RBI

It appears that turnaround is likely to take considerable time. Further, the budgetary allocation for recapitalization of the PSU banks has been lower than desired considering the massive level of NPAs and high stress on their balance sheets. The heightened risk perception of the lenders has also led to new challenges such as providing requisite securities in case of newly incorporated entities backed by various Private Equity and Infrastructure funds. We believe availability of debt financing may be one of the biggest cause of concern and hence the infrastructure financing market has reached an inflection point seeking innovative alternative means of debt financing to be exploited.

2.5 Regressive Impact of Aggressive Bidding

Commercially unviable bids based on speculative assumptions have adversely affected the Return on Equity on a project specific basis across the sector. In recent times, solar sector has witnessed spectacular reduction in the bid tariffs. The aggressive bidding in the solar sector is partly driven by favorable investment climate and buoyant investor sentiment. Government's objective of price discovery through a reverse bidding process seems to be successful in terms of the effectiveness of lowering bid tariffs. However, a careful analysis of the project viability indicates that a segment of bidders have priced their bids aggressively based on speculative calls taken on reduction of the engineering, procurement and construction cost during the time from the bid submission to the execution of projects.

To meet a threshold EIRR benchmark upwards of 14%, the projects awarded at tariffs below INR 4.75 per unit would have to be executed at a cost which is significantly lower than CERC's normative benchmark capital cost. Further, several bidders have also considered aggressive assumptions on the technical performance parameters such as long term degradation rate of low cost solar panels without adequate track record. If the solar panels degrade at a rate higher than the aggressive assumptions, the viability of the project would be seriously affected. Several such projects were assessed as commercially unviable by lenders and were stalled since financial closure could not be achieved. In the past discoms had to procure expensive short term power due to inordinate delays in power projects. More importantly, the resultant cost of unserved energy to the economy would be significant.

The procuring entities should not be overzealous in encouraging aggressive bidding based on unviable assumptions as it may ultimately lead to denting the investor sentiment which happened in the case of some negative grant road projects in the highways sector and some of the UMPPs.

While the Government's focus on aspirational targets to scale up creation of infrastructure is much appreciated, it is imperative to pursue a sustainable capacity addition program based on a balanced agenda.

Rather than a short term focus on achieving spectacular reduction in bid tariff, it is critical to implement a viability check matrix to filter the unwarranted aggressive bids which may potentially shake up the sector fundamentals at a later date. Such systematic moderation may go a long way in generating sustainable interest from companies across the value chain over a longer period of time.

2.6 Key Sectoral Issues – Transportation

Efficient transportation infrastructure is a key to the wider coverage of economic development in a country. However, India has in the recent past been riddled by challenges limiting the pace of development and thereby leading to multiple instances of time and cost overrun. Some of the key sectorial issues faced by various stakeholders are listed in Exhibit 2.3

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Exhibit 2.3 – Major challenges impacting development

Issue specific to	Challenges
Developer and Project	Stranded or under-performing assets impacting portfolio returns especially in case of highway projects
	Growing debt levels from cost overrun on account of delay in project commissioning
	Operational challenges for ports & highways due to limited specialization
	Legacy issues with regards to aggressive bidding limiting scope for new investments
	Adaptation and preparedness for new PPP models such as Hybrid Annuity in case of highway projects
	Group issues impacting project execution as many EPC companies shifted to BOT (development mode)
	Delay in development of project connectivity for seamless traffic movement in case of port projects
	Poor project phasing in case of mega projects such as ports impact project viability
	Investment monetization or capital raising issues on account of factors such as valuation mismatch, limited visibility on return upsides, dilution restrictions, etc.
	Stranded or under-performing assets impacting portfolio returns especially in case of highway projects
Authority	Delay in award of encumbrance free right of way which was a major cause for delays in highway projects
	Greenfield risks as delays caused due to coordination with multiple Government bodies / agencies
	Limiting equity availability by launching multiple projects in a short period as evident in road sector
	Lack of dynamic policies resolving stalled projects like aggressive bid quotes and project scoping
	Absence of an effective quality control mechanism at construction stage limiting project degradation
	Addressing long outstanding arbitration issues with NHAI

Issue specific to	Challenges
	Pending incorporation of key governing bodies such as state specific maritime boards
	Many mega projects in railways and highways being undertaken under the EPC model thereby stretching the budgets for the respective project proponents
	Delay in award of encumbrance free right of way which was a major cause for delays in highway projects
	Inconsistent policy initiatives on key issues pertaining to tolling highways
	Time consuming process to invoke Substitution clause effecting change in ownership for stressed assets
Financing	Limited confidence in funding latest PPP models such as Hybrid Annuity in highways due to outstanding issues with past highway projects
	Lack of clarity on repayment visibility in case of project termination as evident in most highway projects
	Inadequate bandwidth to undertake project appraisals and structuring leading to over dependence on collaterals and discouraging non-recourse financing
	Shorter debt tenures vis-à-vis project concession period as faced in most port projects

2.7 Key Sectoral Issues – Energy

Renewable Energy

The key focus area of the Government has turned to renewable energy with the setting up of an ambitious target of achieving 175 GW by 2022. The ecosystem is well developed in the wind power sector and is ready for scaling up of the capacity. Solar rooftop sector requires encouragement from state level entities in terms of implementing net metering and reasonable tariff for sale of surplus power. Utility scale solar power is in a phase of rapid expansion. However, the issue of grid integration of the intermittent renewable energy is not fully addressed.

Procuring utilities need to develop institutional capability to better forecast and match the demand and supply. Additional peak generation capacity should be created in addition to encouraging electricity storage facilities to be able to optimally absorb renewable energy.

As mentioned earlier, there is a need to curb aggressive bids to ensure viability and ensure reasonable returns to the investors. Constraints in power evacuation and lack of off take have now emerged as key risks for wind and hydro projects respectively. In the wind power sector, the important hurdle to capacity expansion is the concentration of wind power in only eight states and lack of absorption of wind power by other states. Ministry of New and Renewable Energy (MNRE) has now taken an initiative to address this issue by announcing bidding framework in which a central Government owned PSU would procure wind power and would in turn supply to wind deficit states. Poor financial health of distribution companies adversely impacted the payment security in the power sector especially the wind power sector. Delay in payment has reached as high as 12 months in the case of a few utilities.

Thermal Power

Thermal power would continue to play an important role in the generation mix of the country in terms of the ability to meet base load until electricity storage becomes affordable and scalable. In the recent years, thermal power segment faced significant challenges on account of delay in land acquisitions and clearances, inadequate fuel, lack of buyers, inadequate tariff and financial challenges. Nearly 33% of coal based and 40% of gas based power plants commissioned since 2009 became unviable due to the above reasons. Several developers are also stranded with half-finished assets with shortage of equity due to cost and time over runs. However, in the last one year fuel situation has improved significantly in the case of coal and partially in the case of gas. While significant thermal power is already added in the Twelfth plan, the pipeline of projects would be inadequate to meet the future requirement of base load power. Hence, Government would need to carefully evaluate and utilize thermal power which is a very reliable source of base load power. At the same time, newer technologies such as 'carbon capture and storage' and; coalbed methane' should be encouraged to minimize the pollution from thermal power.

Distribution Reforms

Distribution segment is widely acknowledged to be the weakest link in the value chain of the Indian power sector. The Discoms are under financial stress with the accumulated losses reaching an astronomical proportion of about INR 3.8 Trillion[8]. As a result, Discoms are unable to supply adequate power at an affordable rate hampering the economic growth and standard of living. The financial stress of the Discoms has a cascading effect on the entire value chain of the power sector.

The Ujwal Discom Assurance Yojana (UDAY) is an initiative of Government of India which has short term and long term objectives. The short term objective is achievement of financial turnaround by enabling de-leveraging and refinancing so as to improve the liquidity and commercial viability. This is achieved by state Government taking over 75% of the debt and the central Government supporting in terms of additional funding under various programs as well as additional coal at notified prices and additional low cost power from Central PSUs. In the long term, the Government intends to achieve commercial viability of the Discoms on a sustainable basis through improvement in the operational performance and by setting up a system of regular tariff revisions.

[8] Press Release of the Cabinet of Government of India (5th Nov 2015)

The design of UDAY is better than the previous restructuring programs such as the One Time Settlement (OTS), 2001 and Financial Restructuring Program (FRP), 2012 in terms of the intent to set, enforce and monitor the implementation of stipulated conditions for improvement of performance of the Discoms. The environment is conducive for achieving the short term objectives of UDAY because of recent developments such as reduction in fuel prices and bulk power prices. However, past track record shows that most state Governments have been prioritizing political interests over than the sustainability of the power sector.

Hence to ensure the success of UDAY and the sustainability of the sector the following additional initiatives are required:

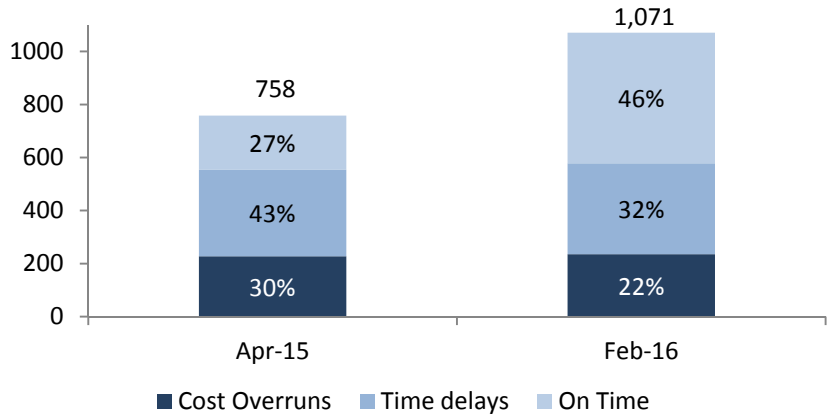
1. Ensure the independence of the State Electricity Regulatory Commissions (SERC). This can be addressed by initiatives such as improving transparency in the appointment of the chairman and members through joint search committee with nominees of key stakeholders.
2. Improve the corporate governance structure of the discoms by including independent directors and nominees of the central Government in the boards of directors of the discoms. This is required to ensure that undue influence of the state Government is avoided.
3. Implement the structural changes by separating carriage and content as envisaged in the amendment to Electricity Act, in a phased manner. This can usher in competition and improve efficiency in the retail business which is responsible for most of the commercial losses.

2.8 Recent Developments

Improvement in Project Execution

Initiatives taken by the Government in the last two years resulted in some improvement in execution of projects in infrastructure. However, there is still a long way to go in terms of timely execution of projects. Exhibit 2.4 below shows that there is a marginal improvement in terms of proportion of "on time" projects increasing from 27% to 46% in the period from April 2015 to February 2016 as per data from the Ministry of Statistics.

Exhibit 2.4 – Project Overruns (No of Projects)



Source: Ministry of Statistics

Progress in Implementation of GST

Goods and Services Tax (GST) is an endeavor by the Government to create an efficient indirect tax structure by improving the transparency and reducing the complex compliance obligation. The same shall be achieved by reducing multiplicity of taxes and lowering effective tax rates by avoiding tax cascading. Some of the existing indirect tax legislations such Electricity Duty and Stamp Duty may not be subsumed under the GST regime. In the short run, the costs are expected to rise due to the uniform tax rate estimated to be about 18%-20% to be applied across sectors. Since GST includes most of the state-level taxes, it would reduce the need for reconciliation at state borders thereby reducing the turnaround time, inventory management and other bureaucracy costs.

It is expected that logistics costs would fall considerably and hence help in reduction of overall costs in the long run.

Under the current policy, infrastructure projects enjoy concessions and benefits under various indirect tax laws, thus bringing down the cost for infrastructure projects. However, there is no clarity on concessions/ exemptions for infrastructure projects under the GST regime.

Taking a specific example of renewable energy, MNRE has estimated that the implementation of GST would lead to increase in the tariff of renewable energy projects as shown in the Exhibit 2.5.

Exhibit 2.5 – Impact of GST on Renewable Energy Projects

Source of Renewable energy	Increase in Levelized Tariff
Solar PV – GRID	12% - 16%
Solar – Off GRID	16% - 20%
Wind energy projects	11% - 15%
Wind solar hybrid projects	11% - 17%
Bio Mass projects	11% - 14%
Bio Mass gasifier projects	11% - 14%
Small Hydro projects	1% - 11%

Source: MNRE

At an estimated GST rate of 18%, tariff of solar (PV-Grid) power projects would increase by 12-16%. In the current regime customs duty is not applicable on import of solar modules which account for about 55-60% of total capital cost. VAT and other levies like entry tax and excise duty which are currently applicable at a concessional rate of ~5% for solar projects would increase to 18%. However, given the strong Government thrust to promote renewable energy, we believe that GST Council would exclude or provide a concessional rate for renewable energy from the regime. Developers are waiting for clarity in the upcoming bids on the pass through of possible increase in tax and hence the bidding activity in the solar power sector has significantly reduced.

Government needs to act fast and provide clarity on several other aspects of GST regime such as treatment of ongoing projects where invoices are not raised. On the other hand, infrastructure

developers should prepare the transition phase by capacity building, restructuring of ongoing contracts if required and upgrading the IT systems.

2.9 Addressing Key Issues – Our Recommendations

To address the challenges faced by the sector, important recommendations were made by the HLC on Financing Infrastructure chaired by Mr. Deepak Parekh and the Committee on Revisiting and Revitalizing PPP model of infrastructure chaired by Dr. Vijay Kelkar. The Government is in the process of implementing these recommendations.

The Deepak Parekh committee has made recommendations to enhance the infrastructure financing by tapping additional avenues from domestic and international sources and by enriching the financing in terms of better risk recognition, longer tenure and lower cost of debt.

The Kelkar Committee has recommended strengthening of the three key pillars of the PPP framework viz. Governance, Institutions and Capacity. The committee made key recommendations to fast forward the PPP model into the next level of maturity by focusing on service delivery, capacity building and fair allocation of risks and returns.

After analyzing some of the key policy, commercial and financing issues post consultation with various potential stakeholders in the Infrastructure sector our recommendations are as follows:

Policy

- Promote the cause of independent regulators in sectors such as Transportation. Tagging operational and regulatory functions may yield to amplified disputes between Government and Private players as the volume of PPP projects picks up.
- Dispute resolution mechanism should be expedited to ensure speedier resolution of claims preferably through an efficient Arbitration process
- Propagate uniform and consistent policy on key issues like tolling both at the Centre and state levels
- Improve the financial health of power discoms by ensuring that UDAY programme meets the intended objectives by implementing the following key reforms:
  - Enhance the independence of the state electricity regulatory commissions, Improve corporate governance in discoms. Separate carriage and content to enable competition and improve efficiency in the retail supply business.

Commercial

- Customize relevant roll out model for executing projects (eg. HAM emerging as a successful model in roads sector is a well thought through model based on current industry trends)
- Build capacity for grid integration of 175 GW of renewable energy expected to be added by the following initiatives:
  - Encourage storage and peaking capacity to improve the capacity to absorb renewable energy
  - Build institutional capacity to better forecast and match demand and supply
- Make provisions for renegotiations of long term Contracts based on genuine, pre-agreed shift in macro parameters over the life of the concession
- Make provisions for Authorities to structure projects based on flexibility in iterating the return on investment profile rather than broad based laid down Gap funding criteria
- Provide absolute clarity across segments within Infrastructure sector on asset monetization post commissioning without any strings attached

Financing

- Encourage deep discount bonds and partial credit enhancement by way of guarantees from financial institutions enabling refinancing by lenders with an appetite for long term funding for operational projects.
- Encourage investors with appetite for long term funding such as insurance and pension funds. Add long term sources as dedicated line of credit for enabling long term lending by domestic lenders through rollover of debt and using innovative risk adjusted put/call structures
- Provide flexibility for accessing ECBs at any point of time in the project life. Rationalize risk based interest rate regime at various stages of the project
- Remove constraints in project finance by removing group limits for projects financed on non-recourse basis
- Restructuring or refinancing of infrastructure projects to be made free from provisioning requirement. Restructuring of NPAs including S4A guidelines should leverage long concession periods of infrastructure projects.
- Encourage non-recourse financing based on prudent application of Project Appraisal and structuring skills by the project proponents and key stake holders

Government and the corporate world should work together to iron out structural issues and develop frameworks that allows transparent and flexible risk sharing mechanism to attract sustainable investments in the infrastructure sector.



3. EMERGING OPTIONS FOR INFRASTRUCTURE FINANCING

Infrastructure drives and supports the growth by increasing private and public sector productivity, reducing business costs, diversifying means of production and creating jobs. Failure to make significant progress towards bridging the infrastructure gap could prove costly in terms of slower economic growth and loss of international competitiveness.

The infrastructure financing gap due to reduction of capital available from traditional sources underscores the need for encouraging emerging and alternate sources of funding such as Masala bonds, InvITs, pension funds and IDFs

3.1 Bond Market – The Inevitable Option

The Indian financial system lacks large, active and liquid debt market. The corporate debt market in India is at a nascent stage both in terms of framework and market outcomes. Primary market is dominated by financial sector and relatively small amount of funds are raised by manufacturing and other core industries. Indian companies largely rely on bank finance to meet their funding requirement. In contrast, the Government securities market has grown fast during last decade due to many structural reforms introduced by the Government and RBI to improve transparency in the market dealings and by creating

technology platforms. However, secondary market activity in corporate bonds has not picked up as much as the market for Government securities.

The primary market in corporate debt is basically a private placement market with most of the corporate bond issues being privately placed among the wholesale investors i.e. the banks, mutual funds, provident funds and other large investors such as LIC. The total issuance of corporate bonds has been growing at a healthy CAGR of 20% over the past decade reaching about INR 4.8 Trillion in FY 2016. However, the proportion of public issues in the total quantum of debt capital issued has substantially decreased in the last few years.

Encouraging state municipalities in taking up credit rating and calling for flexible pricing is a positive step in deepening the nascent market.

Bonds - Structural Issues

HR Khan Committee and earlier committees have made several recommendations on development of corporate bond market in India. These recommendations are in the process of implementation. Recently, SEBI took the decision to allow Foreign Portfolio Investors (FPI) to trade directly in corporate bonds without broker. In our view, the following key measures would help in deepening the corporate bond market and would help infrastructure sector to raise additional funds through this route. Banks should be allowed to pledge corporate bonds as collateral with the central bank beginning with the overnight LAF (Liquidity Adjustment Facility) following the globally successful practice to encourage the corporate bond market. Highly leveraged corporates should be required to tap the bond market for a minimum portion of their working capital and term loan needs. The upper limit for partial credit enhancement facility provided by banks should be improved. The transaction costs should be reduced by rationalizing stamp duty across the states and exempting re-issuances. Indian corporate bond market is about 17% of the GDP which is significantly lower than that of other countries such as Brazil (42%), China (46%), Japan (68%), UK (114%) and US (115%).

Across the world, the implementation of better bankruptcy law with predictable recovery process has helped in doubling the corporate bond market size as a percentage of the GDP in a span of five years. The implementation of reform in bankruptcy laws can significantly deepen the Indian corporate bond market

Bonds – Best Suited for Infrastructure Sector

Globally Bonds have been proved as a practical and most effective fund raising option for the infrastructure sector. Bonds are key to the revival of the Indian infrastructure sector due to various advantages. They are long term in nature and can be structured as per borrower's requirements. Back ending of the cash outflow along with staggered interest payments help long gestation projects. Large companies have already exhausted their limits on a group level and do not have any buffer to borrow additional capital from the banks to fund future projects. Bonds also help in solving the asset liability mismatch issue which the Indian banks are currently facing. Due to long gestation of the projects and

longer debt repayment schedules bonds are a perfect fit, which is proven globally. Projects with cash flow visibility and revenue certainty are ideal candidates for such type of funding. The acute challenge in financing large infrastructure projects can be addressed only if the bond market is developed further and projected as a mainstay in infrastructure financing.

CRISIL estimates that in the five years ending FY 2020, the infrastructure sector requires about INR 10 Trillion of funding from the bond market.

Bond markets could play a pivotal role in financing the infrastructure projects which carry higher risks and require longer-term financing which banks struggle to offer given their asset-liability mismatch. Further it offers competitive spreads which may yield to substantial reduction of the financing cost resulting in improved viability of projects

The Long View

In our opinion bonds are one of the most effective instruments for raising funds in the infrastructure sector. While domestic corporate bond market should be enhanced and deepened, there is also a need to tap newer sources of funding such as emerging variants of bonds to help bridge the financing gap. Various options are available in raising bonds such as Green Bonds wherein the proceeds of the fund raised should be utilized in a renewable energy projects, Covered Bonds which are dual recourse instruments where investors have right to proceeds of cover pool assets as well as the unsecured claim against the issuer and Masala bonds which are Indian rupee denominated bonds raised offshore.

3.2 Masala Bonds – Low Risk High Potential

Indian rupee denominated bonds issued in offshore capital markets help to expand the avenues for debt funding of infrastructure projects. The Reserve Bank of India's (RBI) efforts to kick start the issuance of Indian rupee denominated off-shore bonds by Indian corporates are consistent with the global trend to reduce currency disparities for its resident entities. These bonds are popularly called as Masala bonds. The rupee denominated bond is an attempt to shield issuers from currency risk and instead transfer the risk to investors buying these bonds.

As the investors in a masala bond will bear the currency risk, they would demand a currency risk premium on the coupon. However, there are quantifiable benefits in raising funds through the masala bonds.

Borrower's Perspective

From an issuers' perspective, borrowing in issuer's local currency overseas does not carry the currency mismatch risk or refinance risk which is present in foreign currency denominated debt. Currency mismatches result due to ballooning interest and debt obligations in a scenario of depreciating rupee. Indian corporates have become increasingly dollarized in the past seven to eight years (ECB borrowing in FY15 alone crossed USD 20 billion) and currency risk is one of the key concerns for the borrowers.

Hedging currency risks carry significant costs which may make foreign currency offerings lesser attractive especially at the lower end of the credit curve.

Investor Expectation

From an investor's perspective, attractive yields and a stable or appreciating currency defines the attractiveness of any offering. Indian growth story becomes particularly relevant in view of the slowing Chinese economy. The rupee has performed better than other emerging markets currencies, given sound macroeconomic management and inflation targets set by RBI.

In comparison to issuing a local currency bond domestically, a similar overseas offering provides deeper markets, a diverse liquidity pool and new class of investors who may not necessarily be present onshore.

Masala Bond with a shorter tenure should have a rollover provision with an option to renegotiate the terms based on the prevailing market scenario thereby aligning itself to the long gestation period of the infrastructure projects

International Experience

China, motivated by the aim to internationalize its country, a relatively stable Renminbi (RMB), a growing offshore RMB center in Hong Kong and a RMB deposit base overseas has been successful in promoting its local currency issuance. Certain emerging market countries such as Peru saw decline in the percentage of home currency issuances due to economic stability issues. It has also been noted that a sound monetary policy alone may not provide a conducive environment for local currency issuances overseas. The issuer countries' economy and stability provide other necessary and sufficient conditions.

Pricing of Masala Bonds

Most critical factors for success of such a bond issuance are

Coupon Rate: Pricing of the bonds is a critical element due to the very nature of the issuance. India is rated BBB-[9] by global ratings agencies—a notch above junk rating. Sovereign rating will influence pricing of these bonds. Given the view on Indian economy with BBB- rating which is just above junk rating, investors are expecting a higher coupon from the issuers, which may make these bonds relatively costly for Indian borrowers when compared to borrowers from countries rated better than India. The list of issuances of Masala Bonds is presented in Exhibit 3.1

Liquidity of Indian Currency and the Ratings of the Issuer: Liquidity of the currency is very important as this would provide an impetus to the subscribers to bid for the issue. Past experiences reflect that issuances by the PSUs are subscribed quickly due to the nature of the business and the comfort they provide to the international investors.

[9] Fitch ratings

Exhibit 3.1 – Issuances of Masala Bonds

Sr. No	Name of the company	Issue Size (USD Mn)	Coupon Rate
1	Indiabulls Housing Finance	150	8.85%
2	British Columbia	75	6.62%
3	HDFC	100	8.00%
4	NTPC*	300	7.48%
5	Adani Transmission*	400	9.10%

Source: Media Articles and Company website Note: Companies in the infrastructure sector are shown with an asterisk (*)

Key concerns for raising Masala Bonds

A sound macro fundamental environment needs to be maintained besides implementing structural changes relating to information asymmetry and strengthening of the bankruptcy laws to enable competitive coupon rates. Overall credit rating of the country must also be taken into account before rating an individual bond issuance, hence most Indian corporates would be treated as sub-investment grade by international investors. The USD yield for this class of bonds is upwards of 6%. Some existing high-yield USD issuances of Indian corporates trade around 8-9%. Also tax treatment for such products is unclear and needs to be addressed by the authorities.

An investor will have to take a call on the financial stability of the country and bear the currency risk over a lifetime of a project, thus a stable currency and financially sound sovereign will significantly influence the investor's decision to participate in a masala bond issuance.

Allowing Indian firms to raise rupee-denominated loan from overseas market is a step towards full convertibility of Indian currency and the Indian central bank is supportive of this experiment. In our view despite initial glitches on pricing, masala bonds have potential to raise USD 4-5 billion in next two years with a significant contribution by Infrastructure companies and lending institutions/Banks.

3.3 Infrastructure Development Fund (IDF) – The Pace Maker

IDF is a distinctive attempt to address the issue of sourcing long term debt for infrastructure projects in India. IDFs were setup to accelerate and enhance the flow of long term debt in infrastructure projects. IDFs are meant to supplement lending for infrastructure projects and provide a vehicle for refinancing the existing debt of infrastructure projects presently funded mostly by commercial banks and free up the capital for other projects. To attract funds, an exemption from income tax for IDF has been provided and also the withholding tax has been reduced to 5% from 20% on the interest payment on the borrowings of IDFs.

These Funds can be established by Banks, Financial Institutions and Non- banking Financial Companies (NBFCs). IDFs can be set up either as a NBFC or as a Mutual Fund.

Exhibit 3.2 – Comparison of Infrastructure Debt Funds Structures: NBFC and Mutual Funds

Particulars	NBFC	Mutual Funds
Structure	Funded with Equity and Debt, raising funds through Bonds	Conceptually like private equity funds
Capital	• 10% Equity, 90% Debt • Only domestic investor may invest • May issue both dollar- and rupee-denominated bonds with a minimum tenure of 5 years	Financed 100% through equity
Maturity	Going concern	Finite tenor of 5-10 years
Eligible Assets	PPP projects with minimum 1 year operational history	Projects at any lifecycle stage 90% debt instruments & 10% Equity or subordinated debt
Minimum credit rating of investments	Domestic BBB-	30% limit on unrated or rated below domestic BBB– (50% with approval of the asset management Company's trustees and board)
Regulator	RBI	SEBI
Maximum loan takeout	85% of the project cost under the concession agreement	No Limit

Three NBFC IDFs -IDFC IDF, L&T IDF and ICICI Bank-backed India Infra Debt are currently active with total consolidated assets under management of around INR 60 billion. However, these funds are still miniscule in size when compared to the quantum of infrastructure loans given by banks.

Functioning of an IDF – MF

An IDF-MF would raise resources through issue of rupee denominated units of minimum 5 year maturity, which would be listed on a recognized stock exchange and tradable among investors. It would have to invest minimum 90% of its assets in the debt securities of infrastructure companies or SPVs across all infrastructure sectors, project stages and project types. The returns on assets of the IDF will pass through to the investors directly, less the management fee. The credit risks associated with the underlying projects will be borne by the investors and not by the IDF. An existing mutual fund can also launch an IDF Scheme.

Functioning of an IDF – NBFC

An IDF-NBFC would raise resources through issue of either rupee or dollar denominated bonds of minimum 5 year maturity, which would be tradable among investors. It would invest in debt securities of only Public Private Partnership (PPP) which have a buyout guarantee (Buyout guarantee implies compulsory buyout by the Project in the event of termination of Concession Agreement) and have completed at least one year of commercial operation. IDF would takeover up to 85% of the total debt

covered by the concession agreement. Senior lenders would retain the remaining 15% for which they could charge a premium from the infrastructure company. Here, the credit risks associated with the underlying projects will be borne by the IDF. This structure is focused on investors who are essentially risk-averse

Advantage –IDFs

One major problem faced by banks while disbursing loans to infrastructure projects is the asset liability mismatch inherent with these projects. Therefore many such projects are denied financing by banks. In case of an IDF that issues bonds, credit enhancement inherent in PPP projects would be available. Such projects would involve a lower level of risk and consequently a higher credit rating. In case of IDFs that issue units, greater credit risk would be borne by the investors who will be free to seek correspondingly higher returns. By refinancing bank loans of existing projects the IDFs are expected to take over a fairly large volume of the existing bank debt that will release an equivalent volume for fresh lending to infrastructure projects. Thus, IDFs are expected to channelize the long-term low cost resources of Provident Fund/Insurance/Pension Funds for infrastructure financing. The IDFs will also help accelerate the evolution of a secondary market for bonds which is presently lacking in sufficient depth.

For an IDF-MF larger pool of assets are available for investment including airports, roads, telecommunications, and also social infrastructure as hotels, schools, and hospitals. While NBFCs are restricted to partial take outs, mutual funds can take out 100% of existing exposures. Mutual funds can invest at any stage in the project cycle to include green field and distressed projects. An IDF – NBFC is considered less risky as it may only invest in operational projects which are developed under the PPP model.

Current Initiatives

Recently the Reserve Bank of India (RBI) has allowed Infrastructure Debt Fund-Non Banking Financial Institutions (IDF-NBFCs) or investment vehicles sponsored by NBFCs with investments from domestic and offshore institutional investors mainly for refinancing debt of infrastructure companies to raise up to 10% of their total outstanding borrowings through shorter tenure bonds and commercial papers, giving them the much needed flexibility to manage their assets and liabilities[10].

[10] Reserve Bank of India guidelines for IDF

3.4 Infrastructure Investment Trust (InvIT) – A Potential Game Changer

The under serviced financing need of Indian Infrastructure sector indicates a financing conundrum in the context of international investors with high liquidity and having strong appetite for infrastructure sector. Further, significant investment in the Indian Infrastructure sector by domestic investors is also stuck due to well documented challenges and problems persistent in the sector. It is of paramount importance to unlock the invested capital and enable reinvestment in new projects.

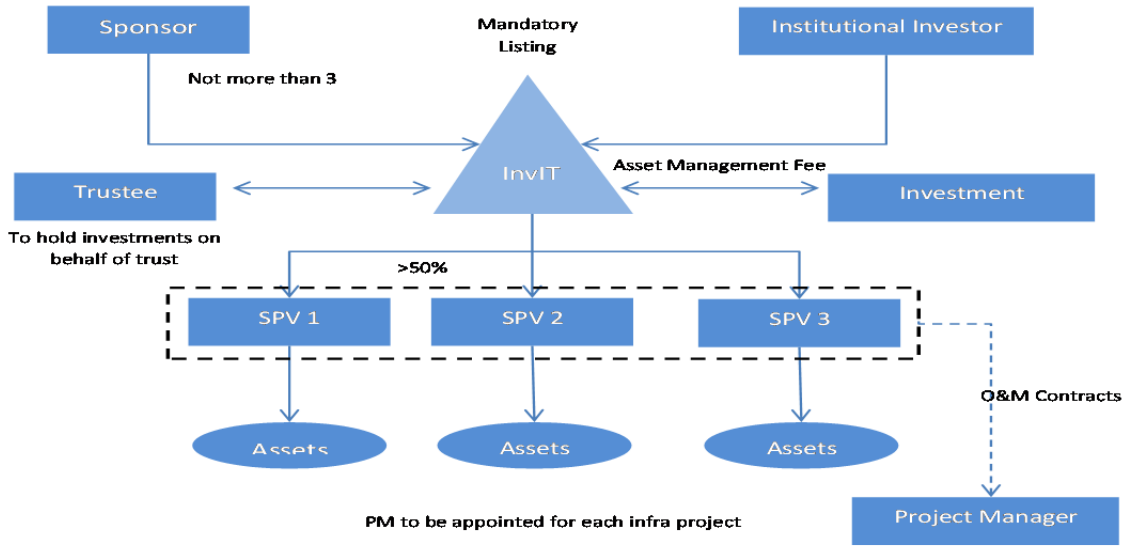
Lately SEBI in consultations with various stakeholders has issued draft regulations for InvITs. This is expected to help drive a fresh round of investments into the infrastructure sector by unlocking promoters' capital. It is also expected to help channelize small savings into these sectors by providing stable, regular incomes for investors. In Budget FY 2016, the Government provided further impetus in the formation of InvITs (or "Business Trusts"). The proposed measure provided removal of dividend distribution tax (DDT) between the SPV and the trust company.

The Government policy has been conducive for the infrastructure sector and InvIT shall play a critical role in creation of long-term financing avenues for infrastructure projects.

In InvIT framework, the sponsor can raise funds by transferring assets to the trust which would be managed by the trustees. It is mandatory for the larger share of the portfolio of assets to be operational and revenue generating. As per the regulations, the sponsor would continue to hold at least 26% of the units in the trust. The remaining can be utilized to raise capital part of which would go into repayment of at least 50% of the debt and balance may go to the sponsor. The corollary benefit is that the bank funding gets released back into the system to help fund other projects. Once the InvIT is formed, 90% of the net distributable cash flows have to be repaid in the form of dividends to the unit holders. Aggregate consolidated borrowings and deferred payments of the InvIT net of cash and cash equivalents shall never exceed 49% of the value of the InvIT assets.

A typical structure for an InvIT is shown in Exhibit 3.3

Exhibit 3.3 – Typical InvIT Structure



Source: Infrastructure Investment Trusts by EY

Various investor classes such as individual investors, Foreign Portfolio Investors (FPI), Mutual Funds (MF), Pension and Sovereign funds, Insurance Companies, and Foreign Venture Capital Investors (FVCI) are expected to participate in InvIT as it is important to spread the investor base and discover a fair price, apart from imparting post issue liquidity.

Types of InvITs

Two types of InvITs have been allowed, one to mainly invest in completed and revenue generating infrastructure projects and other which has the flexibility to invest in completed and/or under-construction projects. While the former can undertake a public offer of its units, the latter has to opt only for a private placement of its units. Both the structures are required to be listed.

Comparing with the Global Scenario

While InvIT is relatively a new concept in India, financing tools such as Business Trusts (BTs) have been in existence since few years in countries such as Singapore, Hong Kong and Malaysia[11].

In a Singapore BT, a trustee manager holds and operates business enterprises for the benefit of its investors. Investors do not have any control over the operations of the company. Trustee manger is an individual company comprising of a management team and Independent directors. This model supports strong governance and efficient management processes - qualities that appeal to potential investors, as their interests are paramount.

In Hong Kong business trust use stapled units in a company as well as units in the BT. Stapling simply means that two different securities are "stapled" together for the purposes of trading or transfers. The trust(s) and the company(ies) can hold assets and operate businesses, but active business, such as asset management and development are typically conducted by the company while passive investments in property or funds are undertaken by the trust. Unlike trustee manager in Singapore, trustee manager in Hong Kong does not receive management fees or other incentives and is only

[11] Report on InvIT by CARE Ratings

entitled to the reimbursement of its costs and expenses. Lastly the BTs in Malaysia are pool cash-generating assets and typically distribute a large portion of profits as payouts, akin to real estate investment trusts. Malaysia allows both conventional BTs as well as Shariah-compliant Islamic BTs, structured in accordance with approved Shariah principles and concepts.

All of these models have been highly successful in the respective countries. InvIT structure is modelled on similar principles and is customized to suit Indian Infra developers after consultations with the experts. Most critical factors for the success of the InvIT model would be execution and ethical implementation.

InvIT – The Journey So Far

Companies with a strong portfolio, steady revenue stream and a resilient track record can be potential candidates for this type of investment. Companies in power, roads, transmission have applied for the SEBI registration. In our view major debt-laden infrastructure entities looking to deleverage and attract long-term equity visibility options are best suited to apply for the InvITs. Indicative list of Indian companies which have received the approval from SEBI or under process for the same represented in the Exhibit 3.4.

Exhibit 3.4 – InvIT Initiatives

Name of the company	Assets to be transferred	Indicative Value (INR Billion)
IRB Infrastructure Developers Ltd	Roads	70 - 80
GMR Infrastructure Ltd	Mix of operational road and transmission assets	-
MEP Infrastructure Developers Ltd	Toll Collection and Operate , Maintain &Transfer assets	12
IL&FS Transportation Networks Ltd	Roads, thermal and renewable energy assets	47 – 61
Sterlite Power Transmission Ltd	Power Transmission assets	25
Adani Group	Ports, power transmission lines and power generation assets	-
Mytrah Energy Limited	Renewable Energy Assets	26

Source: Media Articles and Company website

Challenges for Issuers of InvITs

The ability to provide an attractive yield in an environment of volatile interest rates is a major challenge for the issuers. Additionally issuers may face challenge in obtaining a premium valuation for their assets which would depend upon a number of factors like sponsor credibility and experience, quality and revenue generation ability of underlying assets, Government policies. InvITs would be competing with similar domestic products such as AIF which offer more operational flexibility and allows investors to invest in all forms of infra assets

Internationally investors in Infrastructure sector are patient in nature and have longer horizon for investment. Government's push for investment in infrastructure sector offering products such as

InvITs is a huge positive for the sector which shall help in attracting quality investors and releasing fresh capital in the system.

We believe InvITs will help infrastructure players unlock value in the assets they own and releasing the much needed capital for further expansion. However, InvITs are still in a nascent stage and the actual performance in terms of attracting investments and providing adequate returns is still awaited.

The Long View

We believe the first few issuances of InvITs may have to go through rigorous regulatory compliances and tax structuring issues but the key to success would still revolve around offering the desired yield to the Investors. In the next couple of years InvITs are slated to pick up and have the potential of unlocking USD 5-7 Billion from assets primarily in the Roads, Transmission and Renewables segments.

3.5 Pension and Sovereign Funds – The Universal Choice

The Rise of a New Investor Class– Pension Funds & Sovereign Funds

Pension and Sovereign funds are a key source of funding for long gestation projects in sectors such as infrastructure. They are regarded as a key source not only because they are long term and more stable in nature but also since they prevent these companies from becoming victims of market volatility; which is generally triggered by flight of funds put in by other FIIs and hedge funds.

Some of the traditionally risk-averse global pension funds investing more aggressively in India's capital-hungry economy, including Canada Pension Plan Investment Board (CPPIB), Ontario Teachers, PSP,APG, CDC, TAQA, Abu Dhabi Investment Authority amongst others.

Historically larger pension and sovereign funds were participating in the infrastructure sector in India as fund of funds. Recent trends have shown that most of the global pension and sovereign funds have been actively scouting and investing in projects in India, viewing it as a key for emerging long-term growth market. Their investment approach has been to either back an existing platform with a specific set of assets or to incubate fresh platforms to aggregate operational or near completion assets to accelerate the investing rate in India

The interest of foreign investors of all types in India has been renewed due to the initiatives of the new Government which has promised to ease investment restrictions and build a wave of new infrastructure projects.

The Pension Fund Industry in India

The Indian pension fund managed by EPFO was about USD 125 billion at the end of April 2015[12]. The investment pattern suggests that the Indian pension fund market is highly underpenetrated, out of an estimated workforce of 321 million only 12% is covered by pension schemes. Total pension fund assets with EPF organization were to the tune of 4.6 % of gross domestic product (GDP) compared to 50%–

[12] EPFO

100% for most developed economies with negligible exposure to equities, compared to 40% in developed markets.

Pension and provident funds, both EPF and PPF, are also repositories of large amount of long-term finance. However, as a legacy of Government regulations, pension funds remain a notionally funded scheme. More than two third of the fund exists in the form of special deposits with the central Government. Under the existing stipulations, these funds cannot be drawn out for deployment in other avenues. A significant portion of the remaining funds are deployed in Government securities which too, remain locked in for two reasons. First, once a Government security is subscribed, regulations mandate that they be held till maturity. Second, investment guidelines also mandate that interest received from Government securities be reinvested in those securities itself.

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.

National Investment and Infrastructure Fund – Sovereign Fund of India

The NIIF with a corpus of approximately Rs. 40,000 Crores is expected to be operational soon and start its funding activity, NIIF is as an investment vehicle for funding commercially viable greenfield, brownfield and stalled projects. NIIF will play a pivotal role, especially in infrastructure financing of projects in areas of green energy and highways in particular. This is an evolving model and has the potential to boost investment in the sector.

Challenges Faced by Pension Funds

However, there are still numerous issues to overcome in order to attract more investment by such funds including the perception that India remains a challenging place for infrastructure investments due to the prevailing execution risk associated with projects, complicated investment structures due to taxation policies and unpredictable regulations. India faces competition from smaller markets such as Chile, Columbia, Mexico, Peru and Australia among others, many of whom have created easier to-invest models in the infrastructure sector. Globally this class of investor helps in monetizing high ticket investments and thereby freeing the capital which can be used for other infrastructure projects. Government's efforts in allowing pension funds and promoting newer investment structures like InvITs are a big positive for the sector. Other issues like valuation expectation by the promoter and discounting rates to be applied to an asset, is a huge hurdle in such investments. Valuation mismatch and other finer issues need to be straightened for a smooth investment in a project.

Pension, Superannuation and Sovereign funds are best positioned to absorb the funding requirements of infrastructure projects. Given the availability of matured assets and attractive valuations across infrastructure assets in India we foresee approximately USD 100 Billion investment over the next 8-10 years from such high quality investors. These investments are expected to happen directly into asset portfolio and indirectly through others avenues like InvITs.

The Long View

We have started to experience the presence of high quality international sources of capital such as Sovereign, Pension and Superannuation Funds in India over the last couple of years. Their preference so far has been to primarily buyout operational assets with a reasonably predictable free cash flow visibility. These investors are finding the Indian market increasingly attractive in sectors like Roads and Renewable Energy given the availability of matured assets at attractive valuations. We believe these investors may opportunistically also dabble into evaluating distressed assets in partnership with strategic players which may cultivate to be a huge market in India going forward.

3.6 Application of the emerging Options

Each of the emerging option is suitable for particular segments and specific type of projects as shown in the Exhibit 3.5.

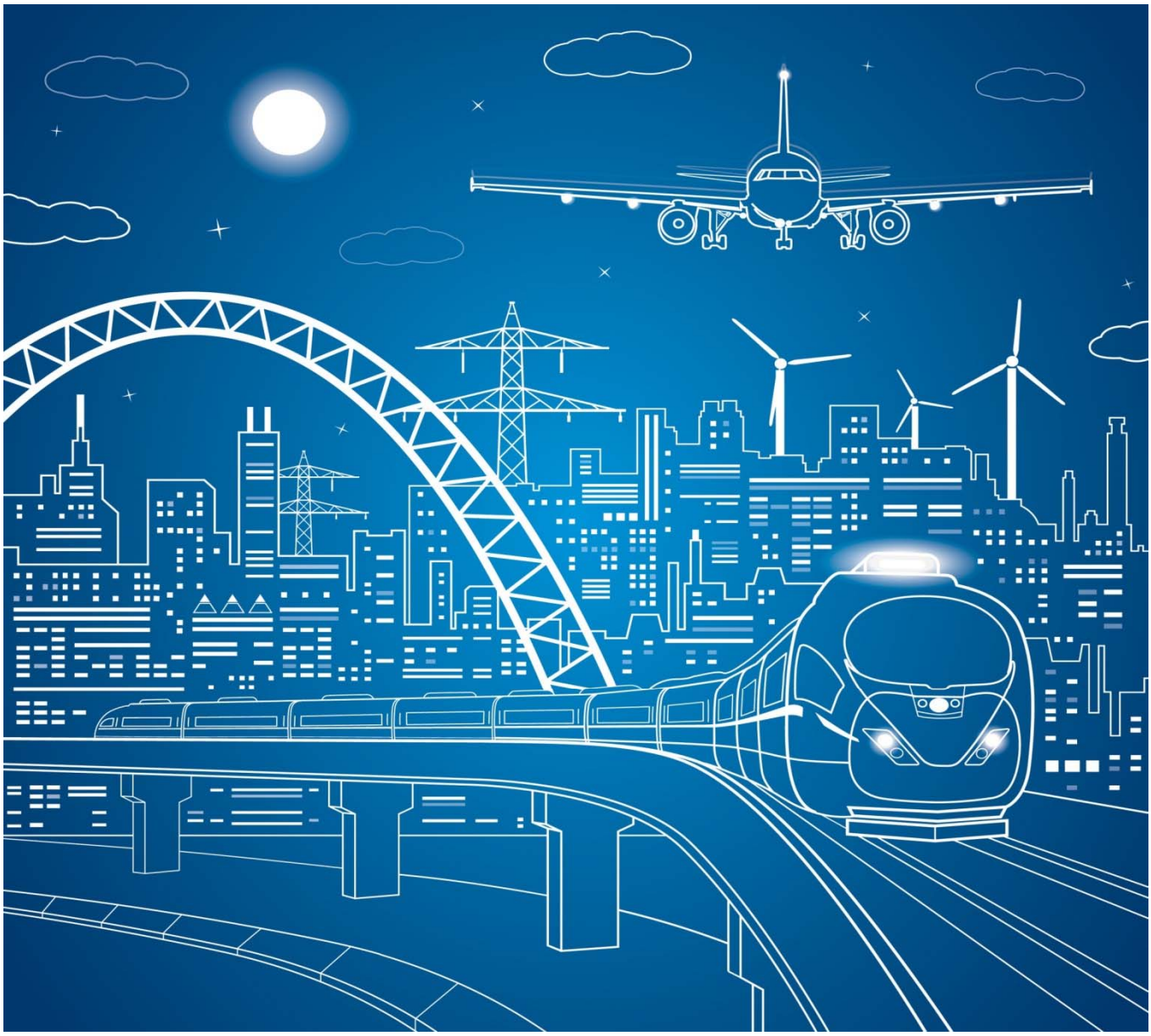
Exhibit 3.5 – Projects and Segments Suitable for Emerging Financing Products

SN	Product	Segments Applicable	Remarks
	Debt Products		
1	Long term Bonds	Roads, Ports, Power (Conventional and Renewable), Airports, Railways, Transmission	Projects with an operational history providing adequate revenue visibility to the investors would be a perfect fit.
2	Masala Bonds	Projects with high cost of debt and low revenue risk. FIs lending to infrastructure sector.	This product is also suited for financial institutions for onward lending to infrastructure projects. Would help reducing significant interest cost for projects with high cost of debt.
3	IDF – MF	Roads, airports, ports, water, power generation, power transmission, telecommunications, social infrastructure, etc.	IDF – MF can invest at any stage in the project cycle including greenfield and distressed projects.
4	IDF – NBFC	Roads, Ports & Airports	Limited to PPP projects.
SN	**Product**	**Segments Applicable**	**Remarks**
	Equity Products		
1	InvITs	Roads, Transmission Power	Apt for corporate houses with a substantial portfolio of highly leveraged operating assets with stable annuity like yield bearing cash flows
2	Pension Funds	Roads, Renewables	Projects with long gestation periods and revenue certainty are a perfect fit for funding from pension funds. Typically characterized by low risk and moderate returns expectation

There is an immense potential for raising funds through emerging routes such as Masala Bonds, InvIT and Infrastructure Debt Funds (IDF) and sources such as Pension funds and unexplored routes such as Covered bonds.

There is a need for implementing a comprehensive strategy for addressing the issue of infrastructure financing in India involving efficient and innovative financing mechanisms and policy enablers to tap emerging funding options as well as to expand the scope of the existing funding options.

About Centrum	About FICCI
Centrum Capital Ltd. flagship company of the Centrum group is a SEBI registered category I merchant banker (listed on BSE) with over two decades of experience in Capital Markets across various cycles. Centrum Infrastructure Advisory Ltd. (CIAL) is a sector focused investment banking and advisory firm providing services to clients in the Infrastructure sector and a subsidiary of Centrum Capital Ltd It has expertise across Equity & Debt spectrum with capabilities in Equity Capital Markets, M&A Advisory, Corporate Finance & Advisory, Primary & Secondary Debt Placement, Project Finance and Corporate Debt Restructuring. Its retail arm provides integrated solutions for Private Wealth Management, Portfolio Management, Stock Broking and Foreign Exchange. With a pan-India presence through a network of 125 branches in 48 cities, Centrum Capital Ltd. is poised for exponential growth. For more details contact **Sandeep Upadhyay** MD & CEO, CIAL sandeep.upadhyay@centrum.co.in **Sunil Varma Marri** Executive Vice President, CIAL sunil.marri@centrum.co.in **Abhijit Shah** Sr. Associate, CIAL abhijit.shah@centrum.co.in	Established in 1927, FICCI is the largest and oldest apex business organisation in India. Its history is closely interwoven with India's struggle for independence, its industrialization, and its emergence as one of the most rapidly growing global economies. A non-government, not-for-profit organisation, FICCI is the voice of India's business and industry. From influencing policy to encouraging debate, engaging with policy makers and civil society, FICCI articulates the views and concerns of industry. It serves its members from the Indian private and public corporate sectors and multinational companies, drawing its strength from diverse regional chambers of commerce and industry across states, reaching out to over 2,50,000 companies. FICCI provides a platform for networking and consensus building within and across sectors and is the first port of call for Indian industry, policy makers and the international business community. For more details contact **Manab Majumdar** Assistant Secretary General, FICCI manab.majumdar@ficci.com **Abdul Salam** Joint Director, FICCI abdul.salam@ficci.com



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