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INDIA: Enabling Monetization of Infrastructure Assets in India

AS-IS ANALYSIS REPORT

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Asian Development Bank

CURRENCY EQUIVALENT

(As of August 2015)

United States Dollar (USD) 1.00 = Indian Rupees (INR) 64

ABBREVIATIONS

	ALM	-	Asset Liability Mismatch
	ABS	-	Asset-backed security
	ADB	-	Asian Development Bank
	AUM	-	Assets Under Management
	BCBS	-	Basel Committee on Banking Supervision
	CAR	-	Capital Adequacy Ratio
	CCB	-	Capital Conservation Buffer
	CDO	-	Collateralized Debt Obligation
	CMBS	-	Commercial Mortgage-Backed Securities
	COD	-	Commercial Operations Date
	CRIS	-	CRISIL Risk and Infrastructure Solutions
	CRR	-	Cash Reserve Ratio
	DFS	-	Department of Financial Services
	ECB	-	External Commercial Borrowings
	EIS	-	Excess Interest Spread
	FII	-	Foreign Institutional Investor
	FY	-	Financial year / fiscal year
	GDP	-	Gross domestic product
	IRDA	-	Insurance Regulatory and Development Authority
	MBS	-	Mortgage Backed Securities
	MF	-	Mutual fund
	MNC	-	Multinational Corporation
	MoF	-	Ministry of Finance, Government of India
	NBFC	-	Non-Banking Financial Company
	NITI	-	National Institution for Transforming India
	NPA	-	Non-performing asset
	PF	-	Pension fund/Project Finance
	PSB	-	Public sector bank
	PTC	-	Pay through certificate
	RMBS	-	Residential mortgage-backed security
	RBI	-	Reserve Bank of India
	SCB	-	Scheduled commercial bank
	SPV	-	Special purpose vehicle
	SEBI	-	Securities and Exchange Board of India
	US	-	United States of America

NOTE

(i) FY denotes the fiscal year end, e.g., FY 2000 ends on March 31, 2000.

Executive Summary

Infrastructure sector needs INR 30 trillion investments over next 5 years

The International Monetary Fund estimates India's gross domestic product (GDP) to grow at an average 7.6% over the next five years. In line with this projection, the erstwhile Planning Commission had estimated investments of around 9% of GDP in the infrastructure sector. However, relatively weaker performance of the economy in recent years has relegated investment in infrastructure to the background. The newly formed NITI Aayog has estimated a 30% shortfall in the envisaged investment. Hence, it is estimated that 7.7% of the GDP will be invested in the infrastructure sector in the country, with a public-private split of 51:49. Consequently, a whopping INR 30 trillion debt will be required for the sector over the next five years.

PSBs pivotal in infrastructure funding, but increasingly constrained

Infrastructure contributed to 14-15% of the overall credit extended by the banking sector over the last three years, amounting to a gigantic INR 9.4 trillion. The exposure of public sector banks (PSBs) to the sector is even higher at around 17.6%. The enormous lending and deteriorating infrastructure assets in the country have led to higher asset-liability mismatch and non-performing assets respectively. Stressed assets for the sector currently amount to INR 2.3 trillion for PSBs.

INR 3 trillion needed for PSBs to meet Basel III capital adequacy norms

Guidelines issued by the Reserve Bank of India (RBI) with an eye on Basel III norms, due for implementation by April 2019, mandate higher capital adequacy requirements for banks.

Minimum capital ratios (%)	April 1, 2013	April 1, 2014	April 1, 2015	April 1, 2016	April 1, 2017	April 1, 2018	April 1, 2019
Total Tier 1 Capital Ratio	6	6.5	7	7.625	8.25	8.875	9.5
Capital to Risk (Weighted) Assets Ratio (CRAR)	9	9	9	9.625	10.25	10.875	11.5

PSBs are currently struggling to meet the Tier-1 requirement under Basel III. Most banks (19 banks out of 26 banks) fall in 7-9% range.

Taking a conservative credit growth rate of 12%, PSBs will require INR 3 trillion of additional capital to meet Basel III norms by 2019-20. Even with the current govt. commitment of INR 700 billion, possible equity dilution to 52% in PSBs andother schemes (refinancing schemes), the gap still remains as high as INR 1.9 trillion.

Hence, critical for PSBs explore other avenues for capitalisation

In view of the colossal capital requirement, it is essential to provide PSBs with avenues for capitalization.

Securitization could be one of the tools to address the capitalization gap

Securitization allows the lender to sell of a pool of assets on which marketable securities can be issued. This, especially if undertaken through the sale of pass-through-securities, provides benefits of capital release and access to other investor classes such as insurance funds, pension funds and mutual funds. Hence, it could be a useful tool in context of PSBs' current capital requirement.

Securitization well-entrenched in Indian market

The securitization market in India has been in existence since the early 1990s. Its growth can be attributed to repackaging of retail assets and residential mortgages (mainly in the priority sector segment) that dominate the current market. Non-banking finance companies and housing finance companies are the key originators of securitized transactions in India, while banks are the leading investors, owing to their priority sector lending targets.

Market trends in securitization have been driven largely by relevant laws and RBI regulations. The first guidelines specific to securitization were released by the RBI in February 2006.

Assuming that 100% of the capitalization gap is met through securitization, potential of securitization is estimated at INR 13 Trillion

Since Securitization will allow banks to shift assets off their balance sheets, it can be implemented effectively to bridge PSBs' capital requirement of INR 1.9 trillion. In a possible scenario where PSBs securitize assets to free up entirety of the gap, assets worth INR 26.8 trillion would have to be securitized by 2019-20.

Since retail is an established asset class for securitization, 30% of retail assets could be targeted (in line with the current levels of securitization by NBFCs), amounting to INR 3.3 trillion. Among corporate assets, infrastructure is best suited due to the sector's higher recoveries vis-à-vis manufacturing and services assets. However, since project finance securitization has seen no transactions in the Indian market yet, it is envisaged that less risky projects, particularly those that have achieved commercial operations be targeted initially for securitization. It has been estimated that the total value of such infrastructure assets available with PSBs amounts to INR 9.6 trillion over the next five years. Thus, in all, INR 13 trillion worth of assets can be easily securitized by PSBs to reduce their capital requirements.

Development of securitization market beset with challenges

The Indian securitization market is currently subject to a plethora of challenges – with taxation at the core. As per the current regime, distribution tax is levied on interest income at the SPV or trust level rather than at the investor level, leading to higher tax implications for the investor. Other issues include limited market appetite, high stamp duty and capital treatment guidelines for junk tranche that end up reducing the viability of securitization transactions in India.

Assessment of potential investors revealed significant investments in government securities

Target investors such as insurance funds, mutual funds, pension and provident funds invest beyond their mandated requirements in highly liquid and safe government securities and PSU bonds. For instance, although the insurance sector on an average is required to invest only 40-50% in state and central government securities, funds currently invest up to 70% of their assets under management in these securities. This predominant investment and ample supply of government securities and PSU bonds has crowded out the appetite for complex instruments.

However, Investors will endorse securitization if existing challenges are resolved

Our initial interactions with investors indicate that despite a fair degree of ambiguity regarding participation in securitization, various investor classes would be keen to participate once the existing issues are addressed. Primarily -

- Mutual funds would be interested in 2-3 year minimum A-rated papers.
- Insurance funds and pension funds would be key investors for 10-11 year minimum AA-rated papers.
- All investor classes expect a premium (50-100 bps) for infrastructure securitized papers over vanilla papers.

Contents

List of tables

List of figures

I. INTRODUCTION

1. The Asian Development Bank (ADB) appointed CRISIL Infrastructure Advisory in June 2015 to undertake a technical study aimed at establishing a viable structure and framework for the monetization of infrastructure loan assets in India.

2. The Indian banking sector is under pressure with banks reaching their exposure limits as far as infrastructure lending is concerned, weighed down by bad loans and weak profitability; the problem is more evident with the public sector banks (PSBs). In the past year, PSBs have accumulated nearly 86% of the non-performing assets (NPAs) of the banking sector as compared to their 75% asset base. Further complications arise because of the new Basel III bank capital requirement, due by 2019. Various studies have estimated capital requirements of the banking sector at INR 2.5-6 billion to meet these norms. The finance ministry has estimated that PSBs would need additional INR 1.8 trillion by the end of FY 2019, of which banks need to raise INR 1.1 trillion (government would fund the rest).

Table 1: Estimates of capital requirement of the Indian banking sector by 2019-20

Source	Findings
Ernst & Young	Indian banking system will require additional INR 4 trillion by 2019, of which 70% will be required in the form of common equity.
ICRA	INR 6 trillion is required by 2019, of which 70-75% will be required by PSBs.
PWC	Indian banking system will have to raise INR 6 trillion over next 4-5 years, of which 70-75% will be raised by PSBs.
Fitch	Fitch estimates additional capital requirements of about INR 2.5 trillion for Indian banks.
CRISIL	Indian banks may have to raise INR 2.4 trillion to meet the Basel III requirements.
Moody's	Moody's-rated PSBs in India will need to raise INR 1.5-2.2 trillion between FY 2015 and FY 2019. A significant part of the required capital – around INR 0.8-0.9 trillion – could be in the form of additional Tier 1 capital.
RBI	Indian banks will require INR 5 trillion over the next 5 years, of which INR 1.75 trillion will have to be equity capital.

Source: Respective Studies

3. The current banking sector scenario also affects the infrastructure sector in the country, as the banking sector funds close to 50% of this sector's requirements. Considering the government's goal of spending USD 1 trillion on roads, ports, power and other infrastructure from 2012 to 2017, the sector requires close to USD 750 billion of debt. This enormous requirement cannot be funded by the constrained banking sector.

4. In this context, this study assesses the monetization of infrastructure assets, to fulfill the following objectives:

    i. Strengthen the capital position of PSBs so that they are well placed to fund new credit growth opportunities and meet the Basel III requirements;

    ii. Improve fund flow to the infrastructure sector by securitizing infrastructure assets, thus enhancing their access to institutional investors such as pension funds, insurance funds and mutual funds.

5. This as-is analysis report is the second deliverable under this study. This report analyzes the requirements of the infrastructure sector in India, deliberates upon the securitization market and highlights international examples of project finance securitization to understand the mechanics behind securitization structures. The report is structured as follows:

    i. Introduction (this section)

    ii. Infrastructure financing in India

    iii. Infrastructure loan portfolio of PSBs

    iv. Monetization of infrastructure assets

    v. Potential market size for securitization

    vi. Likely investors and potential arrangers

II. ANALYSIS OF INFRASTRUCTURE FINANCING IN INDIA

6. Infrastructure sector in India is in need of huge investments. The World Economic Forum's Global Competitiveness Report 2014-15 ranks India 87th out of 140 economies in terms of infrastructure, scoring 3.58/7.00 in the global competitiveness index. Other emerging economies such as China, Brazil and Sri Lanka are ranked higher and boast of better basic infrastructure, as shown below.

Table 2: Infrastructure Rankings - World Economic Forum's Global Competitiveness Report 2014-15

Country	Rank
Hong Kong	1
USA	12
Russia	39
China	46
Sri Lanka	75
Brazil	76
India	**87**
Pakistan	119

Source: World Economic Forum's Global Competitiveness Report 2014-15

7. The government has identified infrastructure as one of the key challenges that need to be tackled to promote economic growth. The Union Budget 2015-16 announced investment up to INR 70,000 crore in the sector, with a focus on roads and railways, while allowing a slippage in the fiscal deficit target for the year. Given the limited nature of budgetary resources, the government has also committed to take a relook at the public-private partnership (PPP) model for infrastructure development to revitalize private investments in the sector.

A. Investment in infrastructure

8. ***Past trends***

i. As per data by the erstwhile Planning Commission, investments in the infrastructure sector in India over 2002-12 (Tenth and Eleventh Five Year Plans) were to the tune of INR 32.6 Trillion. The Twelfth Five Year Plan (2012-2017) was formulated in the backdrop of this remarkable performance of the infrastructure sector. The plan projected an investment of INR 55.75 Trillion in infrastructure during 2012-17, which is more than double the investment in the Eleventh Five Year Plan Period. The Twelfth Five Year Plan also encourages higher private investment in infrastructure, directly and through PPPs, raising the share of private investment in infrastructure from 37% in the Eleventh Five Year Plan to close to 50% in the Twelfth Five Year Plan.

Table 3: Comparison of infrastructure investments across Five Year Plans – Planning Commission (INR Trillion)

Particulars	**Tenth Five Year Plan (2002-07) - Actual**	**Eleventh Five Year Plan (2007-12) - Actual**	**Twelfth Five Year Plan (2012-17) - Projected**
Gross domestic product (GDP) at market prices	1.65	3.36	6.81
Total investment in Infrastructure	8.37	24.24	55.74
Total investment as a percentage of GDP	5.04%	7.21%	8.18%
Public investment	6.51	1.53	2.89
Private sector investment	1.86	8.87	2.68
Share of private sector investment in total investment	22%	37%	48%

Source: Planning Commission

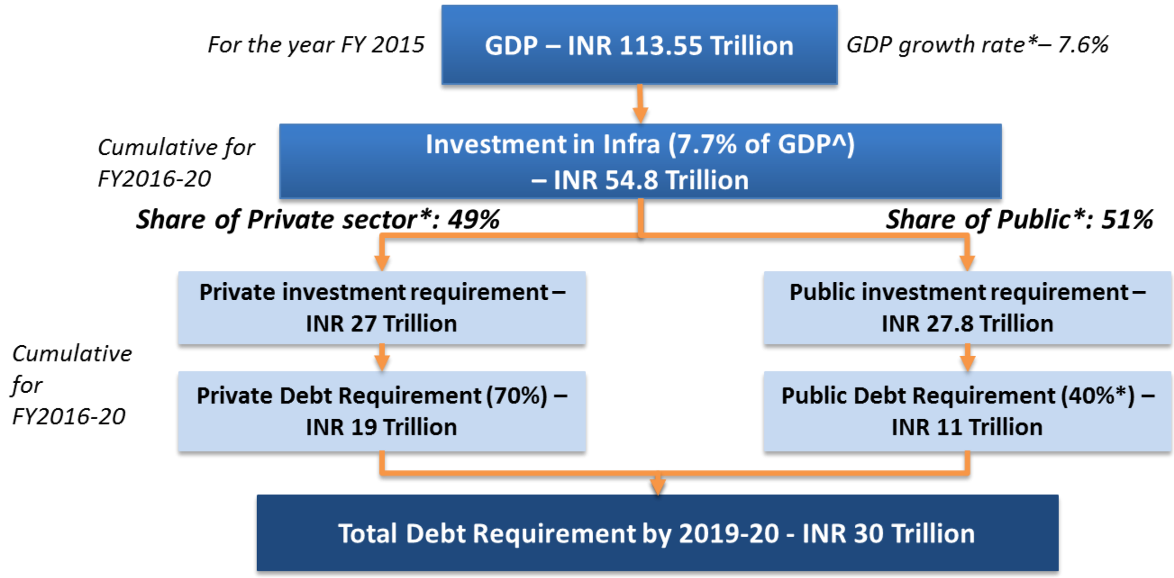
ii. However, relatively weaker performance of the economy in the recent years stands witness to the fact that investment in infrastructure has taken a back seat. The newly found NITI Aayog has estimated a likely shortfall of about 30% in the envisaged investment, with the shortfall in public and private investments at 20% and 43%, respectively. Thus, infrastructure investment under the Twelfth Five Year Plan is likely to amount to INR 39 trillion, as compared to the envisaged INR 55.75 trillion. The slowdown in infrastructure investments is primarily a result of the sharp decline in private sector investment in the first 3 years of the Twelfth Five Year Plan.

iii. A major cause for this decline is the stalling of projects, which has adversely affected the balance sheets of the corporate sector and PSBs, and is in turn, constraining future private investments.

9. ***Projections for infrastructure investment demand***

i. The following table summarizes the debt requirement of the infrastructure sector over the next 5 years. Detailed assumptions for the same are provided in Annexure 1.

Table 4: Forecast for investment and debt requirement of infrastructure sector



Source: CRISIL Infrastructure Advisory Estimate

10. ***Projections for debt supply by scheduled commercial banks & public sector banks***

i. The following table summarizes the debt supply for the infrastructure sector over the next 5 years by scheduled commercial banks (SCBs) and PSBs. Detailed assumptions for the same are provided in Annexure 1.

Table 5: Forecast for debt supply by all SCBs & PSBs to infrastructure sector (INR billion)

Particulars	**2015-16 to 2019-20**
Growth rate of gross non-food credit	13%
Gross non-food credit	4,36,095
Share of infrastructure in outstanding gross non-food credit	15%
Incremental credit to infrastructure sector by SCBs	7,525
Share of **PSBs** in gross non-food credit	70% (72% in 2014-15)

Particulars	**2015-16 to 2019-20**
Share of **infrastructure** in outstanding gross non-food credit for **PSBs**	16.7%
Incremental credit to infrastructure sector by PSBs	5,866
PSBs' share in incremental credit to infrastructure	78%

Source: CRISIL Infrastructure Advisory

B. Key issues & challenges in infrastructure financing

11. Infrastructure projects are typically complex and capital intensive, and have long gestation periods. The key issues faced in infrastructure funding are highlighted below.

12. **Limited sources of financing for the sector**

    i. Infrastructure projects are characterized by non-recourse or limited recourse financing. Initial financing requirements form major part of the project cost, owing to high capital requirements. In India, the sector is over-dependent on banks, especially PSBs[1], for financing due to the absence of other sources of long-term finance.

Table 6: Financing sources for the infrastructure sector (INR billion)

	March 2011	**March 2012**	**March 2013**	**March 2014**
SCBs (Proportion of SCB funding to total infra funding)	5,234 (54%)	6,300 (54%)	7,297 (51%)	8,398 (53%)
Non-banking financial companies	3,150	4,000	5,203	5,902

[1] *As highlighted in Chapter III.D – Bank-wise Assessment of infrastructure portfolio*

Insurance funds	9,60	1,013	1,125	914*
Mutual funds	132	143	155	169*
ECBs	253	253	468	520*
Total	9,729	11,709	14,248	15,903*

*Source: Planning Commission; *CRISIL estimates*

13. **Sectoral exposure management**

i. Though the Reserve Bank of India (RBI) does not mandate a sectoral exposure limit, banks tend to fix internal exposure limits, around 15%, for uniform exposure across sectors and prevention of over-exposure to a single sector.

Table 7: Bank credit to infrastructure sector (INR billion)

	March 2011	**March 2012**	**March 2013**	**March 2014**	**March 2015**
SCBs' total credit	36,871	42,897	48,696	55,296	59,554
Credit to infrastructure	5,234	6,300	7,297	8,398	8,933
Exposure to infrastructure	14.2%	14.7%	15.0%	15.2%	15.0%

Source: RBI

ii. As can be seen from the table above, the banking system's sectoral exposure to infrastructure has already reached the limit, and further growth will be constrained.

14. **Asset-liability mismatch for banks**

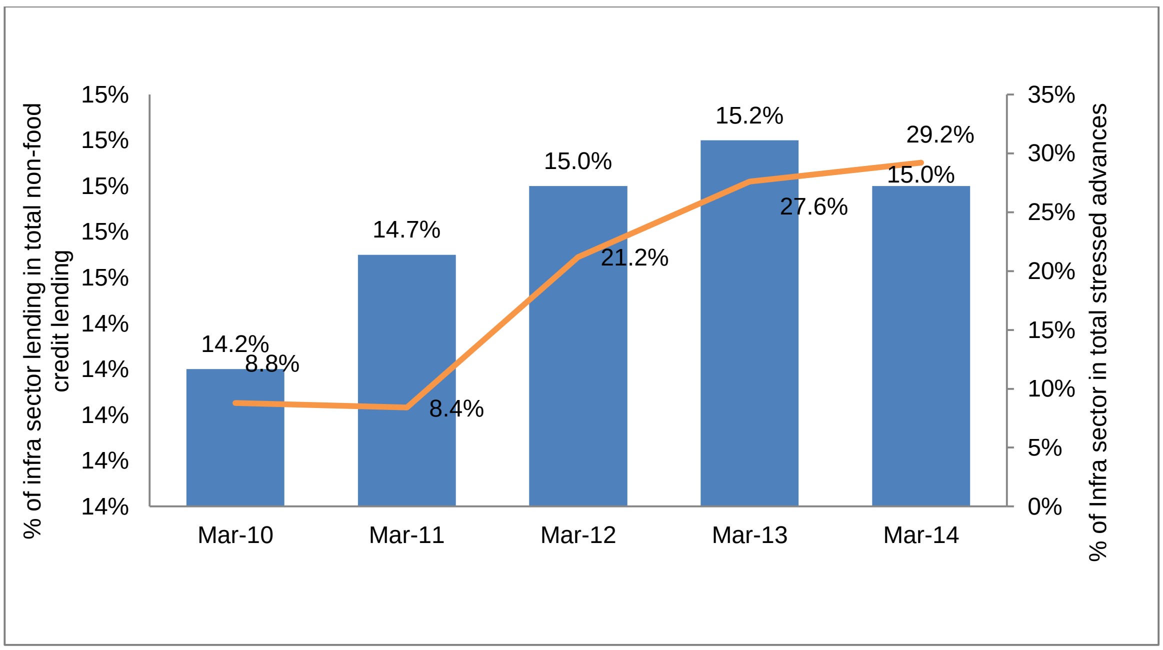
i. Long-term financing expose commercial banks to the asset-liability mismatch (ALM) risk. Majority of the funds with Indian banks are savings bank deposits and term deposits, essentially short term, with tenures of six months to five years. These deposits need to be used for long-term infrastructure lending, having tenures of 10 to 15 years. As per RBI data, bank deposits, especially those of PSBs, have shifted towards the shorter end of the maturity spectrum, while loans and investments have moved towards the longer term. Deposits maturing in less than a year as a percentage of total bank deposits have grown from 30% in 2002 to over 50% in 2013. This potential mismatch between deposits and loans has led to banks preferring shorter tenures while lending to infrastructure projects.

ii. Overall, there is a need to limit asset-liability mismatch in the larger interest of financial stability of banks. Notably, the government introduced the 5:25 flexible structuring scheme wherein lenders are allowed to fix longer amortization periods, say 25 years, for loans to projects in the infrastructure and core industries sectors based on the economic life or concession period of the project, with periodic refinancing, say every 5 years[2].

15. **Asset quality of the infrastructure sector**

i. The rising NPAs of the infrastructure sector continue to be a concern for the banking system. The sector's share in the total stressed assets (NPAs plus restructured assets) of SCBs has risen from 8.8% in March 2010 to 29.8% in December 2014.

Figure 1: Lending to infrastructure sector – SCBs



Source: Financial Stability Report, RBI

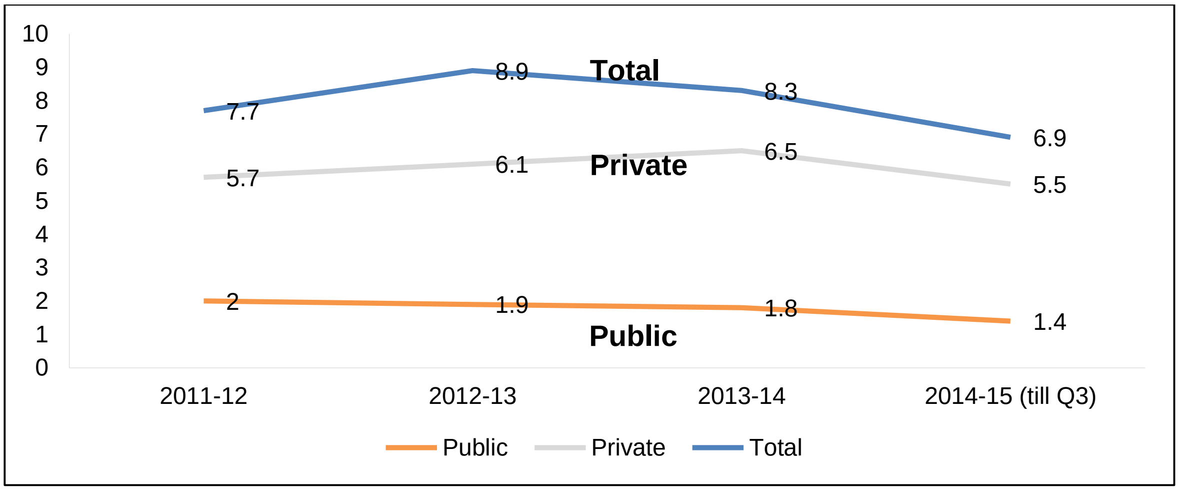
ii. The situation has deteriorated over the last 4 years. As per the latest data published by RBI, infrastructure loans formed 15% of the total loan advances by SCBs, and

[2] *The 5:25 scheme is explained in detail in Annexure IV.*

29.8% of the overall stressed advances were stressed infrastructure assets, as on March 2015. Amongst SCBs, PSBs have been the biggest contributor to infrastructure loans in India. In March 2015, 17.6% of the total loan advances by PSBs were to the infrastructure sector, and 30.9% of the stressed loan portfolio of PSBs was contributed by infrastructure loans.

iii. Time overruns in project implementation continue to be one of the main reasons for underachievement in the infrastructure sector. Stalled infrastructure projects as a percentage of GDP were 6.9% in 2014-15.

Figure 2: Stalled infrastructure projects as a percentage of GDP



Source: Economic Survey 2014-15

iv. According to the Ministry of Statistics and Programme Implementation Flash Report, April 2015, of the 758 central-sector infrastructure projects, each costing INR 150 crore and above, 323 (over 42%) are delayed and 63 have reported additional delays with respect to the date of completion reported in the previous month. Of the 257 projects costing above INR 1,000 crores, 150 have been delayed. Delays in land acquisition, municipal permission, supply of materials, award of work, etc., and operational issues slow down the implementation of these projects and hinder efficient capital expenditure.

16. Further complications in the banking system arise due to the onset of the Basel III norms, due for implementation by 2019. The implications are discussed in the succeeding section.

III. ASSESSMENT OF PSBS INFRASTRUCTURE LOAN PORTFOLIO

A. Sector-wise split of credit by SCBs

17. As on March, 2015, Gross credit for SCBs stood at INR 61 Trillion with non-food credit at INR 60 Trillion (98% of gross credit; rest 2% being food credit). The split of non-food credit by sector for SCBs is given in the figure below. Industries credit accounts for 44% of non-food credit amounting to INR 26.55 Trillion. Retail loans (categorized as Personal loans by RBI which includes housing loans) form 20% of non-food credit. Infrastructure forms part of industries portfolio as categorized by RBI.

18. Infrastructure loans contributes to 35% of industries portfolio amounting to INR 9.247 Trillion. Hence, on an overall basis infrastructure loans form 15% of the overall non-food credit for SCBs, thus figuring among the top segments of SCBs' portfolio

Figure 3: Deployment of Non-food credit - All SCBs (as on March 20, 2015) – In INR Trillion

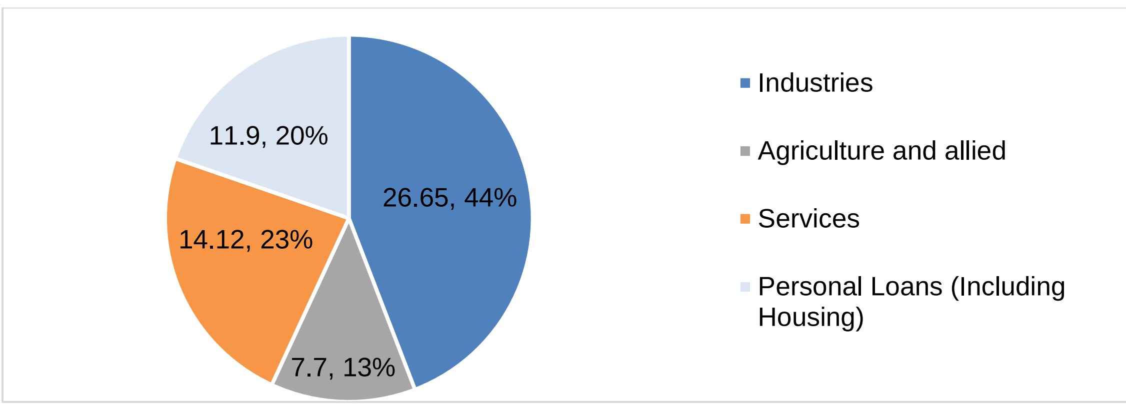
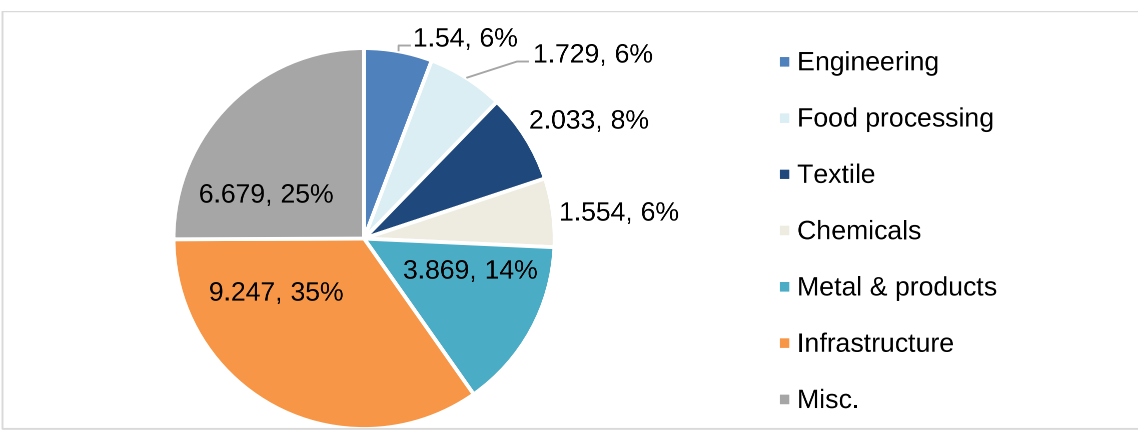


Figure 4: Industry wise deployment – All SCBs (as on March 20, 2015) – In INR Trillion

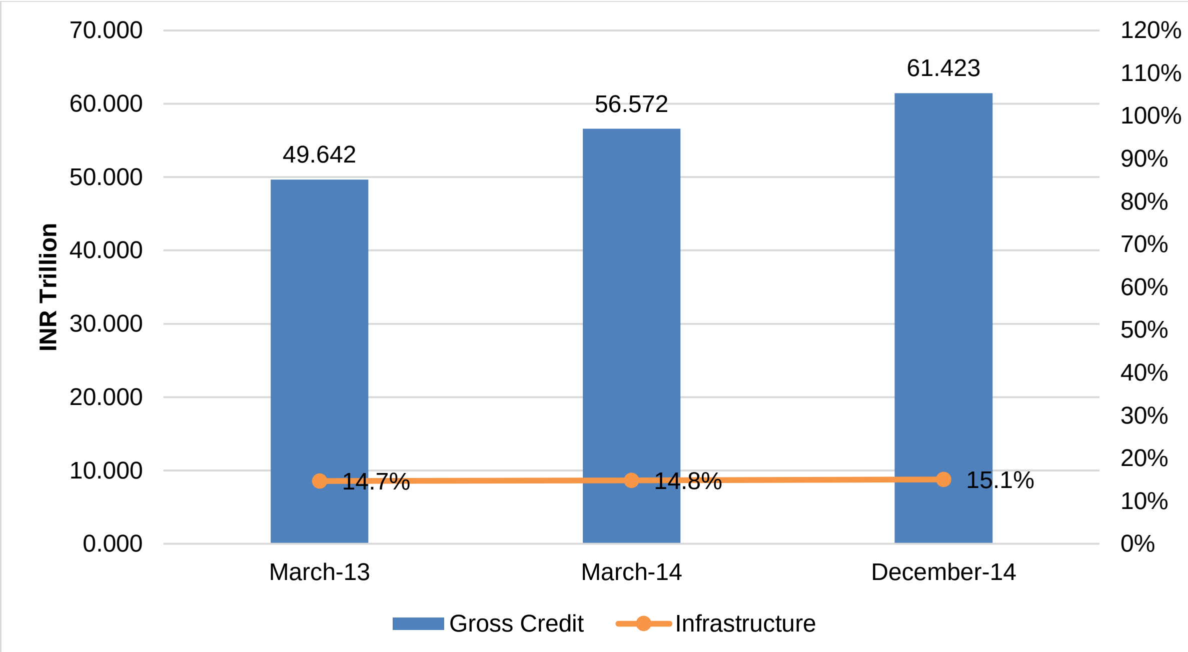


Source: RBI

B. Infrastructure loan portfolio of PSBs

19. The credit growth by SCBs over the last 3 years (FY 2013 to FY 2015) has been at 11% compounded annual growth rate. ***Infrastructure forms 14-15% of the overall credit extended by SCBs over the last 3 years.***

Figure 5: SCBs - Gross credit and infrastructure advances



Source: RBI

20. The share of infrastructure in overall advances is 15% for SCBs[3] (as on December 2014). PSBs play a critical role in infrastructure financing; hence, ***PSBs have even higher exposure to infrastructure loans – 17.6% (amounting to INR 9.41 Trillion)***. Private and foreign banks have much lower share of infrastructure loans in their loan portfolio.

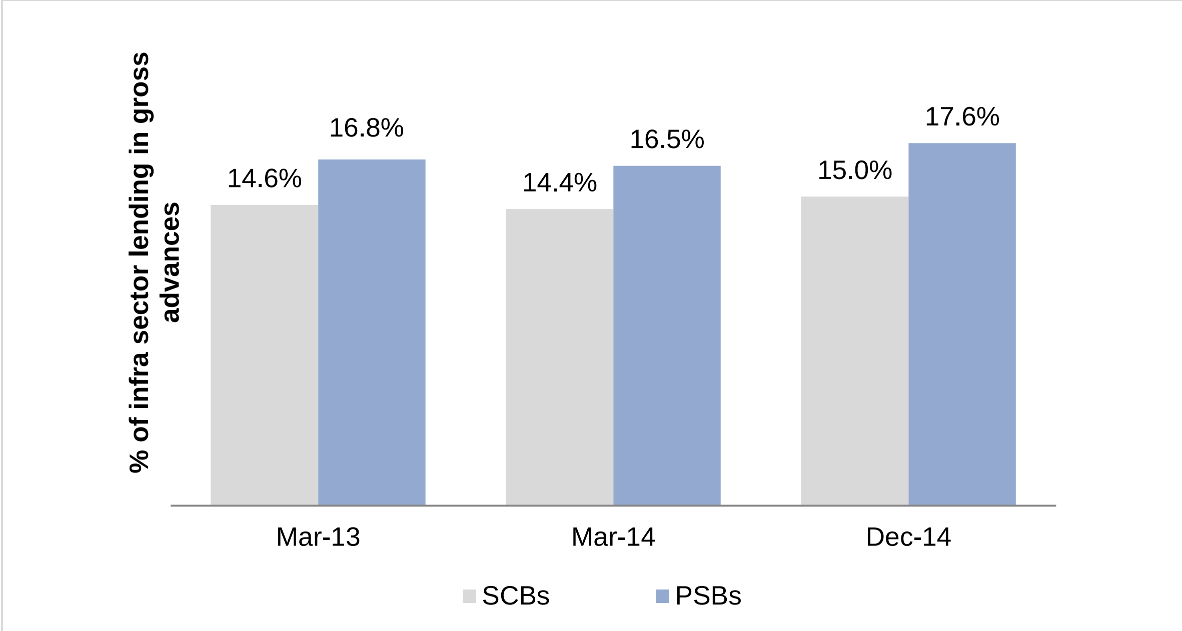
Table 8: Infra Advances by Commercial Banks in India

As on Dec 2014	**PSBs**	**Private banks**	**Foreign banks**	**All SCBs**
Infra advance as % of gross advances	17.6%	8.4%	6.4%	15.0%

Source: RBI

[3] Source: Financial Stability Report, 2015, RBI

Figure 6: Lending to infra sector as percentage of gross advance for SCBs and PSBs



Source: RBI

C. NPAs and restructuring of assets

21. As is evident from the table below, for PSBs the share of gross NPAs has increased from 3.2% in March, 2012 to 5.1% in December, 2014. The share of restructured assets (as percentage of gross advances) has increased from 3.5% in Mar, 2012 to 8.6% in December, 2014. Hence, the ***share of stressed assets (gross NPAs and restructured assets combined) in gross advances has increased from 6.7% in March, 2012 to 13.7% in December, 2014.***

Table 9: Public Sector Bank's - Gross NPAs and Restructured Assets

In INR Billion	Gross advances	Gross NPA (A)	Total restructured assets (B)	Stressed assets (A+B)	As % of gross advances		
					Gross NPA (%)	*Restructured (%)*	*Stressed (%)*
Dec, 2014	53,471	2,727	4,578.83	7,305.83	5.1%	8.6%	13.7%
Mar, 2014	45,981	2,281	3,807.45	6,088.19	5.0%	8.3%	13.2%
Mar, 2013	45,602	1,645	3,170.62	4,815.24	3.6%	7.0%	10.6%
Mar, 2012	35,504	1,125	1,260.06	2,384.95	3.2%	3.5%	6.7%

Source: RBI

22. For PSBs, gross NPAs as percentage of gross advance is 5.1%, amounting to INR 2.7 Trillion. The total stressed assets (includes NPAs and restructured assets) of PSBs stand at INR 7.3 Trillion – of which 30.9% are infra assets. It is evident that between PSBs and Private Banks, the problem of NPAs is much graver for PSBs. The two-fold blow to infra (significant exposure[4] and high NPA) is constraining banks from lending more to infra.

As on Dec- 2014	**Public Sector Banks**	**Private Banks**	**Total SCB**
Gross NPA as % of gross advance	***5.1%***	2.3%	4.9%
Infra stressed assets as % of infra advance	**23.7%**	10.0%	22.0%
Infra stressed assets as % of total stressed assets	**30.9%**	18.2%	29.8%

Source: RBI, CRISIL Infrastructure Advisory

D. Implications of Basel III norms on PSBs

23. The Basel III accord was set forth by the Basel Committee on Banking Supervision in 2010-11. Reserve Bank issued guidelines based on Basel III reforms on capital regulation on May 2, 2012, applicable to all scheduled commercial banks operating in India.

24. The Basel III capital regulation has been implemented from April 1, 2013 in India in phases and will be fully implemented on March 31, 2019. The minimum capital ratios[5] to be maintained under various categories are given in the table below.

Table 10: Year-on-Year Minimum Capital Ratios to be maintained for banks operating in India (Prescribed by RBI)

	April 1, 2013	**April 1, 2014**	**April 1, 2015**	**April 1, 2016**	**April 1, 2017**	**April 1, 2018**	**April 1, 2019**
Common Equity Tier-1 (CET 1)	4.5	5	5.5	5.5	5.5	5.5	5.5

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[4] *Though RBI does not mandate sectoral exposure limit, banks tend to fix their internal exposure limits so that exposures are evenly spread across sectors and the risk of over-exposure to a single sector is minimized.*

[5] *Bank should compute Basel III capital ratios as follows: Common Equity Tier 1 capital ratio = Common Equity Tier 1 capital / Risk Weighted Asset (RWA); Risk Weighted Asset includes market risk weighted asset, credit risk weighted asset and operational risk weighted asset.*

Capital Conservation Buffer (CCB)	-	-	-	0.6125	1.25	1.875	2.5
CET1 + CCB	4.5	5	5.5	6.125	6.75	7.375	8
Additional Tier 1 (AT-1)	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Total Tier 1 Capital	6	6.5	7	7.625	8.25	8.875	9.5
Tier-2	3	2.5	2	2	2	2	2
Total Capital (CRAR)	9	9	9	9.625	10.25	10.875	11.5

Source: RBI

25. Broadly, the RBI guidelines are tighter than the global Basel III recommendations. Several aspects of the Indian framework are more conservative than the Basel framework, as highlighted in the table below.

Table 11: Minimum capital ratios: Comparison of capital requirement standards

	Basel III of Basel Committee	**Basel III of RBI (as on April 1, 2019)**	**Basel II of RBI**
Common equity Tier 1 (CET 1)	4.5	5.5	3.6
Capital conservation buffer[6] (CCB)	2.5	2.5	-
CET 1 + CCB	7.0	8.0	3.6
Additional Tier 1 Capital	-	1.5	-
Tier 1 Capital (CET 1 + additional)	7.0	7.0	3.6
Tier 2 Capital	1.0	2.0	2.4
Total Capital (Tier 1 + Tier 2)	8.0	9.0	6.0
Total Capital + CCB (CRAR)	10.5	11.5	9.0

[6] *CCB is proposed to ensure that banks build up capital buffers and draw on them during times of stress; as a result, besides the minimum total capital (MTC) of 8%, banks will be required to hold a CCB of 2.5% of risk-weighted assets **in the form of common equity**.*

	Basel III of Basel Committee	Basel III of RBI (as on April 1, 2019)	Basel II of RBI
Additional countercyclical buffer[7] in the form of common equity	0-2.5	0-2.5	-

Source: RBI, Basel Committee on Banking Supervision (BCBS)

26. The new Basel III guidelines have a positive impact on the banking system by raising the minimum core capital stipulation, introducing capital buffers and enhancing banks' liquidity position. However, with the increase in minimum CET 1 and CRAR banks will be required to strengthen their common equity capital position.

Table 12: Impact of Basel III on banks' capital

Key factors	Impact on common equity Tier 1 capital	Impact on additional Tier 1 capital	Impact on Tier 2 capital
Increase in capital requirements	Increase	Increase	Increase
Introduction of capital buffer	Increase	Increase	Increase
Deductions made from common equity	Increase	NA	NA
Definition of common equity to exclude share premium from non-common equity capital	Increase	Decrease	NA

Source: CRISIL Infrastructure Advisory

27. Basel III recommendations are towards improving overall level of high quality capital in the bank and enhancing risk coverage of capital. Under Basel III, Tier 1 Capital will be the predominant form of regulatory capital. Within Tier 1, CET 1 will be predominant form of capital, hence improving overall level of high quality capital in banks.

[7] *Countercyclical buffer is proposed to protect banks during periods of excessive aggregate credit growth; this buffer will be in effect only when there is excessive credit growth that results in risk build-up.*

28. Several studies[8] have estimated capital requirements by the Indian banking sector under Basel III to the tune of INR 2.5 to 6 trillion by March-2019. An assessment of the total capital requirement has been made in Section III.F – Assessment of Capital Requirements of PSBs.

E. Capital adequacy issues of PSBs

29. PSBs are struggling to meet the Tier-I requirements under the Basel III norms[9]. Most banks (19 out of 26 PSBs) fall in 7-9% range (mandatory requirement in March 2014 was at 6.5%). United Bank of India just met the mandatory criteria with 6.54% Tier 1 capital. With mandatory Tier 1 capital requirement increasing to 9.5% by 2019, PSBs would need quantum of capital support to meet Tier 1 capital.

Figure 7: Split of Public Sector Banks (no.) in different Tier-1 capital ranges (as on March 2014)

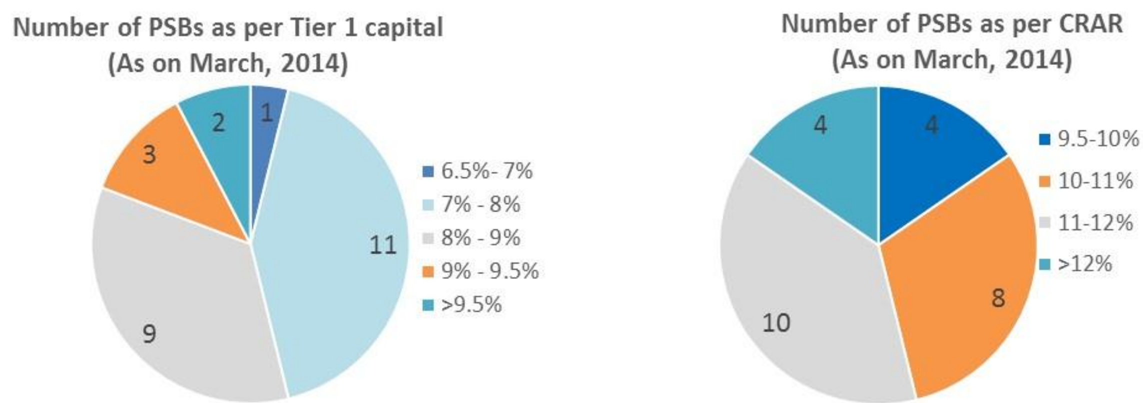


Table 13: CRAR - Indian Banks

CRAR*	SCBs	PSBs	Private banks
March 2014	13.5	**11.18**	14.22
March 2013	14.25	**12.15**	14.75

** CRAR – (Total capital (Tier 1 + Tier 2) + Capital Conservation Buffer)/ Risk-weighted Assets*

Source: RBI

30. The banks which had the lowest CRAR in March 2014, just meeting the mandatory BASEL III CRAR requirement of 9% in that year were the following:

    i. Allahabad Bank – 9.96

[8] *Refer Table 1, Section 1 - Introduction*

[9] *Please refer to Basel III section for Year wise CRAR requirements for banks which operate in India*

ii. Bank of India – 9.97

iii. Central Bank of India – 9.87

iv. United Bank of India – 9.81

Eighteen bank's had CRAR in 10-12% range (mandatory req. at 9% in March 2014). Hence, PSBs are better placed on CRAR and Tier 1 is a bigger concern.

F. Assessment of Capital Requirements of PSBs

31. Assuming a conservative average credit growth of 12% over the next four years, a capital requirement of INR 3.0 trillion has been estimated for public sector banks in India. With a higher credit growth of 14%, this requirement rises to INR 3.9 trillion, as shown in the table below.

Table 14: Estimated Capital Requirement of Banks

	Scenario 1 – 12% Credit Growth (PSBs)	**Scenario 2 – 14% Credit Growth (PSBs)**
Credit Growth (PSBs)	12%	14%
Basel III mandated CAR	9.7%-11.5%	
Gross Credit (PSBs)	INR 38.3 Trillion	INR 46.4 Trillion
Total Incremental Capital Requirement (PSBs)	INR 3.0 Trillion	INR 3.9 Trillion

Source: CRISIL Infrastructure Advisory Estimates

32. To provide comfort to banks in view of this requirement, the Union Budget 2015-16 announced an infusion of INR 700 billion for PSBs in a phased manner over the next four years. Further, the Ministry of Finance has also recently conveyed its intention to reduce its equity stake in PSBs to 51% to help PSBs meet Basel III requirements. A preliminary assessment of this dilution over the next 4 years (at current price) suggests an equity release of almost INR 400 billion. With these cushions in place, the capital requirement of the banking sector reduces to INR 1.02 trillion over the next 4 years for PSBs.

Table 15: Estimated Gap in Total Capital Requirement for PSBs

	Scenario 1 – 12% Credit Growth (PSBs)	**Scenario 2 – 14% Credit Growth (PSBs)**

Total Incremental Capital Requirement (PSBs)	INR 3.0 Trillion	INR 3.9 Trillion
Govt. infusion	INR 700 Billion	
Equity Release due to dilution in Govt. holding	INR 403 Billion	
Gap in Total Capital Required (PSBs)	**INR 1.9 Trillion**	**INR 2.8 Trillion**

Source: CRISIL Infrastructure Advisory Estimates

33. Thus, PSBs require capital to the tune of INR 1.9 Trillion by 2019-20 to meet the stipulated Basel III norms.

G. Bank-wise assessment of infrastructure portfolio

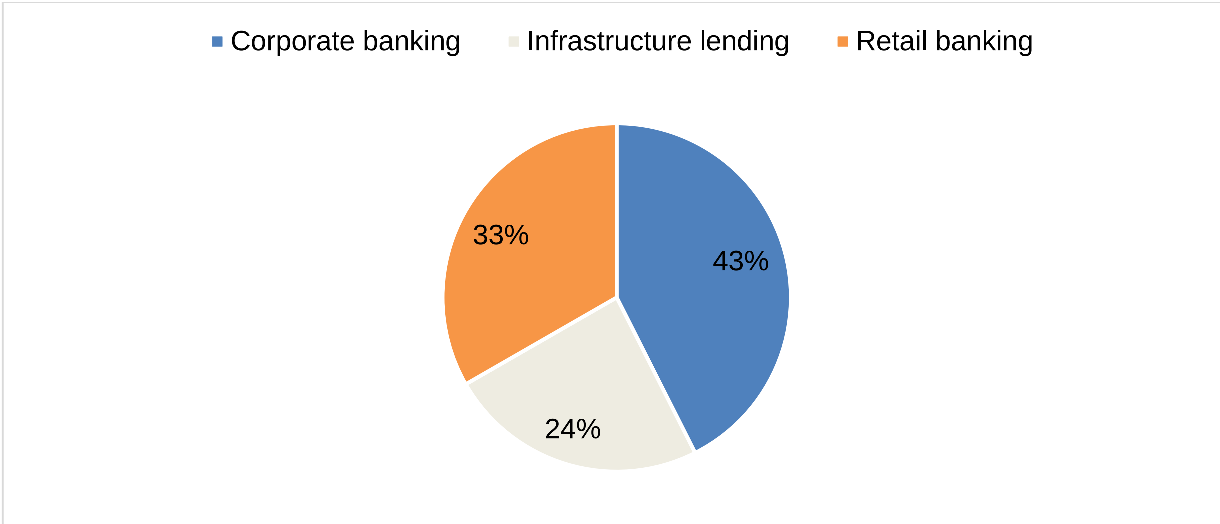
IDBI Bank

34. Industrial Development Bank of India (IDBI) was set up in 1964 as a Development Finance Institution (DFI). In 2004, IDBI was transformed into a full-service commercial bank.

35. Infrastructure advances form major part of the overall advances for the bank (24% of the overall advances amounting to INR 503 billion in March 2015).

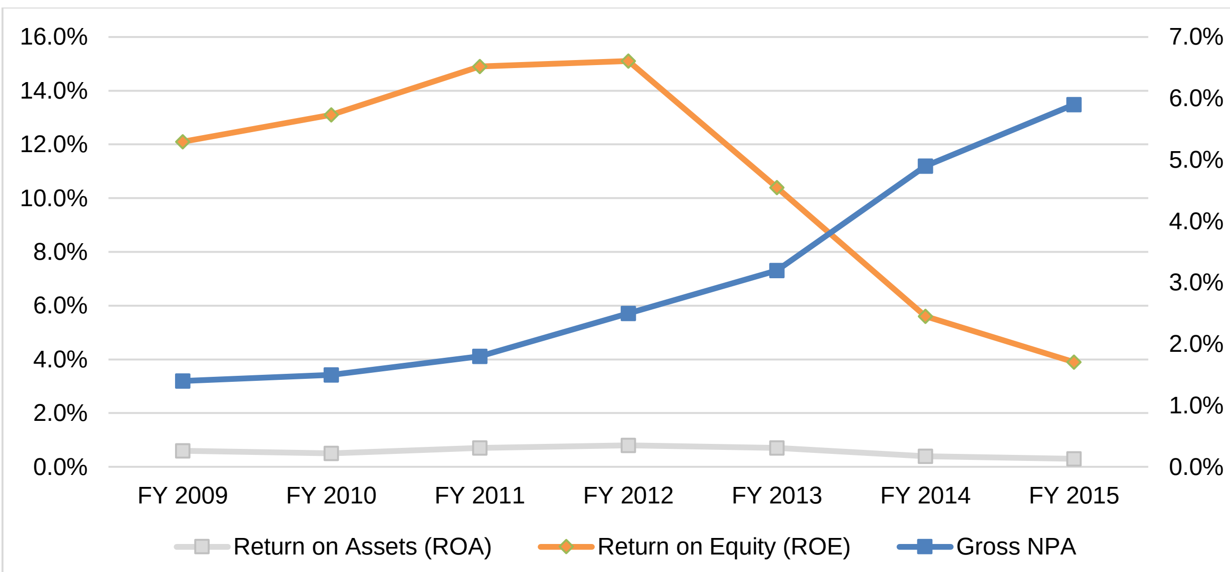
36. Increase in NPAs and downward trend in Return on Equity (ROE) and Return on Assets (ROA) are a major cause of concern to the bank.

Figure 8: IDBI bank - Advances mix as on March, 2015 (INR Billion)



Source: IDBI Investors Presentation

Figure 9: IDBI bank - Key ratios



Source: IDBI Investors Presentation

37. Though the bank presently stands satisfactory on Basel III norms, the increase in NPA is a cause of concern for the bank. It is also evident from the high RWA at 136% in March 2014 and March 2015.

Table 16: Basel III Compliance scenario for IDBI bank[10]

In INR billion	**March 2014**	**March 2015**			**March 2014**	**March 2015**
CET 1 (A)	209.59	208.10		CET 1 % (A / RWA)	7.8%	7.3%
Additional Tier 1 (B)	0.25	25.31				
Tier 1 (C = A+B)	209.84	233.41		Tier 1 % (C / RWA)	7.8%	8.2%
Tier 2 (D)	104.80	102.35				
Total Capital (F = C+D)	314.64	335.76		CRAR % (F / RWA)	11.7%	11.8%
Total advances (G)	1976.86	2083.77				
Risk Weighted Asset (RWA)	2694.71	2855.42		RWA % (RWA / G)	136%	137%

Source: IDBI Investors Presentation

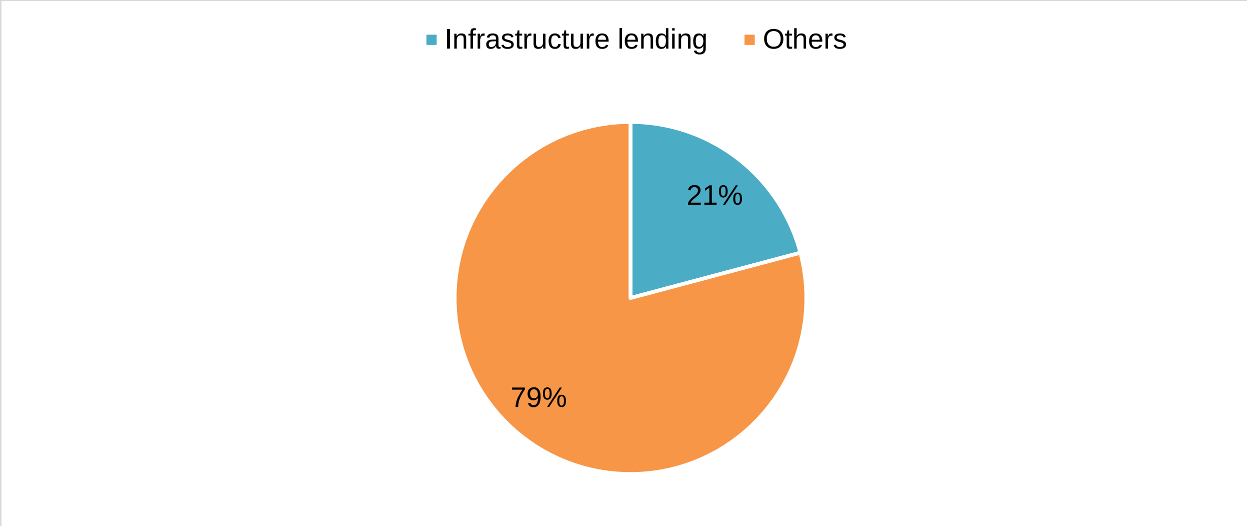
United Bank of India

38. United Bank of India (UBI), headquartered in Kolkata was one of the 14 banks which were nationalized in 1969. The bank has extensive coverage in north-east region of India and is also known as "Tea Bank" being the largest lender to tea industry and its age old association with the financing of tea gardens.

39. Infrastructure advances form major part of the overall advances for the bank (21% of the overall advances amounting to INR 144 billion in March 2015).

[10] *Source: IDBI Annual Reports*

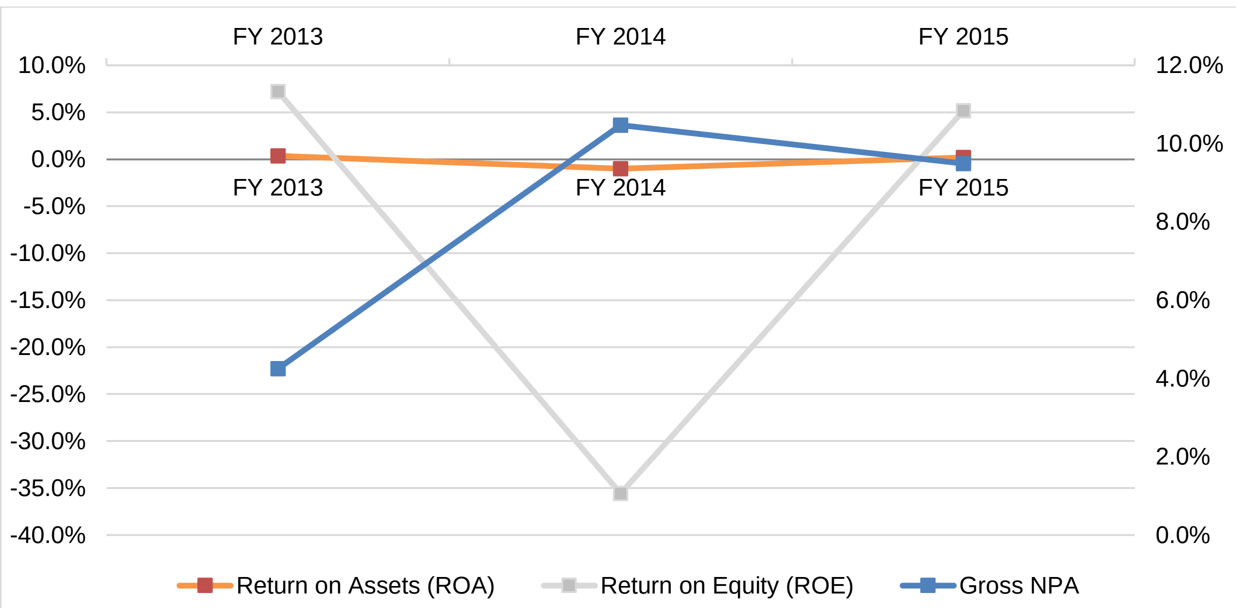
Figure 10: United Bank of India - Advances Mix as on March, 2015 (INR Billion)



Source: United Bank of India Financial Reports

40. High NPAs (increased from 4.3% in March 2013 to 9.5% in March 2015) have majorly impacted bank's profitability and hence, ROE and ROA.

Figure 11: United Bank of India – Key Ratios



Source: United Bank of India Financial Reports

41. The bank was at likely risk of becoming the first lender in India to breach minimum capital ratios (CRAR) mandated by RBI under Basel III. In February, 2014 the bank reported Tier 1 capital ratio of 6.1% which was below the mandated percentage. However, at the time of financial year closing (March 31, 2014), the Basel III norms were met.

42. The drastic increase in NPA (from INR. 29.64 billion in March 2013 to INR. 71.18 billion in March 2014) and net loss (net loss of INR 12 billion for FY 2014) were the key cause of problem in meeting norms relating to minimum capital ratios.

Table 17: Basel III Compliance scenario for United Bank of India[11]

In INR billion	March 2014	March 2015			March 2014	March 2015
CET 1 (A)	39.9	50.2		CET 1 % (A / RWA)	6.5%	7.5%
Additional Tier 1 (B)	0.0	0.0				
Tier 1 (C = A+B)	39.9	50.2		Tier 1 % (C / RWA)	6.5%	7.5%
Tier 2 (D)	19.9	20.3				
Total Capital (F = C+D)	59.8	70.6		CRAR % (F / RWA)	9.8%	10.6%
Total advances (G)	679.8	690.7				
Risk Weighted Asset (RWA)	610.1	668.0		RWA % (RWA / G)	89.7%	89.7%

Source: United Bank of India Financial Reports

Central Bank of India

43. Central Bank of India is one of the Public Sector Banks which has a vast coverage expanding over 29 states and in 6 out of 7 Union Territories in the country. Headquartered in Mumbai, the bank was established in 1911 and got nationalized in 1969.

44. Infrastructure advances form major part of the overall advances for the bank (21% of the overall advances amounting to INR 377.31 billion in March 2013)[12].

45. Level of NPAs increased from 4.8% in March 2013 to 6.3% in March 2014 which impacted the profitability and hence, ROE and ROA particularly in March 2014.

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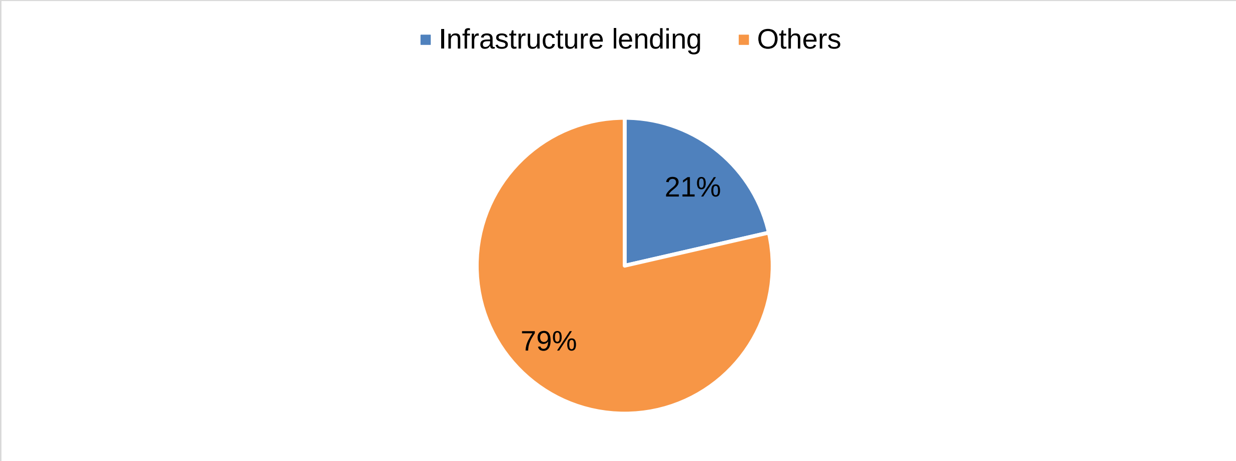
[11] *Source: United Bank of India Annual Reports*

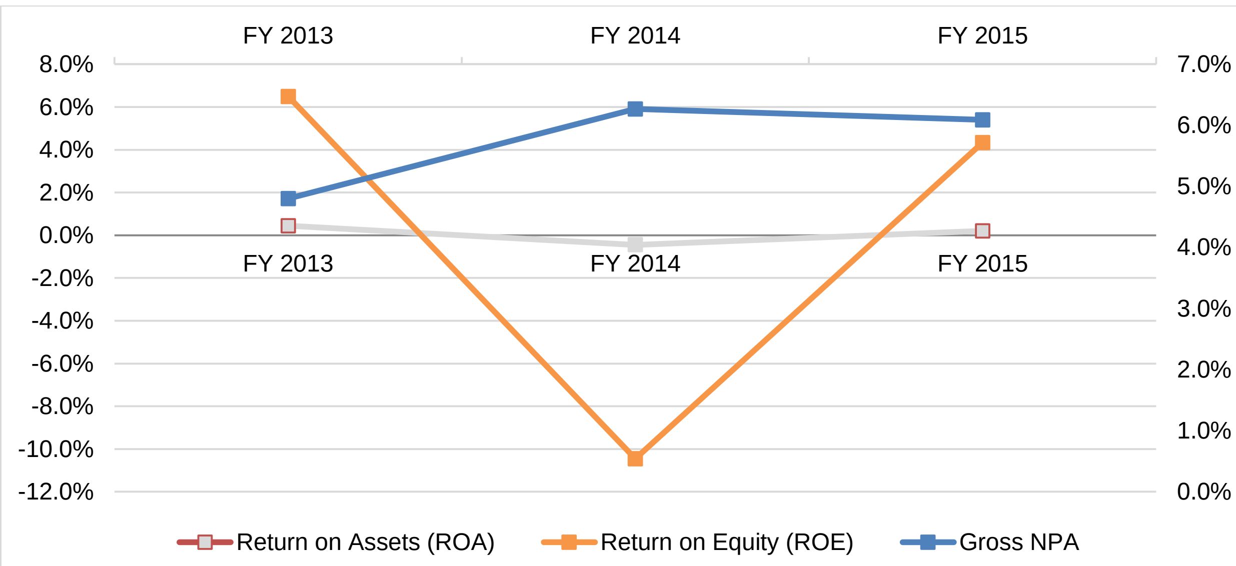
[12] *Exposure to infrastructure data for FY 2014 and FY 2015 is not available.*

Figure 12: Central Bank of India - Gross Advances as on March, 2013 (INR Billion)



Source: Central Bank of India Annual Reports

Figure 13: Central Bank of India - Key Ratios



Source: Central Bank of India Annual Reports

46. Central Bank of India could just meet the Basel III requirements in March 2014. The performance on Basel III compliance improved for the bank in March 2015. The bank would need to take efforts towards complying with the minimum capital ratios prescribed by RBI (increasing year-on-year with minimum CRAR % prescribed for April 2019 at 11.5% – complete details on minimum Basel III requirements in Basel III section of the report).

Table 18: Basel III Compliance scenario for Central Bank of India

	March 2014	March 2015
CET 1 %	6.47%	7.86%

Tier 1 %	7.37%	8.05%
CRAR %	9.87%	10.9%

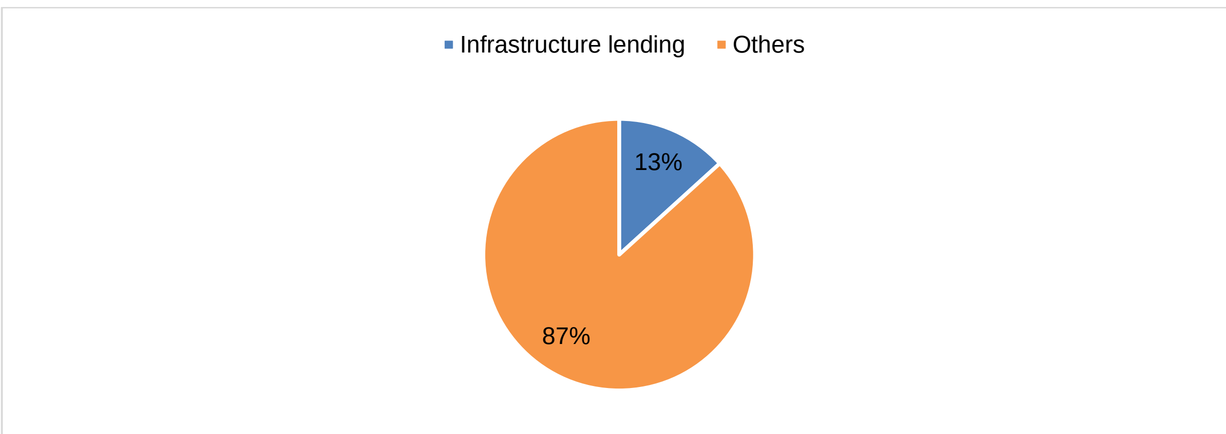
Source: Central Bank of India Annual Reports

State Bank of India

47. State Bank of India (SBI) is a government owned bank headquartered in Mumbai. It is one of the big four banks of India along with Bank of Baroda, Punjab National bank and ICICI Bank. The bank has the largest banking and financial services in India by assets with excellent coverage within the country and even overseas.

48. Infrastructure advances form 13% of gross advances. However in real terms, the infrastructure portfolio is huge amounting to INR 1772.53 Billion in March 2015.

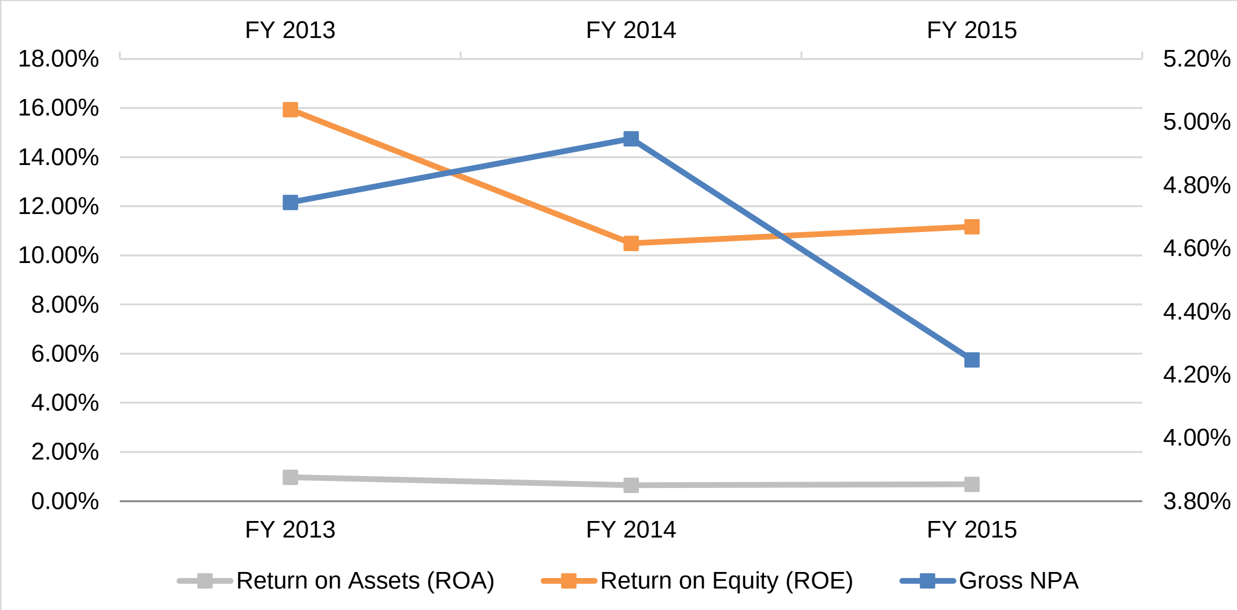
Figure 14: State Bank of India - Advances mix as on March, 2015 (INR Billion)



Source: State Bank of India Annual Reports

49. Gross NPAs increased marginally in March 2014 from March 2013 levels, impacting the ROE and ROA for the bank. However, the bank revived and performed better in March 2015.

Figure 15: State Bank of India - Key ratios



Source: State Bank of India Annual Reports

50. SBI is on a downward trend from 2013 to 2015 as far as CRAR % is concerned. However, considering the NPA and RWA has come down, the bank can be expected to sail through the minimum capital requirements set by RBI.

Table 19: Basel III Compliance scenario for State Bank of India

	March 2013	**March 2014**	**March 2015**
CET 1 %		9.59%	9.31%
Tier 1 %	9.32%	9.72%	9.60%
CRAR %	12.51%	12.44%	12.00%
RWA %	93.2%	90.5%	91.4%

Source: State Bank of India Annual Reports

IV. MONETIZATION OF INFRASTRUCTURE ASSETS

A. Government initiatives to monetize infrastructure assets

51. Monetization of infrastructure sector is critical. Several innovative schemes and initiatives have been announced in the recent past to encourage fund flow to the infrastructure sector. These include credit enhancement mechanisms like the partial credit guarantee scheme by India Infrastructure Finance Company Limited (IIFCL), credit enhancement by banks, infrastructure debt funds (IDFs), take-out finance schemes, infrastructure investment trusts (InvITs) and infra bonds. Majority of these schemes are available to the borrower (developer) of infrastructure projects post achievement of commercial operations date (COD). Lenders have very limited schemes available to them for monetization of infrastructure loans. The following table summarizes the schemes[13] available at various phases to the developer and the lender.

Table 20: Funding schemes available to borrower and lender at various stages

Phases	**Schemes & Investor Category**	**Type of Funding**	**Available to**
Operations Phase – 1 (Post COD /Short term)	Domestic Banks, PCG, Bonds, Infra Debt Fund and ECB	Refinancing Debt	Developer
	Take-out financing	Debt	Developer/ Lender
	Securitization	Debt	Lender
Operations Phase –2 (Medium and Long term)	Domestic Equity Capital markets	Equity	Developer
	Securitization	Debt	Lender

Source: CRISIL Infrastructure Advisory

52. All the schemes listed above have distinct features set forth to enable better access of funding to the infrastructure sector and are expected to play a significant role in bridging the gap in infrastructure financing. While schemes such as the partial credit guarantee and infrastructure investment trusts are accepted to gradually gain traction in the market, initiatives such as IDFs

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[13] *An overview of these instruments and their operations is provided in the Annexure 2.*

(especially those originated by non-banking financial companies (NBFCs)) have already raised over INR 1,200 crore in the market for infrastructure assets. Moreover, various new initiatives are in the pipeline such as the National Investment & Infrastructure Fund and Bond Guarantee Fund for India. Together, these schemes aim to provide alternative ways to channel finance and boost the infrastructure sector.

53. However, ***while a majority of these schemes provide solace to infrastructure developers, only limited alternatives are available for lenders of infrastructure finance, especially banks.*** Securitization can be seen as an effective option for lenders to monetize their infrastructure assets. As explained subsequently, securitization will enable banks to sell their infrastructure assets to a securitization trust or a special purpose vehicle (SPV), which in turn will issue securities backed by these assets. Securitization could potentially help banks to diversify their risks and alleviate large bulk risks of a single project while offering capital to finance critical needs of the infrastructure sector. It also offers an opportunity for banks to improve their capital ratios by transferring assets from their balance sheets to securitization trusts and SPVs.

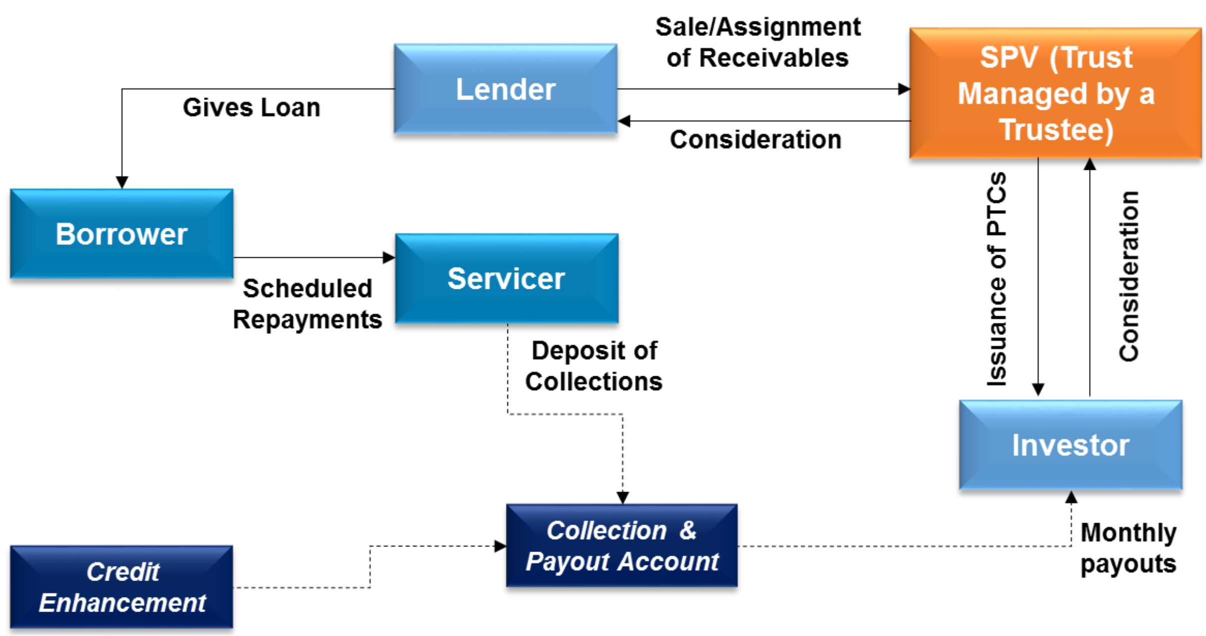
54. Securitization will also benefit from the existing schemes available for the infrastructure sector, since existing and upcoming funds are seen as potential investors and guarantors to securities issued by securitization trusts. All these solutions will complement each other and would contribute towards reducing the infrastructure funding gap. While the schemes mentioned above also enable monetization of infrastructure assets, this report focuses solely at exploring the feasibility of securitization as a method of monetization.

B. Understanding securitization in the Indian context

55. Securitization is the process of converting illiquid loans into marketable securities. The lender sells his/her right to receive future payments from the borrowers of loan, to a third party and receives consideration for the same. Hence, the lender receives the repayment in the form of consideration at the time of securitization. These future cash flows from the borrowers are sold to investors in the form of marketable securities.

56. Securitization in India predominantly takes the form of a trust structure wherein the underlying assets are sold to a trustee company, which holds it in trust for investors. The trustee company in this case is an SPV that issues securities in the form of pass or pay through certificates (PTCs). The trustee is the legal owner of the underlying assets. The investors holding these certificates are entitled to a beneficial interest in the underlying assets held by the trustee, as depicted in the figure below.

Figure 16: Securitization Structure in India



Source: CRISIL Infrastructure Advisory

57. The roles of each party involved in the securitization process are as follows:

i. **Originator –** Original lender and seller of receivables; in Indian context, typically a bank, an NBFC or a housing finance company

ii. **Seller –** One who pools the assets in order to securitize them; usually, the seller and the originator are same in India.

iii. **Borrowers –** Counterparty to whom the originator makes a loan; payments (typically in the form of EMIs) made by borrowers are used for making investor payouts.

iv. **SPV (issuer) -** Typically set up as a trust in India; issues marketable securities, which the investors subscribe to and ensures the transaction is executed as per specific terms

v. **Arranger –** Investment banks responsible for structuring the securities; they liaison with other parties (such as investors, rating agencies and legal counsel) to successfully execute the transaction

vi. **Investors –** Purchasers of securities; typically banks, insurance funds, mutual funds

vii. **Rating agencies –** Analyze the risks associated with the transaction, stipulate the credit enhancement commensurate with the rating of the PTCs and monitor performance of the transaction till maturity and take appropriate rating actions

viii. **Credit enhancement provider -** Typically provided by the originator as a facility which covers any shortfall in the pool collections in relation to the investor payouts; can also be provided by a third party for a fee

ix. **Servicer -** Collects the periodic installments due from individual borrowers and makes payouts to the investors, also follows up on delinquent borrowers, furnishes periodic information on pool performance to the rating agency (typically, the originator acts as a servicer in Indian markets)

58. Three types of securitized instruments are prevalent. Asset-backed securities (ABSs) are instruments backed by receivables from financial assets like vehicle loans, personal loans, credit cards and other consumer loans, but excluding housing loans. Mortgage-backed securities (MBSs) are instruments backed by receivables from housing loans. Collateral debt securities (CDO) are instruments backed by various types of debt, including corporate loans or bonds.

C. Securitization structures prevalent in India

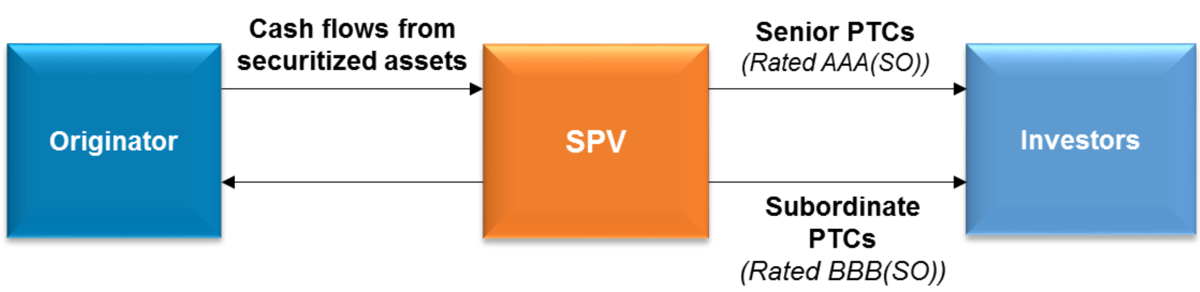
59. The structuring of cash flows gives originators flexibility to tailor instruments meeting investor requirements based on the risk appetite and tenor requirements. The two most commonly used structures in India are:

i. **Par structure** - Investor pays a consideration equal to the principal component (par value) of future cash flows. In return, the investor is entitled to receive scheduled principal repayments from the pool in addition to the contracted yield (called PTC yield) every month. Typically, the asset yield is greater than PTC yield, which results in excess cash flows every month, often referred to as excess interest spread or EIS. For example, a pool of assets with a principal amount of INR 1 billion with a collective yield of 12%, might be sold to the investors at a yield of 11%. In this case, the investors are entitled to principal amount of INR 1 billion along with a yield of 11%. The excess 1% yield from the pool of assets acts as EIS, thereby protecting against any shortfalls in the cash flow of the pool of assets to that extent.

i. **Premium structure** - The investor is entitled to the entire cash flows (EMIs) from the pool every month. The investor pays a consideration greater than principal component of future cash flows. The purchase consideration is the net present value of the entire cash flows discounted at a contracted rate (PTC yield). This structure does not involve an excess interest spread. For example, in case of a pool of assets with a principal amount of INR 1 billion with a yield of 12%, the total cash flows amount to INR 1.12 billion. In a premium structure, the investors are entitled to the entire cash flow of INR 1.12 billion, for which the purchase consideration may be slightly higher than INR 1 billion, say INR 1.01 billion. Thus, the yield of PTC is 10.9% (an expected yield of INR 0.11 billion on an investment of INR 1.01 billion)

60. Risk tranching is a form of cash flow tranching prevalent in India. It involves creation of instruments with different risk profiles. Senior pass through certificates are accorded the first priority on cash flows, characterized by highest rating and thus, lowest risk, while subordinate pass through certificates support payments to senior tranches and carry lower credit ratings, as shown in the figure below.

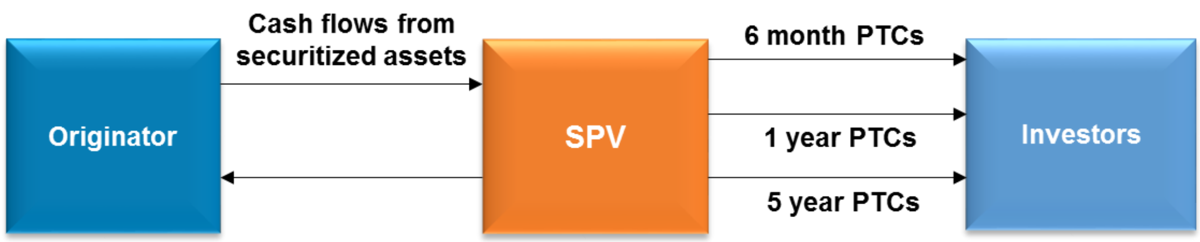
Figure 17: Risk-tranching Securitization Structure



Source: CRISIL Infrastructure Advisory

61. Time tranching and prepayment tranching are two other forms of tranching; however, these are not prevalent in India. Time tranching involves creation of securities having different durations.

Figure 18: Time-trancing Securitization Structure



Source: CRISIL Infrastructure Advisory

62. In prepayment tranching, investors have a preference for bond-like payouts. All the prepayments allocated to a separate strip called prepayments strip (Series P). Hence, the main Investor (Series A) is insulated against any volatility arising out of prepayments. Volatility of cash flows to Series P is taken care of while pricing the instrument.

63. Credit enhancement is also important as it is a source of funds to protect the investors in case losses occur in the securitized assets. Credit enhancement improves the credit quality of securitized instruments in order to achieve the desired credit ratings. Typically, in securitization, a combination of internal (subordinated cash flows, EIS) and external (cash collateral, corporate undertaking) sources are taken for credit enhancement.

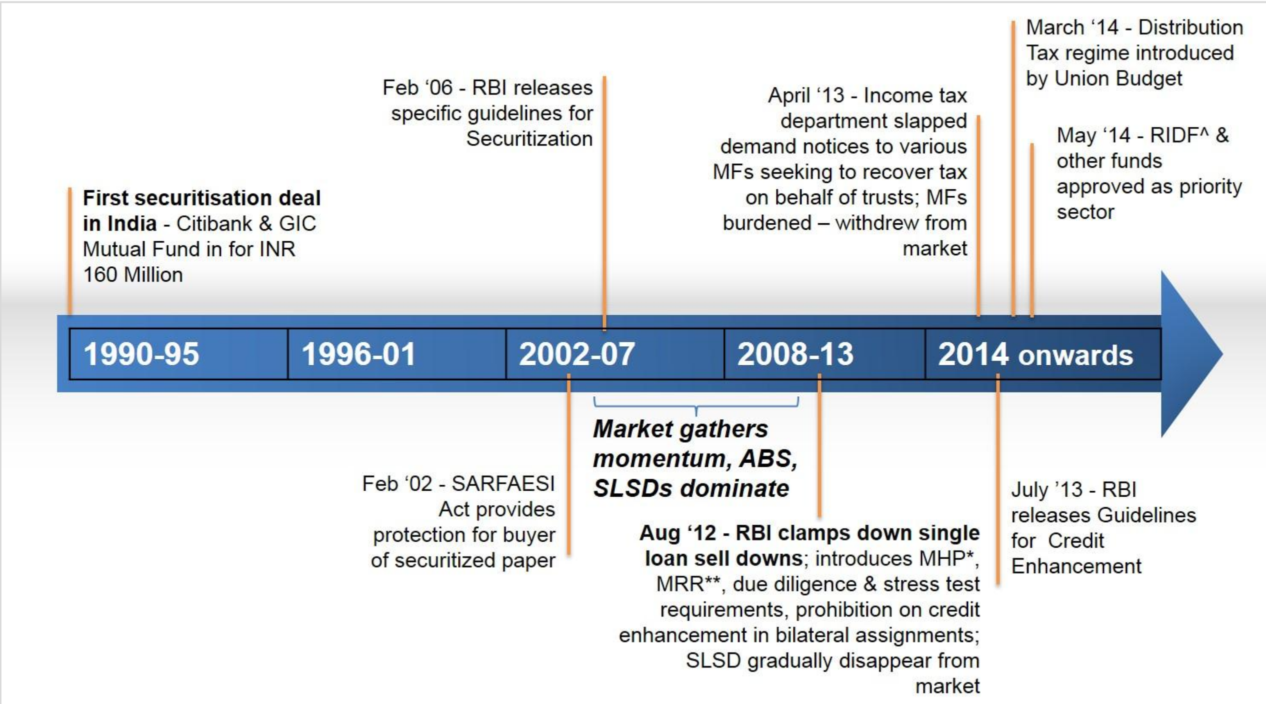
64. Apart from the SPV route through issue of PTCs, financial institutions also sell pool of assets directly to other financial institutions, without issue of PTCs. Such transactions are referred to as direct assignment transaction. While MFs could invest only in “instruments”, banks often preferred to acquire loan portfolios outright, since PTCs—by virtue of them being investments—would need to be marked to market, and loans and advances do not have this requirement. Given that these transactions help towards meeting their PSL targets, Assignees (usually Banks) typically provided fine pricing to the Originators (typically NBFCs) for the same, which MFs—the other potential investor segment—was generally unable to match. As per current RBI regulations, such transactions cannot have credit enhancements and hence the institution which buys the pool of assets, typically adjusts the purchase consideration to compensate for the lack of credit enhancement

D. India’s securitization market - Key trends

65. The securitization market in India has been in existence since the early 1990s. The growth of this market can be attributed to the repackaging of retail assets and residential mortgages (mainly in the priority sector segment) that continue to dominate the current scenario. NBFCs and housing finance companies constitute the key originators of securitized transactions in India, while banks are the leading investors, owing to their priority sector lending (PSL) targets.

66. Indian securitization market is primarily dominated by ABSs. Banks and NBFCs sell the retail assets on their books through securitization.

Figure 19: Key events in securitisation in India



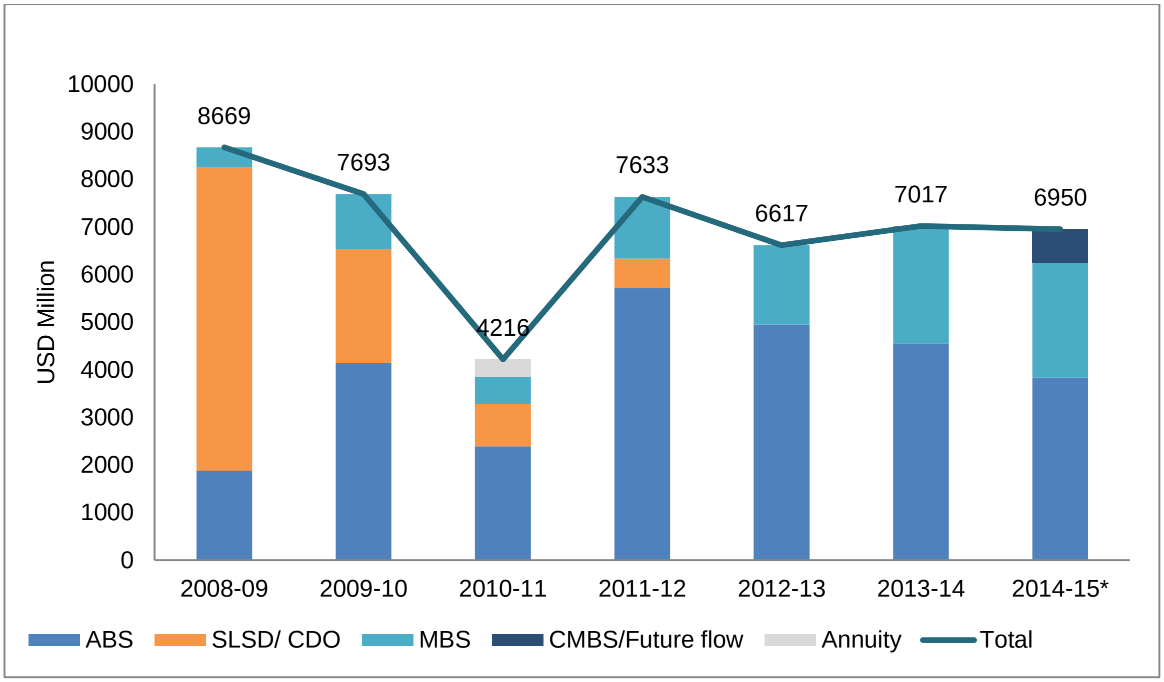
E. Key trends in the past few years

67. The securitization market in India has matured in the past decade, post the implementation of the Securitization and Reconstruction of Financial Assets and Enforcement of Security Interest Act, 2002, which provided the framework for the constitution of asset reconstruction companies specializing in securitizing assets purchased from banks. Securitization of auto loans has dominated the market throughout its development, supported by the emergence of residential MBSs in the 2000s.

68. Development of the securitization market in India has been marked by limited diversification of both investors and originators. Originators have typically been private sector banks, foreign banks and NBFCs, with their underlying assets being mostly retail and corporate loans. PSBs have been the investors, participating in the securitization market for meeting their PSL needs.

69. The figure below depicts the trend in securitization issuances over the past few years.

Figure 20: Trend in securitization issuances



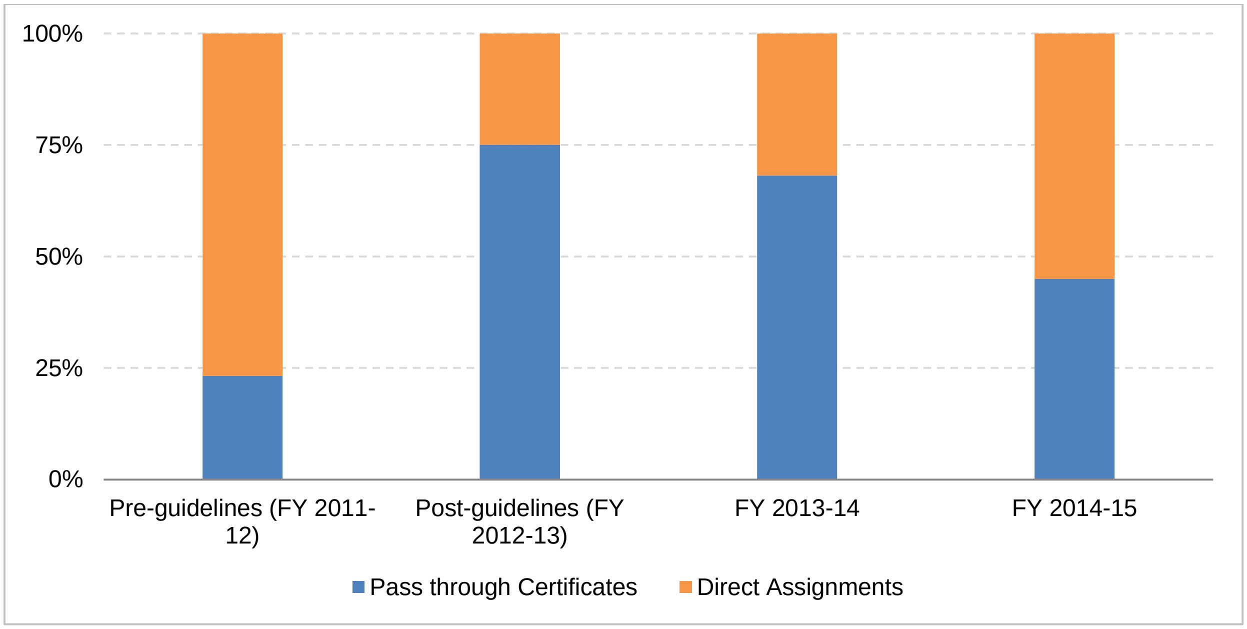
Source: CRISIL analysis

70. The market comprised mainly of ABSs, MBSs, and single-loan sell-downs (SLSDs) till FY 2010. SLSDs showed a sharp decline from FY 2010 to FY 2012. The market for SLSDs grew as corporates with surplus cash started investing in fixed maturity plans (which further invested in SLSDs) because of tax arbitrage that these funds provided. Regulatory restrictions brought down the market for SLSD in 2011. *There had been no instances of securitization of infrastructure loan assets*

71. There was a decline in ABS and MBS volumes in the last two years. Regulatory changes in treatment of Rural Infrastructure Development Fund (RIDF) investments for PSL impacted the securitization volumes. Since May 2014, RBI has allowed indirect agriculture lending under the PSL target to RIDF, maintained with the National Bank for Agriculture and Rural Development[14]. Current year saw debt issuances under two new structures – Commercial Mortgage Backed Securities (CMBS) and future flow, which contributed nearly 10% of overall volumes.

[14] *Banks are required to lend 40% of their loans to agriculture, small industries and other economically weaker sectors. Of this, 18% should be for agriculture, with a break-up of 13.5% as direct lending to farmers and the remaining 4.5% as indirect lending. When banks fail to meet the target, they invest an amount equal to the shortfall in RIDF, on which they earn a lower interest of about 6.5%. RBI has now allowed the banks to include outstanding deposits in RIDF as part of indirect agriculture lending, which will be counted towards their overall PSL.*

Figure 21: Share of PTCs and direct assignments over the years



72. As shown in the figure above, direct assignment transactions have picked up after FY 2013 (post revision in securitization guidelines on taxation). Investment in Direct Assignments (DA) have dual benefits - meet PSL requirements of banks and can showcase improvement in the advances book of the investing bank. PSBs have used DA transactions to increase their overall loans and advances. Also, direct assignment transactions are considered more capital efficient for originators as they do not need to provide credit enhancement. Under the tax new regime, direct assignment transactions also result in less tax outgo compared to the securitization transactions involving issue of PTCs.

F. Benefits of securitization

73. In a conventional debt instrument, the price of the bond is governed by the credit profile of the issuer, which in turn depends on the earning power of the business, financial risk profile and the management capability. It has certain limitations: earmarking of certain cash flows for the redemption of instrument is not possible, rating of the debt instrument and hence the cost of the instrument are restricted by the rating of the issuer (no cost optimization possible for issuers with low ratings) and customization of the same debt issuance according to the need of various investor type is not possible.

74. Securitization can offer the following advantages to banks:

i. **Off-balance sheet financing**: Securitization allows the originator to create assets, generate income, while simultaneously shifting the assets off its balance sheet by way of sale to the SPV. Thus, the income from the asset is accelerated without the asset being present on the balance sheet, *leading to reduced capital requirements and improvement* *in both income- and asset-related ratios*. This will free up capital which the originator can further lend.

ii. **Alternative investor base:** Securitization extends the pool of available funding sources by bringing in a new class of investors. Through the issuance of securities, alternate sources of funding from institutional investors such as insurance funds, pension funds, provident funds, mutual funds etc. is available.

iii. **Sharing of risk:** It results in stratified securities, catering to the risk appetite of multiple investor classes, thereby deepening the financial market. For instance, mutual funds are willing to take higher risks compared to insurance funds. However, pension funds are the most conservative, which are interested in low-risk AAA rated instruments.

iv. **Better asset-liability match**: Asset-liability mismatch continues to be a problem for most financial institutions lending to the infrastructure sector in India. Securitization of assets allows the selling institution to arrange debt issues to fund assets whose payments are better matched to the cash flows on the assets. This transfers the funding-mismatch risk to entities that are more suited to bear it, such as pension funds and insurance funds having long-term liabilities, which could be matched with long-term securitized papers. Securitization allows the financial institution to further improve its asset liability maturity profile by replacing long-term assets with cash.

v. **Positively impacts Return on Equity (ROE):** Appropriate structuring can help in increasing the ROE for the originator.

G. Key challenges

75. The key challenges pertaining to securitization are explained in the section below. However, a detailed assessment of the challenges and recommended solutions, if any, would be provided in the next module – Market Assessment Report

i. **Taxation issues –** Prior to the introduction of Finance Act of July 2013, there were no specific regulations / laws on the taxation for the profits made through the PTCs issued by the securitization trusts. In case where investors were mutual funds, the trusts took a position that as the income of the mutual fund (i.e., beneficiaries) is exempt from payment of tax, the trust should also not be liable to pay any tax in respect of the share of the mutual fund. However, the Income Tax department rejected the above stand of the trusts, and in the last quarter of 2012, slapped demand notices to various trusts seeking to recover tax from them on behalf of the mutual funds in respect of the PTCs issued before 2008. The trusts in turn went back to the mutual funds asking them to pay the tax demanded by the Income Tax department. The department, in some cases, initiated recovery proceedings directly by asking MFs to deposit money as penalty till the case gets resolved. The mutual funds filed petitions in the High Court, seeking relief from the tax claim given that they are exempt from income tax; however, the decision on cases is pending. This has hugely impacted mutual funds appetite in securitization transactions. The mutual funds want resolution on the past court cases along with assurance from the government that no more penalty will be imposed on them on the transactions carried out in 2008-2013. In the Finance Act of July 2013 and subsequently in the Union Budget 2013-14, a new taxation regime was introduced for securitization transactions by inserting Chapter XII – EA in the Income Tax Act, 1961[15]. Under this special provision, Section 115TA obliges the securitization Trustee to pay 0% tax in case of assessees whose income is exempt from tax (primarily MFs), 25% in case of income received by an individual, and 30% in case of income received by any other assessee. Further, investors would suffer disallowance of expenses incurred in relation to the income from PTCs under Section 14A of the Act. This has the following drawbacks:

a. **Mutual funds** – These are exempted from distribution tax. However, the mutual funds are still staying away from the securitization transactions due to the past taxation issue explained above.

b. **Other investor classes such as pension funds, insurance funds, banks and corporates** – The present structure of distribution tax, where the tax is imposed on income distributed at the trust level, is unfavorable for this investor class. The distributed income is tax-free for investors; however they cannot claim deductions for the expenses incurred on this transaction under Section 14a of the Income Tax Act. This has an enormous impact on their net yield. For example, in the current tax regime, if the principal is INR 1 million and the interest is INR 120,000 (at an yield of 12%), the interest is taxed at 30% plus relevant surcharges at the trust level. A tax of 30% reduces the interest income to around INR 84,000, thereby reducing the yield from 12% to 8.4% post-tax. This post-tax income is tax-free at the hands of investors (banks, insurance funds etc). However, if the income is passed through the securitization trust and is taxed at the investor level, the investors can claim deductions for the expenses incurred w.r.t the securitization transaction. Banks, insurance funds and other investors could have claimed deduction for the cost of funds for investing in PTCs and the transaction expenses, Typically ,the tax rate at the gross income level (before arriving at profit before tax claiming deductions for expenses) for most of the insurance funds and banks range between 1%-5%. Hence, for an income of INR 120,000, the tax would be

[15] *Please refer Annexure 6 for details.*

around INR 6,000 (if the tax rate is 5% of gross income), which results in an effective yield of 11.4% (against 8.4% in the current tax regime)

ii. **Stamp duty –** Stamp duty is payable on transfer of asset rights. This is applicable for securitized pools with real estate mortgages such as RMBS and CDOs of power project loans. Hence, in case of securitization of an asset with an underlying real estate asset, the asset rights will be transferred from the originator to the SPV and will be liable for stamp duty. Stamp duty is different across the various states in the country. High stamp duty in most states makes the securitization transactions, commercially unviable. This needs to be addressed at the earliest by the government.

iii. **Issues of capital allocation** – As per an RBI notification[16], the residual non-investment grade (junk) tranche retained by the originator (usually as credit enhancement), has to be completely knocked off from the common equity capital. This restricts the capital benefits provided by securitization transactions. However, this problem is currently being overcome by having multiple tranches – AAA, BBB and junk tranches, where the originator retains BBB and junk tranches. While the junk tranche attracts complete capital knock-off from the common equity capital, the BBB tranche is subject to its usual capital treatment at a risk weight of 100%[17]. The proportion of junk tranche determines the capital benefits provided by securitization transaction. Lower the proportion of junk tranche, higher is the capital benefit. Usually, retail securitization transactions have a junk tranche of 3-5%. It is therefore important that infrastructure loan securitization should lead to a lower junk tranche.

iv. **Characteristics of infrastructure loans in India**

a. **Floating interest rate –** PTCs at fixed interest rates are generally preferred by investors in India. Since infrastructure loans have floating rates linked to bank's prime lending rate, it would impose certain challenge to garner investor interest.

b. **Syndication of banks providing loan to infrastructure asset –** This is not essentially a challenge, but would be a caveat in infrastructure loan securitization deals. Most infrastructure loans in India are provided by a syndication of lenders/banks. Hence, in order to securitize one banks' portfolio, a no objection certificate from other banks would be required.

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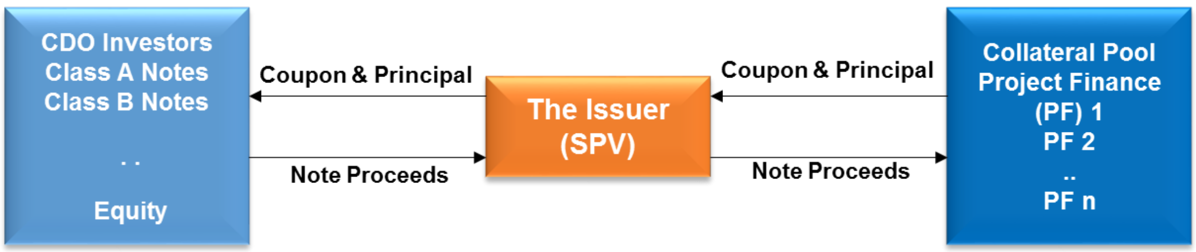
[16] *Refer Annexure 5 for details*

[17] *As elaborated in Section II.C Implications of Basel III on the Indian banking Sector. Further, in case of a common equity capital adequacy ratio of 8%, INR 100 million of BBB tranche requires INR 8 million capital, while INR 100 million of junk tranche requires INR 100 million capital.*

H. International experience of securitization for infrastructure financing

76. Globally, securitization transactions have been a common feature for assets of the power, oil & gas and energy segments. A common structure for securitizing these assets has been a project finance collateralized debt obligation (PF-CDO). In a PF-CDO, the originator transfers project finance loans and bonds to the CDO issuer under a true sale arrangement. As a result, the CDO issuer physically holds project finance assets, and all CDO liabilities are issued in funded form.

Figure 22: Structure of typical cash PF-CDO

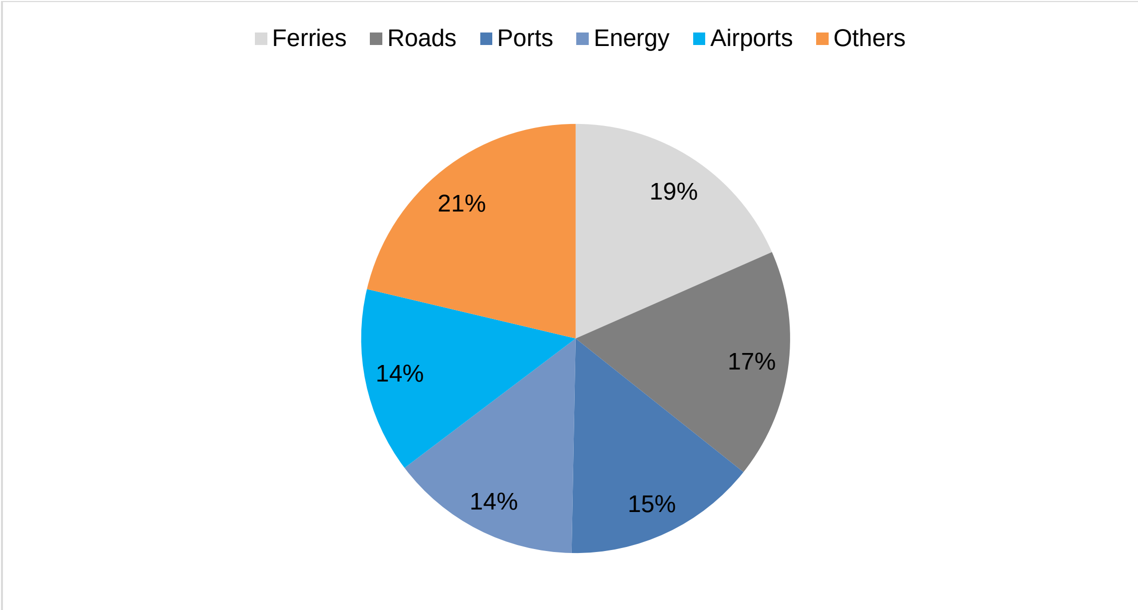


Source: Moody's Approach to Rating Collateralized Debt Obligations Backed by Project Finance and Infrastructure Assets (October 2013)

77. The earliest PF-CDOs were cash securitization structures in which the SPV purchased loans as collateral for the CDO note issues. Project Funding Corp. I (PFC I), sponsored by Credit Suisse First Boston (investment banking division of Credit Suisse Group, prior to 2006), was one of the earliest such cash PF-CDOs; it closed on March 5, 1998. PFC I issued about USD 617 million in debt and equity securities collateralized by a portfolio of about 40 loans made primarily to US infrastructure projects.

78. Lusitano Project Finance I Ltd. (closed in December 2007) was based on 20 pan-European infrastructure asset exposures with an average outstanding balance of EUR 53.9 million belonging to Banco Espirito Santo (BES) (Portuguese bank). The underlying loans were originated by members of the BES Group to borrowers in the project finance markets for infrastructure, energy and construction projects mainly in Portugal, UK and other European jurisdictions. The pool was static, as there was no facility in the transaction for purchase of further loans.

Figure 23: Composition of securitized assets (by outstanding loan amount)



Source: Moody's

79. Geographically, the UK accounted for 11 loans and 63.3% of the principal outstanding. Portugal accounted for 5 loans and 18.2% outstanding, and Spain (3 loans, 14.2%) and Hungary (1 loan, 4.3%) made up the rest of the pool.

80. Even though significant 2007 and 2008 crisis losses occurred on structured credit products with exposures to subprime mortgages or MBSs, the entire CDO, including PF-CDO, business suffered due to falling investor confidence in the CDO structure. New issuance of PF-CDOs plummeted in 2008, as investors fled the CDO market, and widening credit spreads ended the opportunity for yield arbitrage. .

81. However, it is widely believed that the CDO structuring process is time-tested and conceptually sound. Globally, project finance loans, leases, and other debt obligations are seen as attractive assets for CDOs because they have higher assumed recovery rates and shorter recovery periods than comparably rated corporate debt obligations. Moody's-rated PF-CDO transactions are a relatively structured finance asset class that invest in a range of project finance assets, which include, amongst others, PPP/PFI, regulated utilities, renewable energy projects, large infrastructure and power related sectors across UK, Australia, European Union (EU) and North America. Noteworthy PF-CDO structures have retained or witnessed an upgrade in their credit ratings, as depicted in the table below.

82. It has to be noted that the banks usually don't fund infrastructure projects in most parts of the world. Hence, underlying assets in securitization transactions are project finance bonds rather than bank loans.

Table 21: Recently Ratings Assigned to PF-CDOs (Moody's)

PF-CDO	Par Amount	Rating Pre-2008 Crisis	Current Rating
Adriana Infrastructure CLO 2008-I B.V. Underlying portfolio consists of 47 senior secured UK PFI/PPP loans or senior PFI/PPP bonds due 2044. None of the assets in the securitized portfolio are in construction phase.	EUR 962 Million (USD 1.1 Trillion) of Class A1 notes & GBP 100,000 (USD 157,600) of Class A2 notes[18]	Moody's A3 (sf) (October 2008)	Moody's A3 (sf) for Class A2 notes and Moody's Aaa (sf) for Class A1 notes. (October 2013)
Bacchus 2008-2 plc PF CDO backed by a portfolio of 68 UK (68.4%) and Spanish (23.2%) project finance assets due 2038.	EUR 404 Million (USD 467 Million) of Class A Notes	Moody's Aa2 (sf) (April 2008)	Moody's Aa1 (sf) (January 2014)

Source: Moody's

[18] *The lower tranch (Class B Subordinated Notes) has not been rated. .*

V. POTENTIAL MARKET SIZE FOR SECURITIZATION

83. The potential for securitization in the Indian market is immense. This potential stems from the gaping requirement of capital by the banking sector, in view of the guidelines mandated by the upcoming Basel III accord, as mentioned in Section III. D – Implications of Basel III norms on PSBs.

84. Securitization, in this context, can play a substantial role in allowing banks to meet their capital requirements. By way of its benefits of off-balance sheet financing, which allows banks to free up capital, securitization can free up a portion of the total capital requirement.

85. In order to free up the entirety of capital gap of INR 1.9 trillion estimated in Section III.F – Assessment of Capital Requirements of PSBs, public sector banks are required to securitize assets worth INR 26.8 trillion, close to 8% of their outstanding loan book over the next four years[19]. This has been calculated keeping in consideration banks' capital adequacy requirement of 9-11.5% over the next four years.

86. This immense opportunity can be easily utilized by PSBs. As per CRISIL estimates, PSBs outstanding asset book is estimated at INR 88 trillion by 2019-20. The retail and micro, small industry asset portfolio comprises of 29% of the total loan portfolio for PSBs on an average. Thus, PSBs are likely to have close to INR 26 trillion worth of outstanding retail and micro, small industry assets by 2019-20. Given their history of securitization in the Indian market, these assets are ideal for securitization. However, retail assets form a significant part of priority sector loan portfolio. Further, they are best suited to relieve banks suffering severely from asset liability mismatches due to excess exposure to long term funding. Hence, it may not be optimal for banks to securitize a major portion of their retail assets. NBFCs engaged in securitization currently typically securitize up to 20% of their loan books. Hence, if PSBs were to mirror this trend and securitize 20-30% of their retail assets, retail securitization could total INR 3.3 trillion over the next four years.

87. The remaining potential of INR 23.5 trillion could be achieved by PSBs assets in the non-retail, corporate sector. Within this sector, infrastructure boasts of highest recoveries and hence is amenable to securitization. The low recovery rates of the rest of the corporate portfolio, makes it difficult to securitize. As mentioned in the earlier sections, the securitization market in India is currently at a nascent stage and focused on PSL and the retail sector. Infrastructure assets currently do not picture in the market. Hence, over the medium term, relatively safer assets such as infrastructure assets of projects that have achieved COD, are expected to fully constitute the securitized pool. These projects are likely to be less risky with no construction risk and only operations risk.

[19] *Estimated assuming the junk tranche pertaining to the securitization transaction is retained by the bank. The size of this junk tranche is estimated to be 4-5% of the total transaction value.*

88. In order to estimate the total value of post COD projects thus available for securitization, the total incremental credit to the infrastructure sector by PSBs has been estimated for the next 10 years. As stated in Section II, this estimate amounts to INR 5,866 till 2019-20. Further, an analysis of over 400 infrastructure projects covering all infrastructure sub-sectors revealed that the average construction period for infrastructure projects is 4 years. Assuming the initial securitized portfolio to be dominated by the roads sector, the construction period has been considered to be 3 years. A probability analysis of the delays in achieving COD revealed the following:

i. Projects completed without delay – 44%
ii. Delay of 1 year – 12%
iii. Delay of 2 years – 8%
iv. Delay of 3 or more years – 36%

89. Based on these probabilities, the total value of COD projects over the next 4 years has been estimated to be approximately INR 9.6 Trillion. Hence, a significant portion (close to 40 percent) of the potential for non-retail securitization can easily be met through the securitization of post COD infrastructure assets. Combined with the potential offered by PSBs' retail asset securitization, the realizable potential for securitization sums up to INR 13 trillion by 2019-20.

Table 22: Potential for securitization estimates (Based on Scenario 1)

Parameter	**Estimate**
Outstanding Asset Book March 2020 (PSBs)	INR 88 Trillion
Retail asset book	INR 26 Trillion
Infrastructure asset book	INR 14 Trillion
Other non-retail asset book	INR 48 Trillion
Potential for securitization	
Maximum Potential for Securitization of Retail Assets	INR 3.3 Trillion
Potential for Infrastructure Securitization - **Total value of post-**	**INR 9.6 Trillion**

COD infra projects available with PSBs	
Realizable Potential for Securitization	**INR 13 Trillion**

Source: CRISIL Infrastructure Advisory Estimates

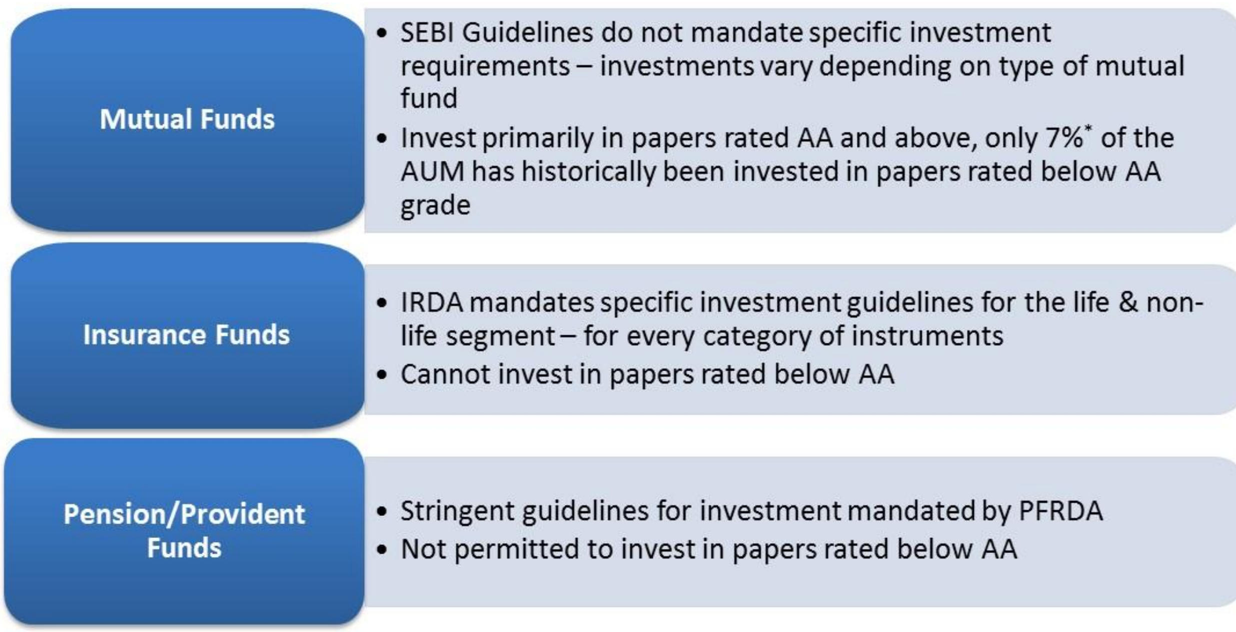
90. For the INR 1.9 Trillion capital gap (established in Section III.F.), this securitization of INR 13 Trillion is expected to bridge INR 1.08 trillion capital gap. The remaining capital gap of INR 816 billion would still persist. *However, it has to be noted that the potential could be realized only if the existing challenges in the securitization market are resolved.* Even if all the challenges could not be addressed immediately, it is recommended to address the challenges, wherever possible, to unlock the potential partially. A detailed assessment on the recommended solutions to address the challenges will be covered in the next module – Market Assessment Report.

VI. LIKELY INVESTORS AND POTENTIAL ARRANGERS

A. Current Investors of Securitized Papers in India

Banks, mutual funds, insurance funds and pension funds are expected to contribute to securitized papers.

Figure 24: Investments by various investor classes with investment corpus for fixed income securities

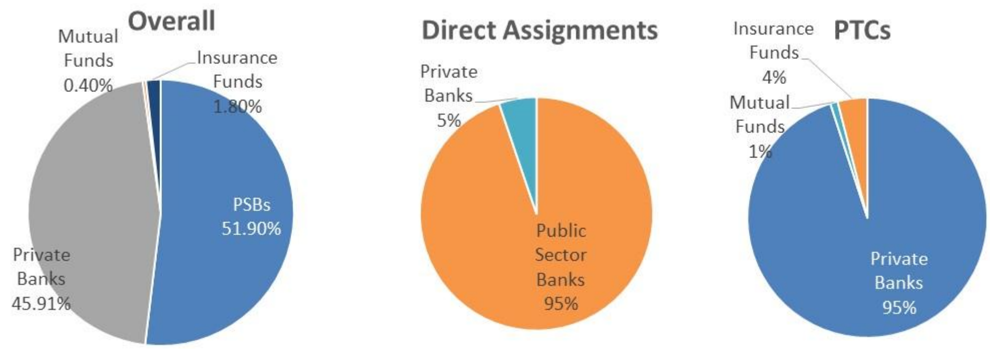


* Source: RBI/2014-15/127 – Issue of long term bonds by banks – Financing of infrastructure and affordable housing

91. Banks, FIIs and Corporate bodies also invest in securitized papers but they do not have dedicated investment corpus for fixed income securities (like the investor classes mentioned in the figure above).

92. The investor segment for securitized papers is currently dominated by banks. As mentioned in section 5 of this report, banks primarily invest in securitized papers to meet their priority sector lending targets. The category of banks investing in direct assignments and PTCs, however, varies immensely. When combined, PSBs, private and foreign banks contribute to 98% of total investments in the securitization market. Individually, it is seen that PSBs dominate the direct assignment transactions (95% share), while private and foreign banks dominate PTC transactions (95% share). Private Banks invest only in 5% of direct assignment transactions.

Table 23: Investors of Securitized Papers in India



Source: CRISIL Infrastructure Advisory

93. The evident differences in investment preferences of PSBs and private banks can be explained by the varying features of direct assignments and PTC transactions. While direct assignment allows the invested assets to be added to the asset book of banks, translating into growth in the asset books, the PTC route permits invested assets to be showcased as investments, thus portraying no growth in the asset books. However, recent guidelines have made direct assignment less attractive by not allowing any credit enhancement, accounting for private sector banks' preference for the PTC route.

B. Analysis of Potential Investors' Current Investments

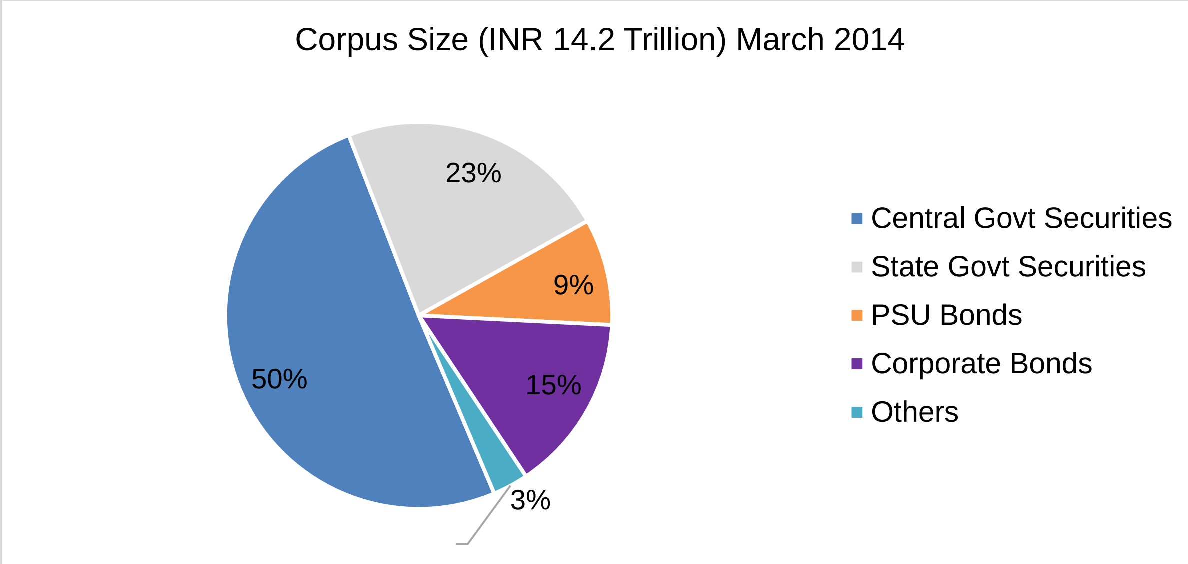
94. The likely investors in infrastructure loan-securitized instruments would be mutual funds, insurance funds, pension funds, structured/hedge funds and private equity funds. Their current investment portfolios are analyzed in subsequent Sections.

Insurance Funds

95. Insurance Funds predominantly utilize available government securities to fulfil their investment needs. Although regulations mandate a minimum limit of 50% & 40% for investments in central and state government securities for life and non-life insurance segments respectively, they currently invest up to 70% of their assets under management in these highly liquid and safe instruments at relatively lower yield. The pre-tax average yields for various instruments are:

- Central govt. securities – 8.26%
- State govt. securities – 8.78%
- PSU bonds – 9.2%
- Corporate bonds – 9.59% (pre-tax average yields for AAA – rated corporate bonds)

Figure 25: Investment Pattern of Insurance Funds (March 2014)



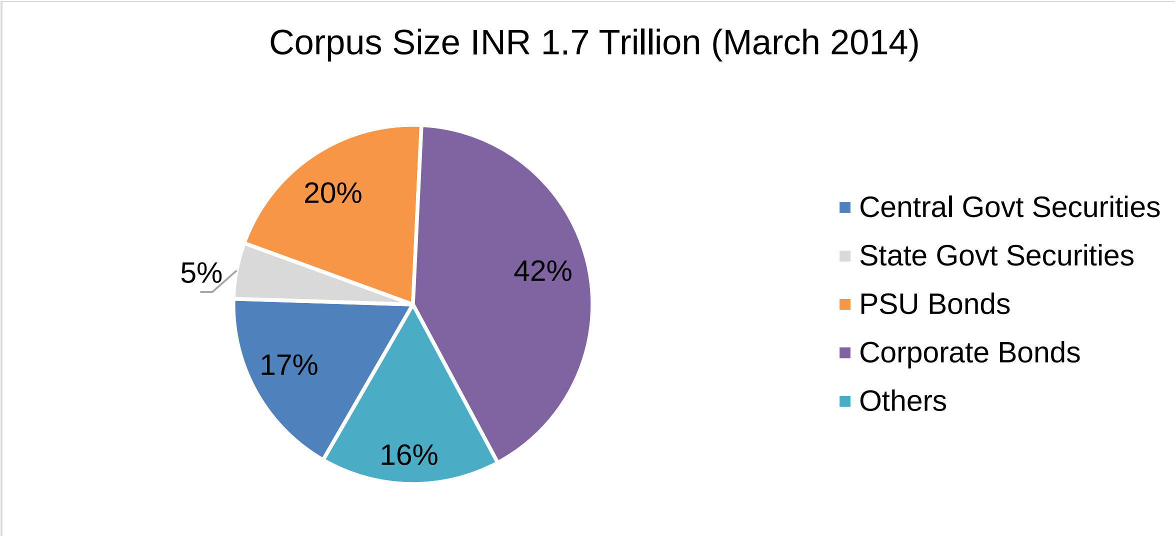
Source: IRDA Annual Report

96. Current investment regulations also mandate a minimum investment of 15% in the infrastructure and housing sectors. Insurers meet this requirement by investing in bonds issued by NHB, HUDCO and Infrastructure PSUs.

Mutual Funds

97. Mutual funds is an investor class that is amenable to corporate bonds, having currently invested close to 40% of assets under management in the same. While Mutual Funds do not have stipulated caps or minimum requirements for investing in either category of bonds, they invest 20% of the assets under management in central and state government securities, and another 20% in bonds issued by Public Sector Units, thus having a slight preference for these safe instruments.

Figure 26: Investment Pattern of Mutual Funds (March 14)



Source: SEBI Annual Report

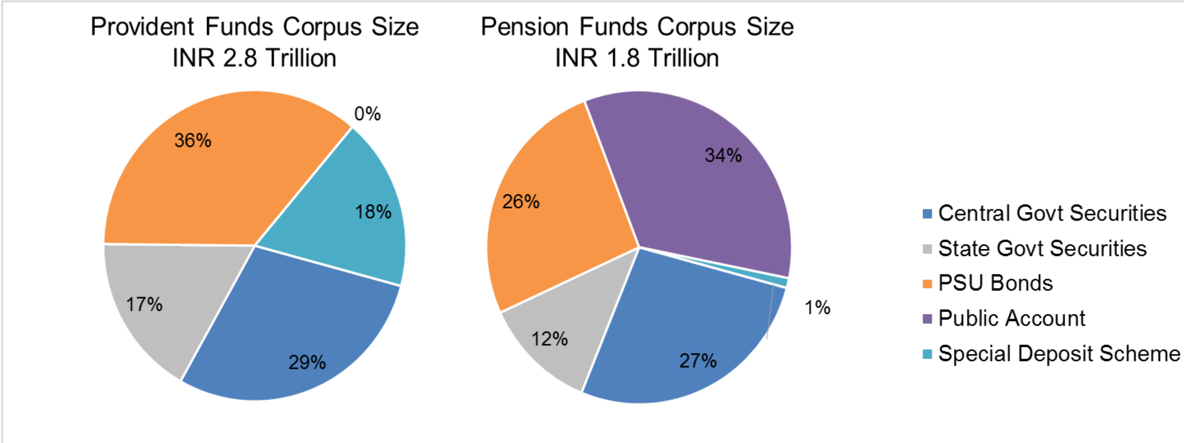
Pension/Provident Funds

98. The current retirement funds corpus in India consists of the Employees' Provident Fund Organization (EPFO), the National Pension System (NPS), private pension funds and the public provident fund. Within this corpus, EPFO accounts for the largest share – over 45% in 2013.

99. Pension and provident funds are highly risk averse in nature, investing primarily in government securities and PSU bonds. This can be further attributed to prevailing investment guidelines[20] for the sector, which mandate investments up to a maximum of 50% (minimum 45%) for government securities and another 45% (minimum 35%) for Listed Debt Instruments including PSU Bonds. Currently, over 80% of the total investments by EPFO have been undertaken in central and state government securities and PSU Bonds.

[20]Ministry of Labor Notification dated November 21, 2013

Figure 27: Investment Pattern of Pension and Provident Funds (EPFO) (March 14)



Source: EPFO/PFRDA; Public Account includes RBI/Banks

100. The National Pension Scheme, a defined-contribution-based pension system launched by the Government of India/PFRDA in January, 2004 currently boasts of an investment corpus size of INR 418 Billion. 45% of this corpus is directly invested in central government securities while another 13% is invested in state securities and PSU bonds. However, the investment in corporate bonds is also significant for NPS, at 22% currently.

Supply of G-Securities

101. The total outstanding debt securities (as on March 2014) amounts to INR 50 Trillion. The split by major categories (87% of outstanding)[21] is given as follows:

Table 24: Ownership in various debt securities categories

Ownership Comparison	**Central Govt. Securities**	**State Govt. Securities**	**PSU Bonds**	**Corporate Bonds**
	2013-14	**2013-14**	**2013-14**	**2013-14**
Banks	64%	56%	21%	27%

[21] Others 13% includes special deposit schemes (banks/RBI), public accounts etc.

Insurance funds	28%	34%	30%	49%
Total (Banks + Insurance)	***92%***	***90%***	***51%***	***76%***
MFs	1%	1%	8%	15%
Pension Funds	4%	3%	17%	5%
Provident Funds	3%	6%	24%	4%
Total (Proportion of total outstanding)	INR 25.6 Tn (51%)	INR 9.5 Tn (19%)	INR 4.0 Tn (8%)	INR 4.4 Tn (9%)

Source: RBI, National Stock Exchange, CRISIL Analysis

102. There is ample supply of G-secs (70% of outstanding debt securities) and PSU Bonds (8% of outstanding debt securities). Regulations for potential investors do not constrain investments in these highly safe & liquid securities. Thus, ample supply coupled with the risk-averse nature of investors – Especially public sector insurance & pension funds has crowded out the demand for corporate bonds, particularly complex instruments.

C. Expectations of Potential Investors

103. Their requirements based on our primary interactions[22] with each of these investor classes are as follows:

Investor type	Characteristics	Yield expectations
Mutual funds	• Traction is less due to legacy issues; important to solve the issues related to pending cases to boost their interest in securitization • Need reforms related to tax structure for securitized papers (distribution tax) • Would be interested in 2-3 years, minimum A-rated PTCs	50-75 basis points higher than prevalent market rates of 12-13%
Life insurance funds	• Need reforms related to tax structure for securitized papers (distribution tax)	50-75 basis points higher than similar rated non-structured papers

[22] List of stakeholder consultations carried out so far is enclosed in Annexure 2.

Investor type	Characteristics	Yield expectations
	• Have appetite for long-term papers but current investment regulations provide them enough options[23] • Our preliminary assessment exhibits that insurance funds by Govt. entities/Public sector banks are less incentivized to participate in riskier options (infrastructure loans being considered riskier than housing loans), however private sector insurance funds have more audacious approach • Minimum AA rated with 10-11 year tenure • Credit guarantee crucial for this segment	
Pension funds	• Need reforms related to tax structure for securitized papers (distribution tax) • Very conservative, mainly look for vanilla products; however, have appetite for investing in long-term papers • Will only go for AAA-rated, 10-11 year papers • Credit guarantee crucial for this segment	50-75 basis points higher than similar rated non-structured papers
Structured funds	• Very few present in Indian market	Very high yield expectations; minimum being 16-18%
Foreign Institutional Investors (FII)	• Long term debt papers[24] are a good product for their requirement • Need of bankruptcy court[25] would be very critical for attracting FIIs	Yield expectation of 50 to 100 basis points higher than bank's perpetual bonds
Private equity funds	• Less interested in debt instruments; typically take equity exposures	

104. Our preliminary assessment reveals that FIIs, mutual funds, life insurance funds and FIIs will be keen to participate once the issues mentioned above are resolved. Private equity funds

[23] *Minimum 50% in government securities (for public sector insurance funds this ranges from 60%-65%), 10% in equity investments, 5% to be kept cash, minimum 15% in infrastructure bonds. Since housing falls under the definition of infrastructure, Housing Finance Company issuances are typically bought.*

[24] *FIIs have confidence in India's story and the country's infrastructure growth story. Our preliminary assessment shows that since they are investing in banks' perpetual bonds which are long term papers at 10-11% interest rates, infrastructure backed papers would also be of interest to them.*

[25] *In case of non-repayment by borrowers, enforcement of recovery is an issue. In the current judicial system, it takes lot of time for decision. The government should act fast on Financial Sector Legislative Reforms Commission (FSLRC) recommendation on setting up of Bankruptcy courts.*

and structured funds are unlikely to participate. The detailed assessment on likely investors will be provided in the Module II - Market assessment report

D. Assessment of potential arrangers

105. Most of the securitized transactions happening in the Indian market currently are in the retail segment (commercial vehicle loans, residential mortgage-backed loans, etc.) to meet the PSL requirements, where NBFCs are the originators and banks (PSBs, private banks, etc.) are the investors.

106. In the current market scenario, the internal team (of banks / NBFCs) executes the transactions themselves. Many banks have an in-house investment banking arm, which is engaged by their PSL team (called the debt-capital market/treasury department/investment banking/arranging arm of the bank) on need basis.

107. Earlier when mutual funds were actively investing in securitized instruments (before 2011), arrangers played an important role. They have structuring capabilities; but due to lack of market appetite and non-existence of infrastructure loan-backed securitized instruments, they do not have the experience. However they have structuring capabilities to play an important role in securitization transactions, in case the market improves.

108. There is no public data available on the volume of securitization transactions done by the arrangers.

VII. ANNEXURES

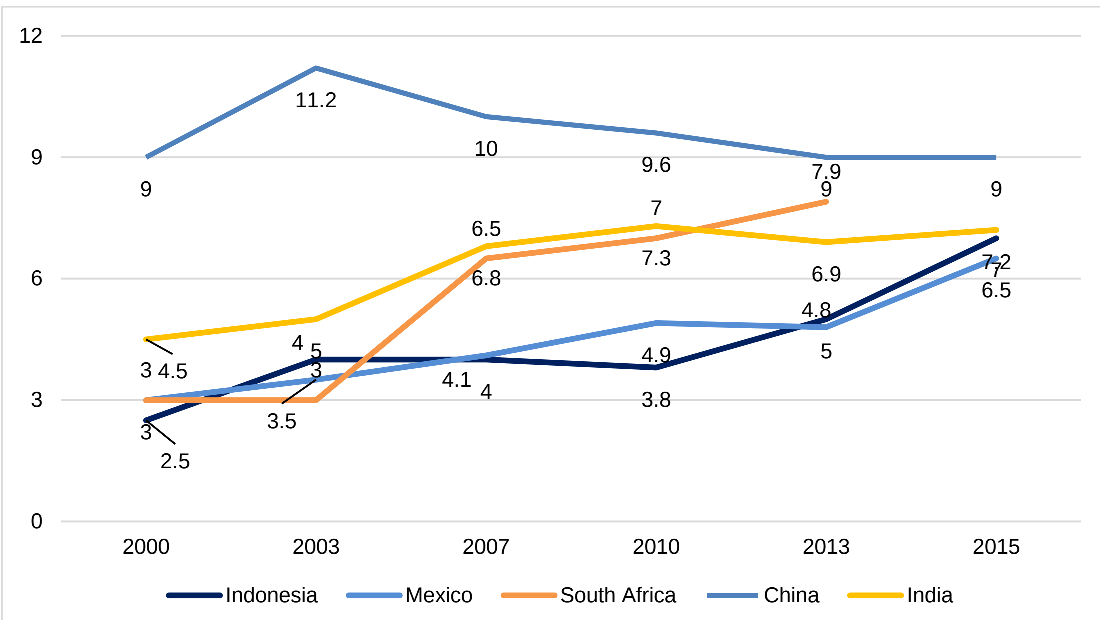
A. Annexure – 1: Assumptions for infrastructure investment forecasts

109. ***Projections for infrastructure investment demand in the future***

i. As mentioned in Section II-A, it is probable that the overall investment in infrastructure for the Twelfth Five Year Plan will fall short of the Planning Commission estimates of ~9% of GDP by 2016-17.

ii. Considering the positive steps taken by the new government, we have assumed that the investments in infrastructure will grow in steps to average around 8.01% of GDP in the 10 years between 2015-16 and 2024-25. This estimate is in line with the trends observed in other emerging economies such as Indonesia, South Africa, China and Mexico. As seen in the following figure, forecasted investments for developing countries are in the range of 7-8% in the short term.

Figure 28: Investment in infrastructure (% of GDP) for emerging economies



Source: Various

iii. In emerging economies such as South Africa and Indonesia, private sector contribution to the infrastructure sector has escalated from 20-30% in the previous decade to over 50% currently. Private investment in infrastructure in South Africa is currently over 60%, while Indonesia is poised to witness a 70% share of private investments in 2015.

iv. A similar trend has been witnessed in developed countries such as Canada, Australia, USA and Britain, where public sector investment in infrastructure has gradually declined. Also, the role of governments in infrastructure provision has generally shifted in the recent decades, with governments reducing their role in economic management that was previously conducted through their ownership of infrastructure. Currently, private infrastructure investment in the USA is five times the total non-defense government investment, while in the UK, it contributes to over 80% of the total infrastructure investments.

v. Hence, it is expected that a similar trend of rising private sector investments in infrastructure will be observed in the Indian economy. Originally, the Twelfth Five Year Plan had envisaged a private sector share of 48% in total infrastructure investments. Given the increasing focus of the new government to involve the private sector in infrastructure investments combined with a revamp of PPP models, it is envisaged that private sector contribution will grow to 50% by 2017-18 from 37% in the Eleventh Five Year Plan period, further growing to a maximum of 55% by 2024-25.

vi. The remaining share in infrastructure investments has been assumed to be undertaken by public sector undertakings. Total debt requirements of this sector have been estimated by removing the extent of budgetary support in the form of grants. Budgetary support has declined over the past 5 years from 6.7% of GDP in 2008-09 to 5.0% in 2013-14. Out of the total budgetary support, close to 50% is allocated to the infrastructure sector. The share has significantly increased to 64% in the planned outlays for the Union Budget 2015-16. With the increased focus of the government on the infrastructure sector, this share is expected to further increase to 66% by 2017-18, post which, it is expected to gradually decline to its earlier average of 54% over the next 10 years.

vii. Considering the long-term nature of these investments, it is estimated that they will be funded by long-term debt – assumed at current levels of 70%[26] of overall investments.

110. ***<u>Projections for debt supply by banks</u>***

i. Historically, financing the infrastructure sector has been the stronghold of commercial banks. Infrastructure contributes to almost 15% of the total non-food credit extended by the banking sector in India. Though in value terms, the amount of lending to infrastructure has seen a two-fold increase since MA 2010 (USD 63 billion in FY 2010 to USD 140 billion in FY 2014), in percentage terms the lending to infrastructure has

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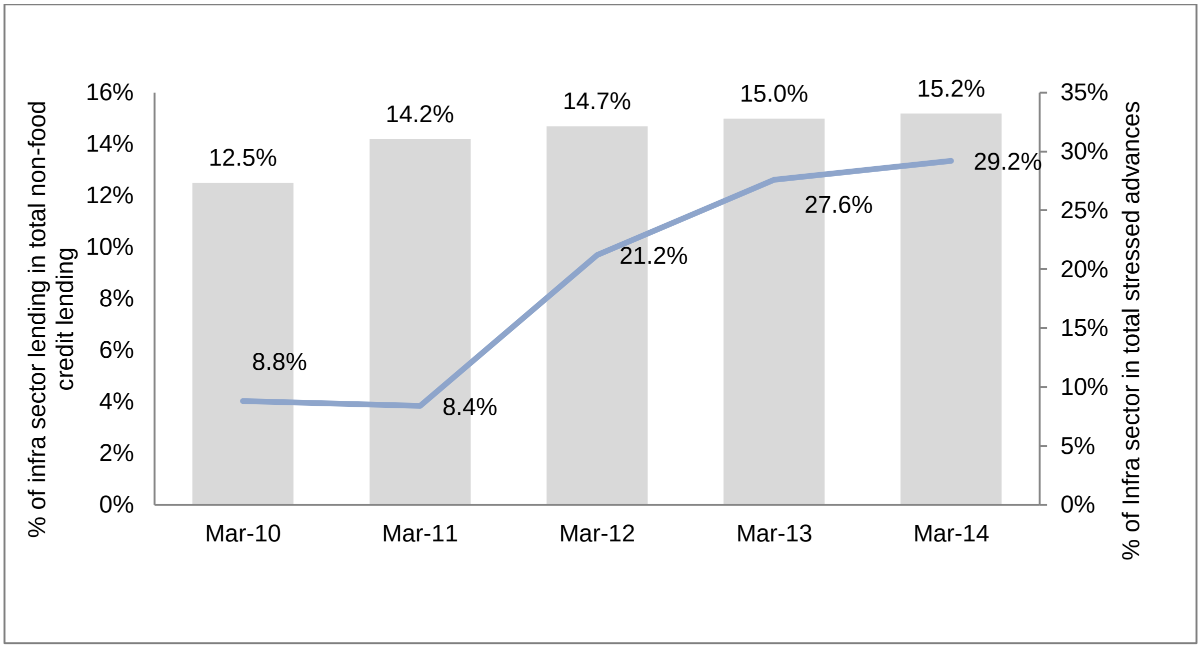
[26] *Arrived at after Prowess analysis of outstanding liabilities of entities in the infrastructure sector*

remained stagnant. Also, rise in NPAs[27] has exerted tremendous pressure on the banking sector's overall profitability.

Figure 29: Lending to infrastructure sector – SCBs



Source: Financial Stability Report, RBI

ii. Further, the growth rate of bank credit has also slowed down significantly in the recent past, falling to an 18-year low of 12.60% in 2014-15. Going forward, industry experts and bankers have pegged this credit growth rate at 14-16% in 2015-16, on account of expected pick-up in infrastructure activity, higher working capital needs and growth in the retail segment.

iii. In context of this scenario, debt supply by banks has been estimated assuming a credit growth rate of 15% till 2019-20. With a 15% exposure towards the infrastructure sector, **debt supply by banks will amount to merely INR 6,627 billion till 2019-20.**

111. ***Projection for debt supply by PSBs***

i. PSBs constitute over 75% of the total credit in the banking system. However, going forward, PSBs are expected to report credit growth rates of 8-12% annually over the next 4-5 years in context of the rising NPAs and reduced profitability.

ii. Currently, PSBs are over-exposed to the infrastructure sector, with 17% of total outstanding credit tied up in infrastructure projects. It is expected that PSBs will gradually reduce their exposure to the industry standard of 15-16% for each sector.

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[27] *An asset is considered as "non-performing" if interest on installments of principal remains 90 days overdue.*

Based on these assumptions, **PSBs are expected to provide close to INR 4,813 billion to the infrastructure sector till 2019-20**. This translates to approximately 72% of the total funds expected from the banking sector to infrastructure.

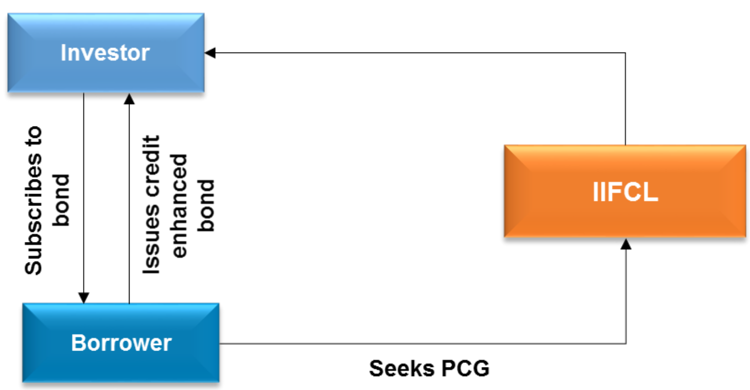
B. Annexure – 2: Existing schemes for infrastructure financing

1. Partial credit guarantee (PCG) scheme – India Infrastructure Finance Company Limited (IIFCL)

112. Under the PCG scheme, IIFCL, supported by ADB, provides partial credit guarantees to enhance the ratings of project bond issuances, to enable channelization of long-term funds from the bond market towards the infrastructure sector. By virtue of the AAA credit rating that IIFCL enjoys, the rating of the bonds can be enhanced to a maximum of AA+ (as it is a partial credit guarantee) – a refinancing mechanism. Only commissioned projects operating for at least 6 months post COD are eligible under this scheme, through bond issuances to refinance existing debt. The features of the PCG scheme include the following:

  i. First loss guarantee
  ii. Irrevocable and unconditional guarantee
  iii. Rolling cover with guarantee quantum usable at any time over the bond tenure
  iv. No automatic reset
  v. Automatic repayment of utilized guarantee from subsequent guarantee

Figure 30: IIFCL PCG structure



113. The scheme, launched in 2012, did not witness substantial traction in the first 1-2 years of operations. GMR Jadcherla Expressways and L&T Vadodara Bharuch Tollway each cancelled plans to sell bonds in 2013 due to mismatches in price expectations between issuers and investors, as well as changing market conditions. However, the scheme has recently received market interest from various Indian infrastructure developers that are turning to the local bond market to cut funding costs.

114. For instance, the private sector wind-power firm ReNew Power Ventures plans to issue a 10-year bond worth INR 4 billion with a yield of 10.25% through its wholly owned subsidiary

Renew Wind Energy (Jath), guaranteed by IIFCL. The credit enhancement covers 35% of the obligations. On a standalone basis, the subsidiary has a local rating of BBB-; however, with the partial guarantee, the ratings of the bonds have been upgraded to AA.

115. Various other deals are in the pipeline for the PCG scheme.

2. Infrastructure debt funds (IDFs)

116. IDFs essentially act as a vehicle for refinancing existing debt (or as a takeout financing scheme) of infrastructure projects that have attained commercial operations, thereby creating headroom for banks to lend to fresh infrastructure projects. IDFs can be set up either as a trust, i.e., as a mutual fund, or as a company, i.e., as an NBFC.

Table 25: Key features of IDFs

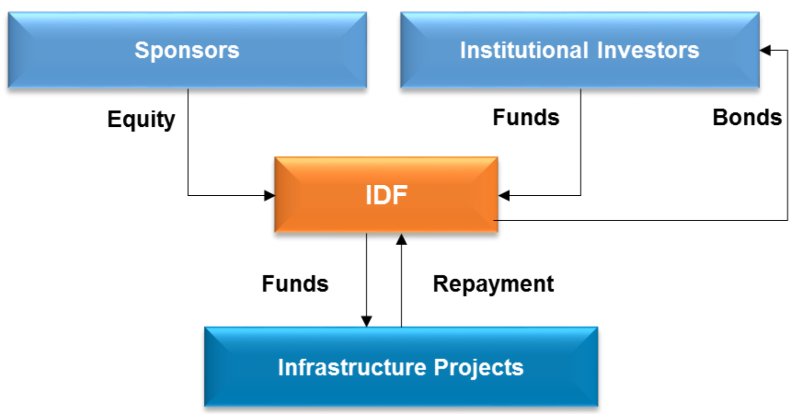
Parameter	**NBFC**	**Mutual fund**
Structure	Funded with equity and debt, raise money through bonds	Issue periodic capital calls and return capital at maturity
Capital	Equity contribution – 30-49%; rest debt	100% equity financed through the issuance of rupee-denominated units
Capital requirements	Capital to risk-weighted assets ratio of 15%; infrastructure assets risk weight 50% (lesser than banks)	No leverage, so no capital requirements
Eligible assets	• PPPs with tripartite agreements and at least 1 year of operations • PPPs/non-PPPs without a project authority, in sectors where there is no project authority	• Infrastructure at any lifecycle stage • 90% infrastructure debt instruments • 10% money market instruments and infrastructure equity and 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	Reserve Bank of India	Securities and Exchange Board of India
Sponsors	Banks and infrastructure finance companies	Mutual funds or companies in the infrastructure finance sector
Maximum loan takeout	85% of the project cost under the concession agreement	No limit

Source: ADB, RBI

117. IDF-NBFCs commenced operations in 2013, and target to take over loans for projects created through the PPP route under a tripartite agreement between the IDF, concessionaire and project authority.

Figure 31: IDF structure



Source: ADB, RBI

118. IDF-NBFCs are required to maintain a CAR of 15%, and hence, can leverage themselves several times the equity base. Further, the income generated by IDFs is tax-free, thus providing cost savings.

119. Two IDF-NBFCs are operational:

i. India Infradebt Ltd. formed by ICICI Bank, Bank of Baroda, Citicorp Finance (India) Ltd. and Life Insurance Corporation of India. The entity has undertaken its first sanction to Himalayan Expressway Limited.

ii. L&T Infra Debt Fund formed by L&T Infra Finance and other companies in the L&T group

120. While India Infradebt has raised INR 300 crore in the market, L&T Infra Debt has raised INR 850 crore. Further, L&T Infra Debt approved debt assistance of INR 176 in 2013-14.

121. A critical challenge that has prevented IDFs from gaining momentum is that banks today are not willing to sell off their existing assets that have been commissioned, since these are usually performing assets with a lower perceived risk. Typically, guarantees from concessioning authorities do not cover cost overruns. Under the tripartite agreement for IDFs, banks would transfer to NBFCs only guaranteed exposure, which would significantly increase their proportional losses in the event of a default. The tripartite agreement also stipulates compulsory buyout by the authority in the event of default by the concessionaire.

122. In order to expand the scope of projects that can be financed under the IDF-NBFC route, RBI, through its circular dated April 2015, has permitted funding of projects in the PPP segment without a tripartite agreement as well as to the non-PPP segment, as long as they have completed 1 year of operations. Thus, IDFs are expected to gain traction in the market in the coming years.

123. Three IDFs have been set up through the mutual fund route by IL&FS (~INR 1,380 crores AUM), IIFCL (~INR 300 crores AUM) and SREI. The investment guidelines of these IDFs mention that at least 90% of the AUM should be invested in infrastructure companies or infrastructure projects/SPVs or bank loans in terms of completed and revenue generating projects or public finance institutions or infrastructure finance companies.

124. Today, while mutual funds are technically allowed to invest till investment grade (BBB), there are hardly any investments below AA. Therefore, the appetite of these funds for investment in the infrastructure sector is questionable.

3. Credit enhancement by banks

125. On May 20, 2014, RBI issued a draft circular allowing banks to provide partial credit enhancements to bonds issued for funding infrastructure projects by companies/SPVs. This draft circular is open for public comments. Brief particulars of the scheme are as follow:

i. Mechanism of providing credit enhancement to the bonds issued by infrastructure projects/SPVs is to separate the debt of the project company into senior and subordinate tranches

ii. Banks will provide subordinate debt either in the form of a loan or a contingent facility.

iii. Partial credit enhancement shall be limited to the extent of improving the credit rating of bonds by maximum of 2 notches or 20% of the entire bond issue, whichever is lower.

126. RBI has invited comments from market stakeholders. Our internal understanding, supplemented by external interactions, is that the scheme in the current form will find it difficult to get much traction due to the following reasons:

i. Most infrastructure projects are rated below A. The credit enhancement restrictions imposed in this scheme currently would not be enough to credit enhance the bond issuance to AA.

ii. In light of the recent initiatives to make long-term financing more attractive – both on liabilities side (through issuance of long term bonds) and assets side (flexibility in structuring), it remains to be seen if banks would cater to credit enhancement which has not been a traditional focus.

iii. A prohibitory capital requirement and risk weight has been imposed.

127. There is undoubtedly intent by the government and the regulators to develop the bond market, especially for the infrastructure sector. However, the viability of the afore-mentioned schemes is yet to be established.

4. Take-out finance scheme – IIFCL

128. Under IIFCL's take-out finance scheme, banks lend to infrastructure projects, but sell a fixed percentage of that loan to IIFCL after a certain period. This enables banks to reduce their asset-liability mismatch and exposure to the infrastructure sector, in turn, enabling banks to lend more to the sector.

129. As per the scheme, which came into effect in April 2010, IIFCL will take over up to full amount of an individual bank's loan or 50% of the residual project cost on to its own books. The loan can be repaid over 15 years. Projects that have a residual debt tenor of at least 6 years or are yet to achieve financial closure are eligible for the scheme. The project developer, IIFCL and the lender will enter into a tripartite agreement, which would include the rate of interest on the take-out amount. IIFCL can take over the loan after 1 year from the commencement of operations.

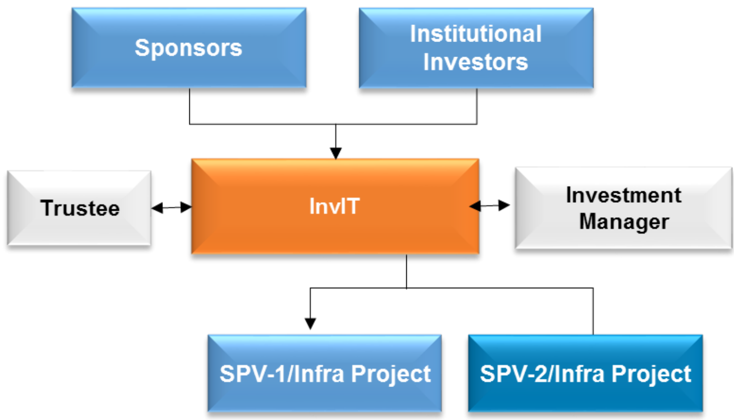
130. The initial take-out scheme, however, did not find many takers in the market. Banks had expressed concerns regarding the interest rate and the pricing mechanism of the scheme. As a result, key changes in the scheme were made in 2011, wherein IIFCL introduced a risk-based transparent and non-discretionary pricing mechanism for pricing of the taken-out loans linked to IIFCL's base rate and risk premium. Under the modified scheme, the pricing mechanism of the take-out finance is solely based on the credit rating of the infrastructure project and is disclosed upfront. Further, the interest rate, linked to the benchmark lending rate of IIFCL, is in the range of 9.90% to 11.15%, which is at a significant discount to market lending rates.

131. IIFCL has till end-March 2014 sanctioned about INR 6,384 crore (32 projects) and disbursed INR 3,819 crore under the take-out finance scheme.

5. Infrastructure Investment Trusts (InvITs)

132. The Securities and Exchange Board of India (SEBI) issued final regulations for InvITs in September 2014. InvITs can invest in infrastructure funds either directly or through an SPV. They have been proposed on similar lines to real estate investment trusts (REIT).

Figure 32: InvIT structure



133. Highlights of the proposed framework:

i. The sponsor/s will be responsible for setting up the InvIT and appointing a trustee. The number of sponsors is limited to 3. The sponsors should have a net worth of at least INR 100 crore and are required to hold minimum required percentage of total investments of InvIT.

ii. The trustee, registered with SEBI, shall hold the InvIT's assets in the name of InvIT for the benefit of all holders.

iii. The investment manager, responsible for making the investment decisions, should have a total net worth of INR 10 crore and minimum 5 years' experience in fund management.

iv. InvITs can invest in PPP projects that have received all requisite approvals or non-PPP projects that have either achieved COD or achieved completion of at least 50% construction as certified by an independent engineer.

v. However, the cumulative projects size for all investments should be greater than or equal to INR 500 crore, while the initial offer size of InvIT has to be at least INR 250 crore.

vi. Listing is mandatory for InvITs, and while listing, the collective holding of sponsors of an InvIT has to be at least 25% for at least 3 years.

134. Globally, investment trusts for the infrastructure sector exist in countries such as Hong Kong and Singapore. However, the lack of tax incentives is seen as a key reason behind their limited popularity. As a result, the Union Budget 2015-16 rationalized capital gain tax regime for InvITs and REITs. The budget proposed a specific taxation regime for providing the way the income in the hands of such trusts is to be taxed and the taxability of the income distributed by these business trusts.

135. When traded on a recognized stock exchange, listed units of a trust would attract same levy of securities transaction tax, and would be given the same tax benefits in respect of taxability of capital gains as equity shares of a company; i.e., long-term capital gains would be exempt and short-term capital gains would be taxable at the rate of 15%. Further, there will be no taxation of interest income earned by the trust.

6. Infrastructure bonds (RBI)

136. Guidelines for issuing infrastructure bonds, with a minimum maturity of 7 years, were announced for banks by RBI, to raise resources for lending to the infrastructure and affordable housing sector in July 2014. As per the guidelines, the bonds are unsecured, redeemable and rank pari-passu with other unsecured liabilities of the banks.

137. Though banks have been allowed to raise bonds for the infrastructure sector since RBI's release of guidelines on 'Issue of Long-term Bonds by Banks' in 2004, the issuance of long-term bonds for infrastructure has not picked up at all, largely due to application of reserve requirements. The current guidelines on infrastructure bonds, however, exempt infrastructure bonds from SLR and CRR requirements, and also from PSL requirements. This is seen as a major benefit for banks. Previously, if banks raised funds by issuing bonds, a large part of the funding would get immobilized in the form of SLR and CRR requirements, and a still larger part would have to be invested in weaker or low-yielding credit because of PSL requirements. Therefore, banks have to earn a substantially higher net interest margin, i.e., the difference between their lending rate and the cost of borrowing, to break even and meet the cost of overheads. With the reserve requirements as well as PSL requirements waived off, the proceeds of the bonds can be directly invested in infrastructure or affordable housing.

138. Infrastructure bonds have gained significant traction in the market, especially in the case of large private sector banks. Axis Bank, ICICI Bank and Kotak Mahindra Bank have collectively raised over INR 8,000 crore for the infrastructure sector through these long-term bonds.

C. Annexure – 3: Stakeholder consultation

Sr. no.	Category	Company	Name	Designation
1	Arranger	Yes Bank - Debt Capital Markets	• P. Rakesh • Purav Shah	• MD Co-Head Debt Capital Markets • Associate Director, Debt Capital Markets
2	Arranger	I-Sec PD	• Shameek Ray	• Head – Debt Capital Markets
3	Arranger	Kotak - Debt Market Arrangers	• Manoj Gupta	• Exec. VP – Corporate and Structured Products
4	Investor – Life Insurance Fund	SBI Life Insurance Corporation of India	• Nirmal D Gandhi	• AVP Investment
5	Investor – Life Insurance Fund	HDFC Standard Life Insurance Co. Ltd.	• Badrish Kulhali	• Sr. Fund Manager - Fixed Income
6	Investor – Mutual Funds	Franklin Templeton MF	• Kunal Agarwal	• Co-Head – Credit Fixed Income
7	Investor – Bank	ICICI Bank – Retail Structured Finance	• Saikrishnan S. • Seema Iyer	• Deputy General Manager – Retail Structured Finance • Senior Relationship Manager
8.	Originator	IDBI	• N.S. Venkatesh	• ED & CFO

D. Annexure – 4: 5:25 Flexible structuring scheme

1. Overview of the 5:25 Scheme

139. RBI's 5:25 scheme allows banks to extend long-term loans of 20-25 years to match the cash flow of infrastructure projects, while refinancing them every 5 or 7 years. Until now, banks were typically not lending beyond 10-12 years. As a result, cash flows of infrastructure firms were stretched as they tried to meet shorter repayment schedules. With this scheme, cash flows will tend to better match the repayment schedules and enhance the viability of long-term infrastructure projects.

140. Under this scheme, the bank offering the Initial Debt Facility may sanction the loan for a medium term, of about 5 to 7 years. This Debt Facility will cover the initial construction period at least up to commencement of commercial operations (CoD) and revenue ramp up. The repayment(s) at the end of this period, equalling in present value the remaining residual payments corresponding to the Original Amortisation Schedule, could be structured as a bullet repayment, with the intent specified up front that it will be refinanced.

141. That repayment may be taken up either by the same lender, a set of new lenders, combination of both or through the issuance of corporate bonds. This refinancing may repeat till the end of the amortization schedule. Further, banks may determine the pricing of the loans at each stage of sanction of the Initial Debt Facility or Refinancing Debt Facility as per the risk perceived by them at each phase of the loan.

2. Applicability

142. Term loans to projects in the infrastructure sector and core industries (viz., coal, crude oil, natural gas, petroleum refinery products, fertilisers, steel (Alloy + Non Alloy), cement and electricity) are eligible for this scheme.

143. New projects or projects which have achieved CoD are eligible under the scheme. Loans already extended, however, should be 'standard' in the books of the existing banks, and should have not been restructured in the past. Further, they should be taken over for more than 50 percent of the outstanding loan by value from the existing lender.

3. Benefits

144. The 5:25 scheme impacts both lenders and borrowers of the infrastructure sector. Key benefits offered by this scheme are listed subsequently.

145. Relief from restructuring for lenders – Through this scheme, banks can set forth fresh loan amortization schedules for existing projects without such exercise being treated as

restructuring. This is a significant advantage for banks, as restructured assets are classified as bad debt, requiring higher provisioning.

146. Long-term lending without adverse ALM issues – As the project loan would be refinanced at the end of every 5 years and banks would be allowed to consider the bullet repayment at the end of every 5 years as a part of their ALM, the banks would be able to extend finance to long gestation infrastructure projects and core industries without getting adversely impacted by ALM issues.

147. Improved exposure management for lenders – The scheme allows Banks to take up or shed their exposures at different stages of the life cycle of the project depending on bank’s single/group borrower or sectoral exposure limits.

148. Possibility of revival for restructured assets and NPAs - The flexible financing scheme is also applicable to infrastructure and core industries projects which have been restructured or classified as NPAs, hence, enhancing the prospects of their revival. However, this will be considered as ‘restructuring’ and these accounts would continue to remain classified as NPAs.

149. For the borrower, the spread out repayment schedule would lead to enhancement of the credit profile. An improved credit profile can in turn allow the borrower to access the bond market for funds.

150. The 5:25 scheme has indeed provided some relief to lenders and borrowers alike, although, its overall impact to the banking system is yet to be tested. So far, SBI pipeline for debt restructuring under 5:25 scheme is expected to be around INR 65 billion. Other PSBs have also participated in the scheme, Punjab National Bank having restructured loans worth INR 26 billion, while Union Bank and Bank of Baroda having restructured loans worth INR 64 billion INR 40-50 billion respectively. However, a large majority of the companies that are seeking refinancing under the scheme are from the steel and power sectors.

E. Annexure – 5: Notification on Basel III by RBI

151. Risk-weighted securitization exposures

i. Banks shall calculate the risk weighted amount of an on-balance sheet securitization exposure by multiplying the principal amount (after deduction of specific provisions) of the exposures by the applicable risk weight.

ii. The risk-weighted asset amount of a securitisation exposure is computed by multiplying the amount of the exposure by the appropriate risk weight determined in accordance with issue specific rating assigned to those exposures by the chosen external credit rating agencies as indicated in the following tables:

Table 10: Securitization Exposures – Risk Weight mapping to long-term ratings

Domestic rating agencies	AAA	AA	A	BBB	BB	B or below or unrated
Risk weight for banks other than originators (%)	20	30	50	100	350	Deduction
Risk weight for originators (%)	20	30	50	100	Deduction	

iii. Under the Basel II requirements, there should be transfer of a significant credit risk associated with the securitized exposures to the third parties for recognition of risk transfer. In view of this, the total exposure of banks to the loans securitized in the following forms should not exceed 20% of the total securitized instruments issued:

- Investments in equity / subordinate / senior tranches of securities issued by the SPV including through underwriting commitments
- Credit enhancements including cash and other forms of collaterals including over-collateralization, but excluding the credit enhancing interest only strip
- Liquidity support

iv. If a bank exceeds the above limit, the excess amount would be risk weighted at 1111 per cent[28]. Credit exposure on account of interest rate swaps/ currency swaps entered into with the SPV will be excluded from the limit of 20 per cent as this would not be within the control of the bank.

[28] As per Basel III, the maximum risk weight for securitization exposures, consistent with minimum 8 per cent capital requirement, is 1250 per cent. Since in India minimum capital requirement is 9 per cent, the risk weight has been capped at 1111 per cent (100/9) so as to ensure that capital charge does not exceed the exposure value.

F. Annexure – 6: Chapter XII - EA

152. —After Chapter XII-E of the Income-tax Act, the following Chapter shall be inserted with effect from the 1st day of June, 2013, namely:—

CHAPTER XII-EA

Special provisions relating to tax on distributed income by securitisation trusts

153. *115TA. Tax on distributed income to investors.*—(1) Notwithstanding anything contained in any other provisions of the Act, any amount of income distributed by the securitisation trust to its investors shall be chargeable to tax and such securitisation trust shall be liable to pay additional income-tax on such distributed income at the rate of—

i. twenty-five per cent. on income distributed to any person being an individual or a Hindu undivided family ;

ii. thirty per cent. on income distributed to any other person :

154. Provided that nothing contained in this sub-section shall apply in respect of any income distributed by the securitisation trust to any person in whose case income, irrespective of its nature and source, is not chargeable to tax under the Act.

155. The person responsible for making payment of the income distributed by the securitisation trust shall be liable to pay tax to the credit of the Central Government within fourteen days from the date of distribution or payment of such income, whichever is earlier.

156. The person responsible for making payment of the income distributed by the securitisation trust shall, on or before the 15th day of September in each year, furnish to the prescribed income-tax authority, a statement in the prescribed form and verified in the prescribed manner, giving the details of the amount of income distributed to investors during the previous year, the tax paid thereon and such other relevant details, as may be prescribed.

157. No deduction under any other provisions of this Act shall be allowed to the securitisation trust in respect of the income which has been charged to tax under sub-section (1).

158. *115TB.* Interest *payable for non-payment of tax.*—Where the person responsible for making payment of the income distributed by the securitisation trust and the securitisation trust fails to pay the whole or any part of the tax referred to in sub-section (1) of section 115TA, within the time allowed under sub-section (2) of that section, he or it shall be liable to pay simple interest at the rate of one per cent. every month or part thereof on the amount of such tax for the period beginning on the date immediately after the last date on which such tax was payable and ending with the date on which the tax is actually paid.

159. *115TC. Securitisation trust to be assessee in default.*—If any person responsible for making payment of the income distributed by the securitisation trust and the securitisation trust does not pay tax, as referred to in sub-section (1) of section 115TA, then, he or it shall be deemed to be an assessee in default in respect of the amount of tax payable by him or it and all the provisions of this Act for the collection and recovery of income-tax shall apply.

160. *Explanation*.—For the purposes of this Chapter,—

i. "investor" means a person who is holder of any securitised debt instrument or securities issued by the securitisation trust ;

ii. "securities" means debt securities issued by a Special Purpose Vehicle as referred to in the guidelines on securitisation of standard assets issued by the Reserve Bank of India ;

iii. "securitised debt instrument" shall have the same meaning as assigned to it in clause(s) of sub-regulation (1) of regulation 2 of the Securities and Exchange Board of India (Public Offer and Listing of Securitised Debt Instruments) Regulations, 2008, made under the Securities and Exchange Board of India Act, 1992 (15 of 1992), and the Securities Contracts (Regulation) Act, 1956 (42 of 1956) ;

iv. "securitisation trust" means a trust, being a—

161. "special purpose distinct entity" as defined in clause (u) of sub-regulation (1) of regulation 2 of the Securities and Exchange Board of India (Public Offer and Listing of Securitised Debt Instruments) Regulations, 2008, made under the Securities and Exchange Board of India Act, 1992 (15 of 1992), and the Securities Contracts (Regulation) Act, 1956 (42 of 1956), and regulated under the said regulations; or

162. "special purpose vehicle" as defined in, and regulated by, the guidelines on securitisation of standard assets issued by the Reserve Bank of India, which fulfils such conditions, as may be prescribed.'.