INFRASTRUCTURE FINANCING IN INDIA

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Infrastructure in India – Investment Trend (% of GDP)

- The period from 2007 to 2012, above can be referred to as the golden phase; with jump in private sector investment boosting overall investment
- The downward trend was due to decline in the private sector investment
  - The period from 2012 saw controversies related to the 2G spectrum allocation, coal mines allocation and slow pace of environmental clearances

For 2017 – India GDP: USD 2439 billion | Infra Investment: USD 137 billion

Public Investment: USD 74 billion | Private Investment: USD 63 billion
Banks have played a pivotal role in providing finance to infrastructure.

- Churning is important for sustained cycle
  - Project Stage – Bank Financing ➔ Post completion – Refinancing ➔ Released funds – Fresh funding
  - Completed projects should attract alternate funding

**Units:** 1 lakh crore = 1000 trillion | USD 1 = INR 65

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**Future Projections (FY18-22)**

<table>
<thead>
<tr>
<th>Sector</th>
<th>Investments (Rs lakh Cr.)</th>
<th>Investments (USD trillion)</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power</td>
<td>14.5</td>
<td>0.223</td>
<td>Renewables, Transmission network</td>
</tr>
<tr>
<td>Roads</td>
<td>10.0</td>
<td>0.154</td>
<td>Mega plans in roads</td>
</tr>
<tr>
<td>Railways</td>
<td>8.0</td>
<td>0.123</td>
<td>Enhanced budget</td>
</tr>
<tr>
<td>Airports &amp; Ports</td>
<td>1.0</td>
<td>0.015</td>
<td>Non-metro airports</td>
</tr>
<tr>
<td>Urban Development</td>
<td>5.5</td>
<td>0.085</td>
<td>Major focus</td>
</tr>
<tr>
<td>Others</td>
<td>11.0</td>
<td>0.169</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>50.0</strong></td>
<td><strong>0.769</strong></td>
<td></td>
</tr>
</tbody>
</table>

**Units:** 1 lakh crore = 1 trillion | USD 1 = INR 65 | Source – SBI Capital Markets Research

- More than 75% investments in sectors related to power, transport and urban sectors
- Presently, private sector participation has been limited primarily to Renewable Energy, Energy Transmission and Roads
Current sources of Infra financing

- Infra Financing
  - Govt.
    - Budgetary Support
  - Private Sector
    - Multilateral Institutions
    - Financial Institutions/Banks
    - Capital Markets (for better rated operational projects)

Financing Infrastructure in India – Key Players

- Public Sector Banks
- Corporates
- Funds
- Financial Institutions

Private Sector Banks and NBFCs

- BlackRock
- GIC
- Brookfield
- REC
- IDFC
- IDFC
- ICICI Bank
- AXIS Bank
- IDFC
- IDFC
- ICICI Bank
- ICICI Bank
- ICICI Bank
Infrastructure Finance – Typical Deal Diagram

Infrastructure Finance - Key Risks

**Categories**

**Sponsor Risk**
- Credit history
- Ability to fund equity
- Ability to implement and operate large projects

**Regulatory Risk**
- Backed by strong political commitment
- Establish transparent systems in all matters (Bidding criteria / Operational standards)
- Flexibility to take care of material changes in business environment / factors beyond the control

**Market Risk**
- Demand risk - Uncertainty in forecasting and competing facilities
- Price risk - Resistance of users for the stated tariffs and delay in periodic tariff increases

**Risk Mitigates**

**Sponsor Risk**
- Balance sheet analysis of sponsor
- Track record of execution
- Credit payment record
- Minimum level of upfront equity
- Step-in rights, pledge of shares

**Regulatory Risk**
- Project economics should be robust notwithstanding the water-tightness of contracts and concessions

**Market Risk**
- Market studies by experts
- Firm throughput contracts
- Price protection through contracts
- Equity stake of the offtaker
- Sensitivity analysis
## Infrastructure Financing - Key Risks

### Categories

- **Construction Risk**
  - Delay in completion of the project
  - Increase in project cost
  - Design & engineering risk
  - Environmental clearances

- **Financial Risk**
  - Capital structure
  - Interest rate risks
  - Forex risk

- **O&M Risk**
  - Technical aspects
  - Cost evaluation
  - Force Majeure events
  - Acts of God
  - War
  - Strike, public agitation
  - Change in law

### Risk Mitigates

- **Fixed price & time EPC Contract**
- **Performance warranties/guarantees**
- **Lenders’ Engineer Study**
- **Equity stake of contractor**
- **Insurance Advisor Study**
- **Environmental Impact Assessment**

- **Appropriate capital structure**
- **Hedging by way of derivative products**
- **Sensitivity analysis**

- **Annual Maintenance Contracts with OEMs**
- **Quality/Quantity assurances through warranties**
- **Maintenance Reserve from cash flow**
- **Insurance**

### Risk categorization

<table>
<thead>
<tr>
<th>Under construction</th>
<th>Operational phase</th>
</tr>
</thead>
<tbody>
<tr>
<td>Key Risks</td>
<td>Key Risks</td>
</tr>
<tr>
<td>Construction Risk, Regulatory Risk (including government approvals), Financing Risk, Market Risk</td>
<td>Operation &amp; Maintenance Risk, Market Risk</td>
</tr>
<tr>
<td>Specialist Advisors – LIE, LIA, Legal</td>
<td>Project debt is generally refinanced - post establishing satisfactory cash flows</td>
</tr>
<tr>
<td>Primarily SPV structure</td>
<td>Bond route for better rated projects (annuity cash flows/credit enhancement)</td>
</tr>
<tr>
<td>SPV/Project Financing – Bilateral or consortium mode depending on project cost</td>
<td>Average operational project rating of A</td>
</tr>
</tbody>
</table>

<table>
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<tr>
<th>Higher Risk</th>
<th>Lower Risk</th>
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<td>Interest spread (proportional to quantum of Risk)</td>
<td></td>
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</tbody>
</table>

Average under-construction project rating of BBB.
### Scope of Work for Lenders Independent Engineer (LIE)

#### Review of Project Documents
- **EPC Contract**
  - Review of various terms in EPC contracts in the context of project requirement, adequacy and transfer of risk
  - Contractors scope of work, terms and conditions with regards to performance guarantees
  - Technical provision associated with Contractors & Sponsors responsibility
  - Provisions for liquidated damages
  - Limits on total liability and individual liability caps
- **O&M Agreement**
  - Review scope of work to verify guarantees and associated liquidated damages provisions
  - Ensure performance testing criteria is objectively defined
  - Assessment of any variable price component in terms of risk of cost increase
  - Review organization structure for O&M team

#### Capability of Project Participants
- **EPC Contractors**
  - Technical capability, experience, adequacy of guarantees/warranties
- **Equipment Suppliers**
  - Past track record, technical know-how, availability of spares (logistics), etc.

#### Design Review & Project Schedule
- Review of overall project schedule, project design review, construction plan, etc.
- Availability of permits and licenses
- Project capability vis-à-vis design
- Identify potential delays

### Scope of Work for Lenders Insurance Advisor (LIA)

#### Risk Assessment
- Review of all relevant project documents (concession agreement, EPC contract, Civil construction contract, O&M contract, legal due diligence report, etc.)
- Discussion with various stakeholders of the Project – Sponsors, Contractors, Lenders, Legal Advisors, Insurance executives. Also conduct site visit (if necessary)
- Identify and quantify risks that can impact the Project during both construction and operational phase
- Review financing documents and advise on insurance schedules and requirements
- Analysis of delay in completion and business interruption issues arising out of risks in Project/Security/Financing documents
- Review local insurance laws and its implication on the Project
- Identify and advice on significant risks that are uninsurable in the Indian market or have limited insurability in international marker or are difficult and expensive to insure

#### Insurance Review
- Adequacy of insurance in both construction phase and operational phase and comment on scope of cover, deductibles, exclusions, compliance with laws, etc.
- Assess responsibilities under Project Contracts and comment on insurance implications for Project Sponsors, Lenders and Contractors
- Recommendation on insurance for Force Majeure, delay in CoD, business interruption, etc.
- Provide recommendations/observations on timing of insurance and financial integrity of insurers/reinsurers
- Recommend methods to mitigate uninsured exposures such as deductibles and any significant policy exclusions
- Certify that all insurances required by Project Sponsors and Lenders have been obtained and that such insurance comply with agreed requirements
Insurance for Infrastructure Projects

Insurance is integral to risk financing large infrastructure projects. Lenders prefer that Project Company effects insurance at their expense. Lenders are designated loss payees in the policy.

Construction Phase
- Construction All Risks - covers against accidental loss or damage arising out of construction works at project site. Extended to include agreed defects liability for specific period
- Delay in start-up/ALOP - to cover loss of earnings as a result of late completion of construction
- Construction Third Party Liability – cover damages to third party property/person

Operating Phase
- Material Damage covering value of assets funded
- Business Interruption – covers the loss of earnings due to damage of Project Assets, fire, etc.
- In case of refinance, new lenders need to designated loss payees

New breed of sponsors

Sovereign Funds
- ADIA
- Temasek Holdings
- GIC

Pension Funds
- GIP Investment Board
- PSP

PE funds
- BlackRock
- Brookfield

Private Sector
- Sembcorp
- enel
Recent Trends

Refinancing Institutions (IDFs)
- In the Union Budget for 2011–12, the Union Finance Minister announced the setting up of Infrastructure Debt Funds (IDFs) to accelerate the flow of long-term funds to operational infrastructure projects.
- By refinancing bank loans of existing projects, the IDFs are expected to take over the existing bank debt and thereby release funds for fresh lending by the banks for infrastructure projects.
- 4 IDF-NBFCs (IDFC, India Infradebt, L&T, Kotak) and 2 IDF-MFs (IL&FS, IIFCL) are currently operational.

Infrastructure Investment Trusts
- Infrastructure Investment Trusts (InvITs) are trusts that manage income-generating infrastructure assets, typically offering investors regular yields.
- Unlocking equity capital of developers to invest in new projects.
- Lower dependence of infrastructure sector to banks/FIs through greater capital market participation.
- IRB InvIT and Sterlite Grid InvIT.

THANK YOU