Essentials of Project Finance

Workshop on Project Finance

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November 2005
Definition of Project Finance

- **Project finance** involves the creation of a legally independent project company financed with non-recourse debt (and equity from one or more sponsoring firms) for the purpose of financing a single purpose capital asset, usually with a limited life\(^1\).

Main Parties to Project Financing

- **Lenders** (nonrecourse debt): 70%
- **Sponsors** (equity holders, typically have a controlling stake in the Project Company): 30%
- **Contractors**: Suppliers → Project Company
- **Customers**: Host Government
Characteristics of Project Finance

- A project is established as a separate company
- A major proportion of the equity of the project company is provided by the project manager or sponsor, thereby tying the provision of finance to the management of the project
- The project company enters into comprehensive contractual arrangements with suppliers and customers
- The project company operates with a high ratio of debt to equity, with lenders having only limited recourse to the equity-holders in the event of default
# Project Finance Investment

## Total Project-Financed Investment (US$ billions)

<table>
<thead>
<tr>
<th>Year</th>
<th>Bank Loans</th>
<th>Bonds</th>
<th>Total</th>
<th>% change</th>
<th>BLA &amp; MLA Finance</th>
<th>Equity Finance</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>2004</td>
<td>116.44</td>
<td>28.65</td>
<td>145.09</td>
<td>43%</td>
<td>18.75</td>
<td>70.22</td>
<td>234.06</td>
</tr>
</tbody>
</table>

## Percent of Lending by Type of Debt

<table>
<thead>
<tr>
<th></th>
<th>Bank Loans</th>
<th>Bonds</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percent</td>
<td>80%</td>
<td>20%</td>
<td>100%</td>
</tr>
</tbody>
</table>

## Number of Projects With Average Size (US$ millions)

<table>
<thead>
<tr>
<th></th>
<th>Bank Loans</th>
<th>Bonds</th>
<th>Bank Loans</th>
<th>Bonds</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number</td>
<td>472</td>
<td>86</td>
<td>247</td>
<td>333</td>
</tr>
</tbody>
</table>

Debt-to-total-capitalization ratio of 70%

Banks provided shorter-term financing (over 60% of bank loans mature in less than 10 years)
Bonds provided longer-term financing (over 75% of bonds mature in more than 10 years)
There has been a dramatic increase in the use of project bonds

Source: see footnote 1 and references therein.
Most project bonds have “negotiated” ratings

- Sponsors adjust leverage, covenants, and deal structure to reach investment grade
- Investment grade is important due to institutional restrictions against investing in sub-investment grade securities
Standard & Poor’s Rated Project Debt Distribution

<table>
<thead>
<tr>
<th>S&amp;P Ratings</th>
<th>Percent of Total Ratings by Number of Bonds</th>
<th>December 2003</th>
</tr>
</thead>
<tbody>
<tr>
<td>AAA</td>
<td></td>
<td>10%</td>
</tr>
<tr>
<td>AA+, AA, or AA-</td>
<td></td>
<td>1%</td>
</tr>
<tr>
<td>A+ or A</td>
<td></td>
<td>12%</td>
</tr>
<tr>
<td>A-</td>
<td></td>
<td>4%</td>
</tr>
<tr>
<td>BBB+</td>
<td></td>
<td>10%</td>
</tr>
<tr>
<td>BBB</td>
<td></td>
<td>6%</td>
</tr>
<tr>
<td>BBB-</td>
<td></td>
<td>14%</td>
</tr>
<tr>
<td>BB+</td>
<td></td>
<td>4%</td>
</tr>
<tr>
<td>BB</td>
<td></td>
<td>3%</td>
</tr>
<tr>
<td>BB-</td>
<td></td>
<td>2%</td>
</tr>
<tr>
<td>B+</td>
<td></td>
<td>9%</td>
</tr>
<tr>
<td>B</td>
<td></td>
<td>16%</td>
</tr>
<tr>
<td>B-</td>
<td></td>
<td>1%</td>
</tr>
<tr>
<td>CCC and below</td>
<td></td>
<td>8%</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>100%</td>
</tr>
</tbody>
</table>

Source: see footnote 1 and references therein.

Total Rated Volume (US$ billions) $120.60
Number of Bonds 221
% investment grade 64%
Comparison of Project Finance to Traditional Lending

- In traditional lending:
  - Projects are generally not incorporated as separate companies
  - Contractual arrangements are not as comprehensive
  - Debt to equity ratios are not as high
  - Loans offer lenders recourse to the assets of borrowers in case of default
Fundamental Difference Between a Project Company and a Typical Company

- **Overriding importance of the contractual and financing arrangements that exist between the various parties involved**
- **These are designed to allocate every major risk presented by the project to the party that is best able to appraise and control that risk**

Risks and Contracts

- The project sponsor bears the risks of project completion, operation and maintenance.
- The project lenders require the usual assurance from the project company, including security of their loans.
- The main contractor is best able to ensure that construction is completed within cost and on schedule.
- When there is a major supplier to the project, there will be a contract to ensure that (1) he does not abuse his possible monopoly power and (2) he produces efficiently.
Risks and Contracts

- When there are only a few potential customers for the project’s output, revenue risk is likely to be transferred to those customers by means of long term sales contracts.

- When the government grants a concession to a project company, there will need to be a concession agreement that gives the company the right to build and operate the project facility.

- If there is currency risk, the government may be asked to provide guarantees of currency convertibility at a given rate, otherwise the project company might not be able to honor its debt.
Ownership, Capital Structure, and Incentives in Project Finance

- Why are projects incorporated in separate companies?
- Why are the operators and the main project contractors typically the main equity-holders in that company?
- Why are project companies highly leveraged?
- Why does this leverage take the form of non-recourse financing?
Project Finance Benefits

- **When Does Project Finance Make Sense? (Agency Effects)**
  - To specialize and decentralize management
  - To make possible the provision of separate incentives for project managers
  - To preclude the waste of project free cash flow
  - To increase the outside scrutiny of projects
  - To improve incentives for the production of information
Project Finance Benefits

When Does Project Finance Make Sense? (Ownership Structure)

- To allow joint ventures without requiring the exhaustive mutual evaluation of the creditworthiness of potential partners
- To limit the liability of project sponsors
- To limit the exposure of creditors to well-defined project risks
- To distribute project risks efficiently
Project Finance Costs

When Does Project Finance Not Make Sense?

- When there are complex interactions of the project with the rest of the firm
- When project default is costly
- When optimal project leverage is low
- When project contracting costs are high