Essentials of Project Finance

Workshop on Project Finance

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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].

1. B. C. Esty and A. Sesia Jr., "An Overview of Project Finance-2004 Update", *Harvard Business Review*, 9-205-065.

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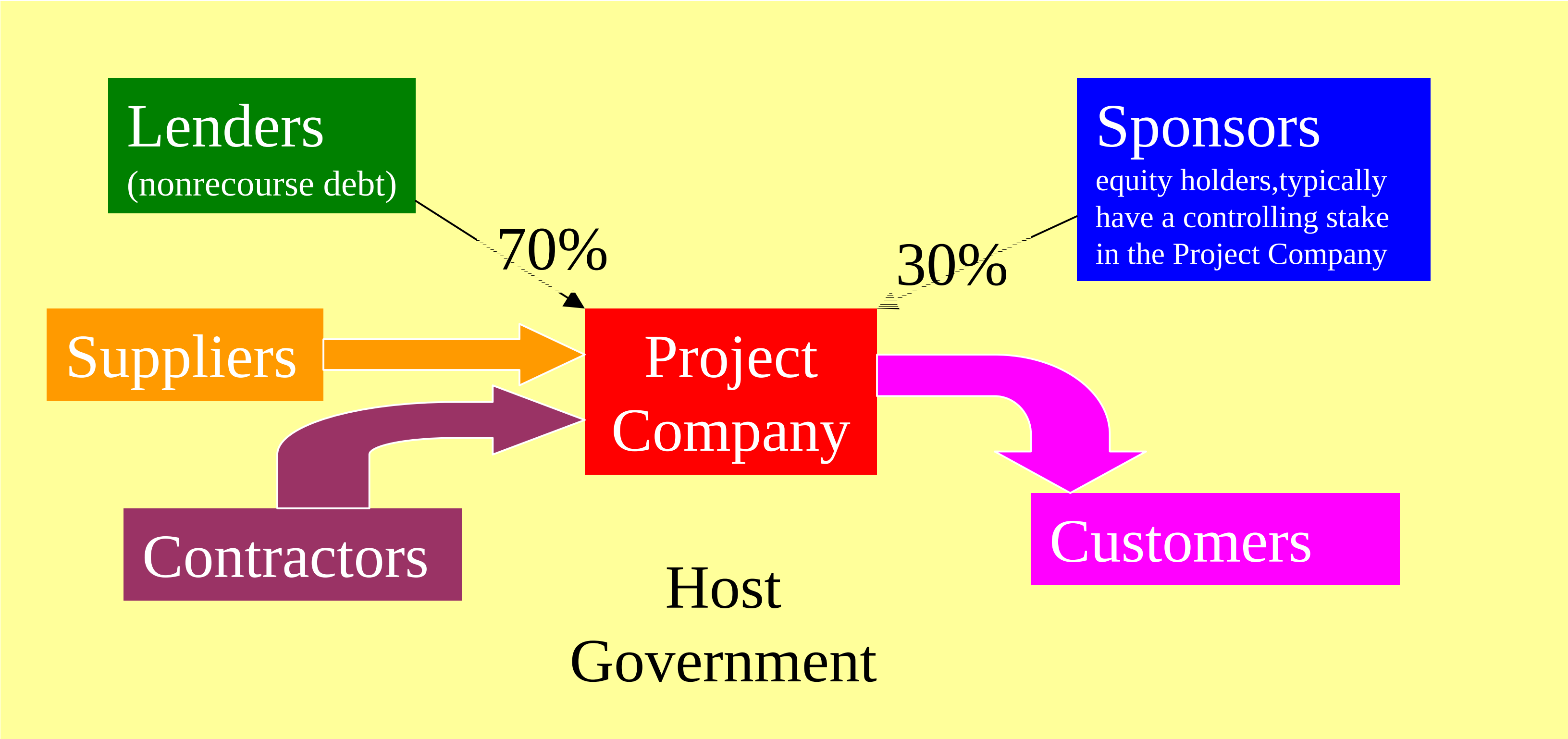
Main Parties to Project Financing



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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

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Project Finance Investment

Total Project-Financed Investment (US$ billions)							
Year	Bank Loans	Bonds	Total	% change	BLA & MLA Finance	Equity Finance	Total
2004	116.44	28.65	145.09	43%	18.75	70.22	234.06

Percent of Lending by Type of Debt		
Bank Loans	Bonds	Total
80%	20%	100%

Number of Projects With		Average Size (US$ millions)	
Bank Loans	Bonds	Bank Loans	Bonds
472	86	247	333

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.

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Project Debt Credit Rating

- 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

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Standard & Poor's Rated Project Debt Distribution

Percent of Total Ratings by Number of Bonds	
S&P Ratings	December 2003
AAA	10%
AA+, AA, or AA-	1%
A+ or A	12%
A-	4%
BBB+	10%
BBB	6%
BBB-	14%
BB+	4%
BB	3%
BB-	2%
B+	9%
B	16%
B-	1%
CCC and below	8%
Total	100%

Source: see footnote 1 and references therein.

Total Rated Volume (US$ billions)	$ 120.60
Number of Bonds	221
% investment grade	64%

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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[2]

- 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

2. The rest of the presentation is based on the paper by Brealey, R.A., I. A. Cooper, and M.A. Habib, 1996, "Using Project Finance to Fund Infrastructure Investments", *Journal of Applied Corporate Finance* 9:3, pp. 25-38.

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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

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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

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