

Project Structuring and Risk Allocation in Project Finance

Project Finance and Project Structuring

- Project Finance is aggressive use of “non-recourse” debt to be serviced by the cashflows from the project itself.
- The benefits are large amount of debt and lack of risk spillover.
- For lenders to finance under project finance structure, they need to have confidence
 - that the project is economically sound
 - that risks are not likely to arise endogenously
 - that risks have been identified, mitigated and allocated appropriately through project structuring

Project Structuring

- Defining Overall Project Boundary or Scope
 - Asset parameters
 - Service parameters
 - Payoff parameters
- Detailing the boundary for each stakeholder in the project

Project Structuring: Objectives

- To achieve the project objectives by defining the following for each stakeholder-
 - Accountability
 - Payoffs
 - Risks

Risk Allocation in Infrastructure Projects

- The payoffs and the risks imposed on stakeholder determine the extent of engagement by each stakeholder.
- Projects have-
 - Exogenous risks
 - Endogenous risks
- Good project structures facilitate achievement of project objectives by minimizing endogenous risks

Principles of Risk Allocation

- Endogenous risks should be borne by the stakeholder, which is in best position to control and mitigate those risks.
- Exogenous risks should be borne by those who can most efficiently bear it, typically
 - Insurance
 - Capital markets
- Risks not related to the core of the business should be hived off and instead debt should be used.

Endogenous Risks

- Endogenous risks arise due to conflict-of-interest between or due to the effort/capabilities of stakeholders in the project
- Conflict-of-interest between various stakeholders are contingent on time and situation
- Typical conflict-of-interests
 - Government and the developer
 - Developers and consumers/ input suppliers
 - Shareholders and lenders
 - developer, contractor and the O&M agency

Risk Allocation and Mitigation Tools

- Capital Markets
 - Insurance
 - Derivatives
- Contracts
 - Legally enforceable agreements
 - Self enforcing agreements
 - Reputation
 - Mutual dependence

Risk Management Framework

Market Risks	Bear or Hedge (Risks related to Demand, Exchange, and Interest etc.)	Allocate, Insure or Deter/Align (Political, Macroeconomic and Sovereign risks)
	Project-Specific Risks	Diversify or Insure (Force Majeure risks)
Exogenous		Endogenous

Limitations of Contract

- Costs of writing/ entering into contract
- Enforceability & Enforcement costs
- Inability to factor in opportunity costs
- Incompleteness
- Renegotiations Costs

Typical Infrastructure Project Risks

- | | |
|--|---|
| 1. Economic Risks | Inflation, Economic Policy stability |
| 2. Soc.-political risks | Social stability, regional stability, corruption, social non-acceptance |
| 3. Regulatory & Legal Risks
independent | Stability of regulatory framework, enforceability of contracts, regulations |
| 4. Market Risks | Tariffs, demand, competition |

Typical Infrastructure Project Risks

5. Development & Contr. Risks	Design and Planning, construction and completion
6. Start-up & Operating	Performance, environmental, suppliers
7. Technology	Obsolescence
8. Force Majeure	Natural disasters, war

Ideal Risks Bearer

Economic Risks	Shareholders, lenders and Government
Soc-Political Risks	Government
Regulatory Risks	Regulator, Government and Legal advisors
Market Risks	Operator, Shareholders and Regulators
Development Risks	Contractors, shareholders, Insurers
Start-up & Operating Risks	Operator, Shareholders, Insurers
Force Majeure	Insurers, Shareholders and Govt.

However....

- Allocating the risks to stakeholders in costly and cumbersome process
- The stakeholders have unequal bargaining power
- Enforcing contracts is costly and difficult
- Agency problems are part of the process
- Enforcing contract written by some parties is difficult.

Therefore....

- A robust project structure relies on self-enforcing contracts as much as possible.
- Incentive Compatibility of contracts and the project structure is the key behind successful project structuring