

Neutralizing Project Finance Risks A Global Perspective

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The World Bank

IBRD & IDA: Working for a World Free of Poverty

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- **Paul Allen** worked in marine and oil & gas sectors prior to forming the Project Executive Group in 2001.
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- He was a co-founding officer of the PMI Risk Management SIG, and an adjunct professor of management at Rice University, where he has taught project management & project finance in the MBA and Executive Education programs since 1997.
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- He has served as Division Chief in the Industry and Energy Department, ESMAP Operations Division, and later in the Oil and Gas Division of the Industry and Energy Department.
- He also served on the Board of Editors of the **Energy Journal** and of the **Journal of Energy Finance**.
- Mr. Razavi was appointed to his current position in 1997.

The Concepts of *Recourse* and *Non-Recourse* Financing

- Gas and Power projects in developing countries are traditionally built as an extension of the assets of an existing company, For example, when a public utility constructs a power plant, funds are provided on the account of the entire company rather than on the account of the new plant. As loan security, lenders have full **recourse** to the assets and revenues of the entire company, rather than recourse only to those funds related to the new power plant.
- An alternative is the formation of a **project company** specifically for construction of the new power plant. The project sponsors contribute equity. The assets and cash flow of the project itself secure debt, not the sponsors' other available resources. This type of borrowing, with no guarantees by sponsors or governments, is described as **non-recourse**. Since the repayment of the loan is primarily dependent on the success of the project, lenders pay close attention to project risks.

Major Risks Concerns in the Developing World

- Financing a project in the developing world is considered **more risky** than in the developed world because:
 1. Deficiencies in institutional and organizational structures,
 2. Lack of clear and transparent legislative and regulatory systems, and
 3. Economic and political insecurity.
- These **risks endanger the viability and sustainability of the project** through:
 1. Excessive construction and operation costs,
 2. Shortfall in revenue or the margin caused by price and market risks, and
 3. Uncertainty about safety and transferability of investments and returns.

Project Finance Participants and Their Roles

- Project sponsor
- Project company
- Borrowing entity
- Commercial lender
 - Arranging bank
 - Managing bank
 - Agent bank
 - Engineering bank
 - Security agent
- International (multilateral) agencies
- Bilateral agencies
- Rating agency
- Supplier/s
- Output purchaser
- Contractor (usually single point)
- Operator
- Financial advisor
- Technical consultants
- Project finance lawyers
- Local lawyers
- Host government/s
- Insurers

Caveat About Risk Allocation

- A project financing invites risk-taking. **All risks in a project financing must be allocated so a non-recourse or limited recourse financing is possible.** This invitation to risk taking is sometimes accepted with an aggressiveness toward a risk that is unsupported by the probabilities of the risk materializing. The project may find that the acceptance of the invitation came attached with a high price. Even if the price is not high, the project sponsors should not declare victory. **Rather, where the risk-reward equation is out of balance, the situation is created where the participant shortchanged is a prime candidate to trigger a project disaster.**

Project Risks

Essential to structuring a project finance package are identification, analysis, mitigation, and **allocation** of project risks. These risks are related to events that could endanger the project during development, construction, and operation.

Project Development – main risk is rejection by the government or financiers.

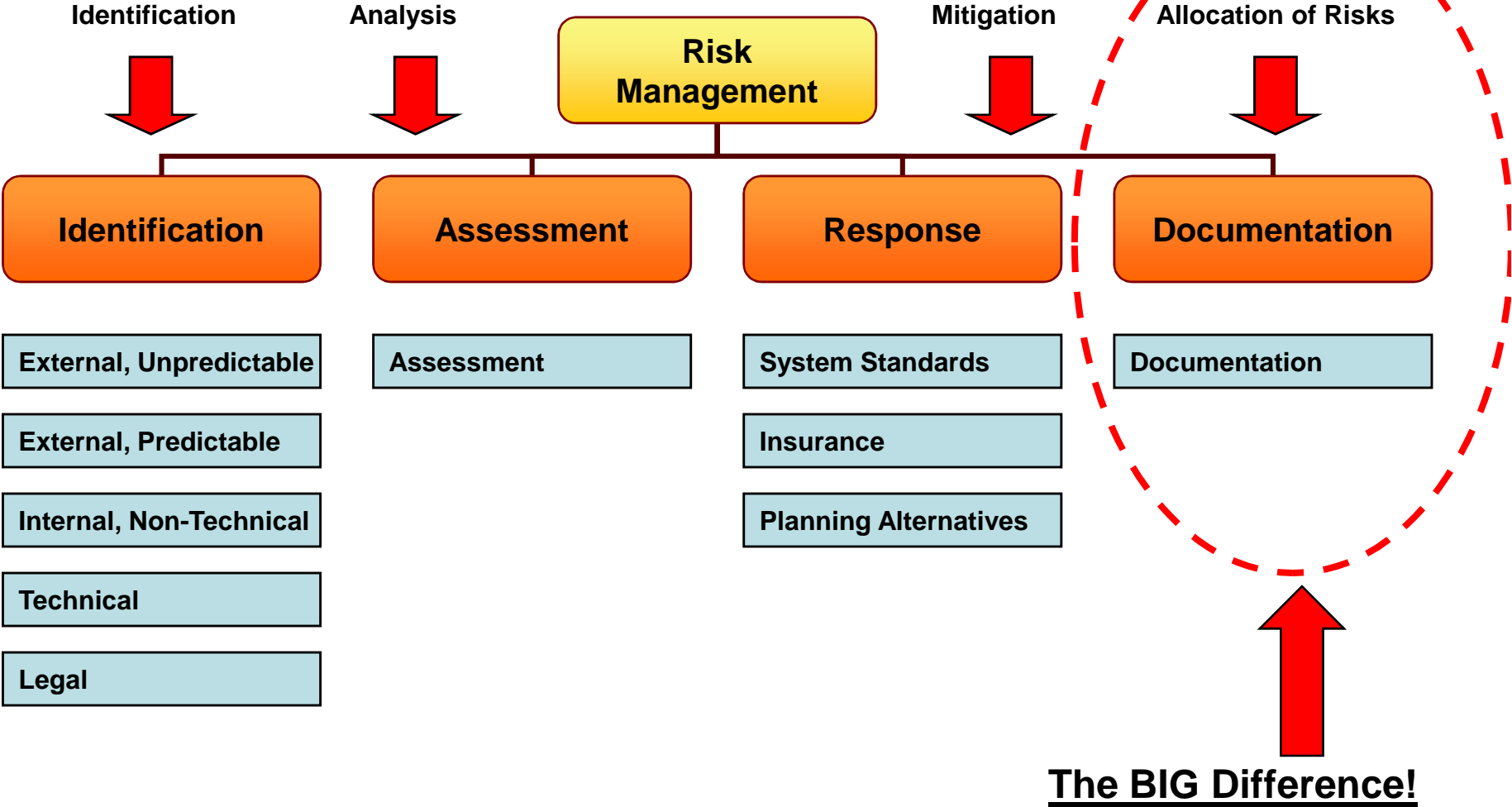
Construction – main risk is failure to complete the project with acceptable performance levels and within an acceptable time frame and budget.

Operations – main concern is it may not operate on a continuing basis within acceptable economic and technical parameters.

All risks are initially borne by project sponsors. However, project sponsors enter into numerous guarantee and contractual arrangements to hedge against risks.

The practice of combining various instruments for guarantees, borrowing, and mobilization of equity is referred to as **financial engineering** and represents the heart of project finance. The hedging arrangements affect not only the liability of the project company but also the willingness of private investors and financiers to support the project. This is the primary reason that project financing has turned into a complex discipline – financial engineering – involving a “combination of instruments” for guarantees, borrowing, and mobilization of equity.

Risk Management – A 4-Phased Approach



Significant Risks – Lenders Require a Complete **Security Package** (Documentation) Against All

- **Costs** (including construction and operations cost), which may be affected by inflation, interest-rate fluctuations, changing availability and rates of foreign exchange, delays, cost overruns, lack of raw materials, or fuels, and so on.
- **Revenues**, which may be affected by price risk and demand risk, and combine with the above into margin risk.
- **Safety and transferability** of investments and returns.

Accordingly, measures to manage the risk try to convince financiers that

- **Costs** will not exceed the projected levels, and, if they do, some other party will take the burden before the cost increase affects the financing of the project.
- **Revenues** will not fall short of projected levels, and, if they do, some other party will make up the shortfall so the project finances are not hurt.
- **Investment is safe and returns can be transferred** out of the country, or, if funds cannot be transferred, a credible agency will cover legitimate losses.

Documentation (Security Packages) Risks

Organizational documents – such as partnership agreements, joint venture agreement and shareholder agreement

Agreements with Host Country governments – such as a concession agreement, governmental licenses, sovereign guarantee and implementation agreement

Real property agreements – such as title documentation, leases, easements, and construction lay-down rights

Construction documents – such as a construction contract

Technology documents – such as a license agreement

Operation & maintenance documents – such as an operating agreement and a spare parts supply agreement

Fuel supply documents – such as a fuel supply agreement

Utility documents – such as electricity, oil, gas and water agreements

Off-take revenue documents – such as production sale agreements, energy sale agreements, and the like

Transportation documents – such as transportation agreements

Financing documents – such as loan agreements, inter-creditor agreements, and collateral security agreements

Instruments for Guarantees

Guarantee arrangement relating to commercial risks (that is, project completion, cost overrun, delay, fuel supply, operation and maintenance costs, and market demand) are normally arranged during the project preparation between project sponsors and other participants. However, guarantees against political risks (that is, expropriation, nationalization, confiscation, currency inconvertibility, labor behavior, and government regulations) are much more delicate and difficult to handle.

Mitigating risks requires considering all possible sources of guarantee and choosing a mix of instruments to enhance prospects for project financing at the lowest possible cost to project sponsors.

These guarantee instruments are classed in several different ways. The following describe guarantees as applied, respectively, to commercial aspects of project construction and project operation and to mitigating political risk.

Types of Risks – Commercial

Commercial Risk

CONSTRUCTION RISK

Cost overrun

Completion delay

Increased financial costs

Contractor

Contractor

Banks, other lenders

OPERATION RISK

Unsatisfactory plant performance

Excessive maintenance costs

Fuel supply or fuel cost
for power plants

Insufficient reserves for oil
and gas projects

Contractor, operator

Operator

Fuel supplier

Sponsors

REVENUE RISK

Insufficient sale volume

Low prices

Purchasers of project output

Mitigating Project Commercial Risks

Evaluating Options for Mitigating “Commercial Risks”

The task has two distinct dimensions.

First, sponsors need to reach agreement with the government or certain government entities about some aspects of marketing the project’s output. The government’s role varies depending on the country and the type of project. Securing government guarantees and agreements takes a relatively long time to complete, particularly in countries that lack clear precedents.

The second dimension in mitigating commercial risk involves negotiating with contractors, equipment suppliers, fuel suppliers, operating companies, and so on to determine their willingness to compensate for damages if they fail to fulfill their obligations. This is a technically complex process, but it is normally accomplished efficiently because it is driven by commercial incentives. The prerequisites for completion of these negotiations is a firm plan for procurement of goods and services.

Guarantee instruments for construction risks fall into following categories:

Construction Guarantee Instruments:

- Sponsor's completion guarantee.
- Lump-sum turnkey contract.
- Bid bond.
- Performance bond.
- Advance payment guarantee.
- Retention money bond.
- Maintenance bond.
- Financial derivatives.

Concerns & Risks:

- Cost overrun
- Completion delay
- Increased financial cost

Risk Mitigation and Guarantee Instruments

- Currency rate & currency swap & options
- Completion guarantee by sponsors
- Turnkey contract with fixed cost; firm completion date and plant performance guarantees; liquidated damages

Guarantee instruments for operation deficiencies fall into following categories:

Operational Guarantee Instruments:

- Put-or-pay contract.
- Take-or-pay contract.
- Throughput contract.
- Escrow account.

Concerns & Risks:

- Unsatisfactory plant performance
- Excessive maintenance costs
- Fuel supply or fuel cost
- Insufficient oil & gas reserves

Risk Mitigation and Guarantee Instruments:

- Operations & maintenance agreement with reputable operator
- Fuel supply agreement
- Independent resources assessment
- Turnkey contract with fixed cost; firm completion date and plant performance guarantees; liquidated damages

Guarantee instruments for revenue risks fall into following categories:

Revenue Guarantee Instruments:

- Sponsor's completion guarantee.
- Lump-sum turnkey contract.

Concerns & Risks:

- Insufficient demand
- Insufficient price

Risk Mitigation and Guarantee Instruments:

- Long-term price hedges
- Government guarantee of purchaser's credibility
- Take or pay or throughput agreements

Risk Issues in Detail – Commercial

- Probability of risks into problems
- Due diligence
- Feasibility study in Risk Identification
- Credit risks
- Increase in construction costs
- Delay in completion
- Force majeure in construction contracts
- Experiences & resources of contractor
- Building materials
- Facility site
- Technology
- Construction of related facilities
- Shortfalls in mineral reserves
- Raw material supply & utilities
- Creditworthiness of off-take purchaser
- Market for product of services
- Shortfalls in anticipated capacity, output, and efficiency
- Operator experience
- General operating expenses
- Sponsor commitment
- Management experience
- Permits and licenses
- Political environment
- Interest rate
- Force majeure
- Economic projection and feasibility report inaccuracy
- Environmental
- Contract mismatch
- Contract risks generally
- Commercial risk mitigation
 - Construction Period Mitigation
 - Contractual undertakings; Contingency reserve funds & equity & other; Insurance
 - Operations Period Mitigation
 - Contractual undertakings; Contractual arrangements; Contingency reserve funds
 - Cash traps; insurance

Types of Risks – Political

Political Risk

REGULATORY RISK

Changes in regulatory regime, including price, environmental obligations, and so on

Government

TRANSFER-OF-PROFITS RISK

Foreign exchange inconvertibility, restrictions on transferring funds

Government

OTHER

Expropriation, war, civil unrest

Force Majeure Risk

Natural disasters

Mitigating Project Political Risks

Evaluating Options for Mitigating “Political Risk”

Although mitigating commercial risks represents the most time-consuming aspect of preparing the security package, the issue of political risk should be addressed at the outset. Most investors and financiers are convinced that commercial risks can be effectively addressed when the time comes, but they also feel that political risks are out of everybody’s control. Thus, they do not take a proposal seriously until they receive some comfort that political risks are manageable. Options for mitigating political risks include several types of guarantees as well as the involvement of certain players – for example, partnership with a key state entity or with powerful local individuals and companies.

Formal guarantees against political risk are provided by the host government and by multilateral and bilateral agencies.

Often, the question is not about choosing one versus another but about combining them to provide the most comprehensive coverage at the lowest possible cost.

Guarantee instruments for political (country) risks fall into following categories:

Political Concerns:

- Currency risks – for example, inconvertibility, devaluation, a restrictions on currency imports and exports.
- Taxes and duties – for example, increased taxes on property, production, income, and profits
- Labor risks – for example, changes in laws and regulations dealing with work permits for imported labor, labor unions, and labor compensation
- Government-intervention risks – for example, local government and federal government interference or harassment through licenses, regulations, police, and military.
- Losses from expropriation, nationalization, confiscation, war or revolution.

Risk Mitigation and Guarantee Instruments

- Offshore escrow account
- IFC “umbrella” protection and partial risk guarantees by World Bank and regional development bank
- Insurance against foreign exchange inconvertibility from multilateral, bilateral, and commercial sources.

Usually a “combination of guarantees” are required:

- Guarantees by the host government are often needed to assure the project company that government will take measures to protect or enhance the interest of the project, provided it is within the government’s control and the company functions within the country’s legal framework. Host government guarantees against political risk can take many forms, including concession agreements covering some of the risks outlined, coverage against expropriation or nationalization, and guarantee by the central bank of the host country against risks such as currency and foreign exchange restrictions.
- Multilateral Investment Corporation (affiliate of the World Bank) provides investment insurance against political risk in developing countries.
- International Finance Corporation (affiliate of the World Bank) provides various types of comfort to other investors and financiers through its “umbrella” arrangement.
- World Bank may provide partial guarantee against the risk arising from non-performance of sovereign contractual obligations and from the force majeure aspects.
- Regional Development Bank (such as Inter-American Development Bank, European Bank for Reconstruction and Development, and the Asian Development Bank) provide various types of guarantees against commercial and political risks.
- Most export-import banks of industrialized countries provide various types of guarantees against commercial and political risks.
- Most industrialized countries now have specialized government-sponsored agencies that guarantee investments and financing of own nationals in developing countries

Guarantee instruments for Force Majeure (natural disaster) risks fall into following category:

Force Majeure:

- Natural disasters, acts of god, etc. – defined: an event outside of the reasonable control of the effected party to a contract, which it could not have prevented by good industry practices or by the exercise of reasonable skill and judgment.

Risk Mitigation and Guarantee Instruments:

- Force majeure insurance from commercial sources
- Partial risk guarantees by World Bank and regional development banks

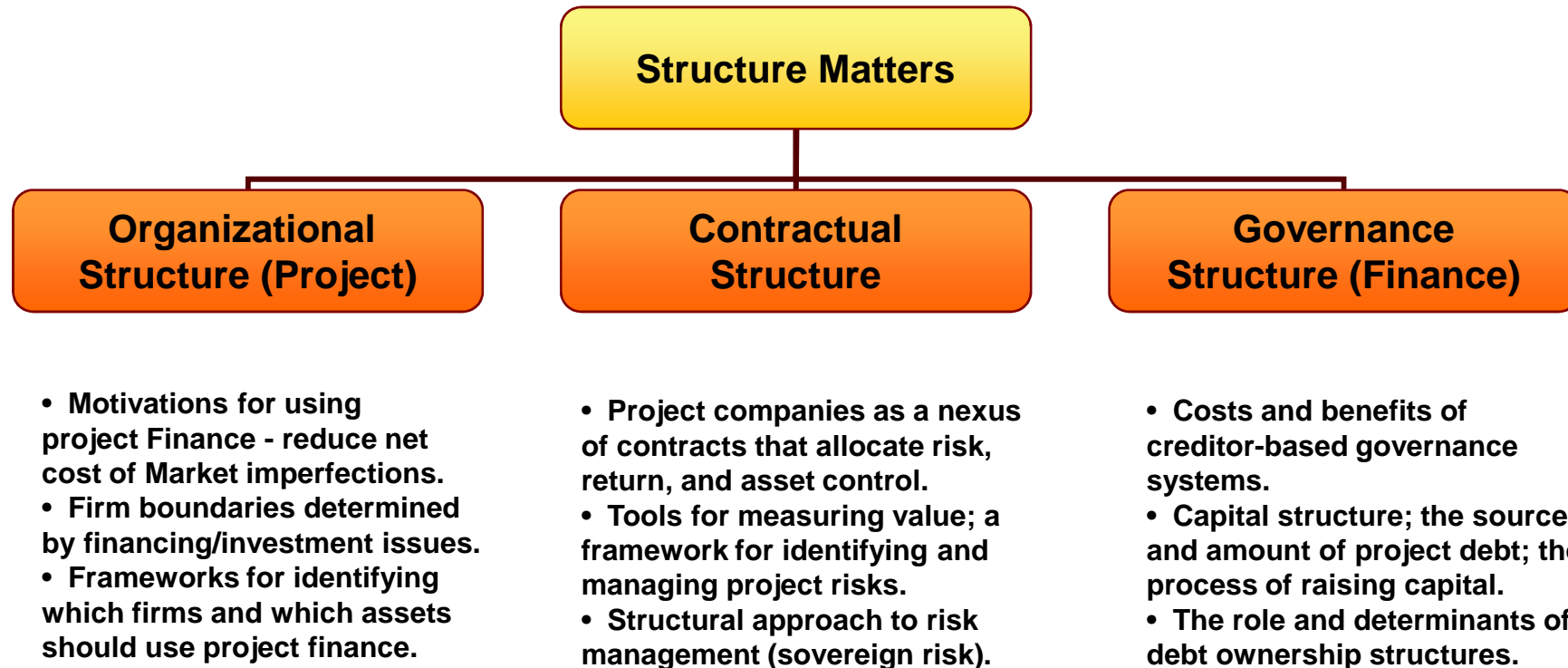
Risk Issues in Detail – Cross-Border (Political) - 1

- Currency-related risk
 - Non-convertibility of currency
 - Currency transfer inability
 - Exchange controls
 - Violation of exchange laws
 - Enforcement of transactions in case
 - Exchange permissions and consents
 - Currency devaluation risks
 - Indexing revenues
 - Matching currencies - revenue and debt
 - Raising debt in local currency
 - Derivatives
 - Sharing of risks
 - Offshore accounts
 - Special currency problems in project
 - Advance approvals
 - Consent
 - exemption
 - Currency risk mitigation techniques
 - Payment in hard currency
 - Foreign exchange risk insurance
 - Indexed local currency payments
- Permits, concession and license risks
- Expropriation risk
- Expatriation
- Change of law
 - Import tariffs
 - Export tariffs
 - Production or consumption controls
 - Taxes
 - Taxes on income
 - Customs duties
 - Withholding tax on payment of interest
 - Nondiscrimination
 - Environmental controls
 - Regulation and deregulation
- Political violence, civil unrest, war and other political Force Majeure events
- Political collapse and succession
- Preemption and priority
- Sovereign risk
- Breach of undertakings (contract repudiation)

Risk Issues in Detail – Cross-Border (Political) - 2

- Collateral risks
 - Types of collateral security allowed by the Sovereign Government?
 - Local formality compliance?
 - Priority of liens?
 - How is lien enforced?
 - How does foreclosure process work?
 - Collateral trusts
 - Real property issues?
 - Interaction among risks?
- Law and Legal Systems risks
 - Choice of law?
 - Agent for process and submission to jurisdiction?
 - Fees, approvals and filings
 - Legal expertise and experience
 - General business law and regulation
 - Waiver of Sovereign Immunity?
- Illiquidity of equity investment
- Freezing or blocking orders
- Export prohibitions
- Price controls and regulation
- Commercial or political – or both?

Structure Matters...



Risks in Project Finance Structures

Commercial loan financing

- Construction phase
- Operations phase

Export credit financing

- Types of Export-Import financing
 - Direct lending
 - Financial intermediary loans (bank to bank)
 - Interest rate equalization

Bond financing

Specials:

- BOO (Build-Own-Operate)
- BOT (Build-Own-Transfer)
- BOOT (Build-Own-Operate-Transfer)

Lease financing

- Advantages to the Project company
 - Control over the project
 - Total financing
 - Lower financing costs
 - Tax deductibility of rent
 - Shifting of residual risks
 - Equity risk-taker replaces lender as financing source

Co-financing

Production payments

Forward purchase agreements

Risks in Project Finance “Ownership” Structures

Pre-development activities

- Definition of the project
- Exclusivity
- Roles and responsibilities
- Tasks and schedule
- Cost funding
- Management and voting
- Abandonment
- Confidentiality
- Anti-trust and restrictive trade practices

Determining the structure to use

- Need for leverage
- Grade of investment
- Tax laws and treaties
- Project management
- Accounting treatment and objectives
- Lender preferences
- Transferability of equity interests

Avoiding parent company direct involvement

Special-purpose nature of project company

Host country investment requirements

Corporation: selection reason, management

Gen'l partnership: liability, reason, collateral

Ltd. partnership: reason, management

Limited Liability Company: op'g agreement

Joint Venture:

- Reason for selection
- Types
- Project management
- Conflicts of interest
- Nature of liability

European Economic Interest Groupings

Development consortium

Preserving **flexibility**

Fragmentation

A Note on *Flexibility*

Flexibility

- Although there is a need to establish the ownership structure as soon as possible to achieve the goals of the project sponsors, flexibility in transnational projects is equally important. To do so, the ownership structure should be kept flexible allowing for participation by local private and state participants.
- Flexibility should be preserved to allow for various levels of government involvement in the project, whether ownership or risk allocation.
- Finally, all available financing sources should be consulted for possible participation, including the following: equipment suppliers with access to export financing multilateral agencies; bilateral agencies, which may provide financing or guarantees; the International Finance Corporation or regional development banks that can mobilize commercial funds; specialized funds; institutional investors and equity investors; and commercial banks, both domestic and international. Involvement of any of these sources might affect the ownership structure.

A Note on *Fragmentation*

Fragmentation

- The complete nature of project financed transactions, coupled with conflicting tax laws and accounting rules among countries, sometimes combine to make multiple project vehicles necessary. For example, a holding company is sometimes formed in a low tax country for the purpose of holding ownership interests in the project company.
- These considerations are not limited to the project company and its owners. Other project participants, such as a multinational construction company, sometimes form on-shore and off-shore companies to participate in a single project. These separate entities provide different services to a project, often in exchange for payments in different currencies.

Recommended Additional Reading for Project Finance & Presentation References

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