AGENDA

• History and Definition
• Structure of Project Finance Transactions
• Key Players
• Milestones
• Role of Debt in PF transactions
• Risk Management
• Financial Models
• Legal Agreements
HISTORY OF PROJECT FINANCE

- Traced back to 1291 A.D.
- English Crown funded exploration of the Devon silver mines
- Deal with Florentine merchant bank Frescobaldi.
- Bankers made up a mining concession equal to the amount of silver they could mine in a year.
- Another type of project finance was utilised to finance ships’ voyages till the 17th century. On return the cargo would be liquidated and the returns of the voyage divided between investors.
- In the 1970’s project finance became popular for oil drilling and soon was associated with all types of infrastructure.

DEFINITION OF PROJECT FINANCE

The International Project Finance Association (IPFA) defines project financing as:

“THE FINANCING OF LONG-TERM INFRASTRUCTURE OR INDUSTRIAL PROJECTS AND PUBLIC SERVICES BASED ON A NON-RECOUSE OR LIMITED RECOUSE FINANCIAL STRUCTURE, WHERE DEBT AND EQUITY ARE USED TO FUND ESTABLISHMENT AND PAID BACK FROM THE CASH FLOWS GENERATED BY THE PROJECT.”
WHAT IS A PROJECT IN THIS CONTEXT?

A PROJECT HAS:

- Intense (up-front) capital requirements
- A finite, but long life, typically between 10 – 25 years
- Few diversification opportunities i.e. assets are specific and the project is legally ring-fenced from undertaking “other” activities
- Typically high operating margins and significant free cash flows, through the contracted sale of commodities, e.g. power at a set tariff
- Often regulated by government and licensed
- Using both debt and equity.
PROJECT MILESTONES

Development Time = Costs

Min. $500k - $1m

% Allocation
- Developer
- Engineering
- Financial Model
- Legal Fees
- Compliance
- Independent DD
- Fund Raising

100%
80%
60%
40%
20%
0%

Project Defined
Bankable Project
Loan Term Sheet Issued
Financial Closure
ROLE OF DEBT IN PROJECT FINANCE

• Debt is principally repaid using cash flows generated from the operations of the project:
  • Limited recourse to project sponsors;
  • Secured by the project’s assets or contracts, i.e. the power purchasing agreement, the off-take or the asset having been created;
  • First priority on project cash flows is given to the Senior Lender(s);
  • Consent of the Lender is required to disburse any surplus cash flows to project sponsors;
  • Riskier projects may require surety/guarantees of the project sponsors

ROLE OF DEBT IN PROJECT FINANCE

• Debtor is a Project Company (SPV)
  • Legally independent from Sponsors
  • Investing in a capital asset
  • Lenders have limited recourse to Sponsors’ assets
  • Risks (more) equitably allocated
  • Finance granted on the basis of future cash flows
  • Future cash flows codified into agreements
ROLE OF DEBT IN PROJECT FINANCE

Cash Flow Available for Debt Service [CFADS] vs. Debt Service Obligation

Pros & Cons of Project Finance Debt

- Limits the Lender’s recourse to the sponsor(s)
- Off-balance sheet treatment of fresh Debt
- Ability to maximize leverage
- Disassociate sponsors’ credit rating from the venture:
  - Developers can obtain finance without a track record
  - Project can be more viable than the sponsors’ existing businesses resulting in lower interest rates
- Takes longer to structure & execute than equivalent size corporate finance transaction
- Higher transaction costs due to:
  - Creation of a separate entity (SPV)
  - Codification of all contracts the SPV enters into
- Restriction in managerial decision making
- Disclosure of stakeholder strategy & intellectual property
PROJECT FINANCE - INSTITUTIONAL FRAMEWORK

- Independent Advisors
- Developer
- Equity Providers
- O&M Contractor
- Construction
- Suppliers
- Project Company
- SPV (Single Purpose Vehicle)
- Banks
- Debt Providers
- Off-taker (Government or Private)
- Regulators
- Cash Flows
- Services, products, permits, licenses
RISK MANAGEMENT PROCESS

IDENTIFY RISK

ANALYSE RISK

EVALUATE RISK

MITIGATE RISK

ALLOCATE RISK

IDENTIFYING PROJECT RISKS

Risk Breakdown Structure (RBS)

• PRE-COMPLETION
  • Location
  • Skill/Competence
  • Activity Planning
  • Technology Choice
  • Construction Method

• POST-COMPLETION
  • Supply Risk
  • Operational Risk
  • Market Risk

• COMMON RISKS
  • Interest Rate Risk
  • Currency Risk
  • Country Risk
  • Inflation Risk
  • Environmental Risk
  • Regulatory Risk
  • Legal Risk
  • Credit / Counterparty Risk
RISK ALLOCATION USING CONTRACTS

- Developer should allocate risks through the proposed contracting structure, i.e. EPC wrap, O&M, Off-take, Supply agreements

- **Covenants** are included in the loan agreement’s term sheet, e.g.:
  - Maintain **Debt Service Cover Ratio** of 1.2x – 1.5x
  - Demand **Performance Guarantees** from EPC and O&M
  - Insist on **Maintenance Reserve Account**
  - Fund a **Debt Service Reserve Account**
  - Require a **Percentage of Contingent Equity**
  - Force purchase **Currency Hedges**
  - Demand an **All asset Cession and Pledge**
  - Insist on **Direct Agreements**

- Any increase in security increases costs and reduces profitability

COMMON RISK RATIOS

- **Debt Service Cover Ratio (DSCR)** is the ratio of (1) to (2) below:
  1. Net project Revenue;
  2. Total Debt Obligation (interest and principal) on the Facility for the period.

- **Loan Life Cover Ratio (LLCR)** is the ratio of (1) to (2) below:
  1. The present value of net cash flow before interest for each future period up to the Final Repayment Date;
  2. The amount of the Facility outstanding at the end of the period.

- **Project Life Cover Ratio (PLCR)** is the ratio of (1) to (2) below:
  1. The aggregate of the NPV of the projected cash flows after debt service from the calculation date until the final day of the Project Term.
  2. The total outstanding Loan Facility at the Calculation Date.
PROJECT DEVELOPERS’ CAPACITY & COMMITMENT

- Experience of sponsors and their team
- How well organized and structured is the developer?
- Identify conflicts of interest
- How professionally is financing being requested?
- Do the sponsors evidence long-term commitment?

Mitigation

- Request experienced firms or professionals (if necessary)
- Increase equity contribution
- Work with projects which receive technical and financial assistance

CONSTRUCTION RISK

- Largest capital expenditure:
  - Most likely source of significant cost overruns.
  - Project technical failure

- Recommended Contract:
  - ENGINEERING PROCUREMENT CONSTRUCTION (EPC) TURNKEY CONTRACT
    - Usually fixed price
    - Contractor takes the risk of fluctuations in the cost of labour or materials and the performance of all sub-contractors
  - FIDIC SILVER BOOK / Bespoke
TURNKEY / EPC CONTRACT

• KEY FEATURES OF EPC CONTRACTS:
  • (Fixed) Price in one or two currencies
    • Drawdown Schedule
    • Performance Bond
  • Stated Completion Date – [DD-MMM-YYYY]
    • Handover, Testing & Commissioning
  • Plant Performance (Minimum Standards)
    • Liquidate/Make Good
  • Guarantees & Warranties
  • Damages (Liquidated)
  • Step In Rights

CONSTRUCTION RISKS

• Can construction be completed within budget and time?
• Are all licenses arranged?
• Are the contractors qualified?
• Is equipment reliable?
• Is the investment cost per kW a reasonable amount?

Mitigation
• Demand a qualified and financially strong EPC contractor
• Contract must contain delay and Performance LDs
• Demand Upfront Performance Bond
• Open book construction budget
• Impose drawing procedures and contingency reserves
• Insist on force majeure insurance
**PRODUCTION RISK**

- Can the envisaged output actually be produced?
- Is the supply study reliable?
- How was the production forecast estimated?
- Understand all data sources

**Mitigation**

- Expert opinion about feasibility studies
- Assess the project’s performance under more pessimistic scenarios (sensitivity analysis)
- Require developers to maintain a debt service reserve account

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**OPERATIONAL RISK**

- What happens if technology breaks down?
- Who is responsible for site maintenance?
- Does the maintenance budget cover all costs?
- Is O&M a reasonable amount compared to sales?
- What happens if O&M is more expensive than budgeted for?

**Mitigation:**

- Confirm that a financially strong O&M-contractor is appointed.
- Insist that insurance policies be put in place.
- Request a Maintenance Reserve Account (MRA).
MARKET (OR REVENUE RISKS)

- How likely is it that revenue will come in?
- Can anything change regarding set prices?
- Are clients capable to pay?
- Will clients pay?
- How competitive is the market?

Mitigation:
- Ensure that the off-take extends beyond the debt period.
- Check financial standing of dominant off-takers.
- Review effects of tariff and volume changes on project cashflow.
- Require developers to maintain a DSRA.
- Look for counter party risk insurance.

POLITICAL, SOCIAL & ENVIRONMENTAL RISKS

- What if the government changes its policies?
- Would local communities oppose the project?
- Does the project cause environmental impact? (claims!)
- Can the construction contract actually be enforced?

Mitigation:
- Check the EIA before loan disbursement.
- Allow for environmental and/or social claims in the budget.
- Obtain political risk insurance if necessary.
INDEPENDENT ADVISORS IN PROJECT FINANCE

“EACH PROJECT FINANCE DEAL HAS A CRITICAL MINIMUM-SIZE THRESHOLD BELOW WHICH STRUCTURING COSTS BECOME EXCESSIVE IN RELATION TO ITS FORECASTED CASH FLOWS.”

- Advisors are essential to the closure of a deal:
  - **Legal Advisors** -> Ensure all contracts are in order
  - **Financial Advisors** -> Prepare/Audit Project Financial Model
  - **Insurance Advisors** -> Put necessary insurances in place
  - **Lender's Technical Advisors** -> Ensure construction completion according to contract terms

SUMMARY: RISK CHECKLIST

| Feasibility          | • Long-term data by an independent professional  
|                      | • Necessary permits and licenses arranged for  
|                      | • Capacity and output calculations verified by an independent professional |
| Construction         | • Engineering design confirmed by an independent professional  
|                      | • Qualified construction company contracted  
|                      | • Qualified construction supervisor contracted  
|                      | • Construction time sufficient  
|                      | • Delays and cost overruns covered through contracts or insurances |
| Market               | • Off-take beyond the length of the term of the loan  
|                      | • Tariff escalations accounted for |
| Operations           | • Access to necessary expertise to operate  
|                      | • Insurances in place for business interruptions and force majeure  
|                      | • Operating expenses less than 10% of sales revenue |
| Financials           | • Increase Equity  
|                      | • Fully costed and contracted construction budget (EPC WRAP)  
|                      | • Minimum ADSCR of 1.3x  
|                      | • Equity IRR over 15%  
|                      | • Financial indicators still meet thresholds if operating assumptions are changed |
SUMMARY

• If a project is viable the risks can be managed using appropriate tools
  • Most difficult Risks are Supply and Off-take

• Specialized expertise required
  • Due Diligence necessary
  • Banks much more involved than in Corporate Finance transactions
THE FINANCIAL MODEL

IT’S ALL ABOUT WATERFALLS

- CFADS - CASH FLOW AVAILABLE FOR DEBT SERVICE
- SENIOR SECURED DEBT REPAYMENTS
- DSRA - DEBT SERVICE RESERVE ACCOUNT
- MEZZANINE FINANCE REPAYMENT
- CASH AVAILABLE FOR EQUITY
- SHAREHOLDER LOANS
- DIVIDEND DISTRIBUTIONS

Basic “best practice” suggestions

- Build the model from assumptions (that are fully understandable)
- Structure your model between Construction and Operations
- Construction
  - Monthly intervals from Financial close to Commercial Operation Date
  - Major expense items based on how they are being depreciated
- Operations
  - Quarterly data until End of Project
  - Revenue is a clearly understood derivative of a number of documented assumptions
UNDERSTAND THE PURPOSE OF THE MODEL

Objectives

1. To communicate that the project is worthwhile
2. To attract equity investors to the project
3. To establish total project costs
4. To establish the size of debt “required”
5. To illustrate that the project can afford the debt asked for

CAPITAL STRUCTURE

- Long-term debt with a grace period
- Equity
  - Often foreign, withholding taxes do apply
  - Sweat equity payments may apply to local developers
- Grants
  - Sometimes amortized (over 10 years)

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount (USD million)</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Debt (grace: 2 years, Interest: 12%, repayment period: 7 years)</td>
<td>7.0</td>
<td>70%</td>
</tr>
<tr>
<td>Grants</td>
<td>0.5</td>
<td>5%</td>
</tr>
<tr>
<td>Equity</td>
<td>2.5</td>
<td>25%</td>
</tr>
<tr>
<td>Grand total</td>
<td>10</td>
<td>100%</td>
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</tbody>
</table>
ESTABLISHING TOTAL PROJECT COSTS

THE PROBLEM WITH CIRCULAR REFERENCES

- **Elements of Total Project Costs**
  1. Capital Costs (EPC Fixed)
  2. Development Fees
  3. Contingencies
  4. Interest During Construction
  5. Initial Funding for the DSRA
  6. Initial Funding for the MRA
  7. Commitment Fees
  8. Lenders Fees

- **Sources of Funds**
  - Equity (25%)
  - Debt (70%)
  - Grants (5%)

Items in Grey are relative to either Total Costs or to Loan size – causing a loop.

PROJECT FINANCE AGREEMENTS

UNCDF
October 2014
• The Term Sheet signifies the bank’s interest in engaging in the transaction
• More importantly it states the terms under which such interest can be consummated
• The purpose of a Term Sheet:
  • Details of terms and conditions
  • Guide to legal counsel
  • Summary for other parties
  • Point of reference for future negotiations
  • Credit committee approval
• Usually not signed or full of caveats that allow the bank to exit the transaction

TERM SHEET – WHAT IS IN IT?

• Primary terms and conditions and major points of principle
• Parties
• Major financial terms:
  • Loan Tenor, Interest Rate, Moratorium, etc.
  • Conditions on EPC and O&M Contract
  • Expected type of Off-take (Take or Pay)
  • Step-in Rights
• Conditions precedent to financial close
• Drawdown conditions and mechanics
• Changes in circumstances
• Representations, covenants and events of default
• Financial covenants
• Governing law and dispute resolution
TYPICAL AGREEMENTS IN PROJECT FINANCE

1. Loan Agreements
2. Off-Take Agreements
3. Supply Agreements
4. EPC Contract
5. O & M Contract
6. Accounts Agreement
7. Security Documents
   • Mortgages
   • Assignments of contract rights and insurances
   • Control over bank accounts
   • Share pledges
   • Direct agreements
8. Support Documents
   • Sponsors
   • Insurances
9. Inter-creditor Agreement
TERMS & CONDITIONS

- Important terms and conditions
  - Cover ratios
  - Drawdown mechanics
  - Interest rate adjustment
  - Repayment and mandatory prepayment
  - Partial prepayment or cancellation
  - Representations and warranties
  - Financial and project information reporting requirements
  - Project supervision
  - Covenants
  - Events of default
  - Project completion
  - Financial close

DEFINITION OF FINANCIAL CLOSE

Financial close
- all project contracts have become unconditional
- all conditions precedent to project credit agreements have been satisfied or waived
Typical Loan Drawdown mechanics:-
- Equity First or Pari Passu
- Drawings only to pay specified project costs:
  - EPC
  - Pre-Development
  - Hedging costs
  - Monitoring costs
- Drawings only against milestones as certified by LTA
- Payment direct to contractor
- Draw-stops may include breach of cover ratio, event of default, material adverse change, etc.

POSITIVE & NEGATIVE UNDERTAKINGS

- Representations and warranties
  - Corporate status and capacity
  - Due execution of documents
  - Accuracy of project and financial information (info memo)
  - Governmental consents
  - Ownership of project assets
  - Validity of obligations
  - Environmental compliance
- Financial and project information reporting requirements
  - Generally extensive and frequent
- Project supervision
  - Independent engineer
**PROJECT COMPLETION**

- **“Project completion”**
  - Physical completion as certified by independent engineer
  - Lowering of representations and warranties (including no default)
  - Payment of all fees and expenses
  - No material adverse change

- **Importance of project completion**
  - Risk in project facilities passes from EPC contractor to project company
  - Sponsor support may fall away or reduce substantially
  - Sponsor begins to receive dividends
  - Liquidated damages for delay no longer run
  - Defects period starts
  - Release of EPC performance bond
  - Release of all or part of retention amounts

**ACCOUNTS AGREEMENT**

- **Disbursement account**
  - Receives loan proceeds and equity contributions
  - Withdrawals subject to borrower (and sometimes IE) certification
  - Withdrawals only to pay project expenditures already incurred and sometimes projected expenditures

- **Proceeds account**
  - Receives proceeds of sale of project product
  - Debited in accordance with “waterfall” (see below)

- **Compensation account**
  - Receives insurance proceeds and other compulsory acquisition payments

- **Debt service reserve account**
  - Reserve to meet debt service if other funds not available
  - Often for payments due over next 6-12 months

- **Maintenance reserve account**
  - For future maintenance expenditures
**WATERFALL STRUCTURE**

“Cascade” or “waterfall” for payments out of proceeds account

- Prior to default
  - 1st, to pre-agreed operating costs
  - 2nd, to debt service in an agreed order
  - 3rd, to funding reserve accounts to agreed levels
  - Last, to project company for payment of dividends and/or debt service on subordinated loans
- On a potential event of default, accounts are frozen
- On an actual event of default, proceeds are payable to lenders and other creditors

**SECURITY**

- Assets over which security is taken
  - **Everything there is, and then some!**
  - Land, buildings and other fixtures
  - Tangible assets used in project (e.g., Plant and machinery, vehicles, pipelines etc.)
  - Concession rights, licenses and other operating permits
  - Goods produced by project company
  - Sales proceeds
  - Bank accounts
  - Insurance, requisition and nationalisation proceeds
  - Technology and process licenses and other intellectual property rights
  - Performance bonds and completion guarantees
  - Rights under project documents
  - Shares in project company
DIRECT AGREEMENTS

- **Who are the parties to a direct agreement?**
  - Project company
  - Lenders
  - Parties to project’s key commercial contracts, i.e.,
    - Concession grantor
    - Design and construction contractors
    - Off-taker
    - Supplier
    - Operator

- **What is the value of a direct agreement?**
  - Alternative to terminating project
  - Positive value - provides for creditors to complete project
  - Defensive value - prevents other creditors from interfering with assets

SUMMARY

- PF agreements created to benefit the Lender
- Geared toward a “Lender first” arrangement
- Legal costs in a project finance deal can be significant
- Project finance lawyers are the principal beneficiaries of this financing technique