



Project Finance & Techniques

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What is Project Finance?

- Project finance is the long-term financing of infrastructure and industrial projects based upon the projected cash flows of the project rather than the balance sheets of its sponsors.
- Project Finance is a process of evaluating and selecting long term investments that are consistent with the goal of shareholders (owners) wealth maximization.
- Project means a business venture.

Nature of project

- New / Green Field Project
- Expansion of existing facilities at the same or different location
- Forward / Backward Integration
- Diversification
- Drafting Debt Restructuring Schemes

Importance of project finance decisions

- Irreversible in nature.
- Impact long term profitability of the business.
- Impact on competitive position of the business.
- Impact on risk perception about the Company.

Process of project finance

- Planning: basic analysis to determine whether a project is worthwhile to justify a feasibility study.
- Analysis: economical, commercial, technical, ecological, marketing analysis.
- Selection: final selection on the basis of findings in the analysis. Analysis of results of NPV, IRR, Payback period, sensitivity analysis, etc.
- Financing: debt / equity.
- Implementation:
 - Project & Engineering designs.
 - Approvals & permissions
 - Negotiations & Contracting
 - Construction
 - Training
 - Plant Commissioning
- Review: Periodic review once the project has commissioned.

Role of CA's

- **Before Commencement of project.**
 - Assist in project identification.
 - Carrying out Technical, Commercial & Financial Feasibility Study.
 - Preparation of Detailed Project Report ("DPR")
 - Assisting in selecting optimal capital requirement / structure.
 - Arranging for finance & negotiations with the financiers.
 - Equity funding
 - Debt Funding
 - Negotiations with the vendors / contractors for the project.

(Beneficiary: Borrower)

Role of CA's

- Before Commencement of project:
 - Independent appraisal of the project.
 - Vetting of DPR's
 - Carrying out TEV Studies of business ventures
 - Certification about net worth of the borrowers

(Beneficiary: Lender)

Role of CA's

- During the implementation of the project

Periodic reports / certifications:

- Work Progress.
- Cost Incurred.
- Sources of Finance used in the Project.
- Act as Lender Independent Engineer.

(Beneficiaries: Borrowers / Lenders)

Role of CA's

- At the Completion Stage

- End use of funds report

(Beneficiary: lenders)

Most preferred work area

- Arranging for debt / Bank finance
- Facets of Bank Finance:
 - Debt is cheaper source of finance.
 - Tax shield
 - Easy access to Bank finance
 - Government schemes implemented through nationalized banks

Pre-requisites for the engagement

- Have you visited the site?
- Past experience of industry / make inquiries about the company product.
- Most Important:
- [ad&pl case study.docx](#)
- Study the financials of the clients thoroughly.

Steps in Debt Finance

- Approaching the Bank.
- Obtain the Approval in Principle / Activity Clearance if necessary.
- Understand the Bank hierarchy system for sanctioning of facilities
- Prepare a thorough project report.
- Identify the security that the client is willing to offer & it fits the Bank's FACR
- Prepare the file as per the checklist of the Bank.

Steps in Debt Raising

- Obtain copies of annual returns of the clients / promoters.
- Need for provisional financial statements. (ensure that the same is signed by the regular auditors)
- Bank has its own rating model.
- Get the sanction letter from Bank.
- Complete the documentation process and comply with the terms of sanction.
- Credit rating from external agencies may have to be done post disbursal.

DPR / TEV Reports

- Major documents to firm up the decision on going ahead with a business venture or to drop dead the idea.
- Hence analysis has to be elaborate & extensive.
- The view needs to be really independent / unbiased / impartial.

Contents of DPR / TEV report

- DPR / TEV is a medium of communication between the borrower and the lender.
- It needs to give elaborative information about the borrower, their expertise / experience in the proposed venture, the reasons for going ahead with the business venture, and the factors that have been evaluated to arrive at the decision for firming up on a business venture.

Table of Contents of a DPR /TEV report

- The standard table of content for a DPR is as under:
- [contents of a DPR.docx](#)

Facets of Project Analysis / Main Sections of a DPR

- Market Analysis / Commercial Feasibility
- Technical Analysis
- Economic / Financial Analysis

Market Analysis

- To Include:
 - Aggregate demand for the proposed product
 - Market share of the project under appraisal
 - Consumptions trends in the past
 - Past & present supply
 - Production possibilities & constraints
 - Imports & Exports situation
 - Cost structure
 - Elasticity of demand
 - Structure of competition
 - Distribution channels & marketing policies

Source for Market related Information

- Collection of Secondary Data
 - Sources of secondary data: National Sample Survey report, census India, plan report, statistical abstracts, economic surveys industry potential reports by various agencies such as crisil, dunn & bradstreet, ORG, & website of industry associations, web-sites of relevant ministry, other information available in public domain, etc.
- Conducting a fresh market survey

Technical Analysis

- Choice of Technologies
 - Plant Capacity
 - Cost and total capital outlay
 - Principal raw materials required
- Appropriateness of technology
- Technical arrangements for knowledge support.
- Information about the product & its applications / target customer group
- Planned product mix (in case multiple product business)

Technical Analysis: Care to be taken

- Location & Site
- Building & Factory layout.
- Machinery layout plans
- Availability of necessary infrastructure:
 - Power arrangements
 - Water availability
- Labour situation
- Government policies & political environment
- Legal environment
- Climatic factors
- Impact of each of the above aspects whether is considered in the estimation of project cost

Technical Analysis: Land

- Proposed site, reasons for selection, locational advantages.
- Whether purchased / to be purchased.
- Whether purchased / proposed to be purchased from single owner / multiple owners.
- Title Clearance.
- Whether agricultural / NA
- Whether agreement is registered?
- Whether appropriate stamp-duty paid?
- Cost of Land to be considered as project cost.

Technical Analysis: Plant & Machinery

- Whether plant layout is prepared?
 - Necessary to ascertain the total area requirement for factory building & the utility structures required
- Manufacturing process-wise machinery requirement to be obtained.
- Workings of plant installed Capacity.
- List of all items of plant & Machinery & equipment required along-with the estimated cost of purchase. (Inclusive of all taxes & installation charges)
- To the best extent possible, ensure estimates have backing of pro-forma invoices from vendors.

Technical Analysis: Building

- Whether Architects Plans are prepared.
- Whether building plans are in line with the machinery lay-out.
- Status of approvals in respect of construction.
- Whether MOEF Clearance is required?
- Whether consent to establish has been obtained / status.
- Architects Estimate on the cost of construction of building & other utilities.
- Correct estimation of project cost.

Technical Analysis: Power requirement

- Status of application for grant of power.
- Working of the power requirement.
- Check availability of power at the site location
- Through broad inquiries ensure that there is no power shortage in the area.
- For this personal visit to site is important.

Technical Analysis: Labour

- Kind & Type of labour required.
- Availability of such labour to be assessed.
- Preparation of wage budget on the basis of planned capacity utilisation.
- This would be in context of the type of machinery used.
- This would also be required for determining the profitability.

Technical Analysis: Implementation Schedule

- Prepare implementation schedule for building construction and for purchase of plant & machinery.
- The same would be necessary for deciding the quarter-wise cash outflow.
- Pre-construction interest and loan drawdown.

Technical Analysis: Project Cost

- Land Cost: includes basic cost, registration charges, stamp-duty, other incidental charges
- Land development charges / cost appropriately considered.
- Plant & Machinery cost to include all taxes & duties along-with installation charges & incidental expenses.
- Building: based on architects certificate, to include cost of hiring professionals, etc.
- Accurate Estimation of Project important for reliable financial analysis

Financial Feasibility: Estimated Project Cost

- Cost of project:
 - Land & Site Development
 - Building & Civil Works
 - Plant & Machinery
 - Technical know how and engineering fees
 - Cost incurred on foreign technicians for installation of plant
 - Miscellaneous fixed assets
 - Cost of trial runs
 - Preliminary expenses & capital issue expenses
 - Pre-operative expenses
 - Margin money for working capital

Means of Finance

- Equity capital
- Term loans
- Debenture capital
- Deferred credit
- Unsecured loans / quasi capital
- Important aspect: Minimum promoters contribution to be based on the lender's policies. The ratio between equity to quasi equity may have to be maintained as per lenders norms.
- Revaluation Reserves not considered as equity.
- Non-Cash elements in equity not considered by lenders for debt equity ratio.

Margin requirements

- In case of Bank Term Loans:
 - Land & Building: 30%
 - Plant & Machinery: 25%
 - 2nd Hand Machinery: 40%
 - Generally Banks there is apprehension about financing purchase cost of land.
 - Reimbursement of cost incurred, higher margins may be stipulated.
 - Generally cost incurred upto one year before are eligible for Bank finance

Financial Feasibility

- Prepare:
 - Projected Income & Expenditure Statement
 - Project Balance-sheet
 - Projected Cash-flow
- Elaborately state the basis of assumption.
- Comparables of other companies wherever possible would be useful
- Past results of company may be used if expansion project.

Financial Feasibility

- Project Evaluation:
 - IRR
 - NPV
 - Simple Payback Period
 - Break-Even Point
 - Cash Break Even Point
 - DSCR

Financial Feasibility

- Sensitivity Analysis
 - 5 % increase in raw material costs.
 - 5% decrease in selling price.
 - 5% increase in raw material cost accompanied with 5% decrease in selling price.
 - 10% decrease in volume.
- Impact of the above scenarios on the financial parameters discussed earlier.

Working Capital Requirement

- Based on trade receivables, inventory levels & extent of trade credit available in the business.
- Thumb rule: 20% to 25% of the estimated sales for the year.
- Assessment & review on a yearly basis. Short review possible.

Assessment of Working Capital

- A.) Estimation of Level of Gross Working Capital
- B.) Estimation of level of current liabilities.
- C.) Determining Net Working Capital.
- D.) Determination of Promoter's Margin.
- E.) Calculating MPBF.

Methods of lending

- First Method: 25% of WC Gap is promoters contribution. Thus 75% of WC Gap is MPBF
- Second Method: 25% of total Current Assets is to be promoters contribution.
- Nayak Committee: 25% of estimated sales, promoters margin at 20%.
- Each Lender Bank has its mechanics for WC Margin.

EXAMPLE

- Calculation of Current Ratio under two methods of financing:
- [CA CL.xlsx](#)
- Your turn: Calculate MPBF
- [Calculate MPBF.docx](#)

Caution

- Eligible Drawing Power is limiting factor.
- Careful in projecting the need for WC & Bank finance
- DP calculation monthly. Stock debtor statements required to be submitted to financing Bank.

Points to Remembers

- Most realistic estimation of project cost.
- Avoid loose assumptions while building up projected financial statements.
- Over / under estimation to be avoided.
- What client wants may not always be required. Guide the client on the same.
- Analyze the client before accepting the engagement.
- Personally visit the site before accepting the engagement.
- Confidence & trust are hard to earn.



Thank-You