

ch-18 Project Evaluation.

Synopsis.

Factors affecting the cost of project.

1. Material cost
2. Labour cost
3. Project quality
4. size of the project
5. Method of constⁿ
6. Nature of constⁿ
7. Nature of struct.
8. Variation in order
9. cost overrun
10. regulator & insu. requirement.

Role of CS.

- Prof. services by CS
- Activity Flow chart by CS.

Case studies.

1. Expansion (healthcare)
2. New outlet (Food)
3. Toll (tax)

Viability check

- Define the scope of project
- conduct market analysis.
- Preparing a Fin Plan.
- Risk assessment & uncertainties
- Report prepⁿ
- Review & feedback

Risk assess. and mitigation

Approval, Feasibility & DD.

- Management - Legal F.
- Technical - Economic F.
- Marketing - Technical F.
- Financial - operational F.
- Social benefit - scheduling F.

A] Legal Feasibility and DD.

- ① Analysis of app. legal framework
- ② Legal Reddiness
- ③ in depth legal analysis.

B] Technical feasibility and DD

- ① Man. Process & technologies
- ② installed capacity.
- ③ Location
- ④ RM availability & sources
- ⑤ Power and utilities
- ⑥ manpower requirement
- ⑦ Envir. clearance
- ⑧ others.

C] Financial feasibility and DD

- ① Det. of Project Finance
- ② Means of Finance
- ③ Profitability estimates
- ④ Projected BIS
- ⑤ Projected CF statement
- ⑥ Fin. Risk assessment

- Equity
- internal accruals
- int free loan
- Govt subsidy / incentives
- Term Loan
- Def. Payment scheme.

Swot anal., IRR.

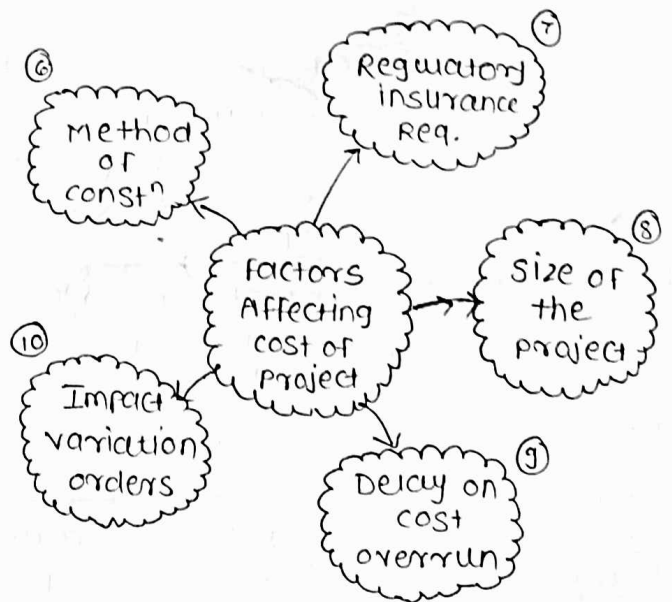
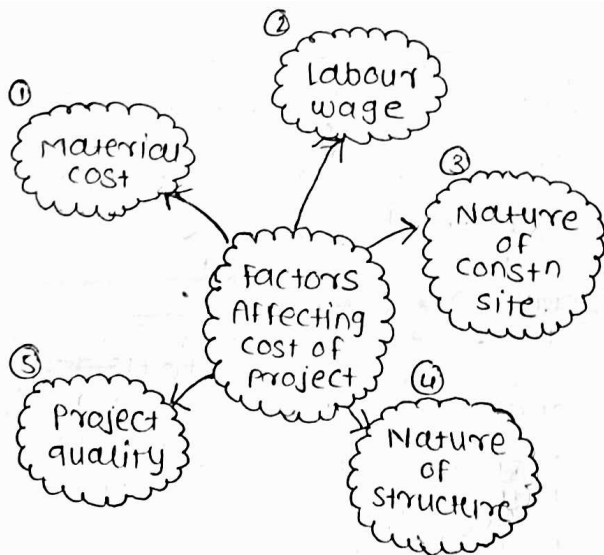
Prepⁿ of detailed Project report

- DPR to include follow information.
- DPR to cover following areas.

 - ① sectorial background
 - ② Det. of P. & scope
 - ③ Project cost
 - ④ institutional framew
 - ⑤ Financial structure
 - ⑥ Phasing of project
 - ⑦ O & M planning
 - ⑧ Financial viability
 - ⑨ Social cost benefit analysis.

- Limitation of DPR
(4)

- Ratio Analysis
- Profitability ratio
- BIS ratio
- Debt service coverage ratio
- Break even analysis
- sensitivity analysis
- Payback period



Explanation.

① Material cost -

- Some materials like concrete and steel are very expensive and req. in bulk, while others like wood are relatively affordable.
- The type of material used can have a significant impact on overall cost of project.

② Labour wage -

- Labour cost can have a significant impact on the overall cost of the proj. and this need to be taken into account when budgeting for a project.
- Incl. type of work being done, the skill required & the location of work

③ Nature of constn site.

- The project site heavily influence the construction cost of project.
- site condⁿ such as poor soil, uneven land, water bodies could increase the cost of project.

④ Nature of structure.

- The type of structure and its structural form significantly influ. the project cost. simpler the structure lesser the cost will be.

⑤ Size of the project -

- A large-sized project requires a large workforce and more mat. materials.

⑥ Method of construction -

- The method of construction is how the project is built.
eg- traditional method of constⁿ tend to be more expensive than newer method such as modular constⁿ
- This is because traditional method often req. more material & labour and they are often slower & complicated

⑦ Regulatory and insurance requirement

- Approval from diff. regulatory authority could be both costly and time consuming

⑧ Project quality.

- The project quality considerably influences the development cost of a house. Besides, high quality project involve the use of high RM (quality)

⑨ Delay on cost overrun.

- constⁿ projects are often delayed due to variety of factors incl. bad weather, material shortage & problems with constⁿ crew.
- In this case contractor may need to pay overtime to the constⁿ crew and shortage fee if project site is not ready to receive material

⑩ Variation orders -

- projects are often subject to change which modify the scope of work that is requested by the client after commencement of construction.

Project Appraisal through Feasibility and Due Diligence

Importance of Project Appraisal.

- Management Appraisal :-
 - whether promoters can manage the project successfully.
- Technical Appraisal :-
 - whether the necessary resources are available for the manuf.
- Marketing Appraisal :-
 - whether the products can be sold in the market & can surmount the competition.
- Financial Appraisal :-
 - whether a project can make a profit to meet the fin. obligation
- Social Benefit Appraisal :-
 - whether it is in line with societal expectations.

Feasibilities.

- Legal Feasibility :-
 - performed to understand if the proposed plan conforms to the legal & ethical requirem.
- Economic Feasibility :-
 - Involves a cost benefit analysis to identify how well or how poorly project will be concluded.
- Technical Feasibility :-
 - process of validating technical resources and capabilities to convert ideas into working system.
- Operational Feasibility :-
 - To understand well a proposed system solves the problems.
- Scheduling Feasibility :-
 - Measure of how reasonable the project duration is.

Due-Diligence in Project Fin.

- Assessment of promoter history and background.
- Evaluation of company and project business model.
- Legal due diligence
- Detailed analysis of fin. statement of the project and its cap structure
- Determine major risk associated with the project.
- Analysis of tax effect.
- credit analysis and evaluation of term loan terms
- Project valuation

Key Parameters from Bank IFT

- Promoter's Background, experience and their managerial skills.
- Technology adopted & its suitability to the local environment.
- Availability of RM & other Resources
- Scope of market for the product
- cost structure and expected profit in light of cost structure
- Compliance of Govt. Policies and regulations.
- Acceptability of the risk level with ref to political, social, economic, technological & legal environment.

Legal Feasibility and Due Diligence.

Identify the laws.

Analysis of the Applicable legal framework.

This include the identification and analysis of pertinent laws & regulation that may affect the project. some of the legal and regulatory aspect are as under :-

- The enabling project legislation looking for Particular requirement imposed on project.
- The Public Procurement Law.
- Legislation referring to foreign investment, property & labour issues.
- Legislation related to land use planning and environmental laws
- legal aspects of dispute resolution and intellectual property.
- Legislation related to the granting of ownership / control of asset or of responsibility for the delivery of public services. to third party.
- Legal treatment of revenue Sources associated with the concession

Identify the authority for approval

Assessment of the legal readiness of the Procuring auth.

- It is important to review at this stage whether the promoting authority and other institutions involved have the legal authority to launch the project or proceed with the approval as needed.
- The legal due diligence must clearly conclude which authorities should be involved and to what extent in each case.

Identify the issue.

In depth legal analysis of the main project issues

- It is important during appraisal to assess the adherence of several aspect of the project to the general legal framework.
- Particular attention should be given to the legal feasibility of -

- The Financial aspects of the project.
- Issues considered relevant to commercial viability.
- The use of land and existing assets.
- Potential alternative ownership claims on the land.
- Rights of other users.
- Employment issues.
- Tax and accounting issues considered in the Fin. model.

Technical Feasibility and Due Diligence.

(4)

Technical Due Diligence.

- Infrastructure functionality and performance.
- Architectural peer review process for functionality.
- compliance with industry std. & regulations.
- Equipment capabilities and performance.
- Proof of concept testing.
- Facilities that support project needs
- operational risk assessment
- system and applications integration
- Data that supports the implementation of technology.

ASPECTS.

- Especially for large project, banks insist for a techno viability study to be carried by their approved consultant.
- The ASPECTS which are normally find place in technical details are as follows -
 - Manufacturing process and tech.
 - Installed capacity.
 - Location.
 - RM availability and sources.
 - Power and utilities.
 - Manpower Requirement
 - Environment clearance
 - Others

1. Manufacturing process and technology -

- while elaborating the manufacturing process, it should ensure that the process covers the use of all the machines to be installed.
- FI/Banks will certainly verify whether machines mentioned in the project report are required for carrying out the manuf. activities to justify the investment in the plant and machinery.
- If any manuf. activity is outsourced in the process, for which no machines are propose - same should specifically mentioned & cost of such out-sourcing to be included in expenses in the profitability estimates.
- The level of technology and automation is proposed, will determine the investment in the machines and manuf. process.

2. Installed capacity -

- Taking into consideration the actual working days, number of shifts to be operated and machine proposed to be installed.
- The installed capacity of the unit is to be determined very carefully and precisely.
- All profitability estimates depend upon capacity to produce.
- It should be ensure that installed capacity matches with the plant capacity mentioned by supplier in the offer / quotation.

③ Location -

- The choice of location is influenced by the factors like.
 - Proximity to the RM
 - Proximity to the market for end product.
 - Availability of other infra. like rail, road, air connectivity, power etc.
 - Govt. policies and special incentives declared by various state govt. for the promotion of any location for development.
- Taking in to considⁿ the above factors, a location is selected.

④ RM availability and sources.

- The Report should mention the types of RM required for manuf of the finished products and its total requirement at 100% capacity.
- It is expected that the report should contain details on -
 - All RM - more than 10% of the value of total consumption
 - sources of major RM supply.
 - quotations from the suppliers.
 - separate details should be provided for indigenous and imported RM.

⑤ Power and Utilities -

- Power - power requirement should always be based on the machines installed and for general purpose. there are many industries which require initial heating load to charge the machines.
- other Utilities - In addition, many units require water, steam and fuel for their manufacturing process. The requirement of such utilities and sources are equally imp. and should be mentioned in report.

⑥ Manpower Requirement -

- The Human factor in the project is very vital for the smooth running of the unit. Report should contain the information on total manpower requirement.
- It should be ensure that the cost covers the minimum wages, prevailing salary and incentives. Fringe benefits like PF, ESIC, Bonus etc.

⑦ Environmental clearance -

- The environmental aspect of the project should be properly dealt with and all the necessary equipment must be provided in the project cost to control the pollution.
- State pollution control board / central pollution control board are the authorities to give the consent and put the necessary conditions to be complied with for running any manuf. plant
- The unit is required to obtain -
 - i) consent to establish
 - ii) consent to operate.

⑧ others -

- carbon credits / Recycling / upcycling sustainability
- Input cost on account of industry standard certification
- Cost of patents, licenses, import of technical manpower. need to be mentioned.

Financial Due Diligence Report.

Important points.

- Detailed info on the co. Finance.
- Particulars of the co. Assets
- Data on clients, partners and suppliers.
- Statistics on the employees of the business.

- Financial feasibility is determined by taking into consideration various technical parameters. Within parameters the Fin. estimates/projections need to be submitted to the FI / Banks. The following important info include

- Determination of project cost
- Means of finance.
 - Equity
 - internal accruals.
 - int free unsecured loan (quasi equity).
 - Govt subsidy / incentives
 - Term loan
 - Deferred payment scheme
- Profitability Estimates
- Projected Balance sheet
- Cash Flow / Fund Flow statement
- Financial Risk assessment
 - Ratio Analysis
 - DSCR
 - Break even analysis
 - sensitivity analysis
 - Payback period
 - IRR
 - SWOT analysis.

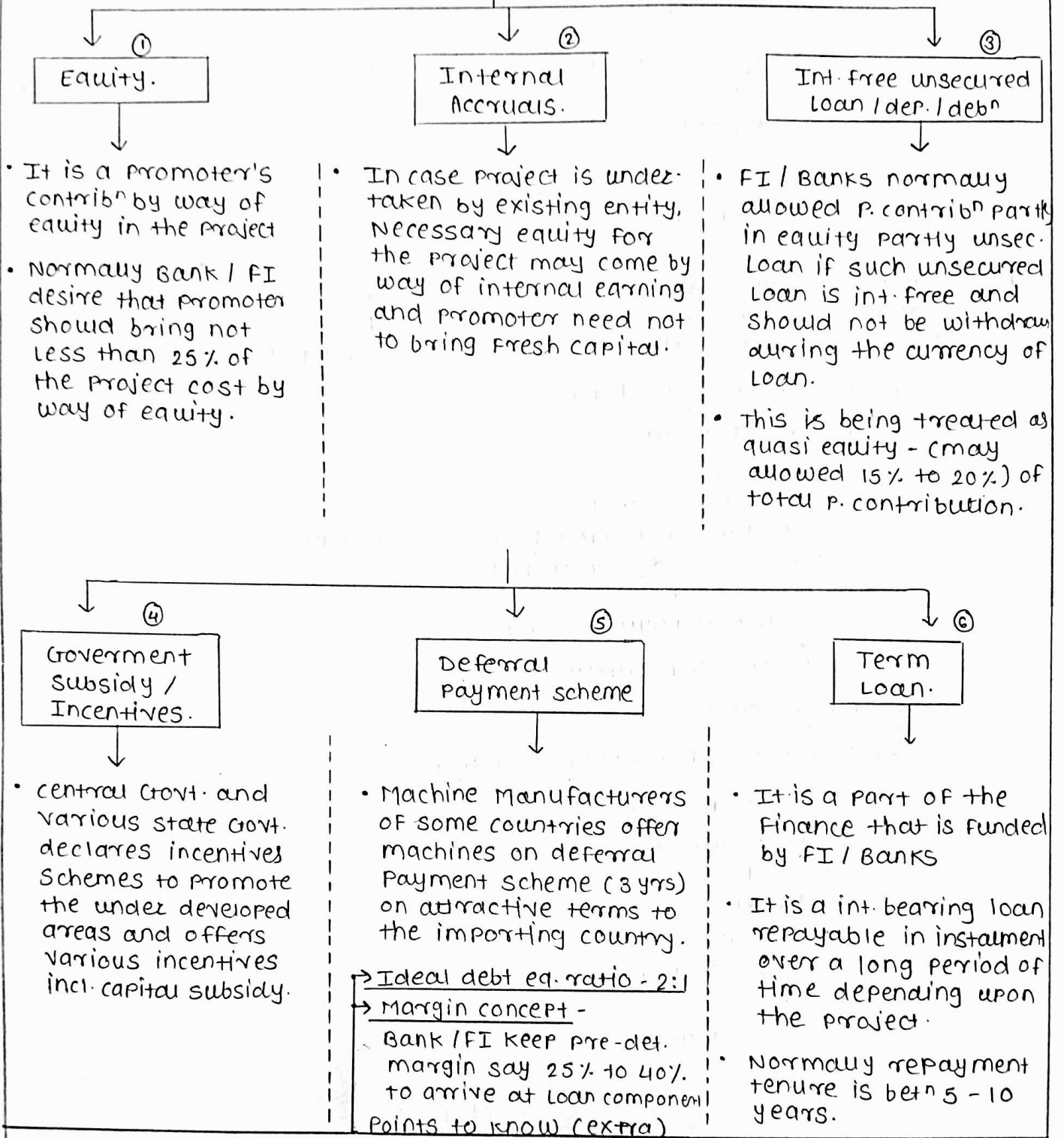
T. Determination of P. cost

- It is important to know the investment to be made on the different heads of the assets, to arrive at the total capital outlay on the project
- The different heads under which investments are to be made.

<u>Particulars of Asset</u>	<u>cost already incurred</u>	<u>To be incurred</u>	<u>Total</u>
i) <u>Land</u>	xx	xx	xx
ii) <u>site development</u>	xx	xx	xx
iii) <u>Technical knowhow</u>	xx	xx	xx
iv) <u>Preliminary exp.</u>	xx	xx	xx

- The invt. on each item mentioned above are appraised in detail.

II. Means of Finance



III Profitability Estimates.

Profitability estimates prepared under following head:

- capacity utilisation.
- sales and other income.
- cost of production.
- Power and fuel cost
- Manpower cost
- stores and spare consumed.
- Int. on term loan
- Int. on other loan
- Int. on working cap. loan

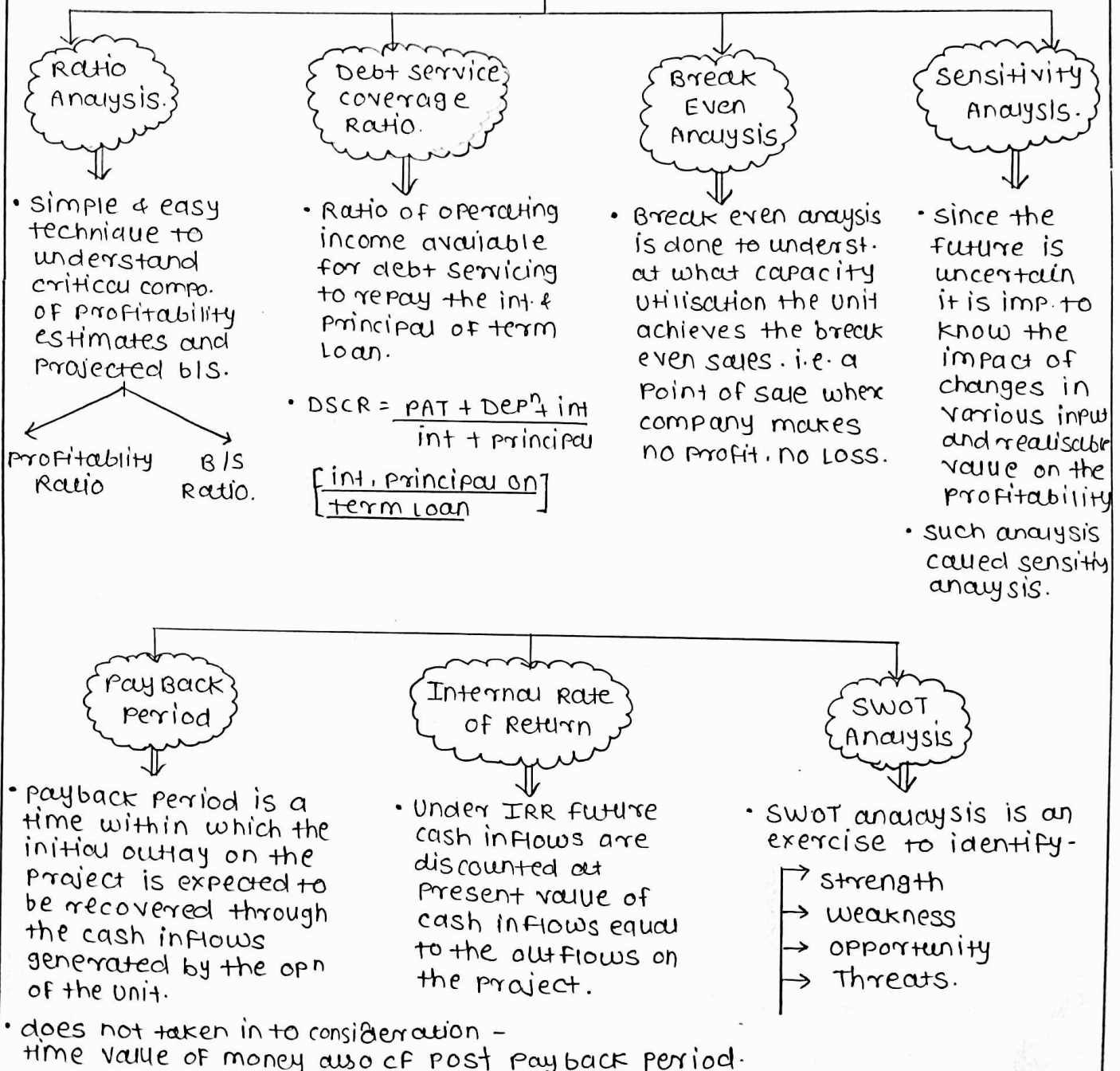
IV Projected Balance sheet.

- The Projected balance sheet showing assets and liabilities of the borrower is prepared in CMA format prescribed to understand the Financial position.
- It is prepared till the repayment of the term loans. However the key points should always be given in the Project report itself.

V cash flow / Fund flow st.

- This will help to understand that sufficient cash flow is generated to meet all short term and long term liabilities and fin. obligations.
- It also helps in understanding that long term surplus is available to meet the short term liabilities.
- If the current ratio is above 1.33 (co. has sufficient liquid assets above the normal requirement) funds can be diverted for expansion

VI Financial Risk Assessment



Preparation of Detailed Project Report

Contents of DPR.

DPR to have the following information.

- General information.
- Management & Promoter's Background.
- Technical feasibility
- Marketing strategy.
- Financial feasibility
- social cost benefit analysis.
- Project implementation Schedule.
- Risk assessment

DPR to include the following information

- Brief info. about product
- Experience and skills of the people involved in the promotion of the project.
- Details and practical results of the industrial concerns of the promoters of the project
- Project Finance and sources of Financing.
- Government approvals
- Raw material requirement
- Details of the requisite securities to be given to various Fin. organizations.
- other imp. details.

DPR needs to provide info. covering the following areas.

- sectorial background and the broad objective of the project.
- Definition of the project and its scope.
- Environmental compliance / protection measures / improvement measures.
- Project cost
- institutional framework of the project
- Financial structure of the project
- Phasing of the project
- operation & maintenance planning of the project
- Assessment of Financial viability of the project
- social cost analysis benefit analysis of the project

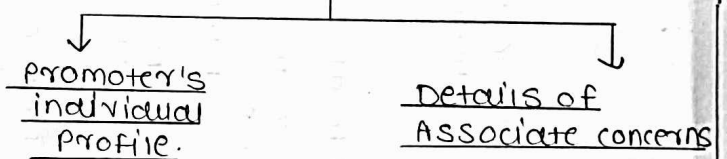
→ General Information.

- Name of the entity.
 - Address.
 - Constitution of the entity.
 - Date of incorporation
 - Status / size of the project
 - Registration number & issuing auth.
 - Licensing Requirement.
- There are some products which require compulsory licence to manuf.
- These items are specified in the industrial policy of the Govt of India.
- Nature of Activity and product to be manufactured.
 - Plant capacity
 - Nature and amount of financial assistance.

Mgt. and Promoter's Background. and their appraisal.

- Following factors are considered while appraising management and promoter's background.
- Past track record, technical qualif and industry specific skill.
 - Business competence & experience.
 - Performance of associate concern.
 - Bankers Report
 - Financial Resources.
 - Existing organizational setup & degree of professionalism.
 - Achievements and Recognitions received from any government, Trade or professional bodies.

→ Promoter's Background may be divided into two parts.



→ DPR needs to provide information covering the following areas.

1. sectorial background and the broad objective of the project

- Existing status of the physical infrastructure.
- List of various projects proposed for the sector.
- List of other capital expenditure projects supported by other scheme

2. Definition of the project and its scope. (Land)

- The project is needed to be clearly defined in terms of Land.
- Total quantum of Land required and being provided for the project
- Land title should be clear and unencumbered.

3. Project cost

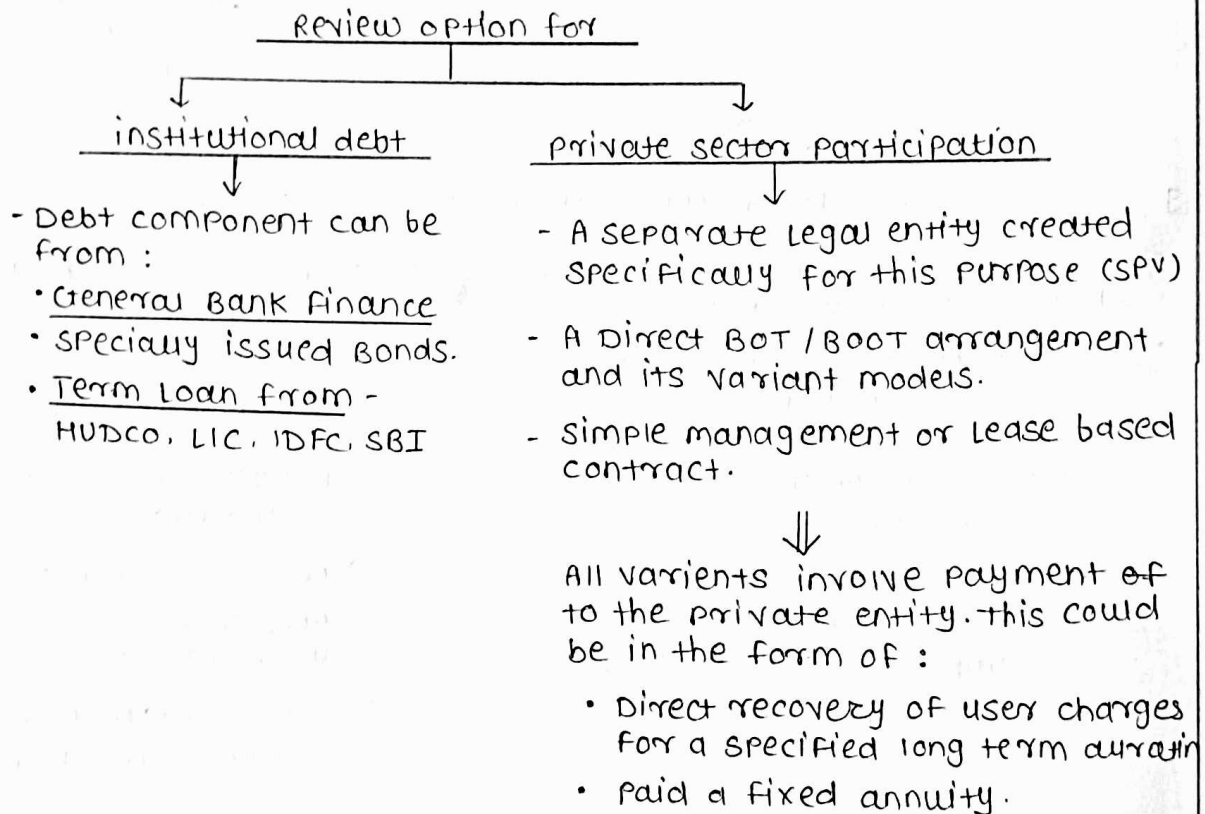
- The project cost should cover major element including but not limited ^{to}
 - land acquisition / site development
 - physical infra. component-wise cost
 - environmental compliance cost
 - cost shifting utilities.

4. Institutional framework of the project

- Roles of different institutions involved in the construction phase of project
- Areas of involvement of the private sector in the construction phase -
 - project feasibility study.
 - project engineering design.
 - specialized surveys
 - construction works.

5. Financial structure of the project

- A combination of equity, grant, debt and finance from private participants



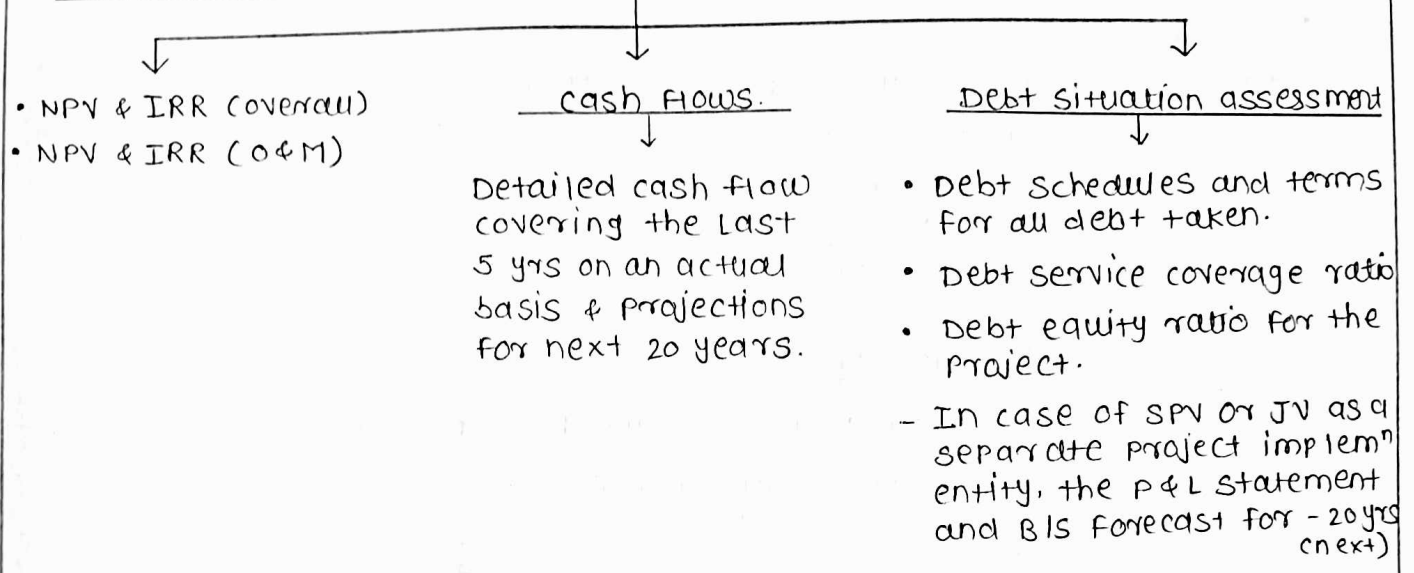
6. Phasing of the project

- Phasing can be done as for following activities.
 - schedule for tendering / selection for procurement of services.
 - schedule for obtaining all clearances
 - schedule for shifting utilities.

7. operation and Maintenance planning of the project

- DPR is to incorporate / include info relating to the following areas.
 - Brief outline of the existing method of billing and collection.
 - Performance matrix in regard to billing and collection.
 - The scope of private entity / community / NGO to be involved
 - Requirement of manpower, energy, spares & consumables etc.
- In regard to tariff and user cost recovery, the DPR is provide
 - i) Tariff model of each customer
 - ii) unit cost of service and unit price
 - iii) outline plan to restructure tariff system with MoA requirement

8. Assessment of Financial viability of the Project



9. Social cost Benefit Analysis of the Project (SCBA)

• covering a list of benefits from societal perspective. both in terms of qualitative and quantitative.

• Some Benefits are as under.
(Positive impacts)

- supply continuity
- Time savings
- enviro. improvement
- employment
- improved quality of life
- cost savings.

Negative impacts must also be stated in terms of

- Pollution, environmental distortion.
- Reduced green cover.
- Reduce access to any specific user segments.
- supply interruptions
- Displacement of inhabitants.

Limitations of Project Report (Not so ime)

- No uniform loan appⁿ form pres. by FI's / Banks
- No uniform format for Project Report
- No uniform appraisal process.
- The Report is prepared on assumption which are likely to change when implemented.

Role of company Secretary



Company secretaries can provide professional services in the following areas -



→ Area of Practice.

In formation.

- To obtain DIN
- To ascertain the availability of Name for the new co.
- Prepare MOA and AOA
- To incorporate company / LLP.

→ In Registration and Licence

- To obtaining udyam Reg. for MSME status.
- To obtain industrial Entrepreneurs Memorandum
- To obtain industrial Licence.

→ In Raising Fund.

- To prepare feasibility Report
- To obtain credit ratings from external rating agencies.
- To raise the capital from cap market or venture capital

→ other corporate services

- To draft collaboration agreement
- To provide FEMA related advice
- To carry on due diligence
- To obtain environmental clearance.

→ corporate compliances.

- To increase the authorised capital
- To comply with the statutory requirement of accepting unsecured loans and deposits.
- To suggest proper capital structure
- To allot shares and to issue share certificate
- To help in executing the loan
- To create / satisfy charge with MCA

Activity Flow chart for company Secretary.

• The activities involved in the entire process of execution of professional assignment are as follows.

- Initial discussion with the promoter on the project
- understanding the scope of work and discuss about the professional charges.
- To apprise the board about financing norms.
- obtain the assignment in writing specifying the scope of work and payment terms of professional fees.
- send the questionnaire format to furnish the information about project and promoters.
- Submit the proposal to more than one FI / Bank and try to obtain in principle clearance
- Arrange the meeting of the promoter with banker
- Pay Processing fee.

Feasibility and due diligence - some examples.

Expansion of Healthcare Facility

Following are the factors that will include -

- Labour & mat. cost
- change in Revenue
- How disruptive it will be for staff & patients?
- what is the public opinion with respect to new extension.
- what is the response of the various stakeholders of the orgⁿ
- A detailed evaluation of all projects pros & cons.

setting up food outlet

→ Following are the diff. factors that may be focused on -

- Preparing Market statistics.
- Potential location
- Level of competition
- Extensive industry analysis.
- Recent economic environment
- In-depth cost structure
- Mgt. capabilities.

→ Risk identification of Project of highway construction-

→ vital Risk of this project

- Traffic Risk
- Toll Risk
- constructional Risk
- operational & maintai. Risk
- Land Acquisition.

→ Slight Risk in this project

- Utilities
- Noise
- Material & manual handling.

→ corrective steps

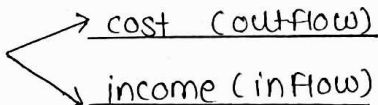
- Traffic Risk
- Toll Risk

→ constructional Risk

→ Project Viability and Research on Innovation.

[Jo soch rahe hai wo realistically implement hoga ya Nai]

- viability can be understood in terms whether it can be completely successfully given the time, money and other resources that are available with the orgⁿ
- This aspect in project management qualitatively and quantitatively evaluate the strength of the project identifies gaps in practices, and advises upon the actions to
- Economic viability of the project is considered positive if the economic benefits of the project exceed its economic cost
- Steps for viability check -
 - Define the scope of the project
 - conduct a market analysis.
 - Preparing a financial plan
 - R&B assessment & understanding all uncertainties.
 - Report Preparation
 - Review and feedback.
- Project viability in financial terms

by calculⁿ of P.V. of all future : 

→ Regulatory Authorities / Agencies

→ Risk Assessment and mitigation.

- A Risk is generally defined as an elaboration of unfortunate consequence of certain events.
- In the project, risk usually refers to the factors that may hamper the objective of the project regarding time, cost and quality.

$$\text{Risk Level} = \text{Risk Probability} \times \text{Risk Impact}$$

• Risk type / attribute in project mgmt

- General, dynamic or static risk
- internal or external risk
- Financial Risk
- Time Risk
- Physical Risk
- Personnel Risk
- Safety Risk
- Economic Risk

Regulatory Authorities / Agencies

- SEBI : The apex regulator in the Indian capital market.
- IRDAI : Regulatory authority for the insurance sector.
- RBI : Apex regulator for banking sector.
- PFRDA : Pension Fund Regulatory and development authority Regulate Pensions.
- MCA : Regulates the functioning of corporate sector.
- AMFI : Association of Mutual Fund in India, control MF industry in the country.

Approvals / clearance required for
Doing business :-

Approval / clearances req.	Dept / Agencies to be approached & consulted.
• <u>Inco. of company.</u>	Roc. Ministry of Affairs.
• <u>Registration / IEM / Industrial Licence.</u>	<u>District Industrial centres</u> , Dept. of industrial policy and promotion
• <u>Allotment of Land.</u>	concerned <u>state DI</u> / state industrial development corp. (SIDC) / infrastructure corporation / small scale industrial development corp. (SSIDC)
• permission for land use (in case industry is located outside an approved industrial area).	<u>State DI</u> Dept. of Town and country Planning Local authority / District collector.
• Consent under water & Air Pollution control ACTS Environment impact assessm.	state pollution control board. Ministry of Environment and Forests, Government of India
• Approval of construction activity and building plan.	a) Town and country planning b) Municipal and local authorities. c) chief inspector of factories d) pollution control Board
• sanction of power and power safety.	state electricity board / companies and state electricity inspector.
• Use and storage of explosives.	<u>chief controller of explosives.</u>
• Manur. Pharma. Products.	<u>Drugs inspectorate</u>
• Boiler inspection	<u>chief inspector of Boilers</u>
• Finance.	SFC / state industrial develop. corpo - Term L For Loan > 15 million → IDBI, ICICI, IFCI etc.
• Reg. under state sales tax Act, state excise Act, central Excise Act.	i) sales tax department ii) state Excise department iii) central excise department.
• Extraction of Minerals:	State Director of Mines and Geology.

ISI (quality) marking.	Regional office of the Bureau of Indian Standard (BIS)
quality marking certificate	quality marking centre of the state Govt.
Labour Act.	Labour Department.
weights and measures.	Inspector of weights and measures.
code number for export and import.	Regional office of <u>Director general of Foreign trade.</u>

Credit Risk mgt in project finance

