PROJECT REPORT BANK
Professional Project Finance & Feasibility Advisory

SAMPLE PROJECT FEASIBILITY STUDY

Value-Added Food Processing & Packaging Plant

Indicative Extract for Demonstration of Structure, Analysis and Presentation

IMPORTANT - SAMPLE / ILLUSTRATIVE ONLY

This document is a fictional, limited sample prepared to demonstrate the nature of a professional feasibility-study deliverable. It is not a complete feasibility study, investment recommendation, engineering report, bank proposal or assurance of commercial success.

Rs 18.50 Cr	5,400 MT	21.4%	MODIFY
Illustrative project cost	Annual installed capacity	Indicative project IRR	Illustrative conclusion

Prepared by
CA Manish Gugliya
FCA | Project Finance & Financial Advisory

EXECUTIVE OVERVIEW

Illustrative Feasibility Snapshot

The following summary is based entirely on fictional assumptions created for this sample. A real engagement would be tailored to the actual project, industry, data and management objectives.

Rs 18.50 Cr	Rs 11.10 Cr	Rs 7.40 Cr	60:40
Total project cost	Term loan	Promoter equity	Debt-equity

Project Concept

An integrated value-added food processing and packaging facility producing instant breakfast mixes, ready-to-cook grain products and value-added snack products.

Installed Capacity

5,400 MT per annum across three product categories. Initial utilisation is assumed at 45%, scaling to 90% by Year 7.

Commercial Thesis

The model assumes a diversified product mix, institutional and retail channels, and gradual market development rather than full-capacity sales in the first year.

Funding Thesis

A 60:40 debt-equity structure with a one-year principal moratorium and six annual principal instalments thereafter.

ILLUSTRATIVE VIABILITY VIEW

The base case shows attractive medium-term cash generation, but selling-price pressure materially reduces returns. The sample conclusion is therefore MODIFY: proceed only after validating price realisation, locking key raw-material arrangements and preserving an adequate equity contribution.

Indicator	Illustrative Result	Interpretation
Project IRR	21.4%	Attractive in base case
NPV @ 14%	Rs 5.86 Cr	Positive
Payback	4.3 years	Moderate recovery period
Minimum DSCR	1.32x	Early repayment pressure
Average DSCR (Y2-Y7)	2.53x	Comfortable overall
Break-even	~39% of capacity	Reasonable cushion

This executive page is deliberately concise. In an actual assignment, conclusions would be linked to the project-specific evidence, assumptions and scope agreed with the client.

1. PROJECT DEFINITION

Project Concept & Key Assumptions

Feasibility starts by defining exactly what is proposed, which assumptions are fixed, and which variables remain open for management decision.

Proposed Location Central India - illustrative only. Actual feasibility would assess logistics, labour, utilities, market access and statutory considerations for the selected site.	**Product Portfolio** Instant breakfast mixes (45% of volume), ready-to-cook grain products (35%) and value-added snack products (20%).
Operating Pattern 300 working days per year, two-shift operation with progressive market-led utilisation rather than immediate full-capacity operation.	**Sales Channels** Illustrative mix of distributors, institutional buyers, modern retail and selected private-label customers.

Key Assumption	Base Case
Installed capacity	5,400 MT per annum
Capacity utilisation	45%, 60%, 72%, 80%, 85%, 88%, 90%
Average Year-1 net realisation	Approx. Rs 92/kg
Selling-price escalation	3% per annum
Income tax assumption	25% for modelling
Term-loan interest	10.50% p.a.
Principal moratorium	1 year
Repayment	6 equal annual instalments
Projection horizon	7 years

WHAT WOULD BE VALIDATED IN A REAL STUDY?

Machinery quotations, actual production yields, detailed utility loads, raw-material procurement terms, channel margins, freight, customer credit, working-capital cycle, statutory requirements and management capabilities would be validated to the extent included in the agreed scope.

2. COMMERCIAL FEASIBILITY

Market & Revenue Logic

This sample does not claim live market research. It demonstrates how commercial assumptions would be framed and tested in a professional feasibility study.

Demand Logic

The project is modelled around convenience-led packaged food demand, but actual market sizing and demand validation would require project-specific research and evidence.

Pricing Logic

Realisation must be assessed after distributor margins, trade schemes, freight and channel mix. Gross retail prices should not be used directly as factory net realisation.

Customer Concentration

Dependence on a small number of institutional buyers can accelerate ramp-up but creates negotiation and concentration risk.

Market Entry Risk

Brand-building and channel development may take longer than plant commissioning. This is why utilisation ramps from 45% rather than beginning at 80-100%.

Commercial Driver	Base Assumption	Feasibility Test
Volume growth	45% to 90% utilisation	Can channels absorb the planned ramp-up?
Price growth	3% p.a.	Can price increases offset cost inflation?
Product mix	45:35:20	Which products generate best contribution?
Credit period	30-45 days	Impact on working capital and cash conversion
Distribution	Multi-channel	Margin leakage, freight and channel cost
Raw-material availability	Regular supply	Seasonality, quality and procurement risk

COMMERCIAL FEASIBILITY OBSERVATION

The financial model is most sensitive to selling-price realisation. Before investment, management should obtain credible customer/channel evidence that supports the assumed net realisation after discounts, freight and trade margins.

3. TECHNICAL & CAPACITY FEASIBILITY

Capacity, Product Mix & Operating Structure

The objective is not to select the maximum plant size. The objective is to select a scale that can be supported by market absorption, funding and operating economics.

5,400 MT	300	2 shifts	45%
Installed capacity	Working days	Operating pattern	Year-1 utilisation

Product Group	Mix	Annual Capacity	Indicative Role
Instant breakfast mixes	45%	2,430 MT	Higher-value retail / institutional mix
Ready-to-cook grain products	35%	1,890 MT	Core volume category
Value-added snack products	20%	1,080 MT	Diversification / margin support

Process Flow

Raw material receipt -> cleaning / preparation -> processing -> blending / seasoning -> quality checks -> packing -> finished-goods storage.

Key Utilities

Power, compressed air, process heat where applicable, water, quality-control facilities and material-handling systems.

Technical Dependencies

Final machinery sizing, yield, wastage, line balancing and automation should be validated with qualified technical suppliers / consultants.

Capacity Recommendation

Retain the 5,400 MT base case only if customer-development evidence supports at least 60% utilisation by Year 2; otherwise evaluate phased equipment installation.

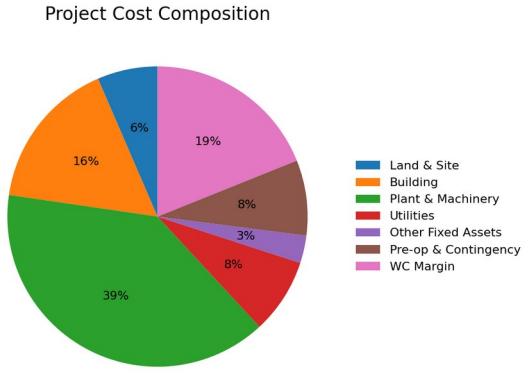
SCOPE LIMITATION

This sample is not an engineering design or machinery certification. A real feasibility assignment may rely on technical information supplied by machinery vendors, engineers and project consultants.

4. CAPITAL REQUIREMENT

Project Cost & Means of Finance

A feasibility study should test whether the capital requirement is realistic and whether the funding structure can be supported by projected cash generation.



Illustrative Project Cost (Rs crore)

Component	Amount
Land & site development	1.20
Building & civil works	3.00
Plant & machinery	7.25
Utilities & electrical	1.50
Other fixed assets	0.55
Pre-op & contingency	1.50
Working capital margin	3.50
TOTAL	**18.50**

Rs 7.40 Cr
Promoter contribution

Rs 11.10 Cr
Term loan

40%
Equity share

60%
Debt share

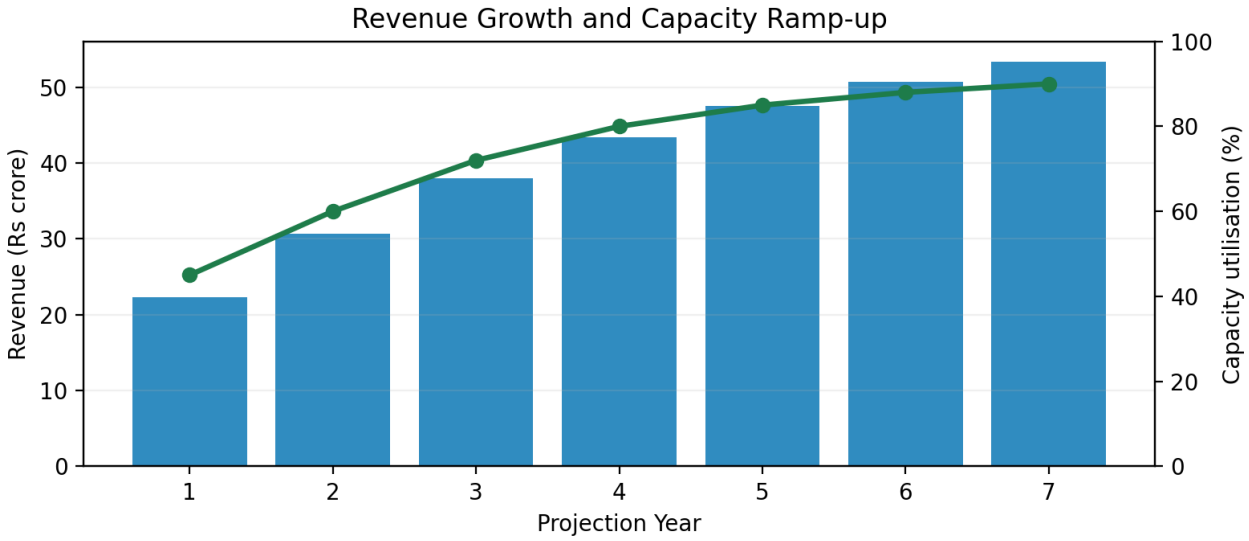
CAPITAL STRUCTURE OBSERVATION

The proposed 60:40 debt-equity structure is workable in the base case, but increasing debt materially would weaken early-year DSCR. Maintaining the planned promoter contribution is therefore an important condition of viability.

5. OPERATING ECONOMICS

Revenue Model & Cost of Production

Revenue is built from capacity, utilisation and net realisation. Profitability depends on contribution after raw material, packaging, utilities and other variable costs - not on turnover alone.



Year	Utilisation	Revenue (Rs Cr)	EBITDA (Rs Cr)	EBITDA Margin
1	45%	22.36	2.79	12.5%
2	60%	30.70	4.61	15.0%
3	72%	37.95	6.25	16.5%
4	80%	43.43	7.57	17.4%
5	85%	47.53	8.62	18.1%
6	88%	50.68	9.23	18.2%
7	90%	53.39	9.73	18.2%

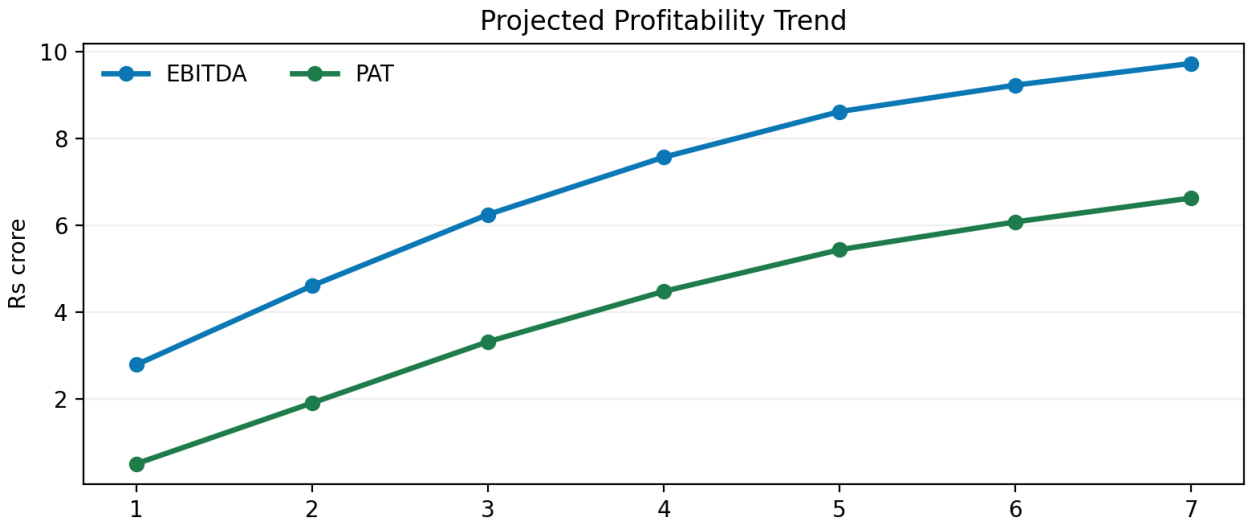
MARGIN ASSUMPTION

Variable operating costs are modelled at approximately 79% of revenue in Year 1, improving gradually with scale. In a real study, this would be built from product-level bills of material, yields, packing costs, power, labour, freight and channel economics.

6. FINANCIAL FEASIBILITY

Integrated Financial Projections

The model links operating assumptions with depreciation, interest, tax and debt repayment so that profitability and cash generation can be viewed together.



Year	Revenue	EBITDA	PBT	PAT	Cash Accrual
1	22.36	2.79	0.68	0.51	1.46
2	30.70	4.61	2.54	1.91	2.81
3	37.95	6.25	4.42	3.32	4.18
4	43.43	7.57	5.98	4.48	5.30
5	47.53	8.62	7.26	5.44	6.22
6	50.68	9.23	8.10	6.08	6.82
7	53.39	9.73	8.84	6.63	7.33

Profitability View

EBITDA expands as utilisation improves and fixed costs are absorbed across a larger sales base. Year-1 profitability is modest because of lower utilisation and full interest burden.

Cash-Flow View

Cash accrual strengthens materially from Year 3 onward, supporting scheduled principal repayments and creating greater financial flexibility.

Amounts are illustrative and rounded. Actual tax, depreciation, incentives, GST treatment and accounting policies would be determined from the facts of the real project.

7. LIQUIDITY

Working Capital & Cash Conversion

A profitable project can still experience liquidity stress if inventory and receivable requirements are underestimated.

45 days	30 days	30 days	Rs 3.50 Cr
Receivables assumption	Finished goods	Raw material	Initial WC margin

Inventory Cycle

Raw material, work-in-progress and finished goods absorb cash before revenue is collected. Procurement seasonality can increase this requirement.

Customer Credit

Institutional and distributor sales may require 30-45 days or more. Longer credit directly increases the working-capital gap.

Supplier Credit

Negotiated supplier terms partly finance the operating cycle, but should not be assumed unless commercially supported.

Growth Effect

As sales grow, the absolute amount tied up in working capital generally increases even when margins improve.

Working Capital Component	Illustrative Basis	Feasibility Concern
Raw material	30 days	Price / seasonality risk
Work-in-progress	5 days	Process duration and yield
Finished goods	30 days	Slow-moving inventory risk
Receivables	45 days	Customer / channel discipline
Creditors	30 days	Depends on supplier terms
Margin funding	Rs 3.50 Cr	Promoter liquidity required

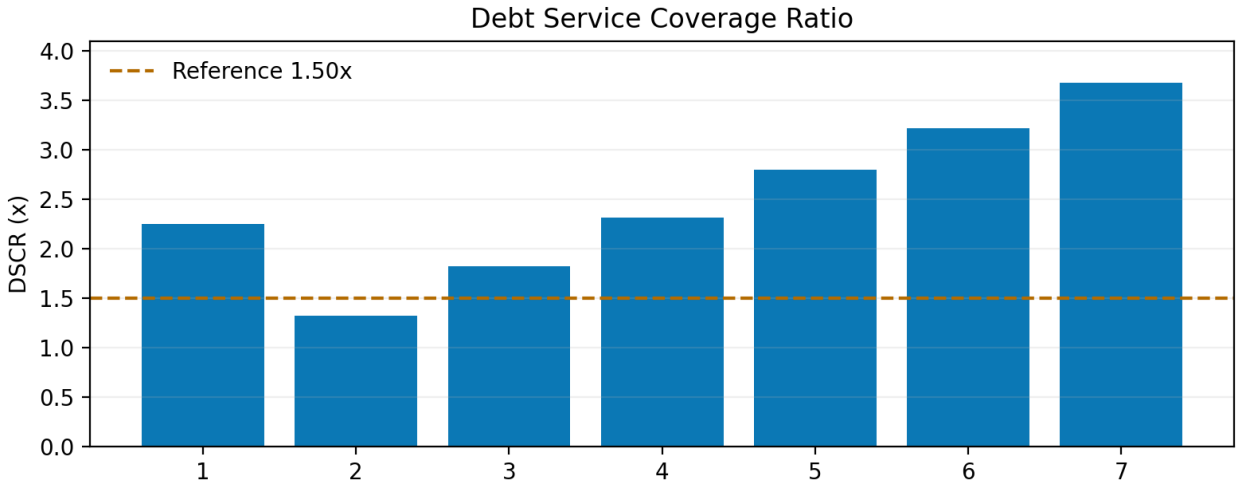
LIQUIDITY OBSERVATION

The project should not divert the full promoter contribution into fixed assets. Adequate cash must remain available for working-capital margin, start-up losses, channel development and implementation contingencies.

8. DEBT SERVICE

Term Loan Repayment & DSCR

Debt sustainability is assessed from cash generation, not merely accounting profit. The timing of principal repayment can materially change early-year financial stress.



Year	Interest	Principal	Cash Accrual	DSCR
1	1.17	-	1.46	2.25x
2	1.17	1.85	2.81	1.32x
3	0.97	1.85	4.18	1.82x
4	0.78	1.85	5.30	2.31x
5	0.58	1.85	6.22	2.80x
6	0.39	1.85	6.82	3.22x
7	0.19	1.85	7.33	3.68x

DEBT-SERVICE OBSERVATION

Year 2 is the tightest repayment year with DSCR around 1.32x. This supports retaining the proposed one-year principal moratorium and avoiding additional debt unless stronger commercial evidence or promoter support is available.

DSCR methodology and lender benchmarks vary by institution and transaction. The above is an illustrative analytical measure, not a bank sanction criterion.

9. INVESTMENT RETURNS

ROI, IRR, Payback & Break-even

Return metrics should be read together. A single attractive ratio cannot compensate for weak cash flow, excessive debt or fragile assumptions.

21.4%	Rs 5.86 Cr	4.3 years	~39%
Indicative project IRR	NPV @ 14%	Simple payback	Break-even capacity

Project IRR Based on illustrative post-tax project cash flows and terminal recovery assumptions. IRR measures the return profile of the project cash flows, not a guaranteed investor return.	**Net Present Value** A positive NPV at the illustrative 14% discount rate indicates value creation in the base case under the modelled assumptions.
Payback Cumulative operating cash flows recover the illustrative initial project investment in approximately 4.3 years.	**Break-even** The accounting break-even is estimated at approximately 39% of rated capacity after considering fixed costs, depreciation and finance cost.

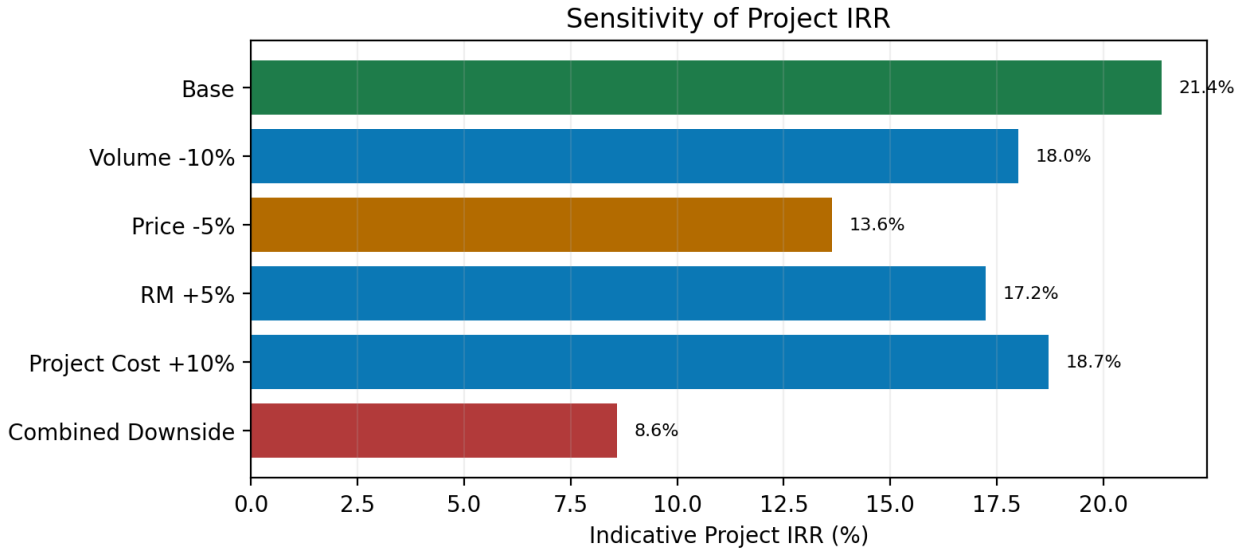
RETURN INTERPRETATION

The base case is financially attractive, but the selling-price sensitivity on the next page demonstrates that returns are highly dependent on maintaining net realisation. The project should therefore be judged on both return and resilience.

10. DOWNSIDE RESILIENCE

Sensitivity & Scenario Analysis

Base-case projections show one possible outcome. Sensitivity analysis tests whether the project remains acceptable when important assumptions move adversely.



Scenario	IRR	NPV @ 14%	Payback	Interpretation
Base case	21.4%	5.86	4.3 yrs	Attractive
Sales volume -10%	18.0%	3.12	4.7 yrs	Manageable
Selling price -5%	13.6%	-0.28	5.4 yrs	Material concern
Raw material cost +5%	17.2%	2.52	4.8 yrs	Manageable with controls
Project cost +10%	18.7%	4.01	4.5 yrs	Moderate impact
Combined downside	8.6%	-4.13	6.4 yrs	Not attractive

KEY SENSITIVITY FINDING

Selling-price realisation is the most critical tested variable. A 5% reduction reduces the illustrative IRR below the 14% reference return and turns NPV slightly negative. Commercial price validation is therefore a pre-investment priority.

11. RISK ASSESSMENT

Key Risks, Mitigation & Critical Success Factors

A feasibility study should identify what must go right - and what could materially change the financial outcome.

Risk Area	Potential Impact	Illustrative Mitigation / Decision
Selling-price pressure	Lower contribution and IRR	Validate net realisation with target customers; diversify channels
Raw-material inflation	Margin compression	Supplier agreements, alternate sourcing, product repricing mechanism
Slow market ramp-up	Low utilisation and weaker DSCR	Pre-commissioning channel build-up; phased marketing plan
Project-cost overrun	Higher debt/equity need	Firm quotations, contingencies, disciplined scope control
Working-capital stretch	Liquidity pressure	Credit controls, stock norms, adequate WC limits/margin
Execution delay	Interest during construction and lost sales	Milestone-based project management and vendor accountability
Product concentration	Demand / margin risk	Balanced mix and product-level contribution monitoring
Excess debt	Repayment stress	Maintain 40% promoter contribution and avoid debt-funded overruns

Critical Success Factor 1

Demonstrated customer/channel demand supporting at least 60% capacity utilisation by Year 2.

Critical Success Factor 2

Net selling-price realisation protected through product mix, channel discipline and periodic repricing.

Critical Success Factor 3

Raw-material sourcing strategy that manages quality, seasonality and price volatility.

Critical Success Factor 4

Promoter liquidity sufficient for equity, working capital and implementation contingencies.

12. FINAL VIABILITY PERSPECTIVE

Illustrative Conclusion: MODIFY

A professional feasibility study should not force a positive conclusion. The conclusion should follow from the assumptions, risks and financial evidence.

GO	MODIFY	RECONSIDER
Proceed on evaluated assumptions	Improve structure / assumptions	Do not commit until issues resolved

ILLUSTRATIVE CONCLUSION - MODIFY

The sample project appears financially viable in the base case, with positive NPV, project IRR of approximately 21.4%, acceptable break-even and improving DSCR. However, the economics are materially sensitive to selling-price realisation and early-year debt service. Proceed only after the conditions below are addressed.

- Obtain credible customer / distributor evidence supporting the assumed net selling price after channel margins, discounts and freight.
- Preserve promoter contribution at approximately 40% of project cost; avoid financing implementation overruns entirely through additional debt.
- Negotiate a repayment profile that retains at least a one-year principal moratorium and avoids excessive early-year instalments.
- Validate raw-material sourcing, yields and major machinery quotations before final capital commitment.
- Consider phased installation of non-critical capacity if market development is slower than expected.
- Maintain a separate liquidity buffer for working capital, channel development and start-up contingencies.

Important Disclaimer

This sample uses fictional data and simplified assumptions. It must not be used for investment, lending, valuation, engineering or regulatory decisions. Actual feasibility work is project-specific and subject to the agreed professional scope.

CA Manish Gugliya
FCA
www.projectreportbank.com