Nov 2025 & Onwards 2.0

CA FINAL

ADVANCED FINANCIAL MANAGEMENT

CONCEPT BOOK

- Extensive conceptual coverage
- ICAI study material references after each concept for practice.
- Step-by-Step Solutions and Common Mistakes Highlighted.
- Analysis and list of ICAI ambiguities in questions
- Last-Day Revision Aids (Important question list, formulas, and ABC analysis)

CA Rohit Chipper

Index - Concept Book

1. Financial Policy and Corporate Strategy

Fund Raising Decision

If company needs funds for expansion of business through debt or equity then choose that option in which market price of share as per PE multiple approach will be higher.

* Return on equity $= \frac{\text{Profit after tax}}{\text{Equity capital + reserves and surplus}}$

* Return on capital employed $= \frac{\text{Profit before interest and dd tax}}{\text{Equity capital + reserves and surplus + Debt}}$

* Value of debt can be calculated from interest amount & rate

Value of debt $= \frac{\text{Interest amount}}{\text{Interest rate \%}}$

External Fund Requirement

It is the amount which companies required to raise from various sources to invest in (companies' total asset less payables and provision) when sales are expected to grow by a certain percentage for the next year.

In such questions it is assumed that with growth in sales, company's (total assets net of provision) should also increase and we need funds to finance those increase in assets.

Step 1: External fund requirement is calculated as follow

Particular	Amount
(Total assets less payables & provisions) × Sales growth %	XX
Less: Retained earnings expected in next year	(XX)
Amount to be raised from external sources	XX

Step 2: Amount to be raised from debt

Particular	Amount
Net amount of debt/loan as per given ratio in question	XX
Less: existing amount of debt/loan	(XX)
Amount to be raised from debt/loan	XX

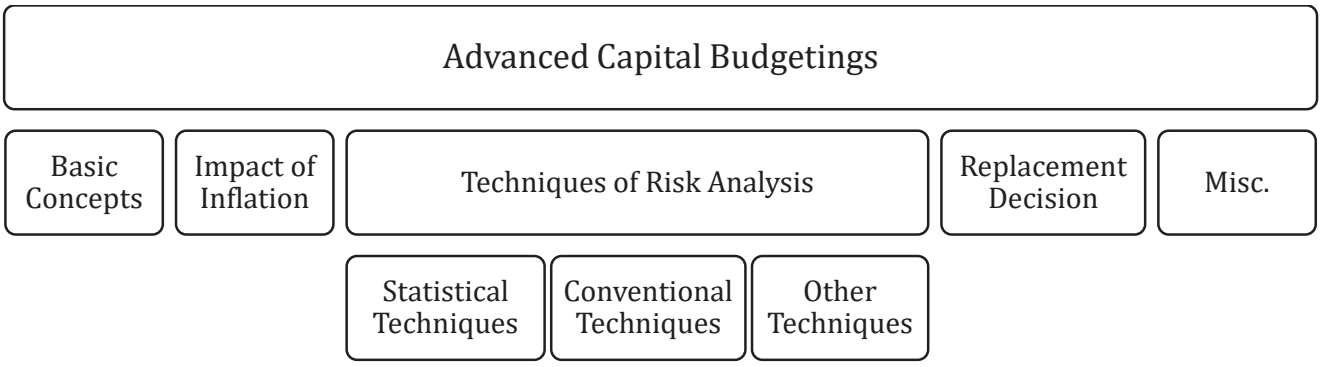
Step 3: Amount to be raised from equity

Particular	Amount
Total amount to be raised as per step 1	XX
Less: amount raised from debt/loan as per step 2	(XX)
Amount to be raised from equity	XX

* If question provides "current year Sales to Short Term Loan and Payables and Provision" then it means $\frac{\text{Current year sales}}{\text{Next year Short term loan and payables and provison}}$ (AQ3)

Question based on above concept: Illustration 1 & AQ1

3. Advanced Capital Budgeting Decisions



Basic Concepts

Capital Budgeting

Capital budgeting is the process by which businesses evaluate and decide on potential major investments or expenditures. These investments can include projects such as purchasing new machinery, building new facilities, launching new products, or investing in research and development.

Nominal Cash Flow

Nominal cash flow refers to the actual cash flow that will be received or paid in the future, it includes inflation.

*If nothing is specified in the question then assume cash flows are nominal cash flow.

Real Cash Flow

Real cash flow, on the other hand, is the nominal cash flow adjusted for the effects of inflation. It reflects the purchasing power of the cash flows, essentially showing how much the money is worth in today's terms.

Net Present Value

This method calculates the present value of all cash flows associated with the project, using the discount rate. A positive NPV indicates that the project is expected to add value to the company.

Calculation of NPV

Step 1: Calculate initial investment

Particular	Amount
Investment in asset or machinery or project	XX
Add: Instalment cost	XX
Add: Investment in working capital	XX
Less: Proceeds from disposal of old asset or machinery	(XX)
Less: Tax on disposal of old asset {(sale value – Book value) × Tax rate}	(XX)
Initial Investment	XX

Step 2: Calculate annual cash inflow

Particular	Amount
Revenue	XX
Less: Operating Cost	(XX)
EBITDA (Earnings before interest, tax, depreciation and amortisation)	XX
Less: Depreciation & Amortisation*	(XX)
EBIT (Earnings before interest & tax)	XX
Less: Interest	(XX)
EBT (Earning before tax)	XX
Less: Tax	(XX)
EAT (Earning after tax/ Net income)	XX
Add: Depreciation & Amortisation (non-cash expense)*	XX
Less: Capital expenditure (increase in fixed capital)	XX
Less: Change in non-cash net working capital	XX
Add: Interest after removing tax benefit {interest× (1-tax)}	XX
Annual Cash Inflow	XX

*Instead of deducting and adding back the depreciation, the tax benefit on depreciation can also be directly added in the cashflow (Ill 2)

Step 3: Calculate of terminal cash inflow

Particular	Amount
Salvage value of asset or machinery or project	XX
Add: Release of investment in working capital	XX
Less: Tax on disposal of asset {(sale value – Book value) × Tax rate}	(XX)
Terminal cash inflow	XX

Step 4: Calculate of present value of all cash flows from step 1, 2 & 3 using discount rate (Weighted average cost of capital)

Step 5: Calculate Net present value

NPV = PV of all cash inflow – Initial investment

If NPV is positive then accept the project, if NPV is negative then leave the project.

*If question ask "Show how the viability of the project is to be evaluated" then we have to calculate the NPV (TYK 17)

Inflation

Impact of inflation (Page 3.2)

To calculate the NPV of a project, both the cash flows and the discount rate used in the calculations should be either both real or both nominal.

If Cash flows are real but discount rate is nominal or

If Cash flows are nominal but discount rate is real

then either of the below adjustment should be made to ensure

- Both cashflow and discount rate are nominal (1st preference)
- Both cashflow and discount rate are real (2nd preference)

(1) Conversion of cashflow

$$\text{Nominal Cashflow}_{\text{year n}} = \text{Real cashflow}_{\text{year n}} \times (1 + \text{Inflation rate})^{n}$$

*If inflation rate changes for each year, then (Illustration 2)

$$\text{Nominal Cashflow}_{\text{year n}} = \text{Real cashflow}_{\text{year n}} \times (1 + \text{IR}_{\text{year 1}}) \times (1 + \text{IR}_{\text{year 2}}) \ldots \text{till n}$$

IR = Inflation rate

*Depreciation does not change with inflation as it is calculated on historical value (Ill 2)

*Inflation for revenue and cost can be different so, there nominal cashflow will be calculated using applicable rate (Ill 2)

*Initial investment is at year 0 so, Real Initial Investment = Nominal Initial Investment

(2) Conversion of discount rate

$$\text{Nominal Rate} = (1 + \text{Real Rate}) \times (1 + \text{Inflation Rate}) - 1$$

*If question mention cashflows are

- Without inflation or ignoring inflation then it means cashflow are real (TYK 19)
- Recognizing or including inflation then it means cashflow are nominal (TYK 17)

*If cashflows are nominal and nothing is specified in the question about discount rate then assume discount rate as real rate. (TYK 17)

*If cashflows are real and nothing is specified in the question about discount rate then assume discount rate as nominal rate. (TYK 19)

Question based on above concept: Illustration 1, 2 | TYK 17, 18, 19

Techniques of Risk Analysis

Statistical Techniques

Statistical Techniques			
Profitability index	Probability	Variance or Standard Deviation	Coefficient of Variation

Profitability index (Page 3.64)

Financial tool to assess the relative profitability of investment opportunities

$$\text{Profitability index} = \frac{\text{PV of cash flows}}{\text{Initial outlay}} = \frac{\text{NPV} + \text{Initial Outlay}}{\text{Initial outlay}}$$

Probability (Page 3.13)

Probability is a measure about the chances that an event will occur. If Probability of the cashflows is given in question then

Expected cashflow or value = Σ (Cashflow × Probability)

Expected NPV = PV of expected cashflow – Initial investment

Expected NPV = Σ (NPV × Probability)

Perfectly dependent cashflow or perfectly positively correlated cashflow over time

When cash flows are perfectly dependent, the occurrence of one cash flow directly determines the occurrence of another.

For e.g., If cash flow of year 1 = worst, then Cashflow of year 2, 3, 4… will also be worst

Probability of worst-case scenario of project = probability of worst-case scenario in year 1

Independent cashflow

When cash flows are independent, the occurrence or amount of one cash flow does not influence or determine the occurrence or amount of another.

For e.g., If cash flow of year 1 = worst, then Cashflow of year 2, 3, 4… can be anything (worst, normal or best).

Probability of worst-case scenario of project = Probability of worst-case scenario in year 1 × probability of worst-case scenario in year 2 × ….. till n year

Variance (Page 3.16)

Variance is a measurement of the degree of dispersion between cashflows from the average cashflow.

Cashflow variance $(\sigma^2) = \sum\{(\text{Cashflow} - \text{Expected casflow})^2 \times \text{Probability of cashflow}\}$

Project or NPV variance $(\sigma^2) = \sum\{(\text{NPV} - \text{Expected NPV})^2 \times \text{Probability of NPV}\}$

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QUESTION BANK

- Comprehensive Question Coverage
- Covers ICAI study materials, past year papers, RTPs, MTPs, and the BOS portal.
- Solutions as per the latest ICAI format to align with exam expectations.
- Each question is accompanied by its source for reference.
- Memory techniques for theory questions to retain concepts for the exam.

CA Rohit Chipper

Index - Question Bank

1. Financial Policy and Corporate Strategy

Illustration 1 – External Fund Requirement

The Balance Sheet of M/s. Sundry Ltd. as on 31-03-2023 is follows:

(₹ in Lakhs)

Liabilities	**₹**	**Assets**	**₹**
Share Capital	3000	Fixed Assets	6000
Reserves	2000	Inventory	5000
Long Term Loan	4000	Receivables	2400
Short Term Loan	3000	Cash	600
Payables & Provisions	2000		
	14000		**14000**

Sales for the year were ₹ 6000 lakhs. The sales are expected to grow by 20% during the year. The profit margin and dividend pay-out ratio are expected to be 4% and 50% respectively.

The company further desires that during the current year Sales to Short Term Loan and Payables and Provision should be in the ratio of 4:3. Ratio of fixed assets to Long Term Loans should be 1.5. Debt Equity Ratio should not exceed 1.5.

You are required to determine:

(i) The amount of External Fund Requirement (EFR)
(ii) The amount to be raised from Short Term & Long Term Funds and issue of new Equity.

Answer

(i) External Funds Requirement (EFR):

	(₹ in lakhs)
Expected sales (₹ 6000 + 20% of ₹ 6000)	7200.00
Profit margin @ 4%	288.00
Dividend payout ratio @ 50%	144.00
Balance to be ploughed back (A)	144.00
Additional funds required (₹ 14000 - ₹ 2000*) x 0.20 (B)	2400.00
Balance to be met from external source (B - A)	**2256.00**

* As current liabilities shall also be increased proportionately with increase in sales.

(ii) Amount to be raised from different sources with following conditions:

- Sales to short term loans and payables & provisions 4:3
- Ratio of fixed assets to long term loans 1.5
- Debt equity ratio should not exceed 1.5

(1) Amount to be raised from Short Term Funds:

	(₹ in lakhs)
New amount of short-term loans and payables & provision $\left[\frac{3}{4} \times 7200\right]$	5400
Less: Existing Amount of short-term loans and payables & provision (2000 X 1.20 + 3000)	5400
Amount to be raised from short term funds	**Nil**

(2) Amount to be raised from Long Term Funds:

	(₹ in lakhs)
New fixed assets (₹ 6000 + 20% of ₹ 6000)	7200
New long-term loans as per given condition (₹ 7200/1.5)	4800
Less: Existing long-term loans	4000
Amount to be raised from Long term funds	**800**

(3) Amount to be raised from Equity:

	(₹ in lakhs)
Amount to be raised from external sources	2256.00
Less: Amount to be raised from short term funds	----
Less: Amount to be raised from Long term funds	800.00
Balance amount to be raised from the new Equity	**1456.00**

Alternative Solution as per Formula Approach

(i) External Funds Requirement (EFR)

$$EFR = \left[\frac{TA}{S} - \frac{P}{S}\right] \times \Delta S - N \times \text{Projected Sales} \times (1 - d)$$

Where,

TA = Total Assets

S = Current Sales

P = Payables and Provisions

ΔS = Change in Sales

N = Net Profit Margin Ratio

d = Dividend Payout Ratio

$$EFR = \left[\frac{14000}{6000} - \frac{2000}{6000}\right] \times 1200 - 0.04 \times 7200 \times 0.5 = ₹2256 \text{ lakhs}$$

(ii) Funds to be raised from Various Sources

(1) Short Term Funds

Let X be the new Short-Term Loan then meeting the given condition the Additional Requirement shall be computed as follows:

$$\frac{4}{3} = \frac{6000 \times 1.2}{2000 \times 1.2 + X}$$

X = 3000.00

New Short-Term Loans required	₹ 3000.00 lakhs
Less: Existing	₹ 3000.00 lakhs
Additional requirement	**0.00 lakhs**

(2) Long term funds

Let Y be the new Long -Term Loans then meeting the given condition the Additional Requirement shall be computed as follows:

$$1.5 = \frac{FA}{\text{Long term loans}}$$

$$1.5 = \frac{6000 \text{ x } 1.2}{Y}$$

$$Y = 4800$$

New Long Term Loans	₹ 4800.00 Lakhs
Existing	₹ 4000.00 Lakhs
Additional Long Term Fund to be raised	₹ 800.00 Lakhs

(3) Equity to be raised

EFR	₹ 2256.00 Lakhs
Less: Amt. to be raised from Short Term Loans	0.00 Lakhs
Amt. to be raised from Long term Loans	₹ 800.00 Lakhs
Equity to be raised	₹ 1456.00 Lakhs

$$\text{New DER} = \frac{\text{Debt}}{\text{Shareholder's Fund}}$$

$$= \frac{4800}{3000 + 1456 + 2000 + 144} = 0.727$$

Thus, required condition is satisfied

Q.1. **(TYK 1, Page 2.8) – Value at Risk (VAR) (SA.N19.Q4(c))**

Consider a portfolio consisting of a ₹200,00,000 investment in share XYZ and a ₹200,00,000 investment in share ABC. The daily standard deviation of both shares is 1% and that the coefficient of correlation between them is 0.3. You are required to determine the 10-day 99% value at risk for the portfolio?

Ans. The standard deviation of the daily change in the investment in each asset is ₹ 2,00,000 i.e. 2 lakhs. The variance of the portfolio's daily change is

$V = 2^2 + 2^2 + 2 \times 0.3 \times 2 \times 2 = 10.4$

σ(Standard Deviation) $= \sqrt{10.4} =$ ₹3.22 lakhs

Alternatively, it can also be computed as follows:

$= (1)^2(0.50)^2 + (1)^2(0.50)^2 + 2(1)(1)(0.3)(0.50)(0.50)$

$= 0.25 + 0.25 + 0.15 = 0.65\%$

σ (Standard Deviation) $= \sqrt{0.65} = 0.80623\%$

σ (Standard Deviation) in Amount = ₹400 lakhs x 0.80623% = ₹ 3.22 lakhs

Accordingly, the standard deviation of the 10-day change is

₹3.22 lakhs $x\sqrt{10} =$ ₹10.18 lakh

From the Normal Table we see that z score for 1% is 2.33 . This means that 1% of a normal distribution lies more than 2.33 standard deviations below the mean. The 10-day 99 percent value at risk is therefore

2.33 × ₹10.18 lakh = ₹ 23.72 lakh

3. Advanced Capital Budgeting Decisions

Illustration 1 - Impact of inflation

Determine NPV of the project with the following information:

Initial Outlay of project	₹ 40,000
Annual Cash Flow from the Project (Without inflation)	₹ 15,000
Useful life	4 years
Cost of Capital (Including inflation premium of 10%)	12%

Answer

Annual Cash Flow of project is ₹ 15,000.

It would be inconsistent to discount these real cash flows at 12% (nominal rate of return).

There are two alternatives:

(i) Either to restate the cash flow in nominal term and discount at 12% or

(ii) Restate the discount rate in real terms and use this to discount the real cash flows.

NPV using (i) approach

Since inflation rate is 10% a year, real cash flows may be stated in nominal cash flows as follows:

Nominal Cash Flow = (1 + Inflation Rate) Real Cash Flows

Year	Real Cash Flows	Nominal Cash flows
1	15,000	15,000 × 1.10 = 16,500
2	15,000	15,000 × (1.10)2 = 18,150
3	15,000	15,000 × (1.10.)3 = 19,965
4	15,000	15,000 × (1.10)4 = 21,962

NPV using nominal discounting rate 12%

$$\frac{16,500}{(1.12)} + \frac{18,150}{(1.12)^2} + \frac{19,965}{(1.12)^3} + \frac{21,962}{(1.12)^4} - 40,000$$

= ₹ 14,732 + ₹ 14,469 + ₹ 14,211+ ₹ 13,957 – ₹ 40,000

= ₹ 17,369 (Approx)

NPV using (ii) approach

To compute NPV using (ii) approach, we shall need real discount rate, which shall be computed as follows:

$$\text{Real Discount Rate} = \frac{1+ \text{Nominal Discount Rate}}{1 + \text{Inflation Rate}} - 1$$

$$\text{Real Discount Rate} = \frac{1+ 0.12}{1 + 0.10} - 1 = 0.0182 \text{ i. e. } 1.8\%$$

$$NPV = \sum_{t\ 1}^{n} cf_t - I_O$$

Where t = Time Period

cf_t = Annual Cash Flow

I_o = Initial Outlay

Accordingly NPV of the project

$$\frac{15,000}{(1.0182)} + \frac{15,000}{(1.0182)^2} + \frac{15,000}{(1.0182)^3} + \frac{15,000}{(1.0182)^4} - 40,000$$

= ₹ 14,732 + ₹ 14,469 + ₹ 14,210+ ₹ 13,956 – ₹ 40,000

= ₹ 57,367 – ₹ 40,000 = ₹17,367(Approx)

NPV based on consideration that inflation rate for revenue and cost are different shall be computed as follows:

$$N.P.V. = n\sum_{t-1}\left[\left\{R_t(1+i_r) - C_t{}^t\sum_{r=1}(1+i_c)\right\}(1-T) + D_tT\right]/(1+K)^t - I_0$$

R_t = revenues for the year 't' with no inflation.

i_r = annual inflation rate in revenues for 'r th ' year.

C_t = costs for year 't' with no inflation.

i_c = annual inflation rate of costs for year 'r'.

T = tax rate.

D_t = depreciation charge for year 't'.

I_0 = initial outlay.

K = cost of capital (with inflation premium).

Illustration 2 - Impact of inflation

XYZ Ltd. requires ₹ 8,00,000 for a project. Useful life of project - 4 years. Salvage value - Nil. Depreciation Charge ₹2,00,000 p.a. Expected revenues & costs (excluding depreciation) ignoring inflation.

Year	1	2	3	4
Revenues	₹ 6,00,000	₹ 7,00,000	₹ 8,00,000	₹ 8,00,000
Costs	₹ 3,00,000	₹ 4,00,000	₹ 4,00,000	₹ 4,00,000

Applicable Tax Rate is 60% and cost of capital is 10% (including inflation premium). Calculate NPV of the project if inflation rates for revenues & costs are as follows:

Year	Revenues	Costs
1	10%	12%
2	9%	10%
3	8%	9%
4	7%	8%

Answer

Computation of Annual Cash Flow

(i) Inflation adjusted Revenues

Year	Revenues (₹)	Revenues (Inflation Adjusted) (₹)
1	6,00,000	6,00,000(1.10) = 6,60,000
2	7,00,000	7,00,000(1.10)(1.09) = 8,39,300
3	8,00,000	8,00,000(1.10)(1.09)(1.08) = 10,35,936
4	8,00,000	8,00,000(1.10)(1.09)(1.08)(1.07) = 11,08,452

(ii) Inflation adjusted Costs

Year	Cost (₹)	Cost (Inflation Adjusted) (₹)
1	3,00,000	3,00,000(1.12) = 3,36,000
2	4,00,000	4,00,000(1.12)(1.10) = 4,92,800
3	4,00,000	4,00,000(1.12)(1.10)(1.09) = 5,37,152
4	4,00,000	4,00,000(1.12)(1.10)(1.09)(1.08) = 5,80,124

(iii) Tax Benefit on Depreciation = ₹ 2,00,000 x 0.60 = ₹ 1,20,000

(iv) Net Profit after Tax

Year	Revenues (Inflation Adjusted) (₹)(1)	Costs (Inflation Adjusted) (₹)(2)	Net Profit (₹) (3) = (1) - (2)	Tax (₹) (4) = 60% of (3)	Net after Profit (₹) (3) - (4)
1	6,60,000	3,36,000	3,24,000	1,94,400	1,29,600
2	8,39,300	4,92,800	3,46,500	2,07,900	1,38,600
3	10,35,936	5,37,152	4,98,784	2,99,270	1,99,514
4	11,08,452	5,80,124	5,28,328	3,16,997	2,11,331

(v) Present Value of Cash Inflows

Year	Net after Profit (₹)	Tax Benefit on Depreciation (₹)	Cash Inflow (₹)	PVF@ 10%	PV (₹)
1	1,29,600	1,20,000	2,49,600	0.909	2,26,886
2	1,38,600	1,20,000	2,58,600	0.826	2,13,604
3	1,99,514	1,20,000	3,19,514	0.751	2,39,955
4	2,11,331	1,20,000	3,31,331	0.683	2,26,299
					9,06,744

NPV = ₹ 9,06,744 – ₹ 8,00,000 = ₹ 1,06,744

Statistical Techniques

Illustration 3 - Statistical Techniques

Possible net cash flows of Projects A and B at the end of first year and their probabilities are given below. Discount rate is 10 per cent. For both the projects, initial investment is ₹ 10,000. Calculate the expected net present value for each project. State which project is preferable?

Possible Event	Project A		Project B	
	Cash Flow (₹)	Probability	Cash Flow (₹)	Probability
A	8,000	0.10	24,000	0.10
B	10,000	0.20	20,000	0.15
C	12,000	0.40	16,000	0.50
D	14,000	0.20	12,000	0.15
E	16,000	0.10	8,000	0.10

Answer

Calculation of Expected Value for Project A and Project B

Project A				Project B		
Possible Event	Cash Flow (₹)	Probability	Expected Value (₹)	Cash Flow (₹)	Probability	Expected Value (₹)
A	8,000	0.10	800	24,000	0.10	2,400
B	10,000	0.20	2,000	20,000	0.15	3,000
C	12,000	0.40	4,800	16,000	0.50	8,000
D	14,000	0.20	2,800	12,000	0.15	1,800
E	16,000	0.10	1,600	8,000	0.10	800
ENCF			**12,000**			**16,000**

The Net Present Value for Project A is (0.909 × ₹ 12,000 – ₹ 10,000) = ₹ 908

The Net Present Value for Project B is (0.909 × ₹ 16,000 – ₹ 10,000) = ₹ 4,544.

Illustration 4 - Statistical Techniques

Probabilities for net cash flows for 3 years of a project are as follows:

Year 1		Year 2		Year 3	
Cash Flow (₹)	Probability	Cash Flow (₹)	Probability	Cash Flow (₹)	Probability
2,000	0.1	2,000	0.2	2,000	0.3
4,000	0.2	4,000	0.3	4,000	0.4
6,000	0.3	6,000	0.4	6,000	0.2
8,000	0.4	8,000	0.1	8,000	0.1

Calculate the expected net present value of the project using 10 per cent discount rate if the Initial Investment of the project is ₹ 10,000.

Answer

Calculation of Expected Value

Year 1			Year 2			Year 3		
Cash Flow (₹)	Prob.	Expected Value (₹)	Cash Flow (₹)	Prob.	Expected Value (₹)	Cash Flow (₹)	Prob.	Expected Value (₹)
2,000	0.1	200	2,000	0.2	400	2,000	0.3	600

About The Author

CA Rohit Chipper, a first-attempt Chartered Accountant with AIR 18 (Intermediate) and AIR 17 (Final), achieved 92% in CA Foundation and 91 marks in AFM. Excelling in CFA Levels I and II with 90+ percentile, he combines academic brilliance with real-world expertise. With three years as a Strategy and Finance Consultant and articleship at PwC, he offers practical insights to students. Passionate about teaching, he has mentored 40,000+ students, simplifying the CA journey and empowering learners to excel with confidence and clarity.

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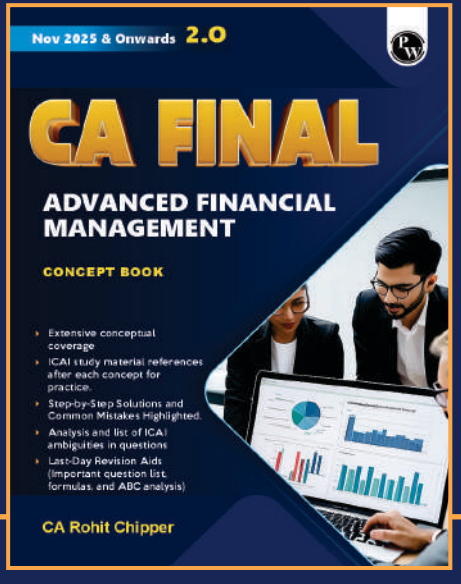

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