



# CA FINAL

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# Prepared by:-

# CA, CPA Vinod Kumar Agarwal

(AIR 2 - CA Foundation, AIR 4 - CA Inter, AIR 24 - CA Final)

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ABOUT

# CA VINOD KUMAR AGARWAL (AIR-2<sup>nd</sup>, 4<sup>th</sup> & 24<sup>th</sup> IN FOUNDATION, INTER & FINAL RESPECTIVELY)

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### SUMMARY

Founder Member of A.S. Foundation, India's Leading Academy for C.A. Course, CA Vinod Kumar Agarwal is a fellow member of ICAI and a past member of the Board of Studies, ICAI. With a teaching experience of twenty years, he has guided more than 1,00,000 students and is ranked as one of the best teachers for Accounts and Financial Management at Intermediate level and Financial Reporting and SFM at Final Level. He has authored books on Accounts, Advanced Auditing for CA Final, Auditing for Intermediate, Accounting Standards, Ind AS, Costing and Financial Management, and his books have sold more than 2,00,000 copies.

### PUBLICATIONS AND ACHIEVEMENTS

- A merit holder in all the three levels of exams conducted by ICAI (2nd rank, 4th rank, and 24th rank in CA Foundation, CA Intermediate ar CA Final respectively).
- Scored 99 marks in Accountancy in CA Foundation.
- Authored books on Accounts, Advanced Auditing for CA Final, Auditing for Intermediate, Accounting Standards, Ind AS, Costing and Financial Management.
- Complied a book "No Truth, Only Interpretations", a book on motivation, inspiration and guidance.
- Compiled a book, "Mind Candy", a book on motivation.
- Compiled a book, "Sweet Voice", a book on inspirational quotes.
- Working experience with India's top firms Firms like M/s. S.B. Billimoria and A.F. Ferguson (both member firm of Deloitte).
- Published article in the Students Newsletter of ICAI on "Valuation of Equity Shares" and "Stock Market Index".
- Presented a paper on "Corporate Governance and Role of Auditor" in National Students Conference held in Goa.

# EDUCATION

- Passed the Certified Public Accountant (CPA) (USA) exam in 2007.
- Post-graduation from Pune University with First Class.
- Graduation from B.M.C.C, Pune with distinction.
- Passed the Diploma in Business Finance Conducted by ICFAI, Hyderabad.
- Passed the Derivative Module test conducted by National Stock Exchange.
- Also appeared for UPSC exam and cleared Mains twice.

# TEACHING EXPERIENCE

- Teaches Accounts, Advanced Accountancy, Financial management and Economics for Finance at CA Intermediate Level and Financial Reporting and Advanced Financial Management (AFM) at CA Final level.
- Pioneer of creating and distributing video tutorials in pen drives/google drive among students.
- Produced All India Toppers (1st Rank) in CPT examination and final examination apart from more than 250 all India merit- holders.
- More than 30000 Facebook subscribers, more than 42000 YouTube subscribers.
- Sold more than 40000 video lectures in pen-drive and google-drive mode.
- In 2019, launched a brand VKNOW, to become a national brand for digital learning.

# TEACHING APPROACH

Simple and effective way of teaching through concept building, class-room practice, home-exercise, and power-point presentation.

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- A large variety of problems are solved in the class to meet the examination requirements.
- Notes are updated frequently covering amendments and exam problems.

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# CA AFM CASE STUDY BASED MCQ MAY 2025 SOLUTION Prepared By : CA, CPA Vinod Kumar Agarwal (All India Ranker in Foundation, Intermediate and Final)

# CASE STUDY - 1

(Source: ICAI May 2025 Exam)

# Case Scenario - I

Mr. X, an investor buys stocks of WBL Limited worth 2 21,60,000 due to very strong fundamentals. Since last 3 months, the market sentiment is weak and witnessed a significant volatility and considered to remain weak for about the next three months. Keeping in the mind the volatility in the market, Mr. X is planning to hedge his portfolio in the future market. The Beta of WBL stock is 1.3 and the current value of NIFTY is 2250 and 3 months future is selling at 2310. The current market price of WBL stock is 240. Each Nifty future can be trade in units of 240 only. Assume there is no transaction cost and M to M Margin.

From the information given above, choose the correct answer to the question No 1 to 3:

- 1. If NIFTY index rises by 6% from 2250 to 2385 and WBL stock rises to 2255, what will be Net Gain/Loss when Portfolio was in hedged?
- a) Net Loss 2 90,000
- b) Net Gain 🛛 45,000
- c) Net Gain 2 1,35,000
- d) Net Gain 2 90,000

2. Number of future contract to be buy/sell to hedge WBL stock against expected fall in the market (rounded of contracts)-

- a) Buy 6 future contracts
- b) Sell 5 future contracts
- c) Buy 5 future contracts
- d) Sell 6 future contracts

# 3. If Nifty index falls by 10% from 2250 to 2025 and WBL stock falls to

- 212, what will be Net Gain/Loss if portfolio was hedged on NIFTY future?
  - a) Net Gain 🛛 3,42,000
  - b) Net Gain 2 3,02,100
  - c) Net Gain 🛛 50,100
  - d) Net Gain 2 90,000

# ANSWERS TO THE CASE STUDY - 1

- 1. Option b
- 2. Option b
- 3. Option d

# Explaination for 1 to 3

As Mr X has Long position on portfolio, he should sell Index future to hedge his portfolio. Use NIFTY Future value to calculate Number of contracts.

# Number of NIFTY Future contracts to be sold to minimize risk

(PortfolioValue)  $(\beta \text{ of the portfolio Desired value of } \beta)$ 

(Valueof a future scontract)

2310x240

# = 5.06 say 5 future Contracts to be sold.

# Net Gain/Loss when Portfolio if NIFTY index rises by 6% from 2250 to 2385 and WBL stock rises to 2255

		Rs
Α	Gain on Stock (Long position)[21,60,000 /240 X (255 – 240)]	1,35,000
В	Loss on Future (Short Position)[ 5 contacts x 240 x (23852310)](There will be loss	(90,000)
	if Index future rises and if we have taken a short position)	
С	Net Gain	45,000

# Net Gain/Loss when Portfolio if NIFTY index falls by 10% from 2250 to 20255 and WBL stock falls to 2212

		Rs
Α	Los on Stock (Long position)[21,60,000 /240 X (212 – 240)]	(2,52,000)
В	gain on Future (Short Position)[ 5 contacts x 240 x (2310 - 2025)](There will be gain	3,42,000
	if Index future falls and if we have taken a short position)	
С	Net Gain	90,000

# CASE STUDY - 2

## (Source: ICAI May 2025 Exam)

ABC Ltd., a UK firm, has receivable \$ 20 Million due in 6 months. The company wants to cover full exposure. Following information are available:

Spot rate 1\$ = £ 0.7720/ £ 0.7840

6 months forward rate 1\$ = £ 0.7910/ £ 0.8040

Interest rates are as follows:

	US	UK
6 months deposit rate	4.50% p.a.	5.50% p.a.
6 months borrowing rate	6.00% p.a.	7.50% p.a.

Following options on pound are available:

Option	Strike rate	Price
Call	£ 0.8100	£ 0.01
Put	£ 0.8100	£ 0.02

ABC Limited has forecasted the spot rates for 6 months as follows:

Future rates of 1\$	Probability
£ 0.7800	30%
£ 0.8100	50%
£ 0.8300	20%

From the information given above, choose the correct answer to the question No. 4 to 7:

4. What will be expected spot rate at the end of 6 months and expected cost (proceed) if no hedge strategy is adopted by the company?

- a) £ 0.805/\$, £ 16.10 million
- b) £ 0.85/\$, £15.8 million
- c) £ 0.7720/\$, £ 15.44 million
- d) £ 0.7910/\$, £ 15.82 million

5. Identify which option gives the highest proceed.

- a) Option hedge
- b) Forward hedge
- c) Money market hedge
- d) No hedge

6. What will be the total expected value of option hedge in pounds, if the full exposure of 20 Million is covered?

- a) £ 16.125 million
- b) £ 16.50 million
- c) £ 15.88 million
- d) £ 15.70 million

7. If ABC Ltd. is using forward hedge strategy; what will be total proceed in pound?

- a) £ 15.40 million
- b) £ 15.88 million

c) £ 16.125 million

d) £ 15.82 million

# **ANSWERS TO THE CASE STUDY - 2**

- 4. Option a
- 5. Option d
- 6. Option c
- 7. Option d

Explaination for 4 to 7

# (i) Forward contract:

Total Proceed in Pound = \$2,00,00,000 x 0.7910 = **£ 15.82 million** 

# (ii) Money market hedge:

As the UK firm has foreign currency receivable, it will create foreign currency lianility by borrowing in USA.

Step 1 - Amount in \$ to be borrowed =  $\frac{2,00,00,000}{1+(\frac{0.06}{2})}$  = \$1,94,17,475

Step 2 - Convert \$ into pound at spot rate = \$1,94,17,475 x 0.7720 = £ 14.99 million

Step 3 - Invest in UK @5.5% p.a.

Step 4 - Amount received in Pound after 6 months = £ 14.99 million x [1 +( 0.055/2)] = £ 15.4025 million

# (ii) Put option: (The UK Company needs to buy put option as it has to sell USD and option is available on USD)(Strike rate = $\pm 0.8100$ )

Expected Spot rate	Premiu m/unit	Exercise Option	Total price per unit	Total price for \$20 million x(4)	Prob. Pi	Pixi (5) x (6)
(1)	(2)	(3)	(4)	= (5)	(6)	(7)
£ 0.7800	£0.02	Yes	£ 0.81-0.02 = 0.79	£15.80 million	30%	£4.74
£ 0.8100	£0.02	No	£ 0.81-0.02 = 0.79	£15.80 million	50%	£7.90
£ 0.8300	£0.02	No	£ 0.83 - 0.02 = 0.81	£16.20 million	20%	£3.24
						£ <b>15.88</b>

# Teacher's Notes -

▶ Interest on Premium is ignored. In some ICAI answers, interest on premium is also considered.

▶ Premium paid is deducted from amount receivable.

- ▶ If the expected spot rate is less than strike rate, put option will be excercised and the company will get £ 0.8100.
- ▶ If the expected spot rate is more than strike rate, put option will lapse and the company will get the market rate.

# (iv) No hedge option:

	Expected Future spot rate (1)	Prob. (2)	(1) x (2)
	£ 0.7800	30%	£ 0.234
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		£ 0.805
£ 0.8300	20%	£ 0.166
£ 0.8100	50%	£ 0.405

Total Amount receivable = 20 x 0.805 = **Pound 16.10 million** 

**Decision:** No Hedging Strategy is most preferable strategy because it gives the highest amount to be received in Pound.

# CASE STUDY - 3

(Source: ICAI May 2025 Exam)

Equity Researchers have estimated the rate of returns for Stock A, Stock B and Market Portfolio under each state of the economy is as under-

Economy	Probability	Return on Stock A (%)	Return on Stock B (%)	Market Portfolio (%)
Boom	0.3	16	19	18
Normal	0.4	14	16	15
Recession	0.3	-9	-7	-8

The risk-free rate of return is expected to be 8%. The covariance between Stock A and the Market Portfolio is 122.70, while the covariance between Stock B and the Market Portfolio is 125.40. Assume that the CAPM framework is valid in this market.

# From the information given above, choose the correct answer to the question No. 8 to 12:

- 8. What will be the beta of Stock A and Stock B respectively?
  - a) 0.9542 and 1.00
  - b) 0.9862 and 1.24
  - c) 0.9785 and 1.00
  - d) 0.9785 and 1.24

9. Required rate of return of Stock A is \_\_\_\_\_ and Stock B is \_\_\_\_\_.

- a) 8.9785% and 9%
- b) 9% and 8.978%
- c) 8.9875% and 9%
- d) 8.9785% and 10.4%

10. Based on calculated Alpha of Stock A and Stock B in the above case scenario, which of the following statements is correct for purchase or sale of Stock A and Stock B?

- a) Stock A has a positive alpha, and Stock B has a negative alpha. This indicates that Stock A is underpriced and Stock B is overpriced. Therefore, purchase Stock A and sell Stock B.
- b) Both Stock A and Stock B have positive alpha values, suggesting they are underpriced. Therefore, purchase both stocks.
- c) Stock A has a negative alpha, while stock B has a positive alpha. This means Stock A is overpriced and Stock B is underpriced. Therefore, sell Stock A and purchase Stock B.
- d) Both Stock A and Stock B have negative alpha values, indicating they are overpriced. Therefore, sell both stocks.
- 11. What is the expected rate of return (percentage) for Stock A and Stock B?
  - a) 7.70% and 9.00%
  - b) 10% and 9.00%
  - c) 7.70% and 10%
  - d) 13.1% and 14.20%
- 12. What will be the variance of market portfolio?

a)	38.4

- b) 4.8
- c) 126.8
- d) 125.4

# ANSWERS TO THE CASE STUDY - 3

- 8. Option C
- 9. Option A
- 10. Option C
- 11. Option C
- 12. Option D

# Explaination for 8 to 12

# **Calculation of Market Variance**

Economy	Probability (P)	Market Portfolio Return (R)(%)	Expected return (R x P)	P (R-R) <sup>2</sup>
Boom	0.3	18	5.4	24.3
Normal	0.4	15	6	14.4
Recession	0.3	-8	- 2.4	86.7
			9 %	Market Variance = 125.4

# Beta of Stock A and Stock B

Beta (B) -	Cov (Rj.Rm)
Deta (p) =	Var <sub>Rm</sub>
Beta of A $=$	$\frac{122.70}{125.4} = 0.978$

Beta of B =  $\frac{125.4}{125.4} = 1$ 

# **Required rate of return as per CAPM**

# = Rf + $\beta$ (Rm - Rf)

Required rate of return of Stock A = 8 + 0.9785 (9-8) = 8.9785%Required rate of return of Stock B = 8 + 1(9-8) = 9%

# **Calculation of Aplha**

Stock	Expected Return	CAPM Return	Alpha
А	0.3x16 + 0.4 x14 + 0.3 x (-)9 = 7.7%	8.9785%	(-)1.2785
			Negative Alpha, Overpriced, Sell Stock A
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В	0.3x19 + 0.4 x16 + 0.3 x (-)7 = 10%	9%	1%
			Positive Alpha, Underpriced, Buy Stock B

# Calculation of Expected rate of return

Stock	Calculation	Expected Return
А	0.3x16 + 0.4 x14 + 0.3 x (-)9	7.7%
В	0.3x19 + 0.4 x16 + 0.3 x (-)7	10%

# CASE STUDY - 4

### (Source: ICAI May 2025 Exam)

Steady Mutual Fund has the following assets in Scheme - Star Gold at the close of business as on 31st March, 2025.

Company	No. of Shares (units)	Market Price per share (2)	
A Ltd.	20,000	25	
B Ltd.	30,000	350	
C Ltd.	38,000	290	
D Ltd.	50,000	400	

The total numbers of units of Scheme - Star Gold are 20 lakhs. The Scheme - Star Gold has accrued expenses of 2,00,000 and other liabilities of 2,50,000.

# From the information given above, choose the correct answer to the question No. 13 to 15:

- 13. NAV per unit of the Scheme Star Gold is
  - a) 🛛 21.135
  - b) 🛛 21.035
  - c) 🛛 20.785
  - d) 🛛 21.235

# 14. Total gross value of the Scheme - Star Gold is -

- a) 🛛 325.00 lakhs
- b) 2 420.20 lakhs
- c) 2 480.40 lakhs
- d) 2 520.30 lakhs

# 15. Total net value of the Scheme - Star Gold is -

- a) 🛛 422.70 lakhs
- b) 2 420.70 lakhs
- c) 2 415.70 lakhs
- d) 2 424.70 lakhs

# **ANSWERS TO THE CASE STUDY - 4**

- 13. Option C
- 14. Option B
- 15. Option C

# Explaination for 13 to 15

# **NAV of fund**

No. of shares	Price	Amount (Rs.)
20,000	25	500,000
30,000	350	1,09,500,000
38,000	290	1,10;20,000
	No. of shares   20,000   30,000   38,000	No. of shares Price   20,000 25   30,000 350   38,000 290

D Ltd.	50,000	400	2,00,00,000
Gross value of the Sche	4,20,20,000		
Less : Liabilities			
Accrued expenses	(4,50,000)		
Net value of the Schem	4,15,70,000		
No. of Units	20,00,000		
NAV Per Unit (Rs)			20.785





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# By CA, CPA Vinod Kumar Agarwal (AIR In All 3 Levels Of CA Exam)



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