

Paper- 14: STRATEGIC FINANCIAL MANAGEMENT

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Full Marks: 100

Time Allowed: 3 Hours

This paper contains two sections **A** and **B**. **Section A** is compulsory and contains question No.1 for 20 marks. **Section B** contains question Nos. 2 to 8, each carrying 16 marks.

Answer any five questions from **Section B**.

Section – A [20 Marks]

1. Choose the correct option among four alternative answer.(1mark for correct choice,1 mark for justification). [10×2= 20]

- (i) The following information is available for the Hypothetical Ltd: EPS = ₹5.00, D/P ratio = 40%, K_e at D/P ratio of 40% is 16%. Assuming that Gordon valuation model holds true, what rate of return should be earned on investments to ensure that that the market price per share is ₹50?
- (a) 15%
(b) 20%
(c) 10%
(d) 30%
- (ii) An investor buys one market lot of December ₹1,230 Nifty calls at ₹70 a call, and sells one market lot of December ₹1,300 Nifty calls for ₹34 a call. If the Nifty closes at ₹1,210 on the expiration date, what is the payoff from this spread position?
- (a) ₹6,000
(b) ₹7,000
(c) ₹6,500
(d) ₹7,200
- (iii) If the company's cost of capital is 15% and expected growth rate is 11%, calculate the market price if dividend of ₹ 4 is to be paid.
- (a) ₹100
(b) ₹60
(c) ₹44
(d) ₹50
- (iv) Calculate the NAV of Great Fund from the following data: Size of the fund ₹200 Crores, face value ₹10 per unit, market value of investments ₹280 Crores, receivables ₹2 Crores, accrued income ₹2 Crores, liabilities ₹1 crore, accrued expenses ₹1 crore
- (a) ₹12 per unit
(b) ₹20 per unit
(c) ₹14.10 per unit
(d) ₹16 per unit

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- (v) A company wishes to earn real rate of 10% from its project, when the inflation recorded is 6%. What is the normal rate the company would earn?
- (a) 6.6%
 - (b) 4%
 - (c) 16%
 - (d) 16.6%
- (vi) You own a portfolio that is 60% invested in stock X, 25% in stock Y and balance in stock Z. The expected returns on these stocks are 12%, 16% and 19% respectively. What is the expected return on the portfolio?
- (a) 15%
 - (b) 14.05%
 - (c) 20%
 - (d) 10%
- (vii) A stock index currently stands at 350. The risk free interest rate is 8%p.a. (with continuous compounding) and the dividend yield on the index is 4%p.a. What should the futures price for a four-month contract be?
- (a) ₹354
 - (b) ₹358
 - (c) ₹354.69
 - (d) ₹362
- (viii) A stock currently sells at ₹120. The put option to sell the stocks sells at ₹134 and costs ₹18. Determine the time value of the option.
- (a) ₹4
 - (b) ₹14
 - (c) ₹32
 - (d) ₹10
- (ix) Value of an out of the money option is
- (a) Zero
 - (b) Negative
 - (c) $(S_0 - E)$
 - (d) $(E - S_0)$
- (x) XYZ stock has a beta of 0.95 and an expected return of 13.586%. The market portfolio has an expected return of 14.014%. What is the risk premium for XYZ's stock?
- (a) 8.560%
 - (b) 5.454%
 - (c) 8.132%
 - (d) 1.378%

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Section – B

Answer any five questions.

[16×5= 80]

2. (a) Chembur Golf Academy is evaluating different golf practice equipment. The “Dimple-Max” equipment costs ₹45,000, has a three-year life, and costs ₹5,000 per year to operate. The relevant discount rate is 12%. Assume that the straight-line depreciation method is used and that the equipment is fully depreciated to zero. Furthermore, assume the equipment has a salvage value of ₹10,000 at the end of the project's life. The relevant tax rate for income and capital gains is 34%. All cash flows occur at the end of the year. What is the equivalent annual cost (EAC) of this equipment? [8]

- (b) The Delta Corporation is considering an investment in one of the two mutually exclusive proposals: Project A which involves an initial outlay of ₹1,70,000 and Project B which has an outlay of ₹1,50,000. The Certainty-Equivalent Approach is employed in evaluating risky investments. The current yield on T-Bill is 0.05 and the company uses this as the riskless rate. The expected values of net cash flows with their respective certainty-equivalents are:

Year	Project A		Project B	
	Cash flow (₹ thousand)	Certainty- equivalent	Cash flow (₹ thousand)	Certainty- equivalent
1	90	0.8	90	0.9
2	100	0.7	90	0.8
3	110	0.5	100	0.6

- (i) Which project should be acceptable to the company?
 (ii) Which project is riskier? How do you know?
 (iii) If the company was to use the risk-adjusted discount rate method, which project would be analysed with higher rate? [8]

3. (a) A mutual fund company has the following assets under it on the close of business as on:

Company	No. of shares	1 st February, 2012 Market price per share	2 nd February, 2012 Market price per share
L Ltd	20,000	20	20.5
M Ltd	30,000	312.4	360
N Ltd	20,000	361.2	383.1
P Ltd	60,000	505.1	503.9

Total no. of units 6,00,000

- (i) Calculate NAV of the fund?
 (ii) Following information is given:
 Assuming one Mr. A, submits a cheque of ₹30,00,000 to the mutual fund and the fund manager of this company purchases 8,000 shares of M Ltd; and the balance amount is held in bank. In such a case, what would be the position of the fund?
 (iii) Find new NAV of the fund as on 2nd February, 2012? [10]

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- (b) Given are the details of dividend & capital gains for a mutual fund with beginning and ending NAV for years 2002-04. Calculate the three year holding period return.

All amount in ₹	2002	2003	2004	Total
Ending NAV	43.20	60.47	57.75	-
Purchase (offer) price	55	46.20	64.68	-
Dividends received	2.10	2.84	2.61	7.55
Capital gains distribution	1.83	6.26	4.32	12.41

[6]

4. (a) The following information is supplied to you, about a company:

Earnings of the company	₹15,00,000
Dividends paid	5,00,000
Number of issued shares	1,00,000
Price earnings ratio	10
Rate of return on investment (%)	15

- (i) Determine the theoretical market price of the share.
 (ii) Are you satisfied with the current dividend policy of the Firm? If not, what should be the optimal dividend payment ratio in this case?

[8]

- (b) XYZ stock has a beta of 0.7 and a required return of 15%. The risk-free rate is 4.5%.

- (i) What is the risk premium on the market portfolio?
 (ii) What is the risk premium on XYZ's stock?
 (iii) If the risk premium on the market portfolio increases by 2% points (e.g., from x% to x+2%), what is the new required return for XYZ's stock?

Year	Dividend Yield = DPS/Share Price
III Year	$14/278 = 0.050$
II Year	$17/294 = 0.058$
I Year	$18/326 = 0.055$
Current Year	$20/370 = 0.054$
Total	$0.217/4 = 0.054$ or 5.4%

[8]

5. (a) The portfolio composition of Sainath is given below:

The beta of the equity portfolio is 0.73. Sainath wants to increase the beta of his portfolio to 1.02 as he expects uptrend in the market. The current Index futures are available at 1015 and multiple attached to it is 200. What is the number of futures contract he should buy/sell to achieve the required beta?

Equity	₹ 80 lakh
Cash/Cash equivalent	₹ 25 lakh
Total	₹ 105 lakh

[8]

- (b) A particular stock sells for ₹42. A call option on this stock is available with a strike price of ₹40 and an expiration date in six months. If the risk-free rate equals 10% and the standard deviation of the stock's return is 20%, what is the price of the call option using Black Scholes Model? What happens if stock price is ₹40? What is the value of put using Put Call parity?

[8]

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6. (a) ABC Textiles Limited places an order to buy textile machinery with an American company. As per the agreement, ABC Textiles Limited will be paying US \$2,00,000 after 180 days. As the fluctuation in the spot rate of the US \$ over next 180 days will impact the rupee cost of import, the Board of ABC Textiles Limited asks its finance manager to collect data from the currency forward market, money market, currency option market, etc. The board also asks a consultant to assess various possible dollar spot rates after six months.

The various findings are as follows:

- (i) Possible spot rate of dollar after six months, as estimated by the consultant, is ₹61.25, ₹61.75, ₹62, ₹62.50, ₹62.90.
- (ii) Spot rate of dollar as of today is ₹62/US\$.
- (iii) 180 day forward rate of dollar as of today is ₹62.48/US\$.
- (iv) Interest rates are as follows:

	India	USA
For 180 day deposit rate (p.a.)	7.5%	1.5%
For 180 day borrowing rate (p.a.)	8.0%	2.0%

- (v) A call option on the dollar, which expires in 180 days, has an exercise price of ₹62/US\$ and premium ₹0.52/US\$.
- (vi) A put option on dollar, which expires in 180 days, has an exercise of ₹62/US\$ and premium of ₹0.04/US\$.

Carry out a comparative analysis of the various outcomes (rupee cost of import) under the alternatives of (A) not hedging (B) forward hedging (C) money market hedging and (D) option hedging. **[8]**

- (b) X Limited, an Indian company, has an export exposure of 10 million yen value at September-end. The yen is not directly quoted against the rupee. The current spot rates are USD/INR = 61.79 and USD/JPY = 102.00. It is estimated that the yen will depreciate to 115 levels and the rupee will depreciate against the dollar to ₹63. Forward rate for September USD/Yen = 108 and USD/INR = 62.89.

You are required:

- (i) to calculate the expected loss if hedging is not done. How the position will change with the company taking forward cover?
- (ii) If the spot rate on 30th September was eventually US\$/¥ = 109 and USD/INR = 62.78, is the decision to take forward cover justified? **[8]**

7. (a) PTC needs to expand its facilities. To do so, the firm must acquire a machine costing ₹80,000. The machine can be leased or purchased. The firm is in the 40% tax bracket, and its after-tax cost of debt is 5.4%. The terms of the lease and purchase plans are as follows:

Lease: The leasing arrangement requires end-year payments of ₹16,900 over 5 years. The lessee will exercise its option to purchase the asset for ₹20,000 paid along with the final lease payment.

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Purchase: If the firm purchase the machine, its cost of ₹80,000 will be financed with a 5-year, 9 loan requiring equal end-of-year payments of ₹20,567. The machine will be depreciated under WDV method 33%. The firm will pay ₹2,000 per year for a service contract that covers all maintenance costs; the firm will pay insurance and other costs. The firm plans to keep the equipment and use it beyond its 5-year recovery period for one more year.

- (i) Determine the after-tax cash outflows of PTC under each alternative.
- (ii) Find the PV of the after-tax cash outflows for each alternative using the after-tax cost of debt.
- (iii) Which alternative, lease or purchase, would you recommend? Why? **[8]**

- (b)** Analyze the following information pertaining to two common stock investments, T Co and S Co. you are told that a 1-year T-Bill will have a rate of return of 5% over the next year. Also, information from an investment advising service lists the current beta for T Co as 1.68 and for S Co as 0.52.

Economy	Probability	Estimated Rate of Return %		
		T Co	S Co	Index
Recession	0.3	-20	5	-4
Average	0.2	15	6	11
Expansion	0.35	30	8	17
Boom	0.15	50	10	27

Required:

1. Calculate the expected rate of return for T Co, S Co and the Index.
2. Calculate the standard deviations in estimated rates of return for T Co, S Co and the Index.
3. Which is a better measure of risk for the common stock of T Co and S Co – the standard deviation you calculated in question 2 or the beta?
4. Based on the beta provided, what is the expected rate of return for T Co and S Co for the next year?
5. If you form a two-stock portfolio by investing ₹30,000 in T Co and ₹70,000 in S Co., what is the portfolio beta and expected rate of return? **[8]**

8. Write short note on (any four)

4×4=16

- (a)** Who are the participants in the capital market?
- (b)** Futures Market
- (c)** What is Risk Management and mention four basic steps of it.
- (d)** What are the direct and indirect instruments that are used in the formulation and implementation of monetary policy?
- (e)** Who are the participants in Foreign Exchange Market?