



PG – 876

IV Semester M.B.A. Degree Examination, July 2017
(CBCS)
MANAGEMENT

4.2.1 : Investment Analysis and Management

Time : 3 Hours

Max. Marks : 70

Instruction : Answer all the Sections.

SECTION – A

Answer any five of the following questions. Each question carries five marks. (5×5=25)

1. What is 'Investment' ? How is it different from Speculation and Gambling ?
2. Briefly explain Dow theory.
3. Distinguish between CML and SML as per CAPM.
4. The estimated factor sensitivities of TEC to the five macro-economic factors are given in the table below. The table gives the market risk premium to each of these factors.

| | Factor Sensitivity | Risk Premium (%) |
|---------------------|--------------------|------------------|
| Confidence Risk | 0.25 | 2.59 |
| Time horizon Risk | 0.30 | – 0.66 |
| Inflation Risk | – 0.45 | – 4.32 |
| Business-cycle Risk | 1.60 | 1.49 |
| Market-timing Risk | 0.80 | 3.61 |

Use the APT model to calculate the required rate of return for TEC using these estimates. The treasury bill rate is 4.1 per cent.

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5. A stock costing Rs. 150 pays no dividends. The possible prices at which the stock may be sold for at the end of the year with the respective probabilities are :

| Price | Probabilities |
|-------|---------------|
| 130 | 0.2 |
| 150 | 0.1 |
| 160 | 0.1 |
| 165 | 0.3 |
| 175 | 0.1 |
| 180 | 0.2 |

You are required to :

- Calculate the Expected Return
- Calculate the Standard Deviation of Returns.

6. At present suppose R_f is 10% and the expected return on the market portfolio is 15%. The expected returns for four stocks are listed together with their expected betas.

| Stock | Expected Return | B |
|--------------------|-----------------|-----|
| Hindustan Zinc | 17.0% | 1.3 |
| Asian Paints | 14.5% | 0.8 |
| Maruti Udyog Ltd., | 15.5% | 1.1 |
| Purvi Electronics | 18.0% | 1.7 |

On the basis of these expectations, which stocks are overvalued and which are undervalued ? Assume assumptions of CAPM hold true.

7. The following are the data on five mutual funds :

| Funds | Return | Standard Deviation | Beta |
|-------|--------|--------------------|------|
| A | 15 | 7 | 1.25 |
| B | 18 | 10 | 0.75 |
| C | 14 | 5 | 1.40 |
| D | 12 | 6 | 0.98 |
| E | 16 | 9 | 1.50 |

You are required to compute Reward to Volatility Ratio and rank these portfolios using :

- Sharpe Method and
 - Treynor's Method
- assuming the risk free rate is 6%.



SECTION - B

Answer any three questions. Each question carries ten marks : (3×10=30)

8. Explain in detail, the process for making and managing investments.
9. Explain in detail the concept of 'Efficient Market Hypothesis'. On what basis are the different forms of efficiency in markets are identified ?
10. The common stocks of Bajaj and TVS have expected returns of 15% and 20% respectively, while the standard deviations are 20% and 40%. The expected correlation co-efficient between the two stocks is 0.36. What is the expected value of return and the standard deviation of a portfolio consisting of (a) 40% Bajaj and 60% TVS ? (b) 40% TVS and 60% Bajaj ? Under both cases, in what direction should the correlation co-efficient move to bring the portfolio risk still lower ?
11. Mr. Suresh is constructing an optimum portfolio. The market return forecast says that it would be 15.5% for the next two years with the market variance of 12%. The risk-free rate of return is 5%. The following securities are under review. Find out the optimum portfolio.

| Company | α | β | σ^2 |
|---------|----------|---------|------------|
| A | 3.72 | 0.99 | 9.35 |
| B | 0.60 | 1.27 | 5.92 |
| C | 0.41 | 0.96 | 9.79 |
| D | - | 1.21 | 5.39 |
| | 0.22 | | |
| E | 0.45 | 0.75 | 4.52 |

SECTION - C

12. **Compulsory Question :** (1×15=15)
Case Study :

You have recently graduated as a major in finance and have been hired as a financial planner by Radiant Securities, a financial services company. Your boss has assigned you the task of investing Rs. 1,000,000 for a client who has a 1-year investment horizon. You have been asked to consider only the following investment alternatives : T-bills, stock A, stock B, stock C and market index.

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The economics cell of Radiant Securities has developed the probability distribution for the state of the economy and the equity researchers of Radiant Securities have estimated the rates of return under each state of the economy. You have gathered the following information from them :

Returns on Alternative Investments

| State of the Economy | Probability | T-Bills | Stock A | Stock B | Stock C | Market Portfolio |
|----------------------|-------------|---------|---------|---------|---------|------------------|
| • Recession | 0.2 | 6.0% | (15.0%) | 30.0% | (5.0%) | (10.0%) |
| • Normal | 0.5 | 6.0 | 20.0 | 5.0 | 15.0 | 16.0 |
| • Boom | 0.3 | 6.0 | 40.0 | (15.0) | 25.0 | 30.0 |

Your client is a very curious investor who has heard a lot relating to portfolio theory and asset pricing theory. He requests you to answer the following questions :

- What is the expected return and the standard deviation of return for stocks A, B, C and the market portfolio ?
- What is the covariance between the returns on A and B ? Returns on A and C ?
- What is the coefficient of correlation between the returns on A and B ? Returns on A and C ?
- What is the expected return and standard deviation on a portfolio in which stocks A and B are equally weighted ? In which the weights assigned to stocks A, B and C are 0.4, 0.4, and 0.2 respectively ?