

**June, 2019**

**Investment Analysis & Portfolio Management**

**School of Business Management**

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**ANURAG GROUP OF INSTITUTIONS**  
**(Autonomous)**  
**School of Business Management**

Course Name : Investment Analysis & Portfolio  
Management

Course Number : A93004F

Course Designation : Specialization

Credits : 4

MBA II Year I Semester  
(2018-19)

<b>Name of Faculty</b>	<b>Academic Year/Regulation</b>
Ch. Siva Priya	R 18

## Syllabus

<b>Unit – I</b>	Unit I: Risk & Return: Meaning of Risk & Return, Types of Risk, Risk & Return of a Single Asset, Risk & Return of Portfolio – Portfolio Selection
<b>Unit – II</b>	Unit II: Portfolio Analysis: The Returns & Risk from Investing, Markowitz Portfolio Theory, Mean Variance Approach & Portfolio Selection – Efficient Portfolio & Single Index Model – CAPM - APT
<b>Unit – III</b>	Unit III: Bond Analysis: Types of Bonds, Interest Rate, Terms Structure of Interest Rates, Measuring Bond Yields – Bond Theorems
<b>Unit – IV</b>	Unit IV: Asset Allocation Techniques: Definition of Asset Allocation, Investor’s Objectives – Mean Variance definition – Analytical Mean Variance –a Numerical Methods – Impact of Constraints – Simple Correlation Model
<b>Unit – V</b>	Unit V: Mutual Funds: Types of Mutual Fund Schemes, Structure, NAV, Risk Return, Performance Evaluation Models – Sharpe Model, Treynor Model & Jenson Model

### Reference Books

1. M. Y. Khan, P.K. Jain, Financial Management – Text & Problems, TMH, 6/e, 2012
2. Prasanna Chandra, Financial Management Theory & Practice, TMH, 8/e, 2012
3. Punithavathi Pandian, Security Analysis & Portfolio Management, TMH, 4/e, 2012
4. IM PAndey, Cases in Financial Management, TMH, 2/e, 2012
5. Shashi K Gupta, R.K. Sharma, Financial Management, Kalyani Publishers, 5/e, 2012

### Websites References

1	<a href="https://www.scribd.com/doc/86783770/sapm-punithavathy-pandian">https://www.scribd.com/doc/86783770/sapm-punithavathy-pandian</a>
2	<a href="https://nptel.ac.in/courses/110105035/">https://nptel.ac.in/courses/110105035/</a>

## **MBA PROGRAM EDUCATIONAL OBJECTIVES (PEO's):**

1. To teach the fundamentals of the key elements of a business organization.
2. To provide a critical perspective on theoretical knowledge and practical approach to various functional areas of management and decision making.
3. To develop analytical skills to identify the link between the management practices in the functional areas of an organization and business environment.
4. To establish and realize a creative research culture among the student community.
5. To provide insights on latest technology, business communication, management concepts and to built team work and leadership skills within them.
6. To inculcate the habit of inquisitiveness and creativeness aimed at self actualization and realization of ethical practices.

## **PROGRAM LEARNING OUTCOMES (PO's)**

The learning outcomes specify the knowledge, skills, values and attitudes students are expected to attain in courses or in a program.

1. ***Business Environment and Domain Knowledge:*** Graduates are able to improve their awareness sand knowledge about functioning of local and global business environment and society.
2. ***Critical thinking, Business Analysis, Problem Solving and Innovative Solutions:*** Graduates are expected to develop skills on analyzing the business data, application of relevant analysis, and problem solving in other functional areas such as marketing, business strategy and human resources.
3. ***Global Exposure and Cross-Cultural Understanding:*** Demonstrate a global outlook with the ability to identify aspects of the global business and Cross Cultural Understanding.
4. ***Social Responsiveness and Ethics:*** Graduates are expected to identify the contemporary social problems, exploring the opportunities for social entrepreneurship, designing business solutions and demonstrate ethical standards in organizational decision making.
5. ***Effective Communication:*** Graduates are expected to develop effective oral and written communication especially in business applications, with the use of appropriate technology.
6. ***Leadership and Teamwork:*** Graduates are expected to collaborate and lead teams across organizational boundaries and demonstrate leadership qualities, maximize the usage of diverse skills of team members in the related context.

## REVISED Bloom's Taxonomy Action Verbs

Definitions	I. Remembering	II. Understanding	III. Applying	IV. Analyzing	V. Evaluating	VI. Creating
<b>Bloom's Definition</b>	Exhibit memory of previously learned material by recalling facts, terms, basic concepts, and answers.	Demonstrate understanding of facts and ideas by organizing, comparing, translating, interpreting, giving descriptions, and stating main ideas.	Solve problems to new situations by applying acquired knowledge, facts, techniques and rules in a different way.	Examine and break information into parts by identifying motives or causes. Make inferences and find evidence to support generalizations.	Present and defend opinions by making judgments about information, validity of ideas, or quality of work based on a set of criteria.	Compile information together in a different way by combining elements in a new pattern or proposing alternative solutions.
<b>Verbs</b>	<ul style="list-style-type: none"> <li>• Choose</li> <li>• Define</li> <li>• Find</li> <li>• How</li> <li>• Label</li> <li>• List</li> <li>• Match</li> <li>• Name</li> <li>• Omit</li> <li>• Recall</li> <li>• Relate</li> <li>• Select</li> <li>• Show</li> <li>• Spell</li> <li>• Tell</li> <li>• What</li> <li>• When</li> <li>• Where</li> <li>• Which</li> <li>• Who</li> <li>• Why</li> </ul>	<ul style="list-style-type: none"> <li>• Classify</li> <li>• Compare</li> <li>• Contrast</li> <li>• Demonstrate</li> <li>• Explain</li> <li>• Extend</li> <li>• Illustrate</li> <li>• Infer</li> <li>• Interpret</li> <li>• Outline</li> <li>• Relate</li> <li>• Rephrase</li> <li>• Show</li> <li>• Summarize</li> <li>• Translate</li> </ul>	<ul style="list-style-type: none"> <li>• Apply</li> <li>• Build</li> <li>• Choose</li> <li>• Construct</li> <li>• Develop</li> <li>• Experiment with</li> <li>• Identify</li> <li>• Interview</li> <li>• Make use of</li> <li>• Model</li> <li>• Organize</li> <li>• Plan</li> <li>• Select</li> <li>• Solve</li> <li>• Utilize</li> </ul>	<ul style="list-style-type: none"> <li>• Analyze</li> <li>• Assume</li> <li>• Categorize</li> <li>• Classify</li> <li>• Compare</li> <li>• Conclusion</li> <li>• Contrast</li> <li>• Discover</li> <li>• Dissect</li> <li>• Distinguish</li> <li>• Divide</li> <li>• Examine</li> <li>• Function</li> <li>• Inference</li> <li>• Inspect</li> <li>• List</li> <li>• Motive</li> <li>• Relationships</li> <li>• Simplify</li> <li>• Survey</li> <li>• Take part in</li> <li>• Test for</li> <li>• Theme</li> </ul>	<ul style="list-style-type: none"> <li>• Agree</li> <li>• Appraise</li> <li>• Assess</li> <li>• Award</li> <li>• Choose</li> <li>• Compare</li> <li>• Conclude</li> <li>• Criteria</li> <li>• Criticize</li> <li>• Decide</li> <li>• Deduct</li> <li>• Defend</li> <li>• Determine</li> <li>• Disprove</li> <li>• Estimate</li> <li>• Evaluate</li> <li>• Explain</li> <li>• Importance</li> <li>• Influence</li> <li>• Interpret</li> <li>• Judge</li> <li>• Justify</li> <li>• Mark</li> <li>• Measure</li> <li>• Opinion</li> <li>• Perceive</li> <li>• Prioritize</li> <li>• Prove</li> <li>• Rate</li> <li>• Recommend</li> <li>• Rule on</li> <li>• Select</li> <li>• Support</li> <li>• Value</li> </ul>	<ul style="list-style-type: none"> <li>• Adapt</li> <li>• Build</li> <li>• Change</li> <li>• Choose</li> <li>• Combine</li> <li>• Compile</li> <li>• Compose</li> <li>• Construct</li> <li>• Create</li> <li>• Delete</li> <li>• Design</li> <li>• Develop</li> <li>• Discuss</li> <li>• Elaborate</li> <li>• Estimate</li> <li>• Formulate</li> <li>• Happen</li> <li>• Imagine</li> <li>• Improve</li> <li>• Invent</li> <li>• Make up</li> <li>• Maximize</li> <li>• Minimize</li> <li>• Modify</li> <li>• Original</li> <li>• Originate</li> <li>• Plan</li> <li>• Predict</li> <li>• Propose</li> <li>• Solution</li> <li>• Solve</li> <li>• Suppose</li> <li>• Test</li> <li>• Theory</li> </ul>

## Course outcomes:

1. Interpret the concepts of Risk & Return of a Portfolio
2. Apply various techniques for construction of an efficient portfolio
3. Explain various theorems of valuation of Bonds
4. Use the advanced Evaluation techniques of Securities
5. Evaluate Mutual Funds schemes by using in different models of mutual funds

## MAPPING OF COURSE OUT COMES WITH PO's & PEO's

Course Outcomes	PEO's	PLO's
CO1	1,2,3,5	1, 2
CO2	1,2, 3, 4	1,2
CO3	1,3,5	1,2
CO4	1,4,5	1,2
CO5	1,2,4,5	1,2

## Articulation matrix of Course outcomes with PO's & PEO's

	Program Educational Objectives					Program Learning Outcomes				
	PEO 1	PEO 2	PEO 3	PEO 4	PEO 5	PLO 1	PLO 2	PLO 3	PLO 4	PLO 5
CO1	3	2	2		2	3	3			
CO2	3	2	2	2		3	3			
CO3	3		3		3	3	3			
CO4	2			3	3	3	3			
CO5	3	2		2	2	3	3			

## Course Schedule

Distribution of Hours in Unit – Wise

Unit	Topic	Chapters		Total No. of Hours
		M. Y. Khan, P.K. Jain	Punithavathi Pandian	
I	Risk & Return: Meaning of Risk & Return, Types of Risk, Risk & Return of a Single Asset, Risk & Return of Portfolio – Portfolio Selection	Prasanna Chandra		9
II	Portfolio Analysis: The Returns & Risk from Investing, Markowitz Portfolio Theory, Mean Variance Approach & Portfolio Selection – Efficient Portfolio & Single Index Model – CAPM - APT	Punithavathi Pandian		13
III	Bond Analysis: Types of Bonds, Interest Rate, Terms Structure of Interest Rates, Measuring Bond Yields – Bond Theorems	Punithavathi Pandian		8
IV	Asset Allocation Techniques: Definition of Asset Allocation, Investor's Objectives – Mean Variance definition – Analytical Mean Variance –a Numerical Methods – Impact of Constraints – Simple Correlation Model	Punithavathi Pandian		8
V	Mutual Funds: Types of Mutual Fund Schemes, Structure, NAV, Risk Return, Performance Evaluation Models – Sharpe Model, Treynor Model & Jenson Model	Prasanna Chandra		11
Total contact classes for Syllabus coverage				<b>49</b>
<i>Tutorial Classes : 1 per week</i>				

Number of hours / lectures available in Semester / Year: 64



## Lecture Plan: Investment Analysis & Portfolio Management

S. No.	Topic	No of Lecture Hours	Teaching Learning Process
<b>UNIT-1</b>			
1	<b>Unit I:</b> Risk & Return: Meaning of Risk & Return,	1	Chalk & Board
2	Types of Risk, Risk	1	Chalk & Board
3	Return of a Single Asset	1	Problem Based Learning
4	Risk & Return of Portfolio	2	Problem Based Learning
5	Portfolio Selection	2	Problem Based Learning
6	Case Study	1	Risk Return
7	Activity	1	Collecting & Calculation Risk & Return of various companies
<b>UNIT-2</b>			
1	<b>Unit II:</b> Portfolio Analysis: The Returns & Risk from Investing.	2	Chalk & Board
2	Markowitz Portfolio Theory	1	Problem Based Learning
3	Mean Variance Approach	2	Problem Based Learning
4	Portfolio Selection – Efficient Portfolio	2	Problem Based Learning
5	Single Index Model	2	Problem Based Learning
6	CAPM - APT	2	Problem Based Learning
7	Case Study	1	CAPM Model
8	Activity	1	Presentations by Students on Portfolio Construction Models
<b>UNIT-3</b>			
1	<b>Unit III:</b> Bond Analysis: Types of Bonds,–	1	Chalk & Board
2	Interest Rate, Terms Structure of Interest Rates, Measuring Bond Yields	2	Problem Based Learning
3	Bond Theorems	2	Chalk & Board & PPT
4	Case Study	2	Bond Valuation
5	Activity	1	Presentations by students of valuation of Bonds
<b>Unit-IV</b>			
1	<b>Unit IV:</b> Asset Allocation Techniques: Definition of Asset Allocation, Investor's Objectives.	1	Problem Based Learning

2	Mean Variance definition	1	Chalk & Board
3	Analytical Mean Variance	1	Problem Based Learning
4	A Numerical Methods	2	Problem Based Learning
5	Impact of Constraints	1	Problem Based Learning
6	Simple Correlation Model	1	Problem Based Learning
7	Case Study	1	Methods of Asset Allocation
<b>UNIT-5</b>			
1	<b>Unit V:</b> Mutual Funds: Types of Mutual Fund Schemes, Structure	1	Chalk & Board
2	NAV & Risk Return	2	Problem Based Learning
3	Performance Evaluation Models – Sharpe Model,	2	Problem Based Learning
4	Treynor Model	2	Problem Based Learning
5	Jenson Model	2	Problem Based Learning
6	Case Study	1	Calculation of Risk Return of Mutual Funs
7	Activity	1	Presentations by students on various Mutual funds in the Market
<b>Total contact classes for Syllabus coverage : 49</b>			

## Minutes of Course Review Meeting

Details of Meeting No -	
Date of Meeting	
Member's Present	
Signature of Member's	
Remarks	

  

Details of Meeting No -	
Date of Meeting	
Member's Present	
Signature of Member's	
Remarks	

  

Details of Meeting No -	
Date of Meeting	
Member's Present	
Signature of Member's	
Remarks	

## Unit Wise Questions:

### Unit I: Risk & Return

#### Short Answer Questions:

1. Define risk and distinguish between systematic & unsystematic risk (CO-1, L-1)
2. How would you minimize various risk exposures (CO-1, L-2)
3. What are the statistical tools used to measure the risk of the securities return? (CO-1, L-1)
4. Define Portfolio Selection (CO-1, L-2)
5. Write a short note of Efficient Portfolio (CO-1, L-2)

#### Long Answer Questions:

1. The returns on securities A & B are given below  

Profitability	Security A	Security B
0.5	4	0
0.4	2	3
0.1	0	3

Give the security of your preference on the basis of Risk & Return. (CO-1, L-5)
2. You decide to invest 30% of your portfolio in Stock C and 70% in Stock D. The return on Stock C is 18% and the return on Stock D is 24%. What is your portfolio's expected return? (CO-1, L-6)
3. Explain different types of Risk (CO-1, L-5)
4. Explain the measurement of Portfolio Risk & Return (CO-1, L-5)
5. What is Portfolio Selection and Explain briefly about Efficient Portfolios (CO-1, L-3)

### Unit II: Portfolio Analysis

#### Short Answer Questions:

1. Define Portfolio (CO-2,L-1)
2. Explain about the Traditional Approach (CO-2,L-2)
3. Explain about the Modern Approach of Markowitz Approach (CO-2,L-2)
4. Explain the objectives of Portfolio Construction (CO-2,L-2)
5. Write the assumptions of Markowitz Theory (CO-2,L-2)
6. Explain Markowitz Efficient Frontier (CO-2,L-2)

#### Long Answer Questions:

1. Distinguish between Traditional Approach & Modern Approach of Portfolio Construction. (CO-2, L-3)
2. Explain the Markowitz Theory of Portfolio with its assumptions (CO-2, L-5)
3. Explain Markowitz Efficient Frontier with suitable Example. (CO-2, L-5)
4. Explain briefly about Capital Asset Pricing Model with its Assumptions (CO-2, L-3)
5. Distinguish between Single Index Model and Capital Asset Pricing Model (CO-2, L-4)
6. Write a short note on (CO-2, L-3)
  - a) Capital Market Line
  - b) Security Market Line
7. Distinguish between Arbitrage Pricing theory & Capital Asset Pricing Model (CO-2, L-4)
8. Explain the Arbitrage Pricing Theory with its Assumptions. (CO-2, L-3)
9. What is Portfolio Selection and Explain briefly about Efficient Portfolios (CO-2, L-5)

10. The returns of two assets under four possible states of nature are given below:

State of Nature	Probability	Return on asset 1	Return on asset 2
1	0.20	-5%	10%
2	0.30	15%	12%
3	0.40	18%	14%
4	0.10	22%	18%

- What is the standard deviation of the return on asset 1 and on asset 2?
- What is the covariance between the returns of the two asset
- What is the coefficient of correlation between the returns on assets 1 and 2? (CO-2, L-6)

### Unit III Bond Analysis:

#### Short Answer Questions:

- What is Interest Rate (CO-3, L-2)
- Define Bond Immunization (CO-3, L-2)
- What is Yield to Maturity? (CO-3, L-2)
- What is Holding Period Return (CO-3, L-2)
- What is Bond Duration (CO-3, L-2)
- Discuss the term structure of the Interest Rate (CO-3, L-6)
- Explain Active Bond Management (CO-3, L-2)
- Explain Passive Bond Management (CO-3, L-2)
- Find out the yield to maturity on a 8 per cent 5 year bond selling at Rs 105 (CO-3, L-2)

#### Long Answer Questions:

- How do you assess the present value of the Bond
- What is meant by duration? Explain the relationship between duration and Price change
- Explain various bond theorems with suitable Examples
- How do you immunize the bond portfolio using the immunization technique?
- Determine the present value of the Bond with a face value of Rs.1000, coupon rate of Rs.90, a maturity period of 10 years for the expected yield to maturity of 8 per cent & also calculate If N is equal to 7 years in the above example, determine the present value of the bond. Discuss the effect of the maturity period on the value of the bond
- Distinguish between the Active & Passive Bond Management.
- Explain various types of Bonds & its valuation.

### Unit IV: Asset Allocation Techniques

#### Short Answer Questions

- Explain the objectives of Asset Allocation (CO-4, L-2)
- Write a short note on Mean Variance (CO-4, L-1)
- Explain the Impact of Constraints (CO-4, L-2)
- Explain briefly on Simple Correlation Model (CO-4, L-2)
- Define Asset Allocation (CO-4, L-2)

#### Long Answer Questions:

- Explain briefly on Asset Allocation Techniques (CO-4, L-2)
- Explain various numerical methods of Asset Allocation (CO-4, L-5)
- Explain simple correlation method with suitable Examples (CO-4, L-2)
- Explain impact of constraints on Asset allocation (CO-4, L-5)
- Discuss in detail about analytical Mean Variance (CO-4, L-6)

## Unit V: Mutual Funds

### Short Answer Questions:

1. Define NAV (CO-5, L-2)
2. What is Mutual Fund (CO-5, L-2)
3. Explain about the Sharpe Model (CO-5, L-2)
4. Explain about the Treynor Model (CO-5, L-2)
5. Explain about the Jensen Model (CO-5, L-2)

### Long Answer Questions:

1. Explain the recent trends in the Mutual Fund Industry (CO-5, L-2)
2. Discuss the structure of the Mutual Fund (CO-5, L-6)
3. Explain about the various types of performance evaluation models of Mutual Funds (CO-5, L-2)
4. Discuss various types of Mutual Fund Scheme (CO-5, L-6)
5. You expect your stock portfolio to return 12% next year. If returns on risk-free Treasury notes are, say, 5%, and your portfolio carries a 0.06 standard deviation, then from the formula above we can calculate that the Sharpe ratio for your portfolio (CO-5, L-5)
6. The Equity Portfolio's total return is 7%, and the Fixed Income Portfolio's total return is 5%. As a proxy for the risk-free rate, we use the return on U.S Treasury Bills – 2%. Assume that the Beta of the Equity Portfolio is 1.25, and the Fixed Income Portfolio's Beta is 0.7. From the following information, we compute the Treynor Ratio of each portfolio (CO-5, L-5)

## Case Study (With Higher Levels of thinking – Blooms Taxonomy) for the academic year 2018-19

### CASE STUDIES

#### *I. Case Study on Fundamental Analysis*

Rajiv had just joined an investment company. He wanted to prove his theory of the stock market at his work place. He had an understanding of all quantities models, economic impact and market sentiment on the movement of stock market from his course on fundamental analysis in college. Rajiv wanted to convince his colleagues about the simplicity of fundamental analysis by using simple known techniques to identify market potential. It appeared to him that Indian stock market s can make use of this and that a straightforward fundamental analysis can do the trick to baet the other investment companies. Rajiv began his fundamental analysis on the day Budget 2002 was announced. The objectives of the budget as segregated in terms of its various components were:

1. Strengthen the growth of rural economy, especially agriculture and allied activities.
2. Nurture the revolutionary potential of the new knowledge based industries such as InfoTech, biotechnology and pharmaceuticals.
3. Strengthen and modernise traditional industries such as textiles, leather, agro processing and SSI sector.
4. Remove bottlenecks in power, roads, ports, telecom, railways and airways sector.
5. Accord the highest priority to human resource development through programmes and policies in education health, and social services, with special emphasis on the poorest and weakest sections of society.
6. Strengthen India's role in the world economy through rapid growth of exports, higher

foreign investment and prudent external debt management.

7. Establish a credible framework of fiscal discipline

The Indian economies expected growth by 5.9%, as against 6.8 % in the previous year is a positive signal for inquiry. More importantly, an industrial recovery seems finally to be underway from the cyclical downturn of the previous two years. The growth of GDP from manufacturing is expected to almost double to 7 % in 1999-2000 from 3.6% in 1998-99. The growth in GDP from the construction sector is expected to accelerate to 9.0% from 5.7%. The performance of infrastructure sectors is expected to be improving remarkably. The inflation rate had dropped to international levels of 2 to 3 percent. The balance of payment survived the twin shocks of the East Asian crisis and post-pakistan sanctions with a low current account deficit and sufficient acquittal inflows. This is supported by the continuing rise in foreign exchange reserves by over US\$204 billion, leading to relatively stable exchange rate. Export performance has improved at par with the better performing emerging economies. The restoration of the confidence in industry, hence will be best reflected in the rise in the stock markets during the year 2001-2002.

*Questions:*

1. Does Rajiv prove any point?
2. Should Rajiv Perform any further analysis to confirm his findings?
3. What will be the impact of a global market slowdown on Rajiv's estimate

**II. Case on Insider Trading**

SEBI's investigation started when it received a complaint from Tata Finance Limited (TFL) alleging various irregularities and violations committed by Dilip Pendse, former Managing Director of TFL, relating to disclosure of the letter of offer of March 2001 for its rights issue of convertible preference shares. Accordingly, SEBI had ordered an investigation into the allegations of insider trading and violations of fraudulent and unfair trade practices

A Preliminary inquiry by an independent chartered accountant (AF Ferguson) has revealed several operational lapses and irregularities committed by the earlier management team. SEBI also probed the alleged circular trading based on an inspection of the books of the finance company. The probe was initially instituted after the regulator came across a reference to circular trading in the report prepared by chartered accountancy firm on irregularities in Tata Finance

SEBI had found Dilip Pendse, guilty of violation the SEBI regulations, 1992 by using unpublished, price-sensitive information. Pendse communicated information to his wife Anuradha Pendse and an acquaintance, Anjali Beke, which was not in ordinary course of business. Anuradha Pendse, Beke and their companies – a Nalini Properties PVT LTD and Anjudi Properties PVT LTD are alleged to have sold 290000 Tata Finance Shares based on this information. SEBI also found brokers Jhunjhunwala (JSBPL) and Malini Sanghvi (MSSPL) guilty along with Anuradha Pendse, Anjali Beke, and a few others, they were found to have violated the provision of Regulation 6(D) of SEBI (Prohibition of Fraudulent and Unfair Trade Practices relating to securities Markets) regulations, 1995

Brokers Jhunjhunwala and Malini Sangvi gave ante-dated contracts in form B to the sellers. The brokers in turn issued the contracts to the ultimate buyers, India Emerging and Sarjan Securities.

SEBI found the back dating and falsification of contract notes, bills and books of accounts was done with a view to create an issues on that the transactions had taken place only during September 2000 even though the transaction had actually taken place in March 2001. By doing so, JSBPL and MSSPL, Anuradha Pendse, Nalini Properties, Anjudi Properties, Anjali Beke, India emerging and sarjan securities have violated the provisions of SEBI's Fraudulent and Unfair Trade Practices regulations

Other than SEBI, the Reserve Bank of India had also undertaken a routine inspection of TFL's accounts. The Department of company Affairs had also consulted the Reserve Bank of India and other regulators in connection with financial irregularities involving TFL and the Ferguson report.

SEBI has, in December 2003, prohibited Dilip Pendse from dealing in securities and associating with the market for six months on the establishment of insider trading charges.

The insider trading investigation is not linked to the main dispute, viz. TATA's allegation that pendse siphoned off over Rs430 crores through fraudulent transactions when he was the managing director of RFL.

The Tata group investigating into the mismanagement of funds at TFL, suspected criminal breach of trust, falsification of accounts and cheating against those involved. Tata Finance terminated the services of the five senior executives of the company based on these allegations. They were involved in "Unauthorised financial transactions" along with the former managing director, Dilip Pendse. These transactions include diversion of funds to Tata Finance's Subsidiary, Niskalp Investment and Trading Co. LTD and other associate companies, Niskalp and the associate companies were found to have deployed a substantial part of these funds in trading/speculative activities in certain specific scrips in the stock market. These activities have also led to sizable losses in Niskalp and the associate companies

### **Case Questions**

- a. What are issues related to insider trading in the case?
- b. How can regulators curb such insider trading activities even before receiving an indication from the company?
- c. What are the implications of the case proceeding for investor protection?

### **III. Case on Portfolio**

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 Rs10, 00,000 for a client who has a 1 year investment horizon. You have been asked to consider only the following investment opportunities. T-Bills, Stock-A, Stock-B, Stock – C and market index.

The economies 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

<b>State of the Economy</b>	<b>Probability</b>	<b>T-Bills</b>	<b>Stock –A</b>	<b>Stock -B</b>	<b>Stock-C</b>	<b>Market Portfolio</b>
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 particular 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?
- The Beta coefficients for the various alternatives based on the historical analysis are as follows

Security	Beta
T- Bills	0.00
A	1.20
B	(0.70)
C	0.90

- What is the SML relationship
  - What is the alpha for Stocks A, B and C
- Suppose the following historical returns have been earned for the stock market and the stock of company D

Period	Market	D
1	(5%)	(12%)
2	4	6
3	8	12
4	15	20
5	9	6

What is the beta for stock D? How would you interpret it?

- What is the Capital Market Line (CML)? Security Market Line (SML)? How is CML related to SML
- What is the systematic risk? Unsystematic Risk? Present the formulae for them
- What is the basic difference between the CAPM and the APT?

#### IV. Case on Bond Analysis:

Ravi Rao is the Chief Executive Officer of Capmart Limited, an investment advisory firm. Ravi Rao has been requested to give a seminar to a group of finance executives drawn from state run universities. He has been requested to explain the basic concepts and tools useful in bond analysis. Ravi Rao has asked you to help him to make his presentation. In particular, you have to answer the following questions

- How is the value of bond calculated
- What is the value of a 9 year, Rs1000 par value bond with a 10 percent annual coupon, if its required rate of return is 8 %?
- What is the value of the bond described in part (b) if it pays interest semi annually, other things being equal?

- d) What is the YTM of a 6 year, Rs1000 par value bond with a 10 percent annual coupon if it sells for Rs 1050?
- e) What is the YTM of the bond described in part (d) if the approximate formula is used?
- f) What is the yield to call of the bond described in part (d) if the bond can be called after 3 years at a premium of Rs50?
- g) What is the realised yield to maturity of the bond described in part (d) if the reinvestment rate applicable to the future cash flows from the bond is 8 percent?
- h) The holders of the bond described in part (d) expect that the bond will pay interest as promised, but on maturity bondholders will receive only 90 percent of par value. What will be difference between the expected YTN and stated YTM? Use the approximate YTM formula
- i) What is the difference between the annual percentage rate and the effective annual yield?
- j) What is the difference between interest rate risk and reinvestment risk?
- k) List the key financial ratios that have a bearing on debt rating
- l) What is a yield curve
- m) What factors determine interest rates?

## V. *Case Study on Equity valuation*

Anand heads the portfolio management schemes division of Phoenix Investment, a well known financial services company. Anand has been requested by Arrow Technologies to give an investment seminar to its senior managers interested in investing in equities through the portfolio management schemes of Phoenix Investments, Manish, the contact person of Arrow Technologies, suggested that the thrust of the seminar should be on equity valuation. Anand has asked you to help him with his presentation.

To illustrate the equity valuation process, you have been asked to analyse Acme Pharmaceuticals which manufactures formulations and bulk drugs. In particular, you have to answer the following questions:

- a) What is the general formula for valuing any stock, irrespective of its dividend patterns?
- b) How is a constant growth stock valued?
- c) What is the required rate of return on the stock of Acme Pharmaceuticals? Assume that the risk-free rate is 7 %, the market risk premium is 6 % and the stock of Acme has a beta of 1.2
- d) Assume that Acme Pharmaceuticals is a constant growth company which paid dividend of Rs500 yesterday ( $D_0 = \text{Rs}5.00$ ) and the dividend is expected to grow at the rate of 10 percent per year forever
  - i) What is the expected value of stock a year from now
  - ii) What is the expected dividend yield and capital gains yield in the first year?
- e) If the stock is currently selling for Rs.110, what is the expected rate of return on the stock? Assume  $D_0 = \text{Rs}5.00$  and a constant growth rate of 10 percent
- f) Assume that Acme Pharmaceuticals is expected to grow at a supernormal growth rate of 25 percent for the next 4 years, before returning to the constant growth rate of 10 percent. What will be the present value of the stock under this condition? What is the expected dividend yield and capital gains yield in year 2? Year 5? Hereafter assume  $D_0 = \text{Rs}5.00$  and a 15 percent required return.

# Tutorial Sheet

<b>Unit-I Topics Revised</b>
<b>Topic Name</b>
<b>Unit-II Topics Revised</b>
<b>Topic Name</b>
<b>Unit-III Topics Revised</b>
<b>Topic Name</b>
<b>Unit-IV Topics Revised</b>
<b>Topic Name</b>
<b>Unit-V Topics Revised</b>
<b>Topic Name</b>

## Model Question Paper

### Short Answer Questions

(5X5=25 Marks)

1. A) Explain about the Risk & Return  
B) Write a short note of Efficient Portfolio
2. A) Explain the objectives of Portfolio Construction  
B) Write the assumptions of Markowitz Theory
3. A) Discuss the term structure of the Interest Rate  
B) Define Bond Immunization
4. A) Explain the objectives of Asset Allocation  
B) Write a short note on Mean Variance
5. A) Define NAV  
B) What is Mutual Fund

### Essay Questions

(5X10=50 Marks)

1. The returns on securities A & B are given below

Profitability	Security A	Security B
0.5	4	0
0.4	2	3
0.5	0	3

Give the security of your preference on the basis of Risk & Return.

2. The returns of two assets under four possible states of nature are given below:

State of Nature	Probability	Return on asset 1	Return on asset 2
1	0.20	-5%	10%
2	0.30	15%	12%
3	0.40	18%	14%
4	0.10	22%	18%

- a) What is the standard deviation of the return on asset 1 and on asset 2?
  - b) What is the covariance between the returns of the two asset
  - c) What is the coefficient of correlation between the returns on assets 1 and 2?
3. Determine the present value of the Bond with a face value of Rs.1000, coupon rate of Rs.90, a maturity period of 10 years for the expected yield to maturity of 8 per cent & also calculate If N is equal to 7 years in the above example, determine the present value of the bond. Discuss the effect of the maturity period on the value of the bond.
  4. Explain briefly on Asset Allocation Techniques
  5. You expect your stock portfolio to return 12% next year. If returns on risk-free Treasury notes are, say, 5%, and your portfolio carries a 0.06 standard deviation, then from the formula above we can calculate that the Sharpe ratio for your portfolio















## **Course Assessment Report**

**Batch:**

**Academic Year/Sem:**

**Course Name:**

**Course Number:**

**Course Attainment (60 of Direct + 40 of Indirect)**

**Remarks and suggestions:**

**Course Coordinator**

**Direct Course Assessment Sheet**

**a) Internal Examination**

**Course assessment sheet Ass 1**

<b>Hall Ticket No</b>	<b>S1</b>	<b>S2</b>	<b>TOT</b>
1			
2			
3			

**Course assessment sheet Mid1**

<b>Hall Ticket No</b>	<b>S1</b>	<b>S2</b>	<b>S3</b>	<b>S4</b>	<b>S5</b>	<b>L1</b>	<b>L2</b>	<b>L3</b>	<b>L4</b>	<b>L5</b>	<b>TOT</b>

1												
2												
3												

**Course assessment sheet Ass2**

Hall Ticket No	S1	S2	TOT
1			
2			
3			

**Course assessment sheet Mid2**

Hall Ticket No	S1	S2	S3	S4	S5	L1	L2	L3	L4	L5	TOT
1											
2											
3											

**b) External Examination**

Hall Ticket No	Total Marks

**Indirect Course Assessment Sheet**

**Tools:**

**a) Case Study**

S.No.	Hall Ticket Number	Rubric Assessment
1		
2		

3		
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## **b) Course End Survey Report**

**Add-ons**(Guest Lecture/Video Lecture/case study discussion /Poster Presentation.... etc.)

**Unit Wise PPT's & Lecture Notes**

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