SECURITY ANALYSIS AND PORTFOLIO MANAGEMENT

(As Per Revised Syllabus 2014-15, Third Year BBI Students of Mumbai University, Fifth Semester)

Winner of “Best Author Commerce – 2013-14” by Maharashtra Commerce Association

Lion Dr. Nishikant Jha

ICWA, PGDM (MBA), M.Com., Ph. D., D. Litt. [USA], CIMA Advocate [CIMA U.K.], BEC [Cambridge University], International Executive MBA [UBI Brussels, Belgium, Europe], Recognised UG & PG Professor by University of Mumbai, Recognised M.Phil. & Ph.D. Guide by University of Mumbai. Assistant Professor in Accounts & HOD BAF, Thakur College of Science & Commerce.

Visiting Faculty in KPB Hinduja College for M.Phil. & M.Com., University of Mumbai CFA & CPF (USA), CIMA (UK), Indian & International MBA, CA & CS Professional Course.

Prof. Vassnathi Shenoy

M.Com., M.Phil., M.A., Senior Faculty, Viva College, Virar.

Dr. (Mrs.) Shraddha M. Bhome

M.Com., M.Phil. (Gold Medalist), MBA, Ph.D. in Commerce, Visiting Faculty, Guru Nanak Khalsa College, Mumbai.

Himalaya Publishing House

Mumbai • New Delhi • Nagpur • Bengaluru • Hyderabad • Chennai • Pune • Lucknow • Ahmedabad • Ernakulam • Bhubaneswar • Indore • Kolkata • Guwahati
We are happy to present this book “Security Analysis and Portfolio Management” to the students of T.Y. BBI, Vth semester. In this edition, an effort has been made to incorporate professional examination questions at relevant places in the book.

The syllabus contains a list of the topics covered in each chapter which will avoid controversies regarding the exact scope of the syllabus. The text follows the term-wise chapter topics pattern prescribed in the syllabus. We have preferred to give the text of the section and rules as it is and thereafter added the comments with the intention of explaining the subject to the students in a simplified language. While making an attempt to explain in a simplified language, any mistake of interpretation might have crept in. This book is an unique presentation of subject matter in an orderly manner. This is a student-friendly book and tutor at home. We hope the teaching faculty and students community will find this book of great use.

We are extremely grateful to Mr. K.N. Pandey, Director of Himalaya Publishing House Pvt. Ltd. for their devoted and untiring personal attention accorded by them to this publication. We gratefully acknowledge the immense contribution and suggestion from various colleges. We gratefully acknowledge our deepest and sincere thanks to:

- Mr. Jitendra Singh, Trustee, Thakur College;
- Dr. Chaitaly Chakraborty, Principal, Thakur College;
- Mrs. Janki Nishikant Jha and
- Arch. Mayuresh Bhome for their inspirational support.

We welcome suggestions from students and teachers for further improvement of quality of the book.

Authors
Syllabus

UNIT – 1 (15 Lectures) 1. An Overview

2. Investment Alternatives

3. Securities Market

UNIT – 2 (15 Lectures)

4. The Time Value of Money

5. Analysis and Valuation of Debt

6. Equity Valuation

7. Risk and Return
UNIT – 3

8. Financial Statement Analysis
— Financial Statement — Financial Ratio — Comparative Analysis — DuPont Analysis
— Applications of Financial Statement Analysis — Problems in Financial Statement Analysis
— Guidelines for Financial Statement Analysis.

9. Fundamental Analysis
— Macroeconomic Analysis — Industry Analysis — Company Analysis: The Study of Financials Numbers

10. Technical Analysis

UNIT – 4

11. Portfolio Theory
— Portfolio Return — Portfolio Risk — Portfolio Diversification — Optimal Portfolio — The Single Index Model.

12. Capital Asset Pricing Model

13. Efficient Market Hypothesis

(Total – 60 Lectures)
Credit Based Grading System Scheme of Examination

- **Internal Assessment** – 25%  
  25 Marks
- **Semester End Examinations** – 75%  
  75 Marks

**Question Paper Pattern**

Q. 1 (a) – 8 marks  
  FOB/MCQ
(b) – 7 marks  
  T/F/MCQ

Q. 2 (a) – 8 marks
(b) – 7 marks
  
or
Q. 2 (a) – 8 marks
(b) – 7 marks

Q. 3 (a) – 8 marks
(b) – 7 marks
  
or
Q. 3 (a) – 8 marks
(b) – 7 marks

Q. 4 (a) – 8 marks
(b) – 7 marks
  
or
Q. 4 (a) – 8 marks
(b) – 7 marks

Q. 5 (a) – 8 marks
(b) – 7 marks
  
or
Q. 5 (a) – 8 marks
(b) – 7 marks
## Contents

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Title</th>
<th>Page No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.</td>
<td>Investment Alternatives</td>
<td>6 – 29</td>
</tr>
<tr>
<td>4.</td>
<td>Time Value of Money</td>
<td>40 – 51</td>
</tr>
<tr>
<td>5.</td>
<td>Analysis and Valuation of Debentures</td>
<td>52 – 57</td>
</tr>
<tr>
<td>6.</td>
<td>Equity Valuation</td>
<td>58 – 68</td>
</tr>
<tr>
<td>7.</td>
<td>Risk and Return</td>
<td>69 – 90</td>
</tr>
<tr>
<td>8.</td>
<td>Financial Statement Analysis</td>
<td>91 – 107</td>
</tr>
<tr>
<td>10.</td>
<td>Technical Analysis</td>
<td>115 – 124</td>
</tr>
<tr>
<td>11.</td>
<td>Portfolio Theory</td>
<td>125 – 141</td>
</tr>
<tr>
<td>12.</td>
<td>Capital Asset Pricing Model</td>
<td>142 – 150</td>
</tr>
<tr>
<td>13.</td>
<td>Efficient Market Hypothesis</td>
<td>151 – 155</td>
</tr>
<tr>
<td>14.</td>
<td>Portfolio Framework and Management</td>
<td>156 – 163</td>
</tr>
<tr>
<td></td>
<td>Appendices</td>
<td>164 – 173</td>
</tr>
<tr>
<td>15.</td>
<td>Model Question Paper</td>
<td>174 – 175</td>
</tr>
<tr>
<td>16.</td>
<td>University Question Papers</td>
<td>176 – 192</td>
</tr>
</tbody>
</table>
1. **Security Analysis and Portfolio Management – An Overview** 1 – 5
   1.1 What is Security?
   1.2 Investment Objectives
   1.3 Investment and Speculation
   1.4 Elements of Investment
   1.5 Meaning of Portfolio
   1.6 Portfolio Management
   1.7 Portfolio Management Process
   1.8 Objectives of Portfolio Management
   1.9 Exercises

2. **Investment Alternatives** 6 – 29
   2.1 Introduction
   2.2 Non-marketable Financial Assets
   2.3 Money Market Instruments
   2.4 Bonds or Fixed Securities
   2.5 Investment in Equity Market
   2.6 Mutual Fund
   2.7 Life Insurance
   2.8 Investment in Real Estate
   2.9 Investment in Precious Metals
   2.10 Exercises

3. **Securities Market** 30 – 39
   3.1 Introduction of Securities Market
   3.2 Basic Functions of Securities Market
   3.3 Secondary Market Operations
   3.4 Stock Market Quotations
   3.5 Stock Exchanges in India — Bombay Stock Exchange
   3.6 Locations
   3.7 Listing
   3.8 Constitution
   3.9 Trading Members
   3.10 Trading Mechanism
3.11 Securities Exchange Board of India
3.12 Government Securities Market
3.13 Corporate Debt Market
3.14 Money Market Instruments
3.15 Exercises

4. Time Value of Money 40 – 51
   4.1 Introduction
   4.2 Future Value of a Single Amount
   4.3 Doubling Period
   4.4 Future Value of Annuity
   4.5 Present Value
   4.6 Present Value of Uneven Series of Payment
   4.7 Present Value of an Annuity
   4.8 Exercises

5. Analysis and Valuation of Debentures 52 – 57
   5.1 Introduction
   5.2 Debt Instruments: Debentures and Bond
   5.3 Bond Valuation and Pricing
   5.4 Bond Yield (Yield to Maturity) (YTM)
   5.5 Exercises

6. Equity Valuation 58 – 68
   6.1 Introduction
   6.2 Need for Valuation Model
   6.3 Balance Sheet Valuation Models
   6.4 Equity Share Valuation Models
   6.5 Price Earnings Ratio Model
   6.6 Exercises

7. Risk and Return 69 – 90
   7.1 Meaning of Risk
   7.2 Types of Risk
   7.3 Measuring Risk
   7.4 Risk Preference of Investors
   7.5 Meaning of Return
   7.6 Measures of Return
   7.7 Holding Period of Return
7.8 Annualized Return
7.9 Expected Return
7.10 Investors' Attitude towards Risk and Return
7.11 Exercises

8. **Financial Statement Analysis** 91 – 107
8.1 Introduction
8.2 Meaning of Financial Statements
8.3 Analysis of Financial Statements
8.4 Balance Sheet Ratios
8.5 Revenue Statement Ratio
8.6 Combined Ratios
8.7 Exercises

9. **Fundamental Analysis** 108 – 114
9.1 Introduction
9.2 Investment Analysis
9.3 Fundamental Analysis
9.4 Macroeconomic Analysis
9.5 Industry Analysis
9.6 Company Analysis
9.7 Trend Analysis
9.8 Ratio Analysis
9.9 Exercises

10. **Technical Analysis** 115 – 124
10.1 Meaning of Technical Analysis
10.2 Fundamental vs. Technical Analysis
10.3 Charting Techniques
10.4 Technical Indicators
10.5 Testing Technical Trading Rules
10.6 Evaluation of Technical Analysis
10.7 Exercises

11. **Portfolio Theory** 125 – 141
11.1 Introduction
11.2 Evaluation of Risk and Return
11.3 Sharpe’s Theory
11.4 Beta
11.5 Portfolio Diversification
11.6 The Single Index Model
11.7 Exercises

12. Capital Asset Pricing Model 142 – 150
12.1 Introduction
12.2 CAPM Major Implications
12.3 Basic Assumptions from Investor’s Point of View
12.4 Capital Market Line (CML)
12.5 Security Market Line (SML)
12.6 Exercises

13. Efficient Market Hypothesis 151 – 155
13.1 Introduction
13.2 Random Walk Theory
13.3 Efficient Market
13.4 Efficient Market Hypothesis
13.5 Random Walk and Security Analysis
13.6 Exercises

14. Portfolio Framework and Management 156 – 163
14.1 Introduction on Portfolio Management
14.2 Selection of Portfolio
14.3 Investment Constraints
14.4 Selection of Asset Mix
14.5 Selection of Portfolio
14.6 Portfolio Execution
14.7 Portfolio Revision
14.8 Exercises

Appendices 164 – 173
Model Question Paper 174 – 175
University Question Papers 176 – 192
Chapter Contents:

1.1 What is Security?
1.2 Investment Objectives
1.3 Investment and Speculation
1.4 Elements of Investment
1.5 Meaning of Portfolio
1.6 Portfolio Management
1.7 Portfolio Management Process
1.8 Objective of Portfolio Management
1.9 Exercises

1.1 WHAT IS SECURITY?

A security means a document that gives its owner a specific claim of ownership of a particular finance asset. Financial market provide facilities for buying and selling of financial claims and services. Thus, securities are financial instruments which are bought and sold in the financial market for investment. The important financial instruments are shares, debentures, bonds, etc. Other financial instruments are also known as securities such as Treasury Bill, Mutual Fund Units, Fixed Deposits, Insurance Policies, Post Office Savings like National Savings Certificates, Kisan Vikas Patras, Public Provident Funds, etc. Some of these securities are transferable while some of them are not transferable.

1.2 INVESTMENT OBJECTIVES

Investment is a widespread practice and many have made their fortunes the process. The starting point in this process is to determine the characteristics of the various investment and then matching them with the individuals need and preferences. All personal investing is designed in order to achieve certain objectives. These objectives may be tangible such as buying a car, house, etc., and intangible objectives such as social status, security, etc. Similarly, these objectives may be classified as financial or personal objectives. Financial objectives are safety, profitability and liquidity. Personal or individual objectives may be related to personal characteristics of individual such as family commitments, status, etc.
The objectives can be classified on the basis of the investors approach as follows:

(a) **Short-term high priority objectives**: Some investors have high priority towards achieving certain objectives in short time. For example, a young couple will give high priority to buy a house.

(b) **Long-term high priority objectives**: Some investors look forward and invest on the basis of objectives of long-term needs. They want to achieve financial independence in long period. For example, investing for post-retirement period or education of child, etc.

(c) **Low priority objectives**: These objectives have low priority in investing. These objectives are not painful. After investing in high priorities assets, investors can invest in these low priority assets. For example, provision for tour, domestic appliance, etc.

(d) **Money making objectives**: Investors put their surplus money in this kind of investment. Their objective is to maximize wealth. Usually, the investors invest in shares of companies which provides capital appreciation apart from regular income from dividend.

### 1.3 INVESTMENT AND SPECULATION

"Speculation, is an activity, quite contrary to its literal meaning, in which a person assumes high risks, often without regard for the safety of his invested principal, to achieve large capital gains." The time span in which the gain is sought to be made is usually very short.

Investment involves putting money into an assets which is not necessarily in order to enjoy a series of returns. The investor sacrifice some money today in anticipation of a financial return in future. He indulges in a bit of speculation. There is an element of speculation involved in all investment decisions. However, it does not mean that all investment are speculative by nature. Genuine investments are carefully thought out decisions. On the other hand, speculative investments are not carefully thought-out decisions. They are based on tips and rumours.

An investment can be distinguished from speculation in three ways—risk, capital gain and time period. Risk has definite financial meaning it is a possibility of incurring a loss in a financial transaction. Investment involves limited risk while speculation is considered as an investment of funds with high risk. Speculation involves buying a security at a low price and selling at a high price to make a capital gain. Investment involves longer-term allocation of funds, whereas speculation involves holding a security for a short-term and trading quickly for earning higher gain.

Speculation involves a higher level of risk and a more uncertain expectation of return. Investments are not risk-free but the risk can be calculated. The expected return is consistent with the risk of investment.

### 1.4 ELEMENTS OF INVESTMENT

(a) **Return**: Investors buy or sell financial instruments in order to earn return on them. The return on investment is the reward to the investors. The return includes both current income and capital gains or losses, which arises by the increase or decrease of the security price.

(b) **Risk**: Risk is the chance of loss due to variability of returns on an investment. In case of every investment, there is chance of loss. It may be loss of interest, dividend or principal amount of investment. However, risk and return are inseparable. Return is a precise statistical term and it is measurable. But the risk is not precise statistical term.

(c) **Time**: Time is an important factor in investment. It offers several different courses of action. Time period depends on the attitude of the investors who follows a ‘buy and hold’ policy. As time moves on analysts believe that conditions may change and investors may revaluate expected return and risk for each investment.
1.5 MEANING OF PORTFOLIO

Portfolio means combined holding of many kinds of financial security that is shares, debentures, government bonds, units and other financial assets. The term investment portfolio refers to the various assets of an investor which are to be considered as a unit. It is not merely a collection of unrelated assets but a carefully blended asset combination within a unified framework. It is necessary for investors to take all decisions as regards their wealth position in a portfolio context. Making a portfolio putting one’s egg in different baskets with varying elements of a risk and return. Thus, a portfolio is a combination of various instrument of investment. It is also combination of securities with different risk return characteristics. A portfolio is built up out of the wealth or income of the investors over a period of time with a view to manage the risk return preferences. The analysis of the risk return characteristics of individual securities in the portfolio is made from time-to-time and changes that may take place in combination with other securities are adjusted accordingly. The object of portfolio is to reduce risk by diversification and maximize gains.

1.6 PORTFOLIO MANAGEMENT

Portfolio management means selection of securities and constant shifting of the portfolios in the light of varying attractiveness of the constituents of the portfolio. It is a choice of selecting and revising spectrum of securities to in which the characteristics of an investor. Marko Wiz analyzed the implications of the fact that the investors, although seeking high expected returns, generally wish to avoid risk. It is the basis of all scientific portfolio management. Although the expected return on a portfolio is directly related to the expected return on component securities, it is not possible to deduce a portfolio riskiness simply by knowing the riskiness of individual securities. The riskiness of portfolio depends upon the attributes of individual securities as well as the interrelationship among securities.

A professional, who manages other people’s or institution’s investment portfolio with the object of profitability, growth and risk minimization is known as portfolio manager. He is expected to manage the investors assets prudently and choose particular investment avenues appropriate for particular times aiming at maximization of profit. Portfolio management includes portfolio planning, selection and construction, review and evaluation of securities. The skill in portfolio management lies in achieving a sound balance between the objectives of safety, liquidity and profitability.

Timing is an important aspect of portfolio revision. Ideally, investors should sell at market tops and buy at market bottoms. They should be guarded against buying at high prices and selling at low prices.

1.7 PORTFOLIO MANAGEMENT PROCESS

Portfolio management is a dynamic process which involves the following basic steps:

(a) Identification of the objectives, constraints and preferences of investors for formulation of investment policy.

(b) Develop and implement strategies in tune with investment policy formulated. It will help the selection of asset classes and securities in each class depending upon their risk return attributes.

(c) Review and monitoring of the performance of the portfolio by continuous overview of the market conditions and performance of the companies.

(d) Evaluation of the portfolio for the result to compare with targets and make some adjustments for the future.

1.8 OBJECTIVES OF PORTFOLIO MANAGEMENT

The basic objective of portfolio management is to maximize yield and minimize risk. The other objectives are as follows:
(a) **Stability of income**: An investor considers stability of income from his investment. He also considers the stability of purchasing power of income.

(b) **Capital growth**: Capital appreciation has become an important investment principle. Investors seek growth stocks which provide a very large capital appreciation by way of right, bonus and appreciation in the market price of shares.

(c) **Liquidity**: An investment is a liquid asset. It can be converted into cash with the help of a stock exchange. Investment should be liquid as well as marketable. The portfolio should contain a planned proportion of high grade and readily saleable investment.

(d) **Safety**: Safety means protection for investment against loss under reasonably variations. In order to provide safety, a careful review of economic and industry trends is necessary. In other words, errors in portfolio are unavoidable and it requires extensive diversification.

(e) **Tax incentives**: Investors try to minimize their tax liabilities from the investment. The portfolio manager has to keep a list of such investment avenues along with the return risk, profile, tax implications, yield and other return.

### 1.9 EXERCISES

**Answer the following questions**

1. What is an investment? What are the objectives of investment? *(April 06)*
2. What is an investment? How it is different from speculation? *(April 09)*
3. What is portfolio? What are the objectives of construction of portfolio? *(April 07)*
4. What is an investment decision? What are the approaches to investment decision-making? *(Nov 05)*
5. What is the difference between investor and speculator?
6. What is a security? What are the important securities traded in the stock market? *(April 08)*

**Objective Type Questions**

State whether the following statements are True (T) or False (F).

1. Investments are concerned with risk and return.
2. Investments involve long-term commitments.
3. Speculation brings about stable return for long-term period of time.
4. Speculation is considered with review and analysis and investments with capital gain.
5. Investments are based on portfolio construction, valuation, identification and analysis.
6. The variable investments consist of cash, bonds and savings certificates.
7. The investment objective is high risk and high return.
8. Arbitrage is a long-term investment.
9. The commodity investment is through saving bank.
10. Indirect securities consist of mutual fund and life insurance securities.

**Ans:** 1. (T), 2. (T), 3. (F), 4. (F), 5. (T), 6. (F), 7. (F), 8. (F), 9. (F), 10. (T).
Multiple Choice Questions

Choose the right answer

1. Which of the following is not a financial investment?
   (i) Purchase of shares     (ii) Purchase of bonds
   (iii) Purchase of car      (iv) Purchase of debentures

2. Which of the following is a tax saving investment?
   (i) Fixed deposit        (ii) Shares
   (iii) NSC                (iv) PPF

3. The fundamental analysis approach has been associated with _________.
   (i) Uncertainties        (ii) Certainties
   (iii) Ratios             (iv) Balance sheet

4. The object of portfolio is to reduce ________ by diversification.
   (i) Return                (ii) Risk
   (iii) Uncertainty         (iv) Percentage