Investment Analysis and Portfolio Management

(As per the Revised Syllabus 2016-17 of Mumbai University for T.Y.BMS, Semester – V)

Winner of “Best Commerce Author 2013-14” by Maharashtra Commerce Association
“State Level Mahatma Jyotiba Phule Excellent Teacher Award 2016”

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Preface

It is a matter of great pleasure to present the first edition of this book on Investment Analysis and Portfolio Management to the students and teachers of Third Year Bachelor of Management Studies course started by University of Mumbai. This book is strictly designed as per new syllabus from the academic year 2016-17 guidelines. The book presents the subject matter in a simple and convincing language.

In keeping with the aims of the book, we have attempted to present the text in a lucid and simple style; the treatment is comprehensive and by and large non-mathematical. Another notable feature of this volume is that the discussions of the concepts and theories are invariably followed by exhaustive illustrative problems. To test the understanding of the readers as also to enable them to have sufficient practice, a large number of exercises have also been given at the end of the chapters.

The syllabus contains a list of the topics covered in each chapter which will avoid the controversies regarding the exact scope of the syllabus. The text follows the term wise, chapter-topic pattern as 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 a 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 the student community will find this book of great use.

We are extremely grateful to Mr. K.N. Pandey of Himalaya Publishing House Pvt. Ltd. for their devoted and untiring personal attention accorded by them to this publication.

We owe a great many thanks to a great many people who helped and supported us during the writing of this book which includes Principal, HOD and Students of BMS Section.

We are thankful to our all family members for constant support and motivation. We are also grateful to our Principal, Colleagues, Library staff and our dear students and friends for encouraging us to write the book. We welcome suggestions from students and teachers for further improvement of quality of book.

Authors
Syllabus

BACHELOR OF MANAGEMENT STUDIES PROGRAMME AT SEMESTER V
WITH EFFECT FROM THE ACADEMIC YEAR 2016-2017

Investment Analysis and Portfolio Management
[60 Lectures: 3 Credit]

MODULES AT A GLANCE

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Modules</th>
<th>No. of Lectures</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>Introduction to Investment Environment</td>
<td>15</td>
</tr>
<tr>
<td>2</td>
<td>Risk-Return Relationship</td>
<td>15</td>
</tr>
<tr>
<td>3</td>
<td>Portfolio Management and Security Analysis</td>
<td>15</td>
</tr>
<tr>
<td>4</td>
<td>Theories, Capital Asset Pricing Model and Portfolio Performance Measurement</td>
<td>15</td>
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<tr>
<td></td>
<td><strong>Total</strong></td>
<td><strong>60</strong></td>
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OBJECTIVES

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Objectives</th>
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<tbody>
<tr>
<td>1</td>
<td>To acquaint the learners with various concepts of finance.</td>
</tr>
<tr>
<td>2</td>
<td>To understand the terms which are often confronted while reading newspapers, magazines, etc. for better correlation with the practical world.</td>
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<tr>
<td>3</td>
<td>To understand the various models and techniques of security and portfolio analysis.</td>
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<tr>
<td>Unit No.</td>
<td>Name of the Topic</td>
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</tr>
<tr>
<td>Unit 1</td>
<td>Introduction to Investment Environment</td>
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<td></td>
<td>(a) Introduction to Investment Environment</td>
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<tr>
<td></td>
<td>(b) Capital Market in India</td>
</tr>
<tr>
<td></td>
<td>• Introduction, Concepts of Investment Banks, its Role and Functions, Stocks, Market Index, The NASDAQ, SDL, NSDL, Benefits of Depository Settlement, Online Share Trading and its Advantages, Concepts of Small Cap, Large Cap, Midcap and Penny Stocks.</td>
</tr>
<tr>
<td>Unit 2</td>
<td>Risk-Return Relationship</td>
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<tr>
<td></td>
<td>• Meaning, Types of Risk – Systematic and Unsystematic Risk, Measurement of Beta, Standard Deviation, Variance, Reduction of Risk through Diversification, Practical Problems on Calculation of Standard Deviation, Variance and Beta.</td>
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<tr>
<td>Unit 3</td>
<td>Portfolio Management and Security Analysis</td>
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<td></td>
<td>(a) Portfolio Management</td>
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<td></td>
<td>(b) Security Analysis</td>
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<td></td>
<td>• Fundamental Analysis, Economic Analysis, Industry Analysis, Company Analysis, Technical Analysis – Basic Principles of Technical Analysis, Uses of Charts: Line Chart, Bar Chart, Candlestick Chart, Mathematical Indicators; Moving Averages, Oscillators.</td>
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<tr>
<td>Unit 4</td>
<td>Theories, Capital Asset Pricing Model and Portfolio Performance Measurement</td>
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<tr>
<td></td>
<td>(a) Theories</td>
</tr>
<tr>
<td></td>
<td>• Dow Jones Theory, Elliot Wave Theory, Efficient Market Theory.</td>
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<tr>
<td></td>
<td>(b) Capital Asset Pricing Model</td>
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<tr>
<td></td>
<td>(c) Portfolio Performance Measurement</td>
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<tr>
<td></td>
<td>• Meaning of Portfolio Evaluation, Sharpe’s Ratio (Basic Problems), Treynor’s Ratio (Basic Problems), Jensen’s Differential Returns (Basic Problems).</td>
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# Question Paper Pattern

## A. Internal Assessment: 25 Marks

*(Internal Assessment – Courses without Practical Courses)*

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Particulars</th>
<th>Marks</th>
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<tbody>
<tr>
<td>1</td>
<td>One class test (20 Marks)</td>
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<tr>
<td></td>
<td>Match the Column/Fill in the Blanks/Multiple Choice Questions (½ Mark each)</td>
<td>05</td>
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<tr>
<td></td>
<td>Answer in One or Two Lines (Concept Based Questions) (01 Mark each)</td>
<td>05</td>
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<tr>
<td></td>
<td>Answer in Brief (Attempt Any Two of the Three) (05 Marks each)</td>
<td>10</td>
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<thead>
<tr>
<th>Sr. No.</th>
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<tr>
<td>2</td>
<td>Active participation in routine class instructional deliveries and overall conduct as a responsible learner, mannerism and articulation and exhibit of leadership qualities in organizing related academic activities.</td>
<td>05</td>
</tr>
</tbody>
</table>

*(Internal Assessment – Courses with Practical Courses)*

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<thead>
<tr>
<th>Sr. No.</th>
<th>Particulars</th>
<th>Marks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Semester End Practical Examination (20 Marks)</td>
<td></td>
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<tr>
<td></td>
<td>Journal</td>
<td>05</td>
</tr>
<tr>
<td></td>
<td>Viva</td>
<td>05</td>
</tr>
<tr>
<td></td>
<td>Laboratory Work</td>
<td>10</td>
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<tr>
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<td>05</td>
</tr>
</tbody>
</table>

## B. Semester End Examination: 75 Marks

(i) Duration: The examination shall be 2½ hours duration.

(ii) Theory question paper pattern.

There shall be five questions each of 15 marks.

All questions shall be compulsory with internal choice within the questions.
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7. Technical Analysis  
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9. Capital Asset Pricing Model  
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10. Portfolio Performance Measurement  
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1.2 Investment Objectives
1.3 Investment and Speculation
1.4 Elements of Investment
1.5 Factors Influencing Selection of Investment Alternatives
1.6 Investment v/s Speculation v/s Gambling
1.7 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 asset 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 FACTORS INFLUENCING SELECTION OF INVESTMENT ALTERNATIVES

There are several constraints that an individual has to take into account before making an investment. These include:

1. **Liquidity**: This is one of the parameters used to measure the efficiency of an investment alternative or instrument. Liquidity is the ability to convert an investment into money. Higher the liquidity for an investment, higher would be its demand and *vice versa*. At the same time, marketability is the measure of demand for an investment instrument. The higher the demand, the easier it is to find a buyer. Liquidity of an investment provides security to the investor that the money would be available when needed. By way of example, Mrs Rupiah may sell the shares invested in a company any time because they have yielded high returns to pay off a house loan.

2. **Age**: The ability of an individual to take risk is linked with his/her age. Typically, the higher the age of an individual, the lower is the risk appetite or tolerance.

3. **Taxes**: The government declares tax benefits for citizens through rebates, exemptions etc and these should be considered while making any investment. For example, under Sec 80CCC an investor gets tax benefit for his investments in ELSS (Equity Linked Savings Schemes). Investors need to take a call between the tax benefit and returns these schemes offer. Other options may not have a tax benefit but may be more lucrative in terms of returns.

4. **Need For Regular Income**: Investors may have a need to obtain periodical or regular returns and this will influence their decision to invest in such instruments.

5. **Time Horizon**: As explained before, the time horizon will vary from short term (as short as one day) to long term which could be a few months to several years.

6. **Risk Tolerance**: Investment decisions are always a trade off between the risk appetites of the investor versus the returns expected. This relation has already been explained.

7. **Lack of Time**: Some investment instruments like equity (shares), mutual funds, real estate, and insurance products need a fair amount of analysis to ensure that the return profile is understood. Sometimes investors, typically professionals like doctors or lawyers who are interested in these investments, may not be able to spare the required time for performing the analysis. They may then seek the help of an intermediary or an advisor. The advisor’s investment objectives may or may not match with those of the investor and this in itself constitutes a risk. Therefore, there is no excuse to blindly relying on someone’s advice without possessing reasonable knowledge of the investment.

8. **Price Discovery**: Several assets such as shares are very active market instruments and may be volatile. This creates uncertainty in the minds of the buyer as to the direction the price will move towards if they buy. Will it come down leading to a loss or go up resulting in profit?

1.6 INVESTMENT v/s SPECULATION v/s GAMBLING

There is often some confusion between the terms investment, speculation and gambling. This confusion is often linked with investments made in the stock market. Investing is NOT gambling. Gambling is putting money at risk by betting on an uncertain outcome with the hope that you might win money. Part of the confusion between investing and gambling, however, may come from the way some people use investment vehicles. For example, it could be argued that buying a stock based on a ‘hot tip’ is essentially the same as placing a bet at a casino.

A ‘real’ investor does not simply throw his money at any random investment. S/he first analyses the situation. If there is a reasonable expectation then only s/he invests.

Many people believe that certain investments are speculative in nature. Are they? An investment may be said to be speculative in nature when the investor takes a position on the timing of making the
Examples of such speculative investments include buying and selling shares in what is called an intra-day trade. Mr. Tradewallah may buy a share in the morning when the market opens at say ₹176 and hope to sell it by the end of the day at ₹188. Since nothing fundamentally can explain this investment decision, this may be speculative. There is the possibility that Mr Tradewallah has tracked the performance of this stock or has received a tip from Mr. Brokerbhai and has taken this decision. Even in such a case, the investment is speculative. If the share finds buyers at ₹188 or more, the speculation has been profitable. However if the price falls and Mr. Tradewallah has to exit i.e., sell the share at a lower value than his purchase price, it is speculation that results in a loss.

Some uninformed people compare investments in the stock market with gambling. It is not at all true. Gambling or betting is more to do with taking a guess at the probability of an event. For example, you want to bet who will win the cricket match. If there are only two teams, then the chances are 50:50. A coin has only two sides and here also the chances are 50:50, either head or tail. Therefore, the probability of head or tail is 50 per cent. It means that if the coin is tossed for a very large number of times - say 10 times - there will be 5 times when it will be heads and an equal number when it will be tails. However, if someone takes a guess on whether it will be heads or tails when the coin is tossed eight times, it is not possible to predict the outcome. In this case the outcome will be a result of gambling, especially if there is payout involved.
What is Gambling?
Gambling is fundamentally different from investment and speculation in following respects:

- **Quick Outcome**: Normally Outcome of gambling is know very quickly. The outcome of rolling a dice or the turn of a dice is almost known quickly.

- **Results don’t depend on Economic activity**: Normally results of gambling are not dependent on any economic activity. For example when you create position in futures or commodities the prices of stocks or commodities are somewhere dependent upon economic activity but when you play card and bet on that the outcome of that doesn’t depend upon any economic activity.

- **Lack of significant Economic benefit**: Generally gambling doesn’t provide significant economic outcome. Whereas, investment and speculation can provide significant economic outcome.

- **Gambling should be for fun**: Normally rational people do gambling for fun and not for making money.

So it is clear that gambling should be more done for fun and not for making money.

1.7 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 an investment decision? What are the approaches to investment decision-making? (*Nov 05*)
4. What is the difference between investor and speculator?

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

5. Investment means
   (i) Commitment of funds for future income
   (ii) Net additions to economy capital stock
   (iii) Short-term commitment of funds
   (iv) Capital gain

6. Speculation can be distinguished from investment in the following way
   (i) Investment is high risk, speculation is low risk
   (ii) Investment is short-term period of time, speculation covers long term period
   (iii) Investment is based on planning of funds for safety, liquidity, profitability, and stability.
   Speculation on hunches and benefits
   (iv) Investment is your own funds, speculation consists of other people’s funds

7. A gambler is one who makes planned investment
   (i) Believes in low risk and high profits
   (ii) Considers high risk and high profits
   (iii) Expects other people to plan his resources in one best security
   (iv) Buying government securities with safety of returns

**Ans:** 1. (iii), 2. (iv), 3. (i), 4. (ii), 5. (i), 6. (iii), 7. (ii).