Birla Institute of Technology & Science, Pilani
Hyderabad Campus

SUMMER TERM-2022

Course Handout Part II

Date: 28-05-2022

In addition to part-I (General Handout for all courses appended to the time table) this portion gives further specific details regarding the course.

Course No. : *ECON F412/ FIN F313*
Course Title : Securities Analysis and Portfolio Management
Instructors : Dr. Nivedita Sinha (nivedita.sinha@hyderabad.bits-pilani.ac.in)

Scope and Objective of the Course:

The objective and focus of the course is to give an insight into evaluation and analysis of a wide range of financial securities and thereby developing techniques for designing an optimal portfolio. The purpose of this course is to provide an in depth understanding of theory and practice related to equity markets, debt markets and portfolio management. The major topics include portfolio theory, asset pricing models, market efficiency, fundamental and technical analysis, portfolio management, introduction to debt markets and fund performance evaluation. Various theories about equity securities are to be discussed and their practical implications for investment analysis and management of individuals and institutions to be examined.

Those who are interested in fund management in asset management companies or in financial institutions will find this course useful. Also this will come in handy for those who aim for personal financial advising in an institution or in individual capacity.

Upon successful completion of the course the students will be able to:

1. Appreciate and apply the concepts of Investment analysis in theory as well as in a real-life situation.
2. Identify numerous investments related risks that an investor is subject to while investing in financial securities.
3. Differentiate between various classes of financial securities such as Equities and Fixed Income Securities, and learn various techniques to value and analyze these securities.
4. Carry out Fundamental Analysis (that involves Economy Analysis, Industry Analysis and Company Analysis) to study the intrinsic strength of a firm and make investment decisions based on the study.
5. Analyze and interpret various technical charts related to stock price movements and predict future price movements to comment on Buy/Sell/Hold decisions.
6. Analyze the performance of the portfolios using various measures.

Textbooks:

1. Reilly Frank K and Keith C. Brown, Investment Analysis and Portfolio Management, 10th edition CENGAGE Learning, 2012.
2. Zvi Bodie, Alex Kane, Alan Marcus, Pitabas Mohanty, "Investments", 2010, McGraw Hill.

Reference books

1. Modern Portfolio theory and Investment Analysis, Elton, Edwin.J, Gruber, Martin J., Brown, Stephen J., and Goetzmann, William, N. [EGBG], 9th edition, Wiley, Jan 2014
2. Prasanna Chandra - Investment Analysis and Portfolio Management, 4th edition, TMH.
3. Murphy, John: Technical Analysis of the Financial Markets; New York Institute of Finance.
4. Bond Markets, Analysis and Strategies, Frank J. Fabozzi, 7/E, Pearson Education, 2013.

Course Plan:

Lecture No.	Learning objectives	Topics to be covered	Chapter in the Text Book
1-2	Exposure to investment climate, Risk and return	Risk and return calculations, Investor life cycle and investor utility function	Ch 1-4 TB 2
3-4	Exposure to investment climate, Risk and return	Security Market Index, Types of orders, trading mechanism- margin trading	Ch 4-5 TB 2
5-18	Modern Portfolio theory & asset pricing models	Portfolio of one risky and one risk-free asset Portfolio of two risky assets Portfolio of two risky and one risk-free assets Portfolio of n assets Efficient portfolios Single index model	Ch 6-7 TB 2
19-24	Modern Portfolio theory & asset pricing models	Capital asset pricing model and arbitrage pricing model EMH and its implications	Ch 8-9 TB 2 and Class Notes
25-28	Evaluation of Portfolio Performance	Composite measures of Portfolio performance, Holding based performance measures, Performance Attribution analysis, Market timing skills & stock selection skills	Ch 25 TB 2
29-32	Technical Analysis	Dow theory, Cycles in financial markets Understanding the significance and limitations of Technical Analysis. Popular figures and chart patterns, their analysis and interpretation.	Ch 15-16 TB 2 & Class notes
33-36	Exposure to Fundamental Analysis and technique of Security valuation	Economy, Industry & Company Analysis, Models of Security Valuation (Cash Flow Model, Dividend Discount Model and Relative Valuation)	Ch 10-14TB 2 & Class notes

37-40	Fixed Income securities or Debt markets	Understand the relevance of fixed income securities, evaluate bond portfolio management strategies	Ch 17-19 TB 2

Course Content

Module I

Exposure to investment climate, risk and return

Topics

In this section, students are expected to understand the overall financial ecosystem in which investors have to make their investment decisions and firms have to make their financing decisions. It includes the study of various types of financial markets, their trading systems, trading mechanisms and issues of various types of securities. Also, students will be introduced to the risk and return concepts which form the core of understanding financial decisions. Various methods of calculating risk and return, i.e., Historical as well as expected, are discussed in the class.

Learning outcomes:

At the end of this topic, students are expected to have understood

1. What are financial markets and their importance in the overall economy
2. Various classification systems of financial markets
3. Instruments which are traded in financial systems and how they are issued in such markets
4. Historical method of calculating various measures of risk and return
5. Calculating expected return and risk using probability distribution

Additional activities

Students will collect historical data from NSE website on a given stock and are required to calculate various risk and return measures

Additional references

www.nseindia.com

www.bseindia.com

Module II

Modern Portfolio Theory

Modern portfolio theory deals with forming efficient portfolios using risk-return relationship with the objective of maximizing return per unit of risk. By decomposing total risk into systematic and unsystematic risk, we derive a functional relationship between risk and return relationship and this relationship could be used to price any financial security which is traded in the market. For investors, it provides a base to form their expectations and for firms it provides a base to understand investor's expectations.

Learning outcomes

At the end of this topic, the students are expected to understand and appreciate

1. The equilibrium mean-variance relationship in a given market
2. Utility maximizing investors
3. Efficient portfolios and efficient frontier
4. Single index model
5. Systematic and unsystematic risks
6. Security market line and capital asset pricing model
7. Arbitrage pricing model
8. Efficient markets

Additional activities

Students will be given an assignment to form efficient frontier, CML and SML for a given set of equity stocks using real historical data from NSE using excel or R.

Module III

Evaluation of Portfolio Performance

Topics:

Students will learn various portfolio performance measures in this Module. The topic will start with the Composite Portfolio Performance measures such as Sharpe's measure, Jensen's alpha measure, Treynor's measure, Information ratio. Some other performance measures such as Sortino's measure which measures risk as downside risk will also be dealt with in this Module. Measurement of market timing skills and stock selection skills of an active portfolio manager using simple statistical techniques will be covered. Fama's Components of Investment Performance measures will provide insights to measuring Selectivity, Diversification, Net Selectivity measures. This module will also cover Holding based performance measures and Performance Attribution analysis.

Learning Outcomes:

Students will learn how to evaluate portfolio performance.

Students will be able to compare mutual funds' performance using these measures

Module IV

Technical Analysis

Topics:

Technical Analysis is the study of market action (stock prices, volume and open interest), primarily using charts, for forecasting future price trends. It has become a useful tool for making investment decisions as market price acts as a leading indicator of the fundamentals. This topic introduces an alternative approach to valuation, with an assumption that markets are not efficient. The students will gain understanding of the significance and limitations of Technical Analysis. This Module discusses various chart patterns of stock prices and relevant trading strategies to be used.

Learning Outcomes:

The student is expected to gain the conceptual and applied knowledge in the following areas:

•Different patterns of historical stock prices

•Interpreting chart patterns

Assignments:

Exercise with real data on the use of various technical indicators to provide buy/sell recommendations.

Module V

Fundamental Analysis

Fundamental analysis is a major approach for stock valuation. The basic assumption is that there are some fundamental economy, industry and firm level factors which drive the prices of equity stocks. This chapter discusses various frameworks to understand how fundamental factors affect value. Also, it provides a framework to calculate the value of a stock, with the assumption that markets are efficient. In this module, we discuss various stock valuation methods under the fundamental approach.

Learning outcomes

The students are expected to understand and apply the following stock valuation methods for real historical data

1. Dividend discount models

2. Relative valuation

Module VI

Fixed Income securities or Debt markets

The world's Bond markets are estimated at over $100 trillion, much larger than the Equity market. They offer a vital source of finance for both corporates and governments. This Module covers the intricacies of Fixed Income markets in depth. It encompasses issues related to both domestic and global debt markets.

Leaning Outcomes:

- Understand the relevance of various Fixed Income Securities, Price volatility characteristics of Bonds and the factors influencing Yield Curve.
- Apply the concept of Theoretical Spot rate to create Zero Coupon Yield Curve.
- Evaluate passive and active Bond Portfolio Management strategies.

Evaluation Scheme:

Component	Duration	Weightage (%)	Date & Time	Nature of Component
Mid Sem Test	90 Minutes	30	23/06 3.30 - 5.00PM	CB
Quiz		20		OB
Assignments		10		OB
Comprehensive Examination	180 Minutes	40	20/07 AN	CB

Chamber Consultation Hour: Tuesday and Wednesday- 3p.m.-4p.m. (Email appointment)

Notices: All notices pertaining to this course shall be displayed on the **Course Management System (CMS).**

Make-up Policy: Make-up will be approved only for students who give a prior (on or before test date) intimation with a genuine reason.

Academic Honesty and Integrity Policy: Academic honesty and integrity are to be maintained by all the students throughout the semester and no type of academic dishonesty is acceptable.

INSTRUCTOR-IN-CHARGE
Nivedita Sinha