

DEPARTMENT OF ECONOMICS
UNIVERSITY OF DELHI

Subject: Common Pool of DSE
Sem.: IV
Course & Code: Financial Economics ECON046
Duration (per week): 4 (3 lectures + 1 Practical)
Date & Time: 25/11/2024 at 1.00 PM
Venue: 104, Department of Economics, Delhi University
Convenor: Satyendra Gupta, Reetika Garg

College Teachers

Animesh Naskar	Hansraj College
VAIBHAV PURI	SGGSCC

Learning Objectives

- To equip students with essential tools for understanding Finance at undergraduate level.
- To enable students to use modelling techniques to solve Financial Economics concepts.
- To develop necessary skill and knowledge for financial problem solving

Learning outcomes

- After studying this course, students would be able to understand the basic concepts of finance and financial variables
- They would develop an understanding of basics of finance including interest rates, annuity, and cash flow.
- The analytical approach adopted in this paper will strengthen and channelise their skills for more advanced approaches in finance.

Following points were discussed and agreed upon.

No changes recommended from last year.

Minutes from last year's meeting and addendum are copied here for easy reference.

Minutes of meeting held on 23/01/2024

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Subject: Common Pool of DSE
Sem.: IV
Course & Code: Financial Economics ECON046
Duration (per week): 4 (3 lectures + 1 Practical)
Date & Time: 23/01/2024 at 4.00 PM
Venue: 104, Department of Economics, Delhi University
Convenor: Satyendra Gupta, Reetika Garg

College Teachers

Animesh Naskar	Hansraj College
Chhavi Gautam	SRCC
VAIBHAV PURI	SGGSCC

Learning Objectives

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- The analytical approach adopted in this paper will strengthen and channelise their skills for more advanced approaches in finance.

Following points were discussed and agreed upon.

- There is a need to organize one half-day workshop for the college teachers to get hands-on experience on the practical component of the course. Professor Animesh Naskar and professor Vaibhav Puri kindly agreed to organise this. Department will share a google form to collect interest from the college teachers.

- Professor Animesh Naskar and Professor Vaibhav Puri have kindly volunteered to prepare a set of relevant - end of the chapter- practice problems, which will be shared with the college teachers by__.
- Regarding the End Semester (Final) Exam (90 marks) the weightage of Unit 1, Unit 2, Unit 3, and Unit 4 was decided to be 20, 30, 30, 10 respectively; students will be required to attempt 5 out of 7 questions.
- Regarding the Internal assessment (30 marks), it was decided to conduct two tests of 12 marks each and 6 marks will be for attendance.
- Continuous assessment (40 marks) will be as per University Rules.
- Following topics are recommended as optional reading (*) for the current academic year.
 - Unit 3 Bodie, Kane, Marcus, Chapter 10 (Arbitrage pricing theory)
 - Unit 4 Bodie, Kane, Marcus Chapter 11 (Efficient market hypothesis) and 12 (Behavioral finance and technical analysis)
- From the Practical Component, following topics are recommended as optional (*) for practice
 - 3 (Multiple IRR),
 - 5 (Continuous compounding),
 - 6 (Analysis cash flows by NPV and IRR).
- In Unit 1 it was decided to cover section 15.1 and 15.2 only from Chapter 15 of Bodie, Kane, Marcus

SYLLABUS OF DSE: FINANCIAL ECONOMICS

Unit 1. Deterministic cash-flow streams (12 Hours)

Basic theory of interest; discounting and present value; internal rate of return; evaluation criteria; fixed income securities; bond prices and yields; interest rate sensitivity and duration; immunisation; the term structure of interest rates; yield curves; spot rates and forward rates.

Berk, DeMarzo

Chapter 4: Time Value of Money (all sections)

Chapter 6: Valuing Bonds (all sections)

Chapter 7: Investment Decision Rules (all sections)

Brealey, Richard A., Myers, Stewart, C., Allen, Franklin:

Chapter 5: Net Present Value and Other Investment Criteria (Section 5.3, pages 107-115)

Bodie, Kane, Marcus

Chapter 14: Bond Prices and Yields (Section 14.1-14.3, Pages 445-460,

Chapter 15: Term Structure of Interest Rate (Section 15.1-15.2, Pages 487-504)

Chapter 16: Managing Bond Portfolios (Section 16.1, 16.3, Pages 515 —525, 535 — 543)

Unit 2. Single-period random cash flows (12 Hours)

Random asset returns; portfolios of assets; portfolio mean and variance; feasible combinations of mean and variance; mean — variance portfolio analysis; the Markowitz model; risk-free assets

Bodie, Kane, Marcus

Chapter 7: Optimal Risky Portfolio (Section 7.1 —7.3, 7.4 Pages 205-218 till Example 7.3, 220 —228)

Berk, DeMarzo

Chapter 11: Optimal Portfolio Choice and CAPM: (Sections 11.1 — 11.6, pages 351 — 378)

Unit 3. Capital Asset Pricing Model (CAPM) (12 Hours)

The capital market line; the capital asset pricing model; the beta of an asset and of a portfolio; security market line; use of the CAPM model in investment analysis and as a pricing formula. Arbitrage pricing theory(APT) and multi-factor model of risk and return.

Bodie, Kane, Marcus

Chapter 9: Capital Asset Pricing Model (Section 9.1, Pages 291-300)

Chapter 10: Arbitrage pricing theory(APT) and multi-factor model of risk and return.*

Berk, DeMarzo

Chapter 11: Optimal Portfolio Choice and CAPM: (Sections 11.7 — 11.8 , pages 379 - 399)

Brealey, Richard A., Myers, Stewart, C., Allen, Franklin

Chapter 8: Portfolio Theory and the Capital Asset Pricing Model (Section 8.4, pages 199-203)

David G. Luenberger:

Chapter 7: The Capital Asset Pricing Model (Section 7.3 & 7.7, Pages 177 — 179, 187 - 190)

Unit 4. Market Efficiency & Behavioural Finance (09 Hours)

Bodie, Kane, Marcus

Chapter 11: Efficient Market Hypothesis (Sections 11.1-11.2, 11.4, Pages 349 — 357, 362-63)*

Chapter 12: Behavioural Finance & Technical Analysis*

Brealey, Richard A., Myers, Stewart, C., Allen, Franklin

Chapter 13: Efficient Markets & Behavioral Finance (Sections 13.2, 13.5, Pages 314 — 318, 329-333)

Practical Component (30Hours)

1. Present Value and Net Present Value
2. Internal Rate of Return and Loan Tables
3. Multiple Internal Rates of Return*
4. Future Values and Applications
5. Continuous Compounding*
6. Analyzing the Cash Flows by NPV or IRR*
7. Portfolio Models
8. Calculating Efficient Portfolios When There Are No Short-Sale Restrictions

Reference for Practical:

Simon Benninga, Financial Modelling, MIT Press, Third Edition, 2008:

Chapter 1: Basic Financial Calculations (Sections: 1.2, 1.3, 1.4, 1.6, 1.8)

Chapter 7: The Financial Analysis of Leveraged Leases(Sections: 7.1, 7.2, 7.3)

Chapter 8: Portfolio Models

Chapter 9: Calculating Efficient Portfolios When There Are No Short-Sale Restrictions

Essential/recommended readings

Bodie, Kane & Marcus, Investments McGraw Hill 10th Edition, 2014

Berk, DeMarzo, Corporate Finance, Pearson, 3rd Edition, 2014

Brealey, Richard A., Myers, Stewart, C., Allen, Franklin, Principles of Corporate Finance, McGraw Hill 10th Edition, 2011

David G. Luenberger, Investment Science, Oxford Press, 1998

Simon Benninga, Financial Modelling, MIT Press, Third Edition, 2008

Addendum

Proposed Discipline Specific Elective

Subject : B.A. (Hons.) Economics

Course : **Financial Economics**

Books:

Bodie, Kane & Marcus, Investments McGraw Hill 10th Edition, 2014

Berk, DeMarzo, Corporate Finance, Pearson, 3rd Edition, 2014

Brealey, Richard A., Myers, Stewart, C., Allen, Franklin, Principles of Corporate Finance, McGraw Hill 10th Edition, 2011

David G. Luenberger, Investment Science, Oxford Press, 1998

Simon Benninga, Financial Modelling, MIT Press, Third Edition, 2008:

Readings:

1. Deterministic cash-flow streams

Basic theory of interest; discounting and present value; internal rate of return; evaluation criteria; fixed-income securities; bond prices and yields; interest rate sensitivity and duration; immunisation; the term structure of interest rates; yield curves; spot rates and forward rates.

Brealey, Richard A., Myers, Stewart, C., Allen, Franklin:

Chapter 5: Net Present Value and Other Investment Criteria (Section 5.3, pages 107-115)

Bodie, Kane, Marcus

Chapter 14: Bond Prices and Yields (Section 14.1-14.3, Pages 445-460,

Chapter 15: Term Structure of Interest Rate (Section 15.1-15.3, Pages 487-497)

Chapter 16: Managing Bond Portfolios (Section 16.1, 16.3, Pages 515 – 525, 535 – 543)

David G. Luenberger:

Chapter 3: Fixed Income Securities (Pages 40 – 65)

Berk, DeMarzo (For Teacher's Reference)

Chapter 4: Time Value of Money (all sections)

Chapter 6: Valuing Bonds (all sections)

Chapter 7: Investment Decision Rules (all sections)

Questions: Berk, DeMarzo Chapter 4: Time Value of Money (Examples 4.1 – 4.11) and Chapter 16 backend questions of Bodie, Kane, Marcus

2. Single-period random cash flows

Random asset returns; portfolios of assets; portfolio mean and variance; feasible combinations of mean and variance; mean – variance portfolio analysis; the Markowitz model; risk-free assets

Bodie, Kane, Marcus

Chapter 7: Optimal Risky Portfolio (Section 7.1 – 7.3, 7.4 Pages 205-218 till Example 7.3, 220 – 228)

Berk, DeMarzo

Chapter 11: Optimal Portfolio Choice and CAPM: (Sections 11.1 – 11.6, pages 351 – 378)

3. Capital Asset Pricing Model (CAPM)

The capital market line; the capital asset pricing model; the beta of an asset and of a portfolio; security market line; use of the CAPM model in investment analysis and as a pricing formula.

Bodie, Kane, Marcus

Chapter 9: Capital Asset Pricing Model (Section 9.1, Pages 291-300)

Berk, DeMarzo

Chapter 11: Optimal Portfolio Choice and CAPM: (Sections 11.7 – 11.8 , pages 379 - 399)

Brealey, Richard A., Myers, Stewart, C., Allen, Franklin

Chapter 8: Portfolio Theory and the Capital Asset Pricing Model (Section 8.4, pages 199-203)

David G. Luenberger:

Chapter 7: The Capital Asset Pricing Model (Section 7.3 & 7.7, Pages 177 – 179, 187 - 190)

4. Market Efficiency & Behavioural Finance

Bodie, Kane, Marcus

Chapter 11: Efficient Market Hypothesis (Sections 11.1-11.2, 11.4, Pages 349 – 357, 362-63)

Chapter 12: Behavioural Finance & Technical Analysis

Brealey, Richard A., Myers, Stewart, C., Allen, Franklin

Chapter 13: Efficient Markets & Behavioral Finance (Sections 13.2, 13.5, Pages 314 – 318, 329-333)

For the **application part**, the reference would be

Simon Benninga, Financial Modelling, MIT Press, Third Edition, 2008:

Chapter 1: Sections 1.2, 1.3, 1.4, 1.6, 1.8.

Chapter 7: Sections 7.1, 7.2, 7.3

Chapter 8: Sections 8.2, 8.3

All problems pertaining to the above sections should be covered.