

FINANCE (FM250)

Course duration: 54 hours lecture and class time (Over three weeks)

Summer School Programme Area: Finance

LSE Teaching Department: Department of Finance

Lead Faculty (session one): Dr Dong Lou and Dr Georgy Chabakauri (Dept. of Finance)

Lead Faculty (session three): Dr Thummim Cho, Dr Dong Lou, and Dr Ashwini Agrawal (Dept. of Finance)

Pre-requisites: Elementary quantitative methods **or** Introductory Microeconomics (to the level of [EC101](#)).

Description

This intensive course is designed to deliver a greater understanding of asset markets and corporate finance. Students will learn about the theory and application of Financial Securities and Corporate Finance. The course broadly covers financial instruments, such as equity and fixed income and derivative securities, as well as key concepts in Corporate Finance.

Part 1: Asset-markets

This section offers a unified perspective of modern valuation methods in the context of three important asset classes – fixed income, stocks, and derivatives. The course will then proceed to fixed-income securities, before moving onto stocks, starting with basic notions of risk, return, diversification, and portfolio theory. Capital asset pricing model (CAPM) will be discussed, before examining whether the market values stocks efficiently, or whether there are “abnormal” returns leading to large profits.

Part 2: Corporate Finance

The questions addressed in this part of the course can be divided into two broad sets.

Decisions regarding how to spend funds on alternative investment projects (also known as capital budgeting). Here the course will describe the alternative techniques commonly employed to assess investment opportunities.

How to raise the funds necessary to finance those investments. Firms’ decisions over debt/equity ratios will be analysed here. This analysis will then be broadened to allow for the possibility that debt/equity choices may affect how firms are run. Incentives to adopt riskier strategies as a function of overall leverage will be considered, as will the debt overhang problem.

Difference between the two sessions:

The course's focus in the first half differs slightly in the two sessions. While the majority of the content will overlap, there are differences in the coverage on some topics as indicated below and the text books on which the sessions are based differ.

Course outcomes

Students will learn about the theory and application of Financial Securities and Corporate Finance. The course broadly covers financial instruments, such as equity and fixed income and derivative securities, as well as key concepts in Corporate Finance. It will also enhance a student's understanding of how firms choose their capital structure, conflicts between shareholders and debt holders, pay-out policy, and initial public offerings.

Lectures: 36 hours **Classes:** 18 hours

Formative Assessment: Homework to be submitted to the class teacher on Friday of week one, this will be marked over the weekend and then feedback given out on Monday of week two to aid with mid-session exam preparation.

Summative Assessment: You will be examined on the basis of two closed book exams, each worth 50% of the final overall grade. The mid-session exam (2hr), will take place on Tuesday or Wednesday of week two and the final exam (2hr) will take place on Friday of week three. Precise time and locations of the exams will be circulated during the programme. 2

Textbook:

Brealey R. and Myers S. and Allen F., *Principles of Corporate Finance*, (12th ed.), McGraw-Hill, (2016).

Other Textbooks:

- Grinblatt M. and S. Titman, *Financial Markets and Corporate Strategy*, (2nd ed.), McGraw-Hill, (2001).
- Berk J. and DeMarzo., *Corporate Finance*, Pearson International Edition, (2007).
- The textbook by Brealey, Myers and Allen (henceforth "BMA") offers the best comprehensive treatment of the subject and is an excellent introductory book.
- Grinblatt & Titman and Berk & DeMarzo can be considered as additional textbooks, and will provide important supplementary reading for the second part of the course.

Lecture slides to be handed out will summarise relevant additional material.

Course Outline (Session 1):

Lecture 1. Introduction to capital markets;
Net present value technique
Valuation of equity and fixed income (bond) instruments
Concept of no arbitrage.

Readings: BMA Chapters: 1-3, 5-7 and lecture slides

Lecture 2. Bond valuation
Duration and its application
The term structure of interest rates
Yield to maturity
Passive bond management.

Readings: BMA Chapters: 4, 24 - 25 and lecture slides.

Lecture 3. Introduction to risk and return
Mean-Variance analysis
Benefits and limits of diversification
Portfolio theory with one asset
Portfolio theory with multiple assets

Readings: BMA Chapters: 8 - 9 and lecture slides.

Lecture 4. The Capital Asset Pricing Model (CAPM)
An intuitive proof of the CAPM
Implications of the CAPM

Empirical evidence on the CAPM.

Readings: BMA Chapter: 9 and lecture slides.

Lecture 5. Definitions of market efficiency
Different forms of market efficiency
Implications to investors
Introduction to behaviour finance

Readings: BMA Chapter: 14 and lecture slides.

Lecture 6. Introduction to derivative instruments
Forward and futures contracts
Stock options
Binomial option pricing model
Put-call parity.

Readings: BMA Chapters: 21, 22, 27 and lecture slides.

Lecture 7. Real Options
Applications to the evaluation of company projects
Applications of option pricing techniques

Readings: BMA Chapter: 23 and lecture slides.

Lecture 8. Introduction to corporate finance
Capital structure choices (between debt and equity)
The Modigliani and Miller (1958) Model
Implications for the firm.

Readings: BMA Chapter: 18 and lecture slides.

Lecture 9. Further issues in capital structure

Tax burdens

Bankruptcy costs

Implications for the firm

Readings: BMA Chapter: 19 and lecture slides.

Lecture 10. Agency Costs

Conflicts between shareholders and debt holders

Associated theories of capital structure

Interactions of investment and financing decisions.

Readings: Lecture slides.

Lecture 11. Dividend policy

Why firms pay dividends

Dividend initiations, omissions, and revisions

Readings: BMA Chapter: 17 and lecture slides.

Lecture 12. Introduction to initial public offerings

Why firms choose to go public

Market reactions to public offerings

Readings: BMA Chapter: 16 and lecture slides.

Course Outline (Session 3):

Lecture 1. Introduction to capital markets
Net present value technique
Valuation of equity and fixed income (bond) instruments

Readings: BMA Chapters: 1-3, 5-7 and lecture slides

Lecture 2. What moves the stock market? A classroom exercise
What moves individual stocks?
Market efficiency
*Note: Bring your laptop computer for this lecture
Lecture slides and the excel worksheet

Lecture 3. Introduction to bonds
Bond prices and interest rates
Forward rates and theories on interest rates
Duration and immunization

Readings: BMA Chapters: 4, 24 - 25 and lecture slides.

Lecture 4. Introduction to risk and return
Mean-variance analysis
Benefits and limits of diversification
Portfolio theory with one asset
Portfolio theory with multiple assets

Readings: BMA Chapters: 8 - 9 and lecture slides.

Lecture 5. The Capital Asset Pricing Model (CAPM)

An intuitive proof of the CAPM

Implications of the CAPM

Empirical evidence on the CAPM

Readings: BMA Chapter: 9 and lecture slides.

Lecture 6. Introduction to options

The concept of no arbitrage

Pricing an option

Review of lectures 1-5

Readings: BMA Chapters: 21, 22, 27 and lecture slides.

Lectures 7-12. Same as session 1

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Credit Transfer: If you are hoping to earn credit by taking this course, please ensure that you confirm it is eligible for credit transfer well in advance of the start date. Please discuss this directly with your home institution or Study Abroad Advisor.

As a guide, our LSE Summer School courses are typically eligible for three or four credits within the US system and 7.5 ECTS in Europe. Different institutions and countries can, and will, vary. You will receive a digital transcript and a printed certificate following your successful completion of the course in order to make arrangements for transfer of credit.

If you have any queries, please direct them to summer.school@lse.ac.uk