

Financial Economics II: Corporate Finance

Lectures: - Arkaja Chakraverty and Sergey Stepanov (Corporate Finance part)

Abstract

This is a compulsory course.

PLEASE NOTE that the course consists of two parts: “Corporate Finance” and “Advanced Asset Pricing and Market Microstructure”

The core of the Corporate Finance part is the analysis of investment (capital budgeting) and financing (capital structure) decisions of a firm. We will first discuss the principles and techniques of selecting investment projects. Secondly, we will examine the determinants of the capital structure choices by firms as well as the notion of the optimal capital structure. We will then discuss how to value a company, taking into account its capital structure. We will also analyze how firms decide on their payouts to shareholders and what the optimal payout policy should be. Finally, we will cover initial public offerings, mergers and acquisitions, corporate governance, and risk management.

The Advanced Asset Pricing part is divided into three parts. The first part covers asset pricing by arbitrage and by equilibrium arguments. The second part deals with issues of asymmetric information and the third with the theory and applications of market microstructure. After each part there will be a class/lecture summarising the lectures, developing applications and discussing the problem sets. This course serves two functions. First, it provides students with a thorough coverage of the principles of asset pricing and market microstructure. It introduces students to advanced finance theory that forms the foundation of modern finance. It provides the necessary background to conduct research. Second, the course offers students with hands-on experience of using computable pricing models to analyze and price modern financial instruments such as options and introduces econometric techniques used in market microstructure.

Prerequisites

Financial Economics I (Asset Pricing), Microeconomics

Learning Objectives and Outcomes

The main objective of the course is to present the modern approach to the financial analysis of a company and to teach the principles and techniques of evaluating the most important corporate decisions.

The student should be able to apply professional knowledge and skills acquired while studying the course in practical areas, including academic research, work in financial institutions, industry, state governance.

Methods of Instruction

The following methods and forms of instruction are used in the course

- Lectures (one or two lectures of 80 minutes per week, alternating from week to week).
- Seminars (one seminar of 80 minutes once every two weeks).
- Self-study
- Case studies (4 cases in total). Cases are to be solved in groups of max. 5 people. Each case will be discussed in a session of 80 minutes. You may be asked to present your solutions in class.
- Homework assignments (problem sets) to be solved individually

Required reading: Jonathan Berk and Peter DeMarzo, Corporate Finance, 2007, Pearson (or a later edition)

Optional reading:

- Hillier, David, Mark Grinblatt, and Sheridan Titman, Financial Markets and Corporate Strategy: 2nd European Edition, 2011, McGraw-Hill.
- Copeland, Thomas E., Weston, J. Fred, and Kuldeep Shastri, Financial Theory and Corporate Policy, 4th edition, 2005, Pearson.
- Tirole, Jean, The Theory of Corporate Finance, Princeton and Oxford: Princeton University Press, 2006.
- J-P Danthine and J. Donaldson (2002), Intermediate Financial Theory, Prentice Hall
- C.- F Huang and R.H. Litzenberger (1988), Foundations of Financial Economics , Prentice Hall
- J. Hull (2003), Options, Futures and Other Derivatives, Prentice Hall.
- J. Ingersoll (1987), Theory of Financial Decision Making, Rowman and Littlefield
- S. E. Shreve (2004), Stochastic Calculus for Finance I: The Binomial Asset Pricing Model, Springer.
- S.F. Le Roy and J. Werner (2001), Principles of Financial Economics, Cambridge University Press.

Other materials and lecture slides will be available at icef-info.hse.ru

Grading System and Knowledge Assessment

Corporate Finance

Home Assignments: 15%

Cases (including evaluation of presentations): 15%

Midterm test: accounts for 20%

Final exam: 50%

The weights given above combine into your final grade for the course. You need to receive at least 35% at the final exam and 35% in the aggregate in order to pass the course. There is only one re-take for the final exam. There will be no re-take for the midterm test. If you have to skip the midterm test due to a valid documented reason, the final exam will automatically carry 70% weight. If you skip the midterm test for no valid reason, you simply get 0 points for it.

Advanced Asset Pricing

Mid-term test (100% for this part of the course; 20% of the final grade for the course)

If you have to skip this midterm test due to a valid documented reason, the weight of the mid-term test shifts to the overall mark for the course, i.e. final grade=100%*the mark for the part taught by Stepanov/Chakraverty.

If you skip the midterm test for no valid reason, you simply get 0 points for it, i.e. final grade= $20\%*0 + 80%*$ the mark for the part taught by Stepanov/Chakraverty.

The grade for each part (on the 100 point scale) is determined separately; the grades are then aggregated with weights 80% (Corporate Finance) and 20% (Advanced Asset Pricing) to obtain the final grade for the course.

Sample materials for knowledge assessment are available in ICEF Information system at <https://icef-info.hse.ru>.

Special Equipment and Software Support

Laptop, projector, Internet connection

MS Word, MS Excel

Course Plan

Corporate Finance

1. Introduction to corporate finance. Notion of corporation, financial statements and financial ratios
2. Fundamentals of capital budgeting
 - a. Refresher on time value of money, discounting, stocks and bonds valuation, risk and return, CAPM
 - b. Basic investment decision rules (NPV, IRR, payback period, etc.)
 - c. Projects with unequal lives: matching cycle, Equivalent Annual Cost (Benefit) method, replacement problem
 - d. Evaluating a project: forecasting earnings, determining cash flows, computing NPV
 - e. Sensitivity analysis, scenario analysis
3. Capital structure in a frictionless world
 - a. Irrelevance of capital structure
4. Capital structure in real world
 - a. Effect of taxes
 - b. Direct and indirect costs of financial distress
 - c. Trade-off theory, *viz.* static and dynamic
 - d. Case discussion (Blaine Kitchenware)
5. Capital structure and valuation methods
 - a. Direct valuation method, i.e. earning based
 - b. Relative valuation method, i.e. peer based
6. Advanced capital budgeting: real options
 - a. Financial options: notion, properties, pricing (binomial model, Black and Scholes formula, Monte-Carlo simulations)
 - b. Real options: types and examples, valuation of projects with real options
7. Capital structure. Effects of agency problems
8. Capital structure. Effects of asymmetric information
9. Initial public offerings
 - a. Advantages and disadvantages of going public

- b. Price performance post listing
- c. Case discussion (Huaneng Power International)

10. Payout policy

- a. Motivation – information asymmetry
- b. Ways of rewarding shareholders – dividend and share repurchase
- c. Impact of tax on payout policies
- d. Case discussion (Linear Technology)

11. Corporate governance + Case discussion (Seagate Technology)

12. Corporate risk management

- a. Types of corporate risks
- b. Benefits and costs of risk management

Advanced Asset Pricing

1 : Equilibrium in security markets

- Consumption-Based Security Pricing / Lucas Model
- First Pass at the CAPM
- Equity Premium Puzzle
- Complete vs. incomplete markets
- Representative vs. heterogeneous agent models

2 : General Equilibrium with Incomplete Markets

- State prices and risk-neutral probabilities
- Spanning
- Constrained inefficiency
- Modigliani and Miller
- Effectively Complete Markets

3: Options Pricing

- Binomial Asset Pricing Model
- Options
- Dynamic completion of the markets
- Cox-Ross-Rubinstein
- Radom-Nikodym Derivative Process
- Exotics
- Numerical Procedures

4: C.A.P.M. and A.P.T.

- Portfolio theory
- Mutual fund, SML, efficiency theorem
- Factor pricing
- A.P.T.

5 : Money and Default

- Liquidity / Cash-in-advance
- Endogenous Default
- Collateral Equilibrium