



## CORPORATE INVESTMENT APPRAISAL

### Syllabus

#### MSc Finance

2014-2015 (Fall Semester)

**FACULTY:** Clara Raposo - [clararaposo@iseg.ulisboa.pt](mailto:clararaposo@iseg.ulisboa.pt)

**OFFICE HOURS:** Wednesdays, 14:00-15:00, Faculty Room (Sala de Professores), Floor 2, Building F1

**COURSE OBJECTIVES:** This course aims to describe the main framework of investment, financing, and payout decisions in corporations. Students should understand the main techniques and methods used to evaluate an investment, as well the financing choices involved, and the optimal capital structure. The payout decision is also discussed. The course offers a sound theoretical background and also a practical applied approach, involving numerous problem sets and a group work assignment for students to deal with.

**COURSE DESCRIPTION:** The course starts with some preliminary notions of game theory and financial option pricing, which allow students to later develop in more depth the topics of corporate investment and financing usually covered as undergraduates. The course then focuses on capital budgeting and the traditional financial performance measures such as the NPV or the IRR, revising the concept of Free cash flow, as well as robustness checks, such as scenario analysis. This is followed by a careful discussion of the basic financing choices and the theory of capital structure, starting from the Modigliani-Miller framework, discussing the trade-off theory, and also dynamic concerns. The main valuation methods used in real life situations, such as WACC, APV or FTE, are also applied. Hybrid financing choices, such as warrants and convertible bonds, are also presented. The course then focuses on risky debt according to Merton's model, as well as the possibility of strategic debt service. The final section of the course offers an introduction to Real Options as an extension to the more traditional DCF analysis.

#### COURSE OUTLINE:

- o. Preliminaries
  - 01 Game Theory – fundamental concepts
  - 02 Financial Options – basic concepts and pricing
- 1. Capital Budgeting
  - 11 Free Cash Flow
  - 12 Criteria: Payback Period, NPV, IRR, Modified IRR, Profitability Index
  - 13 Special Cases: Inflation, Different Lives
  - 14 Robustness: Sensitivity Analysis, Scenario Analysis, Break-even Analysis
- 2. Capital Structure
  - 21 Debt and its cost
  - 22 Equity and its cost

- 23 Modigliani-Miller (1958)
- 24 Corporate taxes
- 25 Personal taxes
- 26 Costs of Financial Distress
- 27 Agency Costs and benefits of debt
- 28 Trade-off theory
- 29 Pecking order theory
- 3. Valuation
  - 31 WACC method
  - 32 APV method
  - 33 FTE method
  - 34 Special Financing policies
- 4. Warrants and Convertibles
  - 41 Warrants and Rights Issues
  - 42 Convertible Bonds Issues
- 5. Risky Debt
  - 51 Merton's model
  - 52 Anderson and Sundaresan's strategic debt service
- 6. Real Options
  - 61 Comparison between DCF and RO
  - 62 Types of Options
  - 63 Valuation
  - 64 Applications

#### **BIBLIOGRAPHY:**

Any widely accepted Corporate Finance textbook is accepted and covers reasonably well the course content. A sample would be:

Berk and DeMarzo, *Corporate Finance*, 3<sup>rd</sup> ed., Pearson, 2013.

Brealey, Myers, and Allen, *Principles of Corporate Finance*, 8<sup>th</sup> ed., McGraw-Hill

Damodaran, *Corporate Finance*, 2<sup>nd</sup> ed., Wiley

Hillier, Ross, Westerfield, Jaffe & Jordan, *Corporate Finance*, european ed., McGraw-Hill

Ross, Westerfield, Jaffe and Jordan, *Corporate Finance*, 8<sup>th</sup> edition, Mc-Graw Hill

Grinblat and Titman, *Financial Markets and Corporate Strategy*, McGraw-Hill

Additionally, for different sections of the course, students will receive with copies of articles, or notes from other textbooks that may be relevant, such as Varian's *Microeconomics*, or Hull's *Options, Futures, and other Derivatives*.

#### **GRADING SYSTEM:**

- In the **Continuous Evaluation System** the grading elements are:
  - **Problem Sets** (15% of final grade).
  - **Group Work Assignments** (20% of final grade), consisting of analysing, solving and presenting a case study. Students must organize themselves in groups of five students (max). Students must prepare a written report (hard copy), together with an Excel spreadsheet (when appropriate) and a powerpoint presentation (all in a CD-rom or USB pen).
  - Final Exam (65% of final grade), with a minimum grade of 8.5/20.

- The Final Grade will be the maximum of: (i) the average of the 3 elements (mid-term test, group work assignments and final exam) or (ii) the final exam grade.
- In the **Final Evaluation System**:
  - The only grading element is the final exam.
- Students with a final grade higher than 16 may be required to defend their grades in an oral exam.

**EXAM DATES:**

Época Normal (First Sit): January 5<sup>th</sup>, 09:00, Room Salão Nobre (Building Q)

Época Recurso (Second Sit): January 26<sup>th</sup>, 09:00 Exam Room (Ground Floor, Library)