

## **Corporate Finance (ECON GU4280)**

Meeting time: Tu, Th 4:10 - 5:25

Meeting place: Mathematics 207

Office address: IAB 1001B

Office hours: Th 11:30 - 12:45 and other times by appointment

### **Course Description**

The aim of this introductory course in corporate finance is to provide students with the fundamental concepts for understanding firms' financing decisions and the basic tools for the valuation of a corporation. The course is divided into two parts. Section I discusses valuation frameworks and the theory of corporate finance. The theoretical foundations and concepts developed in this section highlight important trade-offs in financing decisions and will be useful for choosing an optimal financial structure. Section II is applied and will equip students with the basic skills to work as a financial analyst at an investment bank or other financial services firms. The following topics will be covered.

#### **I. The theory of corporate finance**

- I.1. Valuation concepts
- I.2. Financial structure decisions
- I.3. Taxation and the costs of financial distress
- I.4. Financing decisions and conflict of interests

#### **II. The practice of corporate finance**

- II.1. Internal finance, corporate control and merger analysis
- II.2. Private equity finance
- II.3. Business analysis and financial analysis
- II.4. Enterprise valuation

The learning mode is a combination of theoretical frameworks and its applications to real cases. Heavy emphasis is put upon a working understanding of the economic concepts. Theoretical frameworks highlight the key economic tradeoffs and can help better understand why firms make specific corporate financing decisions. This course provides a fundamental understanding of valuation models and a critical discussion of the underlying assumptions. The extensive business analysis, financial analysis and valuation exercise of Apple Inc. will highlight that valuation is art and sentiment rather than science. Even though a valuation framework has a scientific micro foundation, its application requires the input of data. Forecasting any type of data is a subjective exercise since it depends on the perspective and sentiment of the decision maker. A solid knowledge of theory can help understand why different decision makers employ different assumptions to obtain their own subjective valuation opinion. In addition, a conceptual understanding of corporate finance in terms of theory and practice is useful for making financing decisions and forming an independent and critical opinion about finance topics.

### **Course Requirements**

The main course requirements are homework assignments (i.e., five exercise sets), a midterm exam and a final exam. Grades will be determined based on the following weights:

Exercise sets: 15%

Midterm exam: 40%

Final exam: 45%.

It is important to be regular in preparations for this course. The main concepts and theoretical frameworks will be developed through both lectures and homework assignments.

Some of the background material and institutional details are not covered in the lectures but can be found in the recommended textbook and papers.

Working on the exercise assignments is a very important part of this course. Students are expected to spend a considerable amount of time working through lecture notes and exercise sets.

It is allowed to work together on exercise sets. However, students must submit their homework individually. In case of collaboration, the names of students in the same group should be stated on the first page of the solution sheet.

Students are expected to participate in class discussions. Please ask questions during the lectures. Critical comments are highly appreciated.

Students are welcome to talk to me about career advice if they want to hear my opinion.

## Readings

### Recommended Textbook (not required)

Berg, Jonathan and Peter DeMarzo: Corporate Finance, Pearson, Fourth Edition, 2017 (ISBN: 9780134083278). Other editions and the shorter version of the book are similar.

### Lecture notes (Slides)

Comprehensive teaching notes will be posted on Courseworks for each class session.

### Optional readings

Altman, E.I. (1984): A Further Empirical Investigation of the Bankruptcy Cost Question, *Journal of Finance* 39, 1067-1089.

Baker, G. B. (1992): Beatrice: A Study in the Creation and Destruction of Value, *Journal of Finance* 47, 1081-1119.

Bris, A., I. Welch, N. Zhu (2006): The Costs of Bankruptcy: Chapter 7 Liquidation versus Chapter 11 Reorganization, *Journal of Finance* 61, 1253-1303.

Cutler, M. and L. Summers (1985): The Cost of Conflict Resolution and Financial Distress: Evidence from the Texaco-Pennzoil Litigation, *Rand Journal of Economics* 19, 157-172.

Dang, T.V., Y. Wang and Z. Wang (2022): The Role of Financial Constraints in Firm Investment under Pollution Abatement Regulation, *Journal of Corporate Finance* 76, 102252.

Dang, T.V. and Z. Xu (2018): Market Sentiment and Innovation Activities, *Journal of Financial and Quantitative Analysis* 53, 1135-1161.

Falaye, O. (2004): Cash and Corporate Control, *Journal of Finance* 59, 2041-2060.

Jensen, M. (1986): Agency Costs of Free Cash Flow, Corporate Finance and Takeovers, *American Economic Review* 76, 323-339.

Jensen, M. (1989): Eclipse of the Public Corporation, *Harvard Business Review* 67, 61-74.

Jensen, M.C. and W.H. Meckling (1976): Theory of the Firm: Managerial Behavior, Agency Costs and Ownership Structure, *Journal of Financial Economics* 3, 305-360.

Gompers, P. and J. Lerner (2001): The Venture Capital Revolution, *Journal of Economic Perspectives* 15, 145-168.

Gorton, G. and A. Metrick (2012): Securitization, working paper.

Holmstrom, B. and S.N. Kaplan (2001): Corporate Governance and Merger Activity in the U.S.: Making Sense of the 1980s and 1990s, *Journal of Economic Perspectives* 15, 121-144.

Kaplan, S.N. and P. Stromberg (2003): Financial Contracting Theory Meets the Real World: An Empirical Analysis of Venture Capital Contracts, *Review of Economic Studies* 70, 281-315.

MacKinlay, A.C. (1997): Event Studies in Economics and Finance, *Journal of Economic Literature* 35, 13-39.

Markowitz, H. (1952): Portfolio Selection, *Journal of Finance* 7, 77-91.

Modigliani, F. and M.H. Miller (1958): The Cost of Capital, Corporation Finance and the Theory of Investment, *American Economic Review* 48, 261-297.

Modigliani, F and M.H. Miller (1963): Corporate Income Taxes and the Cost of Capital: A Correction, *American Economic Review* 53, 433-443.

Moeller, S.B., F.P. Schlingemann, R.M. Stulz (2005): Wealth Destruction on a Massive Scale? A Study of Acquiring Firm Returns in the Recent Merger Wave, *Journal of Finance* 60, 757-782.

Myers, S.C. (1977): Determinants of Corporate Borrowing, *Journal of Financial Economics* 5, 146-175.

Myers, S. and N. Majluf (1984): Corporate Financing and Investment Decisions when Firms Have Information that Investors Do Not Have, *Journal of Financial Economics* 13, 187-221.

Porter, M.E. (1980): *Competitive Strategy: Techniques for Analyzing Industries and Competitors*, The Free Press.

Rajan, R.G. and L. Zingales (1995): What Do We Know about Capital Structure? Some Evidence from International Data, *Journal of Finance* 50, 1421-1460.

Ross, S. A. and Dybvig, P. H. (2003): Arbitrage, state prices and portfolio theory, Chapter 10 in *Handbook of the Economics of Finance*, Volume 1, Part B, 605-637.

Trautwein, F. (1990): Merger Motives and Merger Prescriptions, *Strategic Management Journal* 11, 283-295.

Warner, J.B. (1977): Bankruptcy Costs: Some Evidence, *Journal of Finance* 32, 337-347.

## **Tentative Course Outline**

### Lecture 1 (Course overview)

Introduction  
Financial instruments and financing patterns

*Chapter 1, 23, 24*  
*Rajan and Zingales (1995)*

### Lecture 2 (Valuation concepts)

Discounted cash flow (DCF)  
Bond pricing, yields and yield curve

*Chapter 4, 5, 6, 7*

### Lecture 3 (Valuation concepts)

Bond arbitrage  
The No-Arbitrage Theorem

*Chapter 9*  
*Ross and Dybvig (2003)*

### Lecture 4 (Valuation concepts)

Interpretation and applications of NA-Theorem  
ETFs and NA principle  
Stocks, risks and arbitrage

*Chapter 3, 9, 10*

### Lecture 5 (Valuation concepts)

Options  
Put-Call-Parity  
Option pricing  
Financial engineering

*Chapter 20, 21*

Lecture 6 (Valuation concepts)

Real options  
Risks and returns  
Portfolio mechanics  
Diversification

*Chapter 22, 11*  
*Markowitz (1952)*

Lecture 7 (Valuation and Financial structure decision)

CAPM  
Empirical test of CAPM and market efficiency  
Financing decision of firms  
No arbitrage and the MM Theorem

*Chapter 12, 13*  
*Modigliani and Miller (1958)*

Lecture 8 (Financial structure decision)

MM Theorem and Put Call Parity  
The cost of capital  
MM Theorem and the cost of equity  
Event studies methodology  
Event studies of security issuance and exchange offers announcements

*Chapter 14*  
*Modigliani and Miller (1958), MacKinlay (1997)*

Lecture 9 (Taxation and the costs of financial distress)

Debt finance and tax shield  
International taxation and offshore cash  
Debt finance and financial distress

*Chapter 15*  
*Modigliani and Miller (1963)*

Lecture 10 (Taxation and the costs of financial distress)

The cost of financial distress  
Case: Texaco-Pennzoil  
Taxes, bankruptcy costs and hybrid securities

*Cutler and Summers (1985)*

Lecture 11 (Taxation and the costs of financial distress)

Securitization  
Design of bankruptcy codes  
Strategic default  
Restructuring and distressed investments

*Gorton and Metrick (2012), Bris, Welch and Zhu (2006)*

Lecture 12 (Financing decision and conflict of interests)

A contracting view on financial structure choices  
The agency costs of debt finance  
The agency costs of equity finance  
Equity issuance and stock price reactions

*Chapter 16*

*Jensen and Meckling (1976), Myers and Majluf (1984)*

Lecture 13 (Internal finance and corporate control, merger analysis)

Corporate cash holdings  
The agency costs of free cash flow  
The market for corporate control  
A framework for merger analysis

*Chapter 17, 28*

*Jensen (1986), Holmstrom and Kaplan (2001),  
Falaye (2004), Trautwein (1990)*

Lecture 14 (Merger analysis)

Case: The Beatrice Co.  
Case: Constellation and MidAmerican

*Chapter 29*

*Baker (1992)*

Lecture 15 (Merger analysis)

Case: AOL and Time Warner  
Structuring M&A transactions  
M&A bidding process  
Case: Acquisition of Twitter

*Chapter 29*

*Twitter SEC Filings*

### Lecture 16 (Private equity finance)

Private equity: Basics  
PE Fundraising  
Contracting between GP and LP

*Jensen (1989), Gompers and Lerner (2001)*

### Lecture 17 (Private equity finance)

Venture capital finance: Structure and history  
Contracting between VC fund and portfolio firm  
Economic and empirical analysis of VC contracts  
Leverage buyout: Structure and history

*Kaplan and Stroemberg (2003)*

### Lecture 18 (Business analysis)

What do financial analysts do?  
Remarks on valuation and due diligence  
Firm and industry analysis  
Apple: Analysis of a business model and business risks

*Porter (1980)*

### Lecture 19 (Financial analysis)

Financial statements: balance sheet, income and cash flow  
Apple: Financial analysis

*Chapter 2*  
*Apple SEC Filings*

### Lecture 20 (Financial analysis and enterprise valuation)

Apple: Financial forecasts  
Valuation multiples  
Apple: Historical stock performance  
Apple: DCF valuation

*Chapter 19*



Lecture 21 (Enterprise valuation)

HBS Case: American Chemical

*HBS Case*

Lecture 22 (Enterprise valuation)

HBS Case: American Chemical

Case: LBO of Dell

*HBS Case*  
*Dell SEC Filings*

Lecture 23 (Enterprise valuation)

Case: Acquisition of EMC by Dell and listing  
A fundamental analysis of the Chinese economy

*Dell SEC Filings*

Lecture 24 (Enterprise valuation)

Market sentiment, bubbles and valuation  
Market sentiment, investment and corporate finance

*Dang and Xu (2018)*