

Direccio Financiera II

Degree/study: 2013-14- GRAU EMPRESARIAL

Course: 3-4

Term: Third

Number of ECTS credits: 5

Hours of student's dedication: 125

Language or languages of instruction: English

Professor: Filippo Ippolito

1. Presentation of the subject

The primary objective of the course is to improve the knowledge of corporate finance, with particular emphasis on how corporations are financed.

We begin by studying how corporations raise equity capital and debt financing in its different forms. We provide an extended example of the initial public offering (IPO) of a real company, Real Networks. We discuss corporate debt instruments and study the case of Hertz's leveraged buyout (LBO) to illustrate how corporations use debt markets to raise capital.

We then analyze of capital structure decisions in a setting of perfect capital markets in which all securities are fairly priced, there are no taxes or transactions costs, and the total cash flows of the firm's projects are not affected by how the firm finances them. We then examine the impact of taxes and of other frictions on the capital structure decision to explain the observed differences in capital structure across firms and industries.

We then shift the attention to payout policy and to how dividend policy is shaped by market imperfections, such as taxes, agency costs, transaction costs, and asymmetric information, just as capital structure is. We discuss why some firms pay dividends and some do not, and why some firms prefer share repurchases.

Finally, we investigate the complexities of capital budgeting, how to estimate the appropriate cost of capital, and also how the financing decision can affect the cost of capital and cash flows. We introduce the three main methods for capital budgeting with leverage and market imperfections: the weighted average cost of capital (WACC) method, the adjusted present value (APV) method, and the flow-to-equity (FTE) method.

2. Competences to be attained

In terms of general competences, the course will strengthen the ability to reason through complex arguments and defend an argument or thesis on the basis of theory and evidence. It also provides students with the ability to assess risk and to make decisions in the presence of uncertainty. The course strengthens the ability of students to identify the core decision variables in a problem.

In terms of specific competences, the course will strengthen the understanding of: asset pricing, accounting, financial mathematics, budgeting, capital markets, financial institutions, bankruptcy regulation, financial modeling.

3. Contents

Part I: Long-Term Financing

The Mechanics of Raising Equity Capital in the Public Market: Define an initial public offering, and discuss their advantages and disadvantages. Distinguish between primary and secondary offerings in an IPO. Describe typical methods by which stock may be sold during an IPO; discuss risks for parties involved in each method. Evaluate the role of the underwriter in an IPO. Describe the IPO process, including the methods underwriters use to value a company before its IPO. Identify ways in which underwriters can mitigate risk during an IPO. List and discuss four puzzles associated with IPOs. Define a seasoned equity offering, describe two ways in which they are brought to market, and identify the stock price reaction to the announcement of a seasoned equity offering.

Debt Financing: Identify typical sources of debt for corporations. Debt contract terms. An example of a Leveraged Buyout (Hertz Co.). Senior vs. Junior debt. Secured vs. Unsecured debt. Change in control covenants and other restrictive covenants. Asset backed securities. Cash as negative debt.

Part II: Capital Structure

Capital structure in a perfect market: Define the types of securities usually used by firms to raise capital; define leverage. Describe the capital structure that the firm should choose. List the three conditions that make capital markets perfect. Discuss the implications of MM Proposition I, and the roles of homemade leverage and the Law of One Price in the development of the proposition. Calculate the cost of capital for levered equity according to MM Proposition II. Illustrate the effect of a change in debt on weighted average cost of capital in perfect capital markets. Calculate the market risk of a firm's assets using its unlevered beta. Illustrate the effect of increased leverage on the beta of a firm's equity. Compute a firm's net debt. Discuss the effect of leverage on a firm's expected earnings per share. Show the effect of dilution on equity value. Explain why perfect capital markets neither create nor destroy value.

Debt and taxes: Explain the effect of interest payments on cash flows to investors. Calculate the interest tax shield, given the corporate tax rate and interest payments. Calculate the value of a levered firm. Calculate the weighted average cost of capital with corporate taxes. Describe the effect of a leveraged recapitalization on the value of equity. Discuss why the optimal level of leverage from a tax-saving perspective is the level at which interest equals EBIT. Describe the relationship between the optimal fraction of debt and the growth rate of the firm. Assess the apparent under-leveraging of corporations, both domestically and internationally.

Financial distress, managerial incentives and information: Describe the effect of bankruptcy in a world of perfect capital markets. Discuss several direct and indirect costs of bankruptcy. Illustrate why, when securities are fairly priced, the original shareholders of a firm pay the present value of bankruptcy and financial distress costs. Calculate the value of a levered firm in

the presence of financial distress costs. Define agency costs, and describe agency costs of financial distress and agency benefits of leverage. Calculate the value of the firm, including financial distress costs and agency costs. Explain the impact of asymmetric information on the optimal level of leverage. Describe the implications of adverse selection and the lemons principle for equity issuance; describe the empirical implications.

Payout Policy: List two ways a company can distribute cash to its shareholders. Discuss the effect of dividend payment or share repurchase in a perfect world. Assuming perfect capital markets, describe what Modigliani and Miller (1961) found about payout policy. Discuss the effect of taxes on dividend policy; compute the effective dividend tax rate. Provide reasons why firms might accumulate cash balances rather than pay dividends. Describe the effect of agency costs on payout policy. Assess the impact of information asymmetry on payout policy.

Part III: Valuation

Capital Budgeting and Valuation with Leverage: Describe three methods of valuation discussed in the chapter, and list the steps in computing each. Compute the unlevered and equity costs of capital, and explain how they are related. Estimate the cost of capital for a project, even if its risk is different from that of the firm as a whole. Estimate the cost of capital for a project, given the project's debt-to-value ratio, assuming (1) the firm maintains a target leverage ratio, or (2) some tax shields are predetermined. Discuss the importance of considering the overall incremental impact of the leverage of a project on the firm. Calculate the levered value of a project if (1) the firm has a constant interest coverage policy, or (2) the firm keeps debt at a constant level. Define what is meant by a constant interest coverage policy and describe the impact of such a policy on the levered value of a project. Describe situations in which the WACC method is best to use and situations in which the APV method is advisable. Discuss how issuance costs and mispricing costs should be included in the assessment of the project's value. Calculate the value of the interest tax shield if a firm adjusts its debt annually to a target level. Describe the effects of financial distress on the use of leverage.

4. Assessment

During the course problems sets will be distributed as individual homework. Solutions to the problem sets will be provided and discussed in the practical classes (seminars). The problem sets will not be graded.

At approximately two-thirds of the course, there will be an intermediate exam based on multiple-choice questions. The exam includes both theory and computational questions. There is no penalty for a wrong answer. The intermediate exam covers chapters 14, 15, 16, 23 and 24 (not chapters 17 and 18). The exam will have approximately 8-10 questions and will last one hour.

The final exam follows the same methodology as the intermediate exam and covers all chapters discussed in class. It contains approximately 13-15 questions and lasts two hours.

Weight of the intermediate exam: 30%

Weight of final exam: 70%

To pass the course students need a minimum grade of 50% in the final exam. Therefore, if a student does not show up at the intermediate exam, s/he can still take the final exam, but will have a maximum grade of 7/10.

5. Bibliography and teaching resources

The main textbook is Jonathan Berk and Peter DeMarzo, *Corporate Finance*, Second Edition, 2011 (or a later edition), published by Pearson Prentice Hall.

6. Methodology

The classes provide a theory background that is then tested in both, the intermediate and the final exam.

7. Activities Planning

The timing of the topics covered in class and of the intermediate exam are subject to possible variations. Please consider the following table only as a general reference.

Session	Content	Chapter
Part I: Long-Term Financing		
Theory 1	Introduction	23
	<ul style="list-style-type: none"> The Big Picture Equity versus Debt 	
Theory 2-3	The Mechanics of Raising Equity Capital	23
	<ul style="list-style-type: none"> The reasons for an IPO Primary versus secondary offerings Types of IPO: Best effort, Auction, Commitment Steps of the IPO Example of IPO for Real Networks Overallotment option and fees Under-pricing and rationing Types of seasoned equity offerings: cash versus rights Pricing of rights in a seasoned equity offering 	
Theory 4	Debt Financing	24
	<ul style="list-style-type: none"> Debt contract terms An example of a Leveraged Buyout (Hertz Co.) Senior vs. Junior debt Secured vs. Unsecured debt Change in control covenants and other restrictive covenants Asset backed securities Cash as negative debt 	
Part II: Capital Structure and Payout Policy		
Theory 5-7	Capital Structure in a Perfect Market	14
	<ul style="list-style-type: none"> Modigliani Miller Proposition I Weighted Average Cost of Capital Modigliani Miller Proposition II Example of a leveraged recapitalization 	

	<ul style="list-style-type: none"> • Betas and leverage • Earnings per share and leverage • Equity issues and dilution 	
Theory 8-9	Debt and Taxes	15
	<ul style="list-style-type: none"> • Pre-tax balance sheet • Tax shields • Tax shield in the cost of capital • WACC method • Discount factors for the tax shield • Leveraged recapitalization to capture a tax shield • Personal taxes and their effect on the tax shield 	
Theory 10	Financial Distress	16
	<ul style="list-style-type: none"> • Bankruptcy without bankruptcy costs • Risky debt • Bankruptcy costs • Trade-off Theory 	
Theory 11-12	Managerial Incentives, and Information	16
	<ul style="list-style-type: none"> • How returns on assets depend on leverage <ul style="list-style-type: none"> ◦ Complete vs. incomplete contracts ◦ Agency costs and information asymmetries • Conflicts between shareholders and debtholders <ul style="list-style-type: none"> ◦ Equity as a call option ◦ Risk shifting (Overinvestment) ◦ Debt overhang (Underinvestment) • Conflicts between managers and shareholders <ul style="list-style-type: none"> ◦ Growing by issuing equity and suboptimal effort of managers ◦ The Free Cash Flow Hypothesis and the discipline of debt • Financing in the presence of asymmetric information <ul style="list-style-type: none"> ◦ Adverse selection in equity offerings ◦ Signalling with debt ◦ Pecking order theory 	
Theory 13-15	Payout Policy	17
	<ul style="list-style-type: none"> • Two methods of returning cash: Dividends versus stock repurchases <ul style="list-style-type: none"> ◦ Dividend policy in perfect markets ◦ Irrelevance theorem of dividend policy ◦ Dividend policy with personal taxes ◦ The opportunity cost of paying dividends ◦ Agency costs and dividends policy (another example of the FCF Hypothesis) ◦ Signalling with dividends in the presence of adverse selection • The choice of retaining vs. returning cash <ul style="list-style-type: none"> ◦ The opportunity cost of retaining cash 	
Theory 16	Revision	
Session 17	Intermediate Exam	
	Part III: Valuation	
Theory 18-19	Capital Budgeting and Valuation with Leverage	18
	<ul style="list-style-type: none"> • Cash flow statement identities 	

- Definitions of Cash flows
 - Free cash flow to the firm
 - Free cash flow to equity
- Valuation with adjusted present value (APV)
- Valuation with WACC
- Valuation with FCFE
- Equivalence of the three methods
- The impact of external financing on valuation