Year 2012-13

Finance (21138)

Degree/study: IBE DEGREE
Course: 3rd and 4th
Term: 1st
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 provide an introduction to the discipline of corporate finance with particular emphasis on how corporations are financed.

The course begins with the analysis 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.

We then 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. We also discuss an extended example of company valuation by looking at how a venture capital firm might assess the purchase of a private company.

We then study 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, RealNetworks. 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 focus on the tools firms use to manage working capital in order to minimize the opportunity costs associated with holding working capital. In a perfect market, working capital accounts would be irrelevant, however because of market frictions, working capital accounts do affect firm value.

Finally, we investigate short-term financial planning. We look at Mattel, Inc. as an example of a company for which short-term financial planning is very important, due to the high seasonality of its products. We examine how firms forecast cash flows to determine short-term financing needs, and what policies firms use to guide those decisions.

2. Competences to be attained

In terms of general competences, the course will strengthen the ability to reason through complex arguments and defend a specific thesis on the basis of theory and evidence. It also provides students with the ability of assessing risk and making decisions in the presence of risk. 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: 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. Describe the effect of personal taxes on the corporate tax benefits of leverage. Given corporate and personal tax rates on equity and debt, calculate the tax benefit of debt with personal taxes. 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. List and define two types of bankruptcy protection offered in the 1978 Bankruptcy Reform Act. 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. Describe the dividend payment process and the open-market repurchase process. Define stock split, reverse stock split, and stock dividend; describe the effect of those actions on stock price. 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 II: 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. Adjust the APV method for personal taxes.

Valuation and Financial Modelling: Describe the use of comparables as a preliminary way to estimate firm value. Identify the primary factors to consider when estimating the firm's future cash flows. Describe the use of a financial model in projecting future cash flows from an investment. Use the CAPM to estimate the equity cost of capital for a proposed project, using betas of comparable firms. Use a valuation multiple to estimate the continuation value for a firm or a project. Use the discounted cash flow method to estimate a continuation value for a firm or a project. Use the valuation methods to calculate firm value. Discuss the use of IRR and cash multiples as alternative valuation metrics, and discuss the drawbacks of those methods. Calculate IRR and cash multiples for a given firm or project. Describe the use of sensitivity analysis in evaluating the uncertainty of the value of the deal.

Part III: Long-Term Financing

The Mechanics of Raising Equity Capital: Describe four ways in which a private company can raise outside capital. Discuss the effects of a company founder selling stock to an outsider. Identify the two main exit strategies used by equity investors in private companies. 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. Describe the bond indenture. Define the following terms: notes, debentures, mortgage bonds, and asset-backed bonds. Identify which of these are secured, and which are senior. Identify and define the four broadly defined categories that comprise international bonds. Define term loan and private placement, and contrast the two forms of private debt. Identify four different types of securities issued by the U.S. Treasury. Identify the characteristics of municipal bonds. Define the term asset-backed security and give several examples of issuers and types of such securities. Define the following bond terminology: covenants, call provision, callable bond, yield to call, sinking fund, and convertible bonds. Compare and contrast convertible and callable bonds with straight debt.

Part IV: Short-Term Financing

Working Capital Management: Define working capital management, cash cycle, and operating cycle. Compute the cost of trade credit and compare that cost to alternative sources of financing. Discuss ways that companies provide trade credit to their customers. List the three steps involved in establishing a credit policy, and two methods used to monitor the effectiveness of that policy. Discuss the importance of monitoring accounts payable, inventory, and cash; identify ways those items can be managed.

Short-Term Financial Planning: Show how future cash flow forecasts allow a company to determine whether it has a cash flow surplus or deficit, and whether it is a long- or short-term imbalance. Discuss the recommendations of the matching principle with respect to long- and short-term needs for funds. Describe three types of bank loans, and how they may be used for short-term cash needs. Identify the factors that affect the effective annual rate of a bank loan. Define commercial paper and discuss its advantages for large corporations. Describe the use of inventory and accounts receivable as security for loans. Define factoring, floating liens, trust receipts loan, and a warehouse arrangement.

4. Assessment

During the course problems sets will be distributed as individual homework. Solutions to the problem sets will be provided and discussed in class. The problem sets will not be graded.

Students will be divided in groups of 4-5 to carry out a final project. The project consists in the valuation of a publicly traded firm. Two separate groups of students will collect information regarding a publicly traded firm. The first group will act as seller of a large stake of the firm's equity, while the second group will act as potential buyer. The objective of the first group is to provide a valuation of the equity stake so to justify the highest possible selling price. The objective of the second group is also to estimate the value of the equity stake, and pay for it as little as possible.

For the project, both groups will prepare a report (max 25 pages inclusive of figures and tables, 1.5 spaced). Information on the financial accounts of the firms and prices of securities will be obtainable from EDGAR-SEC database and Yahoo Finance.com.

Grading

Weight of Final Exam: 70%

Weight of projects and seminar participation: 30%

The grade of the project is also valid for the retake in February. Only students who failed the December session can do the retake.

To pass the course you need a minimum grade of 50% in the exam.

5. Bibliography and teaching resources

5.1. Basic bibliography

The main textbook is Jonathan Berk and Peter DeMarzo, *Corporate Finance*, Second Edition, 2011, published by Pearson Prentice Hall. Buying the book is strongly advised, not least because it has lots of online exercises, that resemble those in the exam.

For the seminars, we will use the book by Aswath Damodaran, *Applied Corporate Finance: A User's Manual*, Second Edition, published by John Wiley and Sons.

6. Methodology

The classes provide a theory background that is then tested in the exam and implemented in the development of the projects.

7. Activities Planning

Session	Content	Chapter	Week
	Part I: Capital Structure		
Theory 1	Capital Structure in a Perfect Market	14	1
Theory 2	Capital Structure in a Perfect Market	14	1
Theory 3	Debt and Taxes	15	2
Theory 4	Debt and Taxes	15	2
Theory 5	Financial Distress, Managerial Incentives, and Information	16	3
Theory 6	Financial Distress, Managerial Incentives, and Information	16	3
Theory 7	Payout Policy	17	4
Theory 8	Payout Policy	17	4
	Part II: Valuation		
Seminar 1	Problem Set 1		4
Theory 9	Capital Budgeting and Valuation with Leverage	18	5
Theory 10	Capital Budgeting and Valuation with Leverage	18	5

No seminar			
Theory 11	Valuation and Financial Modeling: A Case Study	19	6
Theory 12	Valuation and Financial Modeling: A Case Study	19	6
Seminar 2	Problem Set 2		6
	Part III: Long-Term Financing		
Theory 13	The Mechanics of Raising Equity Capital	23	7
Theory 14	The Mechanics of Raising Equity Capital	23	7
Seminar 3	Problem Set 3		7
Theory 15	Debt Financing	24	8
Theory 16	Debt Financing	24	8
Seminar 4	Problem Set 4		8
	Part IV: Short-Term Financing		
Theory 17	Working Capital Management	26	9
Theory 18	Working Capital Management	26	9
Seminar 5	Problem Set 5		9
Theory 19	Short-Term Financial Planning/Revision	27	10
Theory 20	Revision		10
Seminar 6	Problem Set 5		10
	Exam, December, 12 at 15:00h		
	Hand-in Final Projects December, 19 by 20:00h		