Syllabus
Introduction to Corporate finance
(First and Second Modules 2019/2020)

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Course description

Abstract

The Corporate finance course is an intermediary one-module course for four-year undergraduate students. It is focusing on corporate applications in the international environment. The course develops theoretical and practical frame works for understanding and analyzing major financial problems of modern firm in the market environment. The course is taught in English. Russian is used as supplementary language to explain basic concepts and introduce some Russian terminology.

The first part of the course is devoted to principles of accounting. By the end of this part of a course, students are expected to be able to apply a set of accounting concepts to read annual financial report of a corporation and financial ratios to assess its financial position. The second part deals with principles of company valuation and covers the essentials of capital structure and methods of company valuation. It is focused on estimating and forecasting cash flow of a firm in order to calculate its market value.

Course prerequisites

The course International finance and globalization is the main prerequisite for the course. It is an obligatory course for 3d year students of International Economics and Business specialization of the IR Program. Students must be familiar with some basic financial concepts like bonds, stocks, derivatives, NPV, IRR, discount rates.

Also the course's analytical framework uses a few basic economic principles up to the level of Economic Theory and Calculus that are obligatory courses during the 1st year of the IR Program. The basic principles are a transactions cost, asymmetric information, profit maximization, basic supply and demand analysis to explain behavior in financial markets, and aggregate supply and demand analysis.

Learning objectives

1. To prepare and analyze companies' financial statements and financial ratios for decision-making purposes and perform financial planning, applying various models
2. To conduct quantitative and qualitative research to find and analyze stock information
3. To perform valuation of a company through multiples and discounted cash flows models
4. To evaluate the optimal capital structure of a company and analyze its leverage
5. To make a justified investment decision applying project analysis and evaluation of multiple investment criteria

Learning outcomes

The course is focused on developing skills in analyzing corporate behavior in capital markets and the relationship of agent, and principal of raising funds, allocating capital and distributing returns. The course provides necessary knowledge in evaluating different management decisions and their influence on corporate performance and value. It helps develop a strategic understanding of key financial decisions faced by organizations today by putting them into an international context.

Methods of instruction

Methods of instruction include weekly lectures and seminars, a group project, and self-study.

Special equipment

None

Grade determination

Course grade is determined by:
-Home assignments (15%)
-Class-work during lectures and classes (15%)
- Group project (40%)
- Final written exam (30%)

Home assignments

The course contains 2 obligatory home assignments after the *Accounting* section and after the *Company Valuation* section of the course. Both Home assignments have equal weights and are evaluated out of 10-point scale. If a student wants to increase her grade she can do an additional (optional) home assignment that may cover up to 10% of the course.

Example of home assignment problems:

1. *(15pts) Evaluate and compare any 2 international companies as at 31.12.2018 according to financial ratios. You can calculate or find the values of the ratios in the internet. You need to evaluate at least one ratio in each factor group.*
2. *(10pts) XYZ Corp had $100 Equity and $100 Cash on its Balance Sheet in Year 0. In year 1 the Company invested $200 in factories for production of ice-cream, financed with debt and cash (50/50). Show the Balance Sheet (as of the end of Year 0 and 1) and Cash Flow Statement (for the Year 1), reflecting the abovementioned changes.*

Participation during lectures and classes

Students are expected to attend every lecture and class and participate by contributing to the in-class discussions and problem solving. Students may prepare to their in-class problems by reading the materials provided at the end of each lecture.
The final rating grade out of 10-point scale is made up of points that students earn throughout the course. The distribution of points is the following:

0- Absence without a valid reason[1] or presence with no participation
1- Presence with little contribution or some answers with mistakes
2- Presence with sophisticated contribution and correct answers

Group project

At the end of the course, before the exam week, students are expected to make a group project. Students are subdivided into groups of 4-6 people. Each group illustrates buy side or sell side in an M&A deal. The task is to perform company valuation through DCF construction and multiples calculation using financial statements that can be found in the open sources. The final grade out of 10-point scale is made up of 12 minutes-group presentation (70%), excel file with calculation (20%) and participation in Q&A session of other groups (10%).

If a student has not participated in the group project due to illness or any other valid excuse[1], she can make an individual in-class presentation of the group project and in case of answering all questions correctly, she may get the same grade as her group has.

Final written exam

Final written exam is held during an exam week. The exam is obligatory and cannot be covered by the cumulative grade. The exam lasts 120 minutes and contains 8 problems that include some essays and problem-solving tasks similar to home assignments and class problems.

Example of Exam problems:

[1]Medical certificate or any proof of academic activity (e.g. conference) should be handed in to the Administration Office if a student wants to make up for the missed opportunity to get credits.

1. *(40pts) In 2018 the corporation L which operates in emerging market has been evaluated by famous investment banks before being involved in the merger with the company. Up to this moment L was fast growing company.*
   Position in 2018:
   - Revenues 730,000.00
   - Depreciation, Amortization $100,000.00
   - EBIT $132,000.00
   - Interest expense is $150 per year
   - Income tax rate 40%
   - Net Working Capital 10% of revenues
   - Capital Expenditures$120,000.00
   - WACC 20%
   - 7,000 shares outstanding
   - Net Debt $130,000
   Forecast for 3 years:
   - Revenue will grow at 20% per year
   - Within two years the corporation is planning to implement operating costs reduction programme which will lead to the increase of sales profitability (EBIT/Sales) from current margin to 25% from 2nd year.
   - Net working capital ratio in revenues will stay the same
   - CAPEX and depreciation will grow at the same rate as revenues
   Transition period after year 3:
   - revenue growth rate will decline linearly to 5 % up to year 6
   - net working capital rate stays the same
   - CAPEX will grow at 9%, depreciation will grow at 11% a year
   Since Year 6 the Company enters the stable growth period
   - Revenue, D&A and CAPEX will grow at 5%
   Required:
   - EV, Market Cap
   - Calculate the fair price of 1 share and decide, which bank was closer to fair value
2. *QWERTY Inc. is a food retailer that had the following items on the Balance Sheet in year 0:*
   - Cash - $90
   - Payables - $10
   - Retained Earnings - $30
   - PP&E - $50
   - Shareholder's Equity - $20
   - Inventory - $50
   - Debt - $150 (perpetual debt, with annual interest rate of 10%)
   - Receivables - $20
   During Year 1 QWERTY Inc. sold 50% of Inventory for $60 in cash. Also all Receivables and Payables has been paid out during the year. Q1: Buid up the Balance Sheet of QWERTY Inc. as of the end of Year 0. Q2: Show the P&L of QWERTY Inc. for the Year 1. (Assume the corporate income tax rate is 20% and depreciation (assume it's part of operational expense) is 10% per year) Q3: Show the Cash Flow Statement of QWERTY Inc. for the Year 1. Q4: Show the Balance Sheet of QWERTY Inc. as of the end Year 1.

Literature

Main reading

1. Danny Leiwy and Robert Perks. Accounting: Understanding and Practice.4th edition. McGraw-Hill Higher Education. 2013.
2. Grinblatt, Titman. Financial Markets and Corporate Strategy. McGrawHill. 2nd edition 2001.
3. Brealey, R.A., Myers S.C. Principles of Corporate Finance. McGraw-Hill/Irwin, 2003.

Supplementary reading

1.Ross S., R.Westerfield, J.Jaffe. Corporate Finance. Fifth Edition. IRWIN-McGraw-Hill.

2. Horngren, Charles T. Cost accounting: a managerial emphasis/Charles T. Horngren, Stanford University, Srikant M. Datar, Harvard University, Madhav V. Rajan, Stanford University.—Fifteenth edition. 2015
3. Damodaran A. Applied Corporate Finance. Wiley&Sons. 1999
4. J.Arnold, T.Hope, A.Southworth, L.Kirkham. Financial accounting. 2 edition. Prentice Hall.

Course outline

Part I. Accounting

Basic Accounting Equation and Balance Sheet
Basic accounting equation. Types of assets: current and fixed, liquid and illiquid, tangible and intangible. Liabilities and their recognition criteria. Types of liabilities. Owner's capital (equity, retained earnings) and its forms.

Profit and Loss statement
Main sections of Income Statement. Concepts of Revenue, COGS, OPEX, EBITDA, D&A, EBIT, Tax, Net Income. Revenue recognition criteria: Accrual vs Cash basis.

Cash Flow Statement and the link between 3 statements
Types of company's activities and cash flows: cash flow from operating, investing and financing activities. Net (gross) cash flow. The reconciliation of Net Incometo Cash Flows.The link between 3 statements.

Part II. Company Valuation

Company Valuation Approaches
Why do you need valuation? Market Capitalization vs Enterprise Value. Market Value vs Book Value. Relative valuation (multiples) vs fundamental valuation (Discounted Cash Flows). Multiples: transaction vs trading; Market Cap based vs EV based, etc.

DCF Model: Cash Flows
The concept of DCF model. Terminal Value. Calculating and forecasting different types of Cash Flows (FCFF, FCFE). Reconciliation of Net income to Cash Flows.

Capital Structure Choice
Basic features of Debt and Equity. The effect of taxes on capital structure. The debt tax shield. Cost of financial distress. Corporate Cost of Capitaland Financial Leverage.

DCF Model: Discount rate
Interest rates and the time value of money. The weighted average cost of capital (WACC) and its components. Return on equity: CAPM, beta unlevered and beta levered from peers or from the market. Return on debt. The financing decision including capital structure theory and the cost of capital.

Distribution of hours

#	Topic	Total	Lectures	Classes	Self-study
1	Basic Accounting Equation and Balance Sheet	12	2	2	8
2	Profit and Loss statement	12	2	2	8
3	Cash Flow Statement and the link between 3 statements	16	2	2	12
4	Company Valuation Approaches	8	2	2	4
5	DCF Model: Cash Flows	12	2	2	8
6	Capital Structure Choice	8	2	2	4
7	DCF Model: Discount rate	16	2	2	12
8	DCF Model: Construction	22	2	2	18
	Total	**106**	**16**	**16**	**74**