Company and Business Valuation

Lecturer: Dmitry Ryabykh

Abstract

The course deals with theoretical and practical aspects of business valuation.

Over the course, students will be provided with a deep understanding of the mechanism of valuation, various methods, their advantages, disadvantages and issues. We will discuss the links among a company's public information, its financial reports, industry outlook and the value of the company.

The course includes intense financial modeling activity. Students will prepare one full-blown equity valuation report underpinned by an Excel model, as well as several additional financial models for the most important methods.

Course pre-requisite

- Financial reporting and analysis
- Financial mathematics (discounting, statistics)
- Basics of financial markets
- Financial modeling in MS Excel

Learning Objectives

The goal of the course is to provide a comprehensive overview of the valuation theory and techniques by discussing and working on actual business valuations.

Learning Outcomes

After the course, students will have necessary knowledge and skills to calculate the intrinsic value of a public or private company, as well as understand and analyze equity reports and value estimates prepared by others.

Syllabus

1. Introduction

    1.1. Value definition. Types of value: market value, intrinsic value, mispricing. Applications of equity valuation.
    1.2. Discounted cash flow.
    1.3. The valuation process: understanding the business, forecasting, selecting the model, calculating and communicating the value.
    1.4. Valuation models: discounted dividend, free cash flow to equity, asset-based, relative, sum-of-the-parts. Advantages and disadvantages of the models.

2. Return concepts

    2.1. Required return, discount rate. Discount rate selection in relation to cash flow: valuing the company vs. valuing equity.
    2.2. Risk-free rate. Country risk premium.

2.3. Equity risk premium: historical values and future estimates.
2.4. Capital market line, diversification, security market line, capital asset pricing model (CAPM). Beta for a public company. Leveraged and unleveraged beta.
2.5. Fama-French Model. Build-up method. Bond yield plus risk premium method.

3. Discounted dividend valuation

3.1. The dividend discount model.
3.2. The Gordon growth model. The dividend growth rate: sustainable growth, retention rate and ROE.
3.3. Multistage dividend discount models.

4. Free cash flow valuation

4.1. FCFE and FCFF valuation approaches. Weighted average cost of capital (WACC).
4.2. Cost of debt
4.3. Accounting for inflation: nominal vs. real prices and rates.
4.4. Forecasting cash flow: earnings, net working capital, CAPEX, depreciation. Computing free cash flow from forecasted net income and cash flow statement.
4.5. Fine-tuning the forecast: industry analysis, sustainable profit and growth.
4.6. Terminal value.

5. Market-based valuation

5.1. Price and enterprise value multiples: P/E, P/B, P/Sales, P/Cash Flow, EV/EBITDA
5.2. Issues in practice: international considerations, averaging multiples, outliers.

6. Private company valuation

6.1. Estimating discount rate. Control and marketability premiums/discounts. Diversification issues.
6.2. Guideline public company and guideline transaction methods.
6.3. Real options and the private company valuation.

7. Communicating valuation results

7.1. Research reports: content, format, the analyst's role.

Reading List

I recommend viewing the Damodaran's online valuation class (2014 compressed version) as an introduction to my lectures:

https://www.youtube.com/playlist?list=PLUkh9m2BorqnKWu0g5ZUps_CbQ-JGtbI9

You can also use these sources for deeper study of the topic:

1. CFA Institute Program Curriculum. Level II. Equity.
2. Damodaran, A. "Damodaran on Valuation: Security Analysis for Investment and Corporate Finance", Wiley
3. Koller, T., Goedhart, M., Wessels, D. "Valuation. Measuring and managing the value of companies", Wiley.

Grading System

The final grade is an aggregate of:

- Valuation report 30%
- Final exam 70%

The **valuation report** is a group assignment (group size: 3-4 students). Students will have to prepare a valuation of a company provided by the lecturer. The report includes:

- Calculation of the applicable discount rate
- DDM valuation based on industry average ratios
- Free cash flow valuation
- Relative valuation
- Conclusion

Each report should be accompanied by an Excel model. Student must explain and discuss their choice of methods, ratios and data.

The following scale is used for grading the report:

- 0…3 *Various degrees of fail* (incomplete report, or too many errors)
- 4…5 *Satisfactory* (correct work, but without deep analysis or explanation)
- 6…7 *Good work* (good model with some discussion, correct calculations)
- 8…10 *Excellent work* (model + discussion + analysis of underlying factors)

The **final exam** is a written test at the last class session; 1 hour; 20 questions with multiple choice answers, 5% each. The marking convention for the exam is the following:

N of correct answers	Mark
20	10
19	10
18	9
17	8
16	7
15	6
14	5
13	4
12	0

Methods of Instruction

Lectures, short individual assignments, a group assignment with detailed analysis of a firm.