

Introduction to Finance I

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General Course Information

This course introduces students to basic issues in the modern theory of finance. It serves as an introductory course for students majoring in finance and as an overview course for non-finance students.

Main Textbook

Our major text book is Brealey/Myers/Allen, Principles of Corporate Finance (BMA). Please note that there is a lot of supplementary material on the publisher's website. BMA is the most popular MBA text book in finance in most countries.

- Brealey/Myers/Allen, Principles of Corporate Finance, 9th ed., McGraw-Hill, 2008.
- Brealey/Myers/Allen, Principles of Corporate Finance, 10th ed., McGraw-Hill, 2010.

Additional Introductory Textbooks

- Ross/Westerfield/Jaffe/Jordan, Modern Financial Management, 9th ed., McGraw-Hill, International edition 2009.
- Berk/DeMarzo, Corporate Finance, 10th ed., Pearson Education, Global edition, 2010.
- Welch, Corporate Finance: An Introduction, 2010. Online available for free at URL: <http://book.ivo-welch.com/>.

Additional More Advanced Textbooks

- Elton/Gruber/Brown/Goetzmann, Modern Portfolio Theory and Investment Analysis, 8th edition, 2010. Main text book for Portfolio and Capital Market Theory.
- Grinblatt/Titman, Financial Markets and Corporate Strategy, 2nd edition. Main text book for Advanced Corporate Finance.
- Bodie/Kane/Marcus, Investments, 8th edition, 2009. Supplementary text in Portfolio and Capital Market Theory.

Prerequisites

All students should have taken at least one finance course in their undergraduate studies. Humboldt students should have taken "Finanzierung und Investition" prior to taking Introduction to Finance I. All students should have also taken at least one course in accounting and introductory courses in econometrics and statistics.

More specifically, you must already have a good knowledge of the material covered in chapters 1-3, 6 and 7 of BMA. We will start by reviewing these chapters briefly and then focus on the material covered in chapters 4 and 5, 8-12, 14 and 24. We will not cover chapter 13.

Course outline

The course outline follows the 9th edition of BMA, it will be adapted to the 10th version during the summer semester 2011. The course covers chapters 1 to 14 (except for chapter 13) of BMA, 9th edition in detail. The course consists of 10 lectures and four accompanying tutorial sessions.

1. Introduction/Review of the "Grundstudium" material, Relevant literature: BMA Ch.1-3

The first lecture introduces the course and reviews present value techniques. We assume that students are familiar with techniques and concepts like discount factors, present values, net present values (NPV), perpetuities, growing perpetuities, annuities, growing annuities, future values, and the internal rate of return (IRR).

2. **Review of the “Grundstudium” material, Relevant literature:** BMA Ch.6-7

The first step of using NPV or IRR involves forecasting future cash flows. After discussing the problems arising in this context, we will focus on the treatment of depreciation, taxes and the difference between cash flows and accounting numbers. We will spend considerable time on comparing the NPV and the IRR criterion.

3. **Bond Valuation, Risky Debt Securities, Relevant literature:** BMA Ch.4, 24.1, 24.3-24.4.

Governmental and corporate bonds are some of the most important financial contracts, especially in Europe. We will demonstrate that standard present value techniques can be used to value bonds. We will also explore the riskiness of bonds and discuss the duration concept.

4. **Stock Valuation, Relevant literature:** BMA Ch.5

Equity securities represent an ownership of the firm. The nominal cash flows associated with stock ownership are usually more difficult to predict than those associated with bond ownership. During the lecture we will discuss the dividend growth model and its extensions in order to estimate the intrinsic value of stocks.

5. **Risk and Return, Relevant literature:** BMA Ch.8

This lecture focuses on risk and return. We start by looking at the historical performance of major asset classes. Next we will introduce students to expected rates of return, variances, covariances and other statistical measures. We will also focus on measuring the risk of a portfolio using the Markowitz Model before we introduce beta as a measure for systematic risk.

6. **Risk and Return (II), Relevant literature:** BMA Ch.9

We will cover the most popular capital asset pricing model, the Sharpe-Lintner capital asset pricing model or CAPM. We will also discuss some of the model's major applications, as well as the validity of the model. The main objective of this class is to emphasize the relationship between risk and expected rates of return.

7. **Capital Budgeting and Risk, Relevant literature:** BMA Ch.10

This lecture discusses a company's and a project's costs of capital. We will start estimating the cost of capital for unlevered firms before we switch to levered firms. We also focus at certainty equivalents, and international risk during the lecture.

8. **Project Analysis, Relevant literature:** BMA Ch. 11, RWJJ Ch. 8

During this lecture we will focus on handling risk as part of the capital investment process by means of sensitivity analysis, scenario analysis, break even analysis, and Monte Carlo simulation. We will also learn to evaluate real options of an investment project using decision trees.

9. **Investment, Strategy, and Economic Rents, Relevant Literature:** BMA, ch. 12

So far we assumed that good projects are positive NPV projects. However, we argue that in a competitive market excess profits are zero, which implies that there are no positive NPV projects. This lecture discusses the source of positive NPV projects. We will learn how market values help up to improve out NPV estimates. We will also discuss Economic Rents and Competitive Advantage in more detail.

10. **Market Efficiency, Relevant Literature:** BMA, ch. 14

The main purpose of this lecture is to introduce the efficient market hypothesis to students. In the previous lectures we implicitly assumed that markets are efficient. In this lecture we will present evidence in favor of and against the efficient market hypothesis.