

# Introduction to Finance and Methods of Quantitative Analysis

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## Learning Objectives

Many people have good business ideas, but these people don't always have enough money to put their ideas into reality. Similarly, many people worry about saving enough to fund themselves through retirement. Financial markets exist as a way to resolve these problems. At its heart, finance is about the flow of funds between people with money and people with ideas. For this reason, the financial system is the engine of innovation and economic prosperity. However, finance also has a dark side: Financial crises are frequent, and have the power to paralyse the entire economy.

This course will teach you the most important analytical and statistical tools that are used to make financial decisions in practice. At the same time, you will learn to *critically* evaluate these tools and their relationship to the dark side of finance. In the lectures, we will focus on the following topics:

1. *Saving*: How do people with money choose which assets to purchase? What measures help us distinguish a good company from a bad one? How do we value assets such as stocks and shares?
2. *Investment*: How do firms decide which ideas are worth investing in? How do their choices of investment project affect the value of the firm?
3. *Financial Crises*: What can cause the financial system to fail? Is there anything regulators can do to reduce these risks without harming the financial system in good times?

## Why should I take this course?

The course offers an intuitive introduction to the world of finance. While students considering a future career in a financial institution will find the course a useful investment, it is also intended for those who are interested in the (huge) impact finance has on the economic and political world we live in, and who want to be able to fluently speak and read about financial issues.

This course is about developing the core tools, techniques and critical thinking. We will frequently learn to apply these tools to address real-life issues through high profile examples such as the 2007-08 financial crisis and other worked exercises.

## Course Format

There will be 12 lectures and 8 support classes. Both lectures and classes will be interactive. Classes will focus on group exercises, during which students work in teams to apply concepts from the lecture to real-world financial data.

The preliminary schedule of lectures is as follows:

Lecture 1: Overview of the financial system, key players and markets. Preview of the course.

Lecture 2: Introduction to financial analysis - What makes a profitable company?

Lectures 3-8: Saving

- Interest rates & the time value of money
- Concepts of risk & return
- Bond and equity valuation
- The Capital Asset Pricing Model, diversification and portfolio choice

#### Lectures 9-10: Investment

- The Net Present Value Rule
- Investment and the value of the firm
- The role of uncertainty

#### Lectures 11-12: Financial Crises

- How are financial crises caused?
- What are the consequences of a financial crisis?
- The 2007-08 crisis
- What can regulation and supervision achieve?

### Prerequisites

No prior knowledge of economics or finance will be assumed. As for numerical techniques, you should be comfortable manipulating basic mathematical equations. Basic knowledge of calculus and probability will be an advantage, but is not absolutely necessary.

For the group exercises in seminars, students should have working computers (PC or Mac) with internet access and Excel.

### Assessment

Examination 45%

Essay (2000 words) 45%

Participation 10%

Students are free to choose their own essay topics, as long as they are related to the lectures. Essays can be quantitative exercises, pieces of economic and financial analysis or investigative journalism. Feedback on essays in progress will be given during seminars.

### Readings

The lectures aim to be self-contained. Useful readings to supplement the course are:

1. **Berk & De Marzo, *Corporate Finance*, Pearson**
2. **Bodie, Kane and Marcus, *Investments and Portfolio Management*, McGraw-Hill.**
3. **Blinder, *After the Music Stopped: The Financial Crisis, the Response, and the Work Ahead*, Penguin.**
4. **Admati & Hellwig, *The Bankers' New Clothes: What's Wrong with Banking and What to Do About It*, Princeton.**