

EC4024 Financial Economics

Course Outline

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1 Introduction

Finance is the applied wing of economics. This course is about introducing students to the economics of finance via the study of several canonical models.

1.1 Overview of the course

We will begin with data. First, we'll describe the categories within which financially important variables exist, and develop ways to encapsulate them using simple statistics drawn from the study of simple probability distributions. We will develop graphical tools to analyse market movements in the lectures. Then we will move on to the study of financial history, to show the influence of uncertainty and 'Black Swans' on the markets, and to help you understand just how little we as economists really know about the markets and how they move. We will develop three simple but flawed models used to benchmark markets to round out the course, which every person interested in finance must know, as these models begin many of the conversations one might have about a stock or a bond. Then we will pull these models apart, so you know more than most leaving a course like this at the undergraduate level. If you work hard and do well in this course, you'll have learned

- How to read the financial pages
- What a stock, bond, or any risky asset is, and how to value it
- The economists' approach to decision making under uncertainty
- The canonical models of finance: CAPM, APT, and Black-Scholes
- Elementary probability theory and data analysis
- Episodes in financial history.
- The structure of the international financial system.

This course is roughly designed around the following statements inspired by [Mandelbrot and Hudson \(2004\)](#). The course will expand upon each of them as we go through the lectures.

1. Markets are Turbulent;
2. Markets are very, very risky—more risky than most theories imagine;

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3. Timing in Markets Matters greatly. Big gains and losses, as we shall see, are concentrated in short spaces of time;
4. Prices often leap, they do not glide. There are thresholds to risky portfolios held;
5. In markets, time is flexible;
6. Markets in all places, and at all times, are alike;
7. Markets are inherently uncertain, and bubbles are inevitable;
8. Markets are deceptive;
9. Forecasting prices is perilous, but you can forecast the odds of future volatility;
10. In financial markets, the idea of ‘value’ has limited value.

2 Lecture materials

All the lecture notes, programs, data, handouts and podcasts of the lectures will be available *after* the lecture from www.stephenkinsella.net. Just click on the course page (EC4024) to access these materials.

There is a course pack of readings available for download from the site. These are required readings I’ve put together for you to make things a little easier on you.

The textbook for the course is [Pilbeam \(2005\)](#), Finance and Financial Markets. There are copies on order in the bookshop.

There will also be lecture notes, handouts, and exercises distributed throughout the module.

3 Grading policy

To get a grade for this course, you will need to complete two problem sets, due in at the end of weeks 4 and 8, respectively, worth 10% each. A midterm (MT), in class exam will count for 30%, and you’ll do a final exam (FT) worth 50%. So the formula for a grade for each student, i , will be

$$\text{Grade}_i = \max(0.1(\text{PS1}) + 0.1(\text{PS2}) + 0.3(\text{MT}) + 0.5(\text{FT}) \quad \text{or Fail}) \quad (1)$$

Problem sets must be hand written, include the student’s name and student number, and be handed into the department office, EMO23, by 3pm for each due date. Copying or cheating will result in disciplinary procedures.

There will be a sample exam available from week 10. The final exam will cover everything contained in the course after the midterm.

3.1 Mini presentations

Throughout the class, we’ll be doing ‘mini presentations’ on concepts and definitions. You’ll be chosen at random to work in groups of 2 to come up with a definition of a concept, say, standard deviation, and a numerical example. You’ll have 5 minutes to present this in class. Mini presentations will start in week 2. If you do *not* want to be called as a volunteer, send me an email saying so.

4 Learning objectives

- To help students understand the building blocks of modern financial economics, both in the context of full information market economies and non-market contractual relationships.
- To overview the main theoretical and empirical developments in order to analyse the way in which firms make financial decisions and how such decisions are likely to affect performance.
- To overview the main theoretical and empirical developments in explaining the behaviour of stock prices within auction and dealership markets, developing student awareness of the important issues in market microstructure.

5 Contact Details

Office is AM068b, number is 061-23-3611. Office hours 9–11 on Fridays in term. Email me for an appointment at stephen.kinsella@ul.ie. If you don't receive a reply email in 24 hours, your email has gone into my spam filter. Resend it. Also, don't write me an email like a text message, I won't reply to it.

6 Lecture Outline

Lecture 1, Jan 28 Introduction to the course. Readings: None

Lecture 2, Jan 31 Data and Terminology. Readings: None

Lecture 3, Feb 4 Market Structure in Finance. Readings: Pilbeam, Chapter 1.

Lecture 4, Feb 7 Probability and Statistics in Finance. Reading: Cowles (1933), in coursepack.

Lecture 5, Feb 11 Probability and Statistics in Finance 2. Reading: Lecture Notes.

Lecture 6, Feb 14 Probability and Statistics in Finance 3. Reading: Lecture Notes.

Lecture 7, Feb 18 Uncertainty, Risk, and Historical Finance. Reading: Taleb, Fooled by Randomness, Chapter 1, Simon (1978), in course pack.

Lecture 8, Feb 21 Choice under uncertainty, discounting, and risk aversion. Reading: Pilbeam, Chapter 7.

Lecture 9, Feb 25 Portfolio Analysis. Reading: Pilbeam, Chapter 7.

Lecture 10, Feb 28 Portfolio Analysis 2. Reading: Pilbeam, Chapter 7.

Lecture 11, Mar 3 Capital Asset Pricing Model. Reading: Pilbeam, Chapter 8, Perold (2004), Sharpe, (1964) in coursepack.

Lecture 12, Mar 6 Equities, Arbitrage Pricing Theory, and the Efficient Markets Hypothesis. Reading: Pilbeam, Chapter 8, Lo (2004), in coursepack

Lecture 13, Mar 10 The Adaptive Markets Hypothesis. Reading: Lo (2004), in coursepack.

Lecture 14, Mar 13 Midterm.

Lecture 15, Mar 27 Domestic and International Money Markets. Reading:

Lecture 16, Apr 10 Options: description. Reading: Pilbeam, Chapter 14, Liebowitz, (2005), in coursepack.

Lecture 17, Apr 14 Options: pricing. Reading: Pilbeam, Chapter 15.

Lecture 18, Apr 17 Options: pricing 2. Reading: Pilbeam, Chapter 15, and Taleb and Haug, (2008), in coursepack.

Lecture 19, Apr 21 Behavioural Finance 1. Reading: Kahneman, (2003), Ritter, (2003), in coursepack.

Lecture 20, Apr 24 Behavioural Finance 2. Reading: Shiller, (2007), in coursepack

References

Benoit Mandelbrot and Richard L. Hudson. *The (Mis)Behaviour of Markets*. Basic Books, 2004.

Keith Pilbeam. *Finance Financial Markets*. Palgrave-Macmillan, 2nd edition, 2005.