Foundations of Financial Economics: 2023-2024
Masters in Economics and Monetary and Financial Economics
Universidade de Lisboa, ISEG

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Organization

Instructor: Paulo Brito
Schedule: Fridays (between February 16th and May 17th) 18h-21h
Room: 118 (F1)
Office hours: Fridays (between February 16th and May 17th) 11-12h (upon confirmation).

Overview

This is an introductory course on general equilibrium asset pricing theory.
It aims to provide foundations at an introductory level on:

- the microeconomics of intertemporal choice by households in deterministic and stochastic settings;

- general equilibrium in deterministic and stochastic environments;

- the endogenous determination of interest rates, asset prices and returns in the aggregate economy;

- more advanced topics in macro-finance: financial frictions, heterogeneity and inequality.

In particular, we will be interested in understanding the behavior of some variables, according to present state of the economic theory,

- the safe interest rate;

- the rate of return of risky assets, including housing;

- the risk premia.

and on the puzzles involved when confronting that theory with empirical stylized facts.

Pre-requisites

I will assume that students have a working knowledge, at the BA level, of calculus, static optimization, probability, and microeconomic theory.

Assessment

We have to comply with ISEG's assessment rules, meaning there will be one Exam (on June 5th) and one Re-sit exam (on June 25th), and for some students a Special exam (in September).

There will also be a total of 4 quizzes, approximately one every three weeks. Students are free to choose the quizzes they want to do. They will take place in class. The time allowed for each quiz is 30 minutes. Each quiz has questions about the material covered in class after the preceding quiz. Each quiz counts 8%, towards the final grade, if its grade is equal or higher then 10.

Therefore, there are two options for the final assessment in the course:

1. just the grade in the first exam, or the re-sit exam,

2. a weighted average of grades in quizzes and in the final exam. If the average grade on the quizzes, on which the grade has been equal or larger than 10, is denoted by x then the final grade is equal to $x \times (n \times 8\%) + y \times (100\% - n \times 8\%)$, where n is the number of quizzes done having a grade equal or larger than 10, and y is the grade in the final exam.

All the quizzes and exams will be closed book assessments (done in class).[1]

Program

1 Introduction

2 Revision of utility theory

3 The household problem in a two-period deterministic setting

4 Two period dynamic deterministic general equilibrium (DDGE) and asset pricing

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[1]They follow the ISEG rules concerning un-ethical behavior.

5 Contingent goods and choice under uncertainty

6 The household problem in a two-period stochastic setting

7 Two period dynamic stochastic general equilibrium (DSGE): simultaneous case

  7.1 Environment, contracts, markets and models

  7.2 Arrow-Debreu equilibrium for an exchange economy

8 Financial markets and the arbitrage pricing theory

9 Two period DSGE and asset pricing in exchange finance economies:

10 Two period SGE models: extensions

  10.1 Production economies

  10.2 Heterogeneous agents

11 Two period SGE models: frictions

  11.1 Limited participation

  11.2 Housing

  11.3 Moral hazard

12 Multi-period period DSGE:

Study material

At least, two types of material will be provided in the dedicated Fenix page:

1. slides covering all topics

2. problem sets (with some solutions)

Disclaimer: the slides, and the problem sets will be posted before the class but can be modified afterwards. The final version will be posted before the 24th May. Please check the date of each document.

Bibliography

Every slide contains specific references. But general references covering the material in this course are:

- Closer to this course: Lengwiler (2004), LeRoy and Werner (2014);

- On the economics of uncertainty and information: Bikhchandani et al. (2013);

- Contains most topics of this course, but at a more advanced level: Altug and Labadie (2008), and Campbell (2018)

Some sites containing useful material

Financial historical data

- Very long run trends in interest rates: XIV-XXI centuries

- Macro-financial historical data

- Historical financial statistics

Some Papers with useful information

- The rate of return: 1870-2015

- The total risk puzzle

- Historical wealth

Recent financial data

- Macro-financial history

- Financial crises and productivity

- OECD, long-term interest rates

- long-run trends in real interest rates

- World inequality database

Data

- The Case-Shiller index
- Policy uncertainty around the world
- Eurostat-interest rates
- Penn World Table, Maddison Historical Statistics and more

References

Altug, S. and Labadie, P. (2008). *Asset pricing for dynamic economies*. Cambridge University Press.

Bikhchandani, S., Hirshleifer, J., and Riley, J. G. (2013). *The analytics of uncertainty and Information*. Cambrdge University Press, 2nd edition.

Campbell, J. Y. (2018). *Financial Decisions and Markets: A Course in Asset Pricing*. Princeton University Press.

Lengwiler, Y. (2004). *Microfoundations of Financial Economics*. Princeton Series in Finance. Princeton University Press.

LeRoy, S. F. and Werner, J. (2014). *Principles of Financial Economics*. Cambridge University Press, Cambridge and New York, second edition.