1 Introduction and Administrative Issues

We meet on Tuesday from 2 p.m. to 4 p.m. in room 624. We might have to schedule an extra day for extra classes, but we shall do this later on as the course develops if we need to.

The aim of this course is to teach Asset Pricing and Corporate Finance in the context of general equilibrium models. While this is not the standard approach of the discipline, it has the advantage of facilitating a coherent understanding of finance in its asset pricing and corporate finance manifestations. Furthermore, this approach is consistent and related to the practice of macroeconomics. Finally, this is the approach I follow in my Micro I - General Equilibrium course in the first year and hence the two classes fit nicely.

Besides providing an introduction to Financial Economics, this course has therefore also the ambition of suggesting a useful approach to theoretical and empirical research in the field, as a topics course.

Consequently, grading will be based mostly on homework and on a short class presentation. I will distribute homework problems, some straightforward, some challenging, and a few breaking new ground. I will also schedule some student presentations to the class, whose topic is to be agreed upon with me and with the class and should consist of a survey of interesting material not covered in the lectures.

2 SYLLABUS

We will first (very quickly) review two-period economies, an environment in which concepts can be defined and results proved with minimal notation. We will then study infinite horizon economies, the typical workhorse in finance and
macroeconomics. In the context of infinite horizon economies we will study exchange economies without commitment and with asymmetric information: these economies are rapidly becoming the frontier in macroeconomics. Finally, we shall also study production economies without commitment and with asymmetric information. While not much studied yet, these are the natural environments to integrate asset pricing and corporate finance.

There is no book for the course, just because one does not exist. I will distribute class notes and more detailed reading lists for some of the topics.

However, I will often use and refer to:


Other useful references are:


for asset pricing; and


for corporate finance.


### 2.1 General Equilibrium Foundations: 2-Period Exchange Economies

This part of the course could constitute a short self-contained course on classical general equilibrium theory with complete and incomplete financial markets. It stresses, models, issues, and results which are of foundational interest for macro and finance applications. This is material I cover in Micro I - General Equilibrium.

A list of topics include:

Definition of competitive equilibria
From Arrow-Debreu economies to financial economies: Arrow’s Theorem

Budget separation Theorems

Representative agent Theorems

No-Arbitrage Theorem - complete and incomplete markets

Welfare Theorems - complete and incomplete markets

From general equilibrium to finance: Mean variance, Hansen-Jagannathan bounds, CAPM, factor pricing, transaction costs, etc.

In this section we shall also study two period economies with lack of commitment and asymmetric information. When agents are endowed with asymmetric information or lack of commitment, insurance markets operate with frictions. In this part of the course we study various properties of competitive equilibria of such economies. Since in these context even how to define competitive equilibria is not straightforward, we shall first study two-period economies. A list of the topics includes:

Arrow-Debreu equilibrium and efficiency in exchange two-period economies: moral hazard, adverse selection, exclusive contracts;

Arrow-Debreu equilibrium and efficiency in exchange two-period economies: moral hazard, adverse selection, non-exclusive contracts;

Economies with bankruptcy and collateral.

I will assume you are familiar with the content of the notes I distributed for Micro I - General Equilibrium, which you can find in my webpage:


The notes contain ample references to the sources. Also, they draw extensively from Cochrane’s book,


In particular, the material on classical finance (Mean variance, Hansen-Jagannathan bounds, CAPM, factor pricing) is taken from Cochrane (2001, ch. 5 and 6). The material on commitment problems and asymmetric information is mainly based on the following original references which are therefore suggested readings:


2.2 General Equilibrium Foundations: 2-Period Production Economies

This part of the course will constitute a short self-contained course on production in general equilibrium. While production is not usually part of asset pricing theory, it is necessary to integrate asset pricing and corporate finance as we intend to do. We will stress issues and results which do not appear in exchange economies.

Objective function of the firm - complete and incomplete markets

Production and financing decisions of firms: Modigliani-Miller Theorem

Once again, I will assume you are familiar with the content of the notes I distributed for Micro I - General Equilibrium, which you can find in my webpage:


The notes contain ample references to the sources:


2.3 General Equilibrium Foundations: Infinite-Horizon Economies

In this part of the course we will extend (or indicate how to extend, when straightforward) the models, issues, and results we have studied for 2-period economies. We will also address new topics which arise in infinite-horizon; in particular,

Recursive competitive equilibria

Bubbles (in economies with perfect information)

Bewley models

Conditioning information and asset prices

Once more (this is the last time, I promise) I will assume you are familiar with the content of the notes I distributed for Micro I - General Equilibrium, which you can find in my webpage:


Good survey presentations of the some of the material are:


G.L. Violante, ‘Class notes,’ mimeo, NYU.

Being closer to the research frontier, however, lecture notes are no substitute for the original references. In particular, suggested readings include:


### 2.4 Topics

At this point we shall read and present in class several classic papers, organized into different topics.

#### 2.4.1 Is market incompleteness relevant for equilibrium prices and allocations and for agents’ welfare?

Or, Do dynamic portfolio strategies (e.g., self-insurance via a capital buffer) allow agents to approximately replicate complete market equilibrium allocations?


2.4.2 Commitment problems and asymmetric information


2.4.3 Default and collateral


2.4.4 Production


M-G. Angeletos (2005), Uninsured Idiosyncratic Investment Risk and Aggregate Saving, MIT, mimeo.


2.4.5 How incomplete are financial markets in fact?


2.4.6 Equilibrium corporate finance


2.4.7 Housing


2.4.8 Non-revealing prices


2.4.9 Financial innovation


2.4.10 Bubbles, Crashes, and other horrible things

Infinite horizon models with asymmetric information (and other sorts of frictions - including behavioral ones) are also the natural environment to study bubbles. This is a major topic in itself. Fundamental reading are:

We shall study:


N. Kocherlakota (2009): ‘Bursting bubbles: Consequences and cures,’ mimeo, IMF.


