

Economics 751.01
Macroeconomic Theory II
Spring 2007

Part I: Asset Markets and Business Cycle Models

Lectures:

Monday and Wednesday, 10 am – 12 pm; 21 Campanella Way, Room 429

Fabio Ghironi

21 Campanella Way, Room 473

Tel: 617-552-3686

E-mail: Fabio.Ghironi@bc.edu

Web page: <http://www2.bc.edu/~ghironi>

Office Hours: Wednesday, 3:30 – 5:30 pm, and by appointment

Teaching Assistant: Geoffrey Sanzenbacher

E-mail: Geoffrey.Sanzenbacher.1@bc.edu

Office Hours: TBA

Discussion Sessions: TBA

Description:

This part of the course will focus on the consequences of uncertainty and unexpected shocks for the economy. We will first analyze the implications of various asset market structures for consumption and asset pricing. The main purpose will be to understand how agents use trade in assets to protect themselves from uncertainty. We will then study dynamic, stochastic, general equilibrium models of the business cycle that rely on different assumptions about the asset menu available to agents and the structure of labor markets. We will discuss asset pricing implications of business cycle models and the consequences of monopoly power in the market for goods. Time permitting, we will conclude by analyzing the transmission of unexpected shocks in a two-country (or two-region) model of macroeconomic interdependence. Our goals will be: (1) To understand the general principles by which models are formulated and the techniques by which they are solved. (2) To understand how the models can be evaluated according to their ability to account for and explain economic data.

Materials:

I will post lecture notes and slides in my web page. The required textbook for this part of the course is:

Ljungqvist, Lars, and Thomas J. Sargent, 2004: *Recursive Macroeconomic Theory*, Second Edition, Cambridge: MIT Press (LS2004 in what follows). Chapter 1 of this book should be your first reading. You should then read it again at the end of my lectures.

Two recommended books are:

Cooley, Thomas F. (ed.), 1995: *Frontiers of Business Cycle Research*, Princeton: Princeton University Press.

Sargent, Thomas J., 1987: *Dynamic Macroeconomic Theory*, Cambridge: Harvard University Press.

I will recommend some chapters from Cooley's book below, referring to it as C1995. The Sargent 1987 book presents some material in LS2004 using a different notation, which some of you may find helpful. Finally, some required or recommended papers are listed below.

Background Readings:

I will assume familiarity with some time series concepts, difference equations manipulation and solution, and dynamic programming. Chapters 2-5 of LS2004 would be excellent background readings. When necessary, I will recall definitions and results from these chapters in lecture. On difference equations, see also Chapter 9 of Thomas J. Sargent's *Macroeconomic Theory* (second edition, San Diego: Academic Press, 1987). The Supplements to Chapter 2 (pp. 715-741) of Maurice Obstfeld and Kenneth Rogoff's *Foundations of International Macroeconomics* (Cambridge: MIT Press, 1996) are an alternative reference on optimization and solution of difference equations. Part of the material in Chapters 2 and 3 of C1995 will be covered in lecture or in the discussion sessions led by the teaching assistant.

If you have not read it before, you definitely must read Blanchard, Olivier J., and Charles M. Kahn (1980): "The Solution of Linear Difference Models under Rational Expectations," *Econometrica* 48: 1305-1311.

Requirements and Grading:

There will be four problem sets and an in-class closed-books exam. Problem sets and exam will be graded on a scale 0-100. Your grade for Part 1 will be a weighted average of your average problem set grade and the exam grade. The problem set average will count for 25 percent of the overall grade and the exam will count for 75 percent. Detailed answers to problem sets will be made available by the teaching assistant.

Academic Integrity:

Academic integrity is central to the mission of higher education. Observe the highest standards of academic integrity in this course. Review the standards and procedures that are published in the university catalog and on the web, at:

<http://www.bc.edu/offices/stserv/academic/resources/policy/#integrity>

Make sure that the work you submit is in accordance with university policies. If you have any questions, please consult with me. Violations will be reported to the Deans' Office and reviewed by the College's Committee on Academic Integrity. This could result in failing the course or even more severe sanctions.

Topics and References:

A. Asset Markets and Consumption:

1. Competitive Equilibrium with Complete Markets, LS2004, Chapter 8.
2. Asset Pricing and Consumption, LS2004, Chapter 13.
3. Self-Insurance and Incomplete Markets Models, LS2004, Chapters 16 and 17.

B. (Real) Business Cycle Analysis:

1. Economic Growth and Business Cycles: C1995, Chapter 1 (recommended).
2. The Basic Real Business Cycle Model:
 - Campbell, John (1994): "Inspecting the Mechanism: An Analytical Approach to the Stochastic Growth Model," *Journal of Monetary Economics* 33: 463-506 (required).
 - Uhlig, Harald (1999): "A Toolkit for Analyzing Nonlinear Dynamic Stochastic Models Easily," in R. Marimon and A. Scott (eds.), *Computational Methods for the Study of Dynamic Economies*, 30- 61, Oxford: Oxford University Press (required). (Text and Matlab codes available at: <http://www.wiwi.hu-berlin.de/wpol/html/toolkit.htm>)

I also recommend the following papers:

- King, Robert G., Charles I. Plosser, and Sergio T. Rebelo (1988a): "Production, Growth, and Business Cycles (I): The Basic Neoclassical Model," *Journal of Monetary Economics* 21: 195-232.
 - King, Robert G., Charles I. Plosser, and Sergio T. Rebelo (1988b): "Production, Growth, and Business Cycles (II): New Directions," *Journal of Monetary Economics* 21: 309-341. (This paper provides an excellent overview of new directions in business cycle research at the end of the 1980s.)
3. Business Cycles and Aggregate Labor Market Fluctuations: C1995, Chapter 5 (recommended).
 4. Unions and Unemployment: Maffezzoli, Marco (2001): "Non-Walrasian Labor Markets and Real Business Cycles," *Review of Economic Dynamics* 4: 860-892 (required).
 5. Asset Pricing Implications of Equilibrium Business Cycle Models: Lettau, Martin (2003): "Inspecting the Mechanism: The Determination of Asset Prices in the RBC Model," *The*

Economic Journal 113: 550-575. (Available at <http://pages.stern.nyu.edu/~mlettau/>, click on 'Research' and then 'Published Papers.')

On this topic, I recommend also C1995, Ch. 10 and the following papers:

- Boldrin, Michele, Lawrence J. Christiano, and Jonas D. M. Fisher (1995): "Asset Pricing Lessons for Modeling Business Cycles," NBER WP 5262. (Available at <http://papers.nber.org/papers/w5262>)
 - Cochrane, John H. (1991): "Production-Based Asset Pricing and the Link Between Stock Returns and Economic Fluctuations," *Journal of Finance* 46: 207-234.
 - Jermann, Urban (1998): "Asset Prices in Production Economies," *Journal of Monetary Economics* 41: 257-275.
6. The Real Business Cycle Model Revisited: Recursive Competitive Equilibria, LS2004, Chapter 12 (time permitting – I recommend you read this chapter even if we do not make it to cover it in class).
 7. Dynamic General Equilibrium Models with Imperfectly Competitive Product Markets: C1995, Chapter 9 (recommended).
 8. Asset Markets and the International (or Inter-Regional) Transmission of Shocks: Ghironi, Fabio (2006): "Macroeconomic Interdependence under Incomplete Markets," *Journal of International Economics* 70: 428-450.