

Economics 696G Advanced Macroeconomics/Monetary

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Office Hours: Tuesday, Thursday, 12:00 - 1:00 pm

Learning Objectives

This course covers various topics in monetary and macroeconomics. At the end of the semester, you should be able to: 1. Identify key issues and topics that are at the frontier of this subject. 2. Apply the tools you learned in this course, including general equilibrium analysis and numeric simulations, to your own projects. 3. Construct general equilibrium models to study various topics in monetary economics, such as the output effects of monetary policies, anticipated inflation, alternative monetary policy implementation, and monetary policy under agent learning.

Course Materials

A list of readings will be provided for each lecture on the class website on Blackboard. Most of the journal articles can be found in the library or at <http://www.jstor.org/>. We will also read and discuss materials from the following books:

1. Walsh, Carl E., 2003: *Monetary Theory and Policy*, second edition, Cambridge: MIT Press.
2. Evans, George, and Seppo Honkapohja, 2001: *Learning and Expectations in Macroeconomics*, Princeton University Press.
3. Woodford, Michael, 2003: *Interest and Prices: Foundations of a Theory of Monetary Policy*, Princeton University Press.

Class Activities and Grading

Grading is based on three parts of your performance:

1. Participation (15%). This includes attendance and presenting papers as required.
2. Computer Assignments (35%). I will assign a number of computer problem sets as the course progresses. Most of the assignments require you to solve monetary models with the computation methods developed in class. Hand in your computer codes as well as the results. The software that we are going to use is Matlab.
3. Final project (50%). The final project is a proposal or a preliminary version of an academic paper. Towards the end of the semester I will schedule each of you to present this project to class. Ideally this project will become part of your

dissertation or a serious research paper that you will complete in the near future. The final project should consist of the following:

- a. A description of the problem or issue that interests you, and a brief but concise review of the literature that is related to this topic. The topic is frequently brought up as a question. For example, does money cause output to fluctuate?
- b. A complete explanation of the creative idea that you have. The idea should be conducive to the understanding of the issue or to the solution of the problem you brought up in part a.
- c. Find an existing published paper as your basis of analysis. Your paper is going to be an extension of this paper. Before extending it, make sure you completely replicate the result of this paper and hand it in as part of your project.
- d. The final step is to implement the idea you have in part b. by extending the model you replicated in part c. I don't require you to get a complete final result for this section. Some preliminary results suffice. If the result meets your expectation, it is an indication of a successful paper. If it does not, analyze why it fails.
- e. The topic of the project needs to be approved by the instructor before April. To find an interesting topic, check [the reading list](#) of this course on the class website. If you cannot find a good topic, I will consider assigning a topic to you.

Reading List

The list will be updated every week on the class website. The list below is a preliminary one.

Background paper "[Monetary Policy Comes of Age: A 20th Century Odyssey.](#)"

1. Empirical Evidence on Money and Output

Chapter 1 of Walsh (2003)

Lecture notes on VAR analysis

Cochrane, John H. (1998): "[What Do the VARs Mean? Measuring the Output Effects of Monetary Policy,](#)" *Journal of Monetary Economics* 41: 277-300.

Lucas, Robert E. (1996), "Nobel Lecture: Monetary Neutrality," *Journal of Political Economy*, Vol. 104, no 4.

Leeper, Eric M., Christopher A. Sims, and Tao Zha (1996): "[What Does Monetary Policy Do?](#)" *Brookings Papers on Economic Activity* 2: 1-63 (with Ben S. Bernanke's discussion, pp. 69-73; link: C.A. Sims' web page).

Sims, Christopher A. (1992): "Interpreting the Macroeconomic Time Series Facts: The Effects of Monetary Policy," *European Economic Review* 36: 975-1000.

2. Dynamic General Equilibrium Models without Money

Lecture notes on [Computing Dynamic General Equilibrium Models](#)

King G., C. Plosser and S. Rebelo (1988), "Production, Growth and Business Cycles I. The Basic Neoclassical Model," *Journal of Monetary Economics* 21, p 195 – 232.

King and Rebelo (1999), "[Resuscitating Real Business Cycles](#)," Working paper

Cochrane, John H. (2001), "[Solving real business cycle models by solving systems of first order conditions](#)."

King G. and Sergio T. Rebelo (1993), "[Transitional Dynamics and Economic Growth in the Neoclassical Model](#)," *The American Economic Review*, Vol. 83, No. 4. (Sep., 1993), pp. 908-931.

Cooley and E. Prescott (1995), "Economic Growth and Business Cycles," in Cooley, *Frontiers of Business Cycle Research*, Princeton University Press.

Campbell (1994), "Inspecting the Mechanism: An Analytical Approach to the Stochastic Growth Model," *Journal of Monetary Economics* 33, p 463 – 506.

3. Money in the Utility Function

Lecture notes on [computing the MIU model](#)

Chapter 2 of Walsh, Carl E. (2003): "Money in a General Equilibrium Framework."

Brock, William A. (1974): "[Money and Growth: The Case of Long-Run Perfect Foresight](#)," *International Economic Review* 15: 750-777 (link: JSTOR).

Friedman, Milton (1969): "The Optimum Quantity of Money," in Friedman, Milton (ed.), *The Optimum Quantity of Money and Other Essays*, Chicago: Aldine.

Sargent, Thomas J. (1987): *Dynamic Macroeconomic Theory*, Cambridge: Harvard University Press (chapters 4-7; see chapters 4 and 5 on MIUF and CIA models).

Sidrauski, Miguel (1967): "[Rational Choice and Patterns of Growth in a Monetary Economy](#)," *American Economic Review* 57: 534-544 (link: JSTOR).

4. Cash in Advance Models of Money

Walsh, Carl E. (2003): "Money and Transactions," Chapter 3

Lucas, Robert E., Jr., and Nancy L. Stokey (1987): "[Money and Interest in a Cash-in-advance Economy](#)," *Econometrica* 55: 491-514.

Svensson, Lars E. O. (1985): "[Money and Asset Prices in a Cash-in-Advance Economy](#)," *Journal of Political Economy* 93: 919-944.

Lucas, Robert E (1980), "Equilibrium in a Pure Currency Economy," *Economic Inquiry* 18, pp.203-220.

Alan Stockman (1981) "Anticipated Inflation and the Capital Stock in a Cash-in-Advance Economy," *Journal of Monetary Economics* 8, pp387-393.

Andrew Abel (1985) "Dynamic Behavior of Capital Accumulation in a Cash-in-Advance Model," *Journal of Monetary Economics* 16, pp. 55-71.

Thomas Cooley, and Gary Hansen (1989) "The Inflation Tax in a Real Business Cycle Model," *American Economic Review* 79, pp. 733-748.

Thomas Cooley, and Gary Hansen (1992) "Tax Distortions in a Neoclassical Monetary Economy," *Journal of Economic Theory* 58, pp. 290-316.

5. Money and Output in the Short-Run: Sticky Prices

Walsh, Carl E. (2003): "Money and Output in the Short-Run," Chapter 5.

Calvo, Guillermo A. (1983): "Staggered Prices in a Utility Maximizing Framework," *Journal of Monetary Economics* 12: 383-398.

Caplin, Andrew, and John Leahy (1991): "State-Dependent Pricing and the Dynamics of Money and Output," *Quarterly Journal of Economics* 106: 683-708.

Chari, V. V., Patrick J. Kehoe, and Ellen R. McGrattan (2000): "[Sticky price Models of the Business Cycle: Can the Contract Multiplier Solve the Persistence Problem?](#)" *Econometrica* 68: 1151-1179 (link: Federal Reserve Bank of Minneapolis Staff Report version).

Goodfriend, Marvin S., and Robert G. King (1997): "[The New Neoclassical Synthesis and the Role of Monetary Policy](#)," in Ben S. Bernanke and Julio J. Rotemberg (eds.), *NBER Macroeconomics Annual 1997*, Cambridge: MIT Press (with Olivier J. Blanchard's comments; link: Federal Reserve of Richmond WP version).

Ireland, Peter N. (2000): "[Money's Role in the Monetary Business Cycle](#)," Boston College Economics Department WP 458. [More notes](#).

Ireland, Peter N. (2001): "[Sticky-Price Models of the Business Cycle: Specification and Stability](#)," *Journal of Monetary Economics* 47: 3-18 (link: BC WP version).

Ireland, Peter N. (2001): "[Endogenous Money or Sticky Prices?](#)," Boston College Economics Department WP 499.

Rotemberg, Julio J. (1982): "Monopolistic Price Adjustment and Aggregate Output," *Review of Economic Studies* 49: 517-531.

6. Monetary Policy Rules in the New Keynesian Model

Walsh, Carl E. (2003), "Policy Analysis in New Keynesian Models," Chapter 11.

Clarida, Richard, Jordi Galí, and Mark Gertler (1999): "[The Science of Monetary Policy: A New Keynesian Perspective](#)," *Journal of Economic Literature* 37: 1661-1707 (link: M. Gertler's web page).

7. Learning and E-stability of Monetary Policies

"**Introduction to Techniques**," Chapter 2 of *Learning and Expectations in Macroeconomics*, Evans and Honkapohjia (2001).

Bullard and Mitra (2002), "Learning about Monetary Policy Rules," *Journal of Monetary Economics* 49, No. 6.

Evans and Honkapohja (2002), "[Adaptive Learning and Monetary Policy Design](#)."