

12M014

3 ECTS

Monetary Policy

Overview and Objectives

The lectures will provide an overview of the literature on monetary aspects of the business cycle, with a special emphasis on optimizing sticky price models and their implications for monetary policy. We will cover both the main theoretical models and relevant empirical evidence. Lecture notes and problem sets will be handed out during the course. The list of topics covered, together with a basic reading list is provided below, with key articles or book chapters marked with an asterisk. Evaluation will be based on a take-home exam at the end of the course.

Course Outline

Sessions 1 and 2: A Classical Monetary Model

Households. Firms. Equilibrium. Neutrality. Monetary policy rules and price level determination. Sources of non-neutrality. Optimal monetary policy.

Sessions 4, 5 and 6: The Basic New Keynesian Model

Motivation and evidence. The basic New Keynesian model. The New Keynesian Phillips curve. Evidence on inflation dynamics. The output gap and the natural rate of interest. The effects of monetary policy shocks. The effects of technology shocks.

Session 6 and 7: Monetary Policy Design in the Baseline Model

A benchmark case. Optimal monetary policy and its implementation. The Taylor principle. Simple monetary policy rules. Second order approximation to welfare losses. Evidence on monetary policy rules.

Sessions 8, 9 and 10: Extensions of the Baseline Model and their Implications for Monetary Policy

Cost-push shocks. Nominal wage rigidities. Open Economy. Recent developments.

Evaluation

Final exam (100%)

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Materials

The main textbook for the course is:

Galí, Jordi (2008): *Monetary Policy, Inflation and the Business Cycle. An Introduction to the New Keynesian Framework*, Princeton University Press (Princeton, NJ).

An excellent, but more advanced textbook is:

Woodford, Michael (2003): *Interest and Prices: Foundations of a Theory of Monetary Policy*, Princeton University Press (Princeton, NJ).

A third textbook covering a wider range of topics on monetary economics is:

Walsh, Carl E. (2010): *Monetary Theory and Policy*, Third Edition, MIT Press (Cambridge, MA)

Sessions 1 and 2: A Classical Monetary Model

(*) Galí, Jordi (2008), chapter 2.

Walsh, Carl E. (2010), chapter 2

Woodford, Michael (2003), chapters 1-2.

Cooley, Thomas F. and Gary D. Hansen (1995): "Money and the Business Cycle," in in T. Cooley ed.: *Frontiers of Business Cycle Research* (Princeton University Press).

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

Chari, V.V., and Patrick J. Kehoe (1999): "Optimal Fiscal and Monetary Policy," in in J.B. Taylor and M. Woodford eds., *Handbook of Macroeconomics*, volume 1C, 1671-1745.

Correia, Isabel, and Pedro Teles (1999): "The Optimal Inflation Tax," *Review of Economic Dynamics*, vol. 2, no.2 325-346.

Sessions 4, 5 and 6: The Basic New Keynesian Model

(*) Galí, Jordi (2008), chapters 1 and 3.

(*) Walsh, Carl E. (2003), chapters 1, 6 and 8.

Woodford, Michael (2003), chapter 4.

Christiano, Lawrence J., Martin Eichenbaum, and Charles L. Evans (1998): "Monetary Policy Shocks: What Have We Learned and to What End ?," in J.B. Taylor and M. Woodford eds., *Handbook of Macroeconomics*, volume 1A, 65-148. (also NBER WP 6400).

Romer, Christina, and David Romer (1989): "Does Monetary Policy Matter? A New Test in the Spirit of Friedman and Schwartz," *NBER Macroeconomics Annual*, 4, 121-170.

Peersman, Gert and Frank Smets (2003): "The Monetary Transmission Mechanism in the Euro Area: More Evidence from VAR Analysis," in Angeloni et al.

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(eds.) *Monetary Policy Transmission in the Euro Area*, Cambridge University Press, (also ECB WP no. 91).

Galí, Jordi (1992): "How Well Does the IS-LM Model Fit Postwar U.S. Data?," *Quarterly Journal of Economics* 709-738.

Bils, Mark and Peter J. Klenow (2004): "Some Evidence on the Importance of Sticky Prices," *Journal of Political Economy*, vol 112 (5), 947-985.

Dhyne, Emmanuel et al. (2006): "Price Changes in the Euro Area and the United States: Some Facts from Individual Consumer Price Data," *Journal of Economic Perspectives*, vol. 20, no. 2, 171-192.

Mackowiak, Bartosz and Frank Smets (2009): "On the Implications of Micro Price Data for Macroeconomic Models," in J. Fuhrer, Y. Kodrzycki, J. Little, and G. Olivei (eds.), *Understanding Inflation and the Implications for Monetary Policy: A Phillips Curve Retrospective*, MIT Press (Cambridge, MA).

Nakamura, Emi and Jón Steinsson (2008): "Five Facts about Prices: A Reevaluation of Menu Cost Models," *Quarterly Journal of Economics*, vol. CXXIII, issue 4, 1415-1464.

Fuhrer, Jeffrey C. and George R. Moore (1995): "Inflation Persistence", *Quarterly Journal of Economics*, No. 440, February, pp 127-159.

Altissimo, Filippo et al. (2006): "Sectoral and Aggregate Inflation Dynamics in the Euro Area," *Journal of the European Economic Association*, vol 4, issue 2-3, 585-593.

Benati, Luca (2008): "Investigating Inflation Persistence across Monetary Policy Regimes," *Quarterly Journal of Economics*, 123 (3), 1006-1060.

(*) Galí, Jordi and Mark Gertler (1998): "Inflation Dynamics: A Structural Econometric Analysis,"

Journal of Monetary Economics, vol 44, no. 2, 195-222.

Galí, Jordi, Mark Gertler, David López-Salido (2001): "European Inflation Dynamics," *European Economic Review* vol. 45, no. 7, 1237-1270.

Mankiw, N. Gregory and Ricardo Reis (2002): "Sticky Information vs. Sticky Prices: A Proposal to Replace the New Keynesian Phillips Curve," *Quarterly Journal of Economics*, vol. CXVII, issue 4, 1295-1328.

Special issue of the *Journal of Monetary Economics* on "The Econometrics of the Pricing Equation," September 2005.

Yun, Tack (1996): "Nominal Price Rigidity, Money Supply Endogeneity, and Business Cycles," *Journal of Monetary Economics* 37, 345-370.

King, Robert G., and Alexander L. Wolman (1996): "Inflation Targeting in a St. Louis Model of the 21st Century," *Federal Reserve Bank of St. Louis Review*, vol. 78, no. 3. (NBER WP #5507).

Galí, Jordi (1999): "Technology, Employment, and the Business Cycle: Do Technology Shocks Explain Aggregate Fluctuations?," *American Economic Review*, vol. 89, no. 1, 249-271.

Session 6 and 7: Monetary Policy Design in the Baseline Model

(*) Galí, Jordi (2008), chapter 4.

Woodford, Michael (2003), chapter 6.

Yun, Tack (2005): "Optimal Monetary Policy with Relative Price Distortions" *American Economic Review*, vol. 95, no. 1, 89-109

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Blanchard, Olivier and Charles Kahn (1980), "The Solution of Linear Difference Models under Rational Expectations", *Econometrica*, 48, 1305-1311

Bullard, James, and Kaushik Mitra (2002): "Learning About Monetary Policy Rules," *Journal of Monetary Economics*, vol. 49, no. 6, 1105-1130.

(*) Woodford, Michael (2001): "The Taylor Rule and Optimal Monetary Policy," *American Economic Review* 91(2): 232-237 (2001).

Rotemberg, Julio and Michael Woodford (1999): "Interest Rate Rules in an Estimated Sticky Price Model," in J.B. Taylor ed., *Monetary Policy Rules*, University of Chicago Press.

Clarida, Richard, Jordi Galí, and Mark Gertler (2000): "Monetary Policy Rules and Macroeconomic Stability: Evidence and Some Theory," *Quarterly Journal of Economics*, vol. 105, issue 1, 147-180.

(*) Taylor, John B. (1998): "An Historical Analysis of Monetary Policy Rules," in J.B. Taylor ed., *Monetary Policy Rules*, University of Chicago Press.

Orphanides, Athanasios (2003): "The Quest for Prosperity Without Inflation," *Journal of Monetary Economics* 50, 633-663

Sessions 8, 9 and 10: Extensions of the Baseline Model and their Implications for Monetary Policy

(*) Galí, Jordi (2008), chapters 5-7

Woodford, Michael (2003), chapters 6-8.

(*) Clarida, Richard, Jordi Galí, and Mark Gertler (1999): "The Science of Monetary Policy: A New Keynesian Perspective," *Journal of Economic Literature*, vol. 37, no. 4, 1661-1707.

(*) Erceg, Christopher J., Dale W. Henderson, and Andrew T. Levin (2000): "Optimal Monetary Policy with Staggered Wage and Price Contracts," *Journal of Monetary Economics* vol. 46, no. 2, 281-314.

Benigno, Gianluca, and Benigno, Pierpaolo (2003): "Price Stability in Open Economies," *Review of Economic Studies*, vol. 70, no. 4, 743-764.

(*) Galí, Jordi, and Tommaso Monacelli (2005): "Monetary Policy and Exchange Rate Volatility in a Small Open Economy," *Review of Economic Studies*, vol. 72, issue 3, 2005, 707-734.

Clarida, Richard, Jordi Galí, and Mark Gertler (2002): "A Simple Framework for International Monetary Policy Analysis," *Journal of Monetary Economics*, vol. 49, no. 5, 879-904.