

## BUSINESS CYCLES

Class Meets: M, W 8:00-9:20, Econ 300

Grading:

Homework	= 10% (check $\pm$ )
Midterm	= 30%
Final	= 60% (cumulative)

## SYLLABUS

Professor: Johannes Wieland

Email: [jfwieland@ucsd.edu](mailto:jfwieland@ucsd.edu)

Office: Econ 309

Office Hours: Tu 9am-10am, or by appointment.

TA: Nelson Lind

Email: [nrlind@ucsd.edu](mailto:nrlind@ucsd.edu)

Section time: TBA

Office: TBA

Office Hours: W 1pm-2:30pm, or by appointment.

Main textbooks:

David Romer, 2011. *Advanced Macroeconomics*. 4<sup>th</sup> edition. McGraw-Gill.

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

Recommended textbooks:

Carl Walsh, 2010. *Monetary Theory and Policy*. MIT Press.

Olivier Blanchard and Stanley Fischer. 1989. *Lectures on Macroeconomics*. MIT Press.

Michael Woodford, 2003. *Interest and Prices*. Princeton University Press.

# COURSE OUTLINE

Starred papers are required readings.

## Overview

- \*Romer, sections 5.1.
- Walsh, Chapter 1.
- \*Robert Lucas, 1977. "Understanding Business Cycles," *Carnegie-Rochester Conference Series on Public Policy* 5: 7-29.
- \*James Stock and Mark Watson, 1999. "Business Cycle Fluctuations in U.S. Macroeconomic Time Series," *Handbook of Macroeconomics*, Chapter 1.
- Robert Barsky and Jeffrey Miron, 1989. "The Seasonal Cycle and the Business Cycle," *Journal of Political Economy* 97 (3): 503-534.
- Milton Friedman and Anna Schwartz, *A Monetary History of the United States, 1867-1960*. Princeton University Press, 1963. (Especially ch. 7).
- James Stock and Mark Watson, 2002. "Has the business cycle changed and why?" *NBER Macroeconomics Annual* 2002, p 159

## A (very brief) History of Thought

- \*N Gregory Mankiw, 2006. "The Macroeconomist as Scientist and Engineer." *Journal of Economic Perspectives*, 20(4): 29-46.
- Robert E. Lucas Jr, "Econometric policy evaluation: A critique," *Carnegie-Rochester Conference Series on Public Policy*, Volume 1, 1976, Pages 19-46

## Competitive Equilibrium Business-Cycle Models

### A. Overview, Basic Issues, Log-Linearization

- \*Romer 5.2-5.7.
- \*Harold Uhlig, "A Toolkit for Analyzing Nonlinear Dynamic Stochastic Models Easily," in Marimon and Scott (eds.), *Computational Methods for the Study of Dynamic Economies*. Available at <http://www.wiwi.hu-berlin.de/wpol/html/toolkit/toolkit.pdf>
- \*Miles Kimball, 2004. Real Business Cycle Theory: A Semiparametric Approach, Chapter 10. Available at <http://www.umich.edu/~mkimball/Econ611/book-ec611-2004.pdf>
- Obstfeld and Rogoff, 7.4 (esp. 7.4.3).
- Olivier Blanchard and Charles Kahn, 1980. "The Solution of Linear Difference Models under Rational Expectations," *Econometrica* 48(5): 1305-1311.

### B. Complete Models and Calibration

- \*Romer, 5.8.
- \*Robert King, Charles Plosser and Sergio Rebelo, 1988. "Production, Growth and Business Cycles: I. The Basic Neoclassical Model," *Journal of Monetary Economics* 21 (2-3): 195-232.
- Robert King and Sergio Rebelo, 1999. "Resuscitating Real Business Cycles," *Handbook of Macroeconomics*, Chapter 14.

Thomas Cooley and Edward Prescott, 1995. "Economic Growth and Business Cycles," in Cooley, ed., *Frontiers of Business Cycle Research* (Princeton: Princeton University Press), Chapter 1.

#### C. Discussion and Evaluation

\*Romer, 5.10.

\*Timothy Cogley and James Nason, 1995. "Output Dynamics in Real-Business-Cycle Models," *American Economic Review* 85(3): 492-511.

\*Julio Rotemberg and Michael Woodford, 1996. "Real-Business-Cycle Models and the Forecastable Movements in Output, Hours, and Consumption," *American Economic Review* 86(1): 71-89.

Larry Summers, 1986. "Some Skeptical Observations on Real Business Cycle Theory." Federal Reserve Bank of Minneapolis Quarterly Review, Fall 1986.

Edward Prescott, 1986. "Response to a Skeptic" Federal Reserve Bank of Minneapolis Quarterly Review, Fall 1986.

Sergio Rebelo, 2005. "Real Business Cycle Models: Past, Present and Future," *Scandinavian Journal of Economics* 107(2): 217-238.

Charles Plosser, 1989. "Understanding Real Business Cycles," *Journal of Economic Perspectives* 3(3): 51-77.

N. Gregory Mankiw, 1989. "Real Business Cycles: A New Keynesian Perspective," *Journal of Economic Perspectives* 3(3): 79-90.

#### D. Variable Factor Utilization

\*Jeremy Greenwood, Zvi Hercowitz and Gregory W. Huffman, 1988. "Investment, Capacity Utilization, and the Real Business Cycle," *American Economic Review* 78(3): 402-417.

Craig Burnside and Martin Eichenbaum, 1996. "Factor-hoarding and the Propagation of Business-cycle Shocks," *American Economic Review* 86(5):1154 -1174.

#### E. RBC Models with Non-Neoclassical Features

\*Julio Rotemberg and Michael Woodford, 1995. "Dynamic General Equilibrium Models with Imperfectly Competitive Product Markets," in Cooley, ed., *Frontiers of Business Cycle Research*, Chapter 9. (Also available as NBER WP 4502).

\*Susanto Basu and John Fernald, 1997. "Returns to Scale in U.S. Production: Estimates and Implications," *Journal of Political Economy* 105(2): 249-283.

Marianne Baxter and Robert King, 1991. "Productive Externalities and the Business Cycle," unpublished manuscript. Available at <http://www.minneapolisfed.org/research/DP/DP53.pdf>

#### F. Macroeconomics and the Labor Market (time permitting)

\*Romer, 10.1-10.4, 10.6-10.9

\*Gary Hansen and Randall Wright, 1992. "The Labor Market in Real Business Cycle Theory," Federal Reserve Bank of Minneapolis Quarterly Review, Spring 1992.

Katharine Abraham and John Haltiwanger, 1995. "Real Wages and the Business Cycle," *Journal of Economic Literature* 33(3): 1215-1264.

Michelle Alexopoulos, 2004. "Unemployment and the Business Cycle," *Journal of Monetary Economics* 51(2): 277-298.

- Robert Hall, 2005. "Employment Fluctuations with Equilibrium Wage Stickiness," *American Economic Review* 95 (1): 50-65.
- Olivier Blanchard and Larry Katz, 1997. "What We Know and Do Not Know About the Natural Rate of Unemployment." *Journal of Economic Perspectives* 11(1): 51-72.

## **Monetary Business Cycles**

### A. Staggered Price Setting

- \*Romer, Chapters 6 and 7.
- \*Gali, Chapters 2 and 3.
- Woodford, Sections 3.1 and 3.2.
- Walsh, Chapters 6 and 8.
- \*Larry Ball and David Romer, 1990. "Real Rigidities and the Non-Neutrality of Money." *Review of Economic Studies* 57 (2): 183-203.
- \*Peter J. Klenow and Benjamin A. Malin, "Chapter 6 - Microeconomic Evidence on Price-Setting" in: Benjamin M. Friedman and Michael Woodford, Editor(s), *Handbook of Monetary Economics*, Elsevier, 2010, Volume 3, Pages 231-284.
- Miles Kimball, 1995. "The Quantitative Analytics of the Basic Neomonetarist Model," *Journal of Money, Credit and Banking* 27(4): 1241-1277.
- V.V. Chari, Pat Kehoe and Ellen McGrattan, 2000. "Sticky-Price Models of the Business Cycle: Can the Contract Multiplier Solve the Persistence Problem?" *Econometrica* 68(5): 1151-1179.

### B. Optimal policy and the zero bound

- \*Romer, Chapter 11.
- \*Gali, Chapter 4.
- Woodford, Sections 4.2, 6.1-6.2.
- Walsh, Chapters 8.4 and 11.
- \*Richard Clarida, Jordi Galí, and Mark Gertler, 2000. "Monetary policy rules and macroeconomic stability: evidence and some theory," *Quarterly Journal of Economics* 115, (1), 147-180.
- \*Gauti Eggertsson and Michael Woodford, 2003. "Zero bound on interest rates and optimal monetary policy," *Brookings Papers on Economic Activity*, (1), 139-233.
- Richard Clarida, Jordi Galí, and Mark Gertler, 1999. "The Science of Monetary Policy: A New Keynesian Perspective." *Journal of Economic Literature* 37 (4): 1661-1707.
- Marvyn King, 2005. "What Has Inflation Targeting Achieved?" in *The Inflation-Targeting Debate*, Ben Bernanke and Michael Woodford, eds., University of Chicago Press.
- Lars E.O. Svensson, 2010. "Chapter 22 - Inflation Targeting," in: Benjamin M. Friedman and Michael Woodford, Editor(s), *Handbook of Monetary Economics*, Elsevier, 2010, Volume 3, Pages 1237-1302.
- Laurence Ball, 2010. "Chapter 23 - The Performance of Alternative Monetary Regimes," in: Benjamin M. Friedman and Michael Woodford, Editor(s), *Handbook of Monetary Economics*, Elsevier, 2010, Volume 3, Pages 1303-1343.
- Paul Krugman, 1998. "It's Baaack: Japan's Slump and the Return of the Liquidity Trap," *Brookings Papers on Economic Activity*, 1998, (2), 137-205.
- Lawrence Christiano, Martin Eichenbaum, and Sergio Rebelo, 2011. "When is the Government Spending Multiplier Large?" *Journal of Political Economy* 119(1): 78-121

## Credit Cycles

- \* Ben Bernanke, Mark Gertler, and Simon Gilchrist, 1999. "The financial accelerator in a quantitative business cycle framework," *Handbook of Macroeconomics*, Chapter 21.
- \* Gauti B. Eggertsson and Paul Krugman, 2012. "Debt, Deleveraging, and the Liquidity Trap: A Fisher-Minsky-Koo Approach," *The Quarterly Journal of Economics*, 127 (3): 1469-1513
- Nobuhiro Kiyotaki and John Moore, 1997. "Credit cycles," *Journal of Political Economy* 105:211-248.
- Mark Gertler and Nobuhiro Kiyotaki, 2010. "Chapter 11 - Financial Intermediation and Credit Policy in Business Cycle Analysis," in: Benjamin M. Friedman and Michael Woodford, Editor(s), *Handbook of Monetary Economics*, Elsevier, 2010, Volume 3, Pages 547-599.
- Anil Kashyap and Jeremy Stein, 2000. "What Do A Million Observations on Banks Have To Say About the Monetary Transmission Mechanism?" *American Economic Review* 90(3): 407-428.

## Conditional model evaluation

### A. Monetary Shocks

Woodford Section 3.2-3.3 and Chapter 5

- \*Christina Romer and David Romer, 2004. "A new measure of monetary shocks: Derivation and implications," *American Economic Review* 94 (4): 1055-1084.
- \*Larry Christiano, Martin Eichenbaum, and Charles Evans, 2005. "Nominal Rigidities and the Dynamic Effects of a Shock to Monetary Policy," *Journal of Political Economy* 113 (1): 1-45.

### B. Technology and oil price shocks

- \*Jordi Gali, 1999. "Technology, Employment, and the Business Cycle: Do Technology Shocks Explain Aggregate Fluctuations?" *American Economic Review* 89: 249-271.
- \*Susanto Basu, John Fernald, and Miles Kimball, 2006. "Are Technology Improvements Contractionary?" *American Economic Review* 96 (5): 1418-1448.
- Paul Beaudry and Franck Portier, 2006. "Stock Prices, News, and Economic Fluctuations," *American Economic Review* 96 (4): 1293-1307.
- Jeremy Greenwood; Zvi Hercowitz; Per Krusell, 1997. "Long-Run Implications of Investment-Specific Technological Change," *American Economic Review* 87: 342-362.
- Kilian, Lutz 2008. "The Economic Effects of Energy Price Shocks." *Journal of Economic Literature* 46(4): 871-909.

### C. Fiscal shocks

- \*Romer, Sections 11.1-11.3
- \*Valerie Ramey and Matthew Shapiro, 1998. "Costly Capital Reallocation and the Effects of Government Spending," *Carnegie-Rochester Conference Series on Public Policy* 48, 145-194.
- \*Emi Nakamura and Jón Steinsson, 2013. "Fiscal Stimulus in a Monetary Union: Evidence from U.S. Regions," *American Economic Review*, 104(3), 753-792, March 2014.

- Christina Romer and David Romer, 2010. "The Macroeconomic Effects of Tax Changes: Estimates Based on a New Measure of Fiscal Shocks," *American Economic Review* 100(3): 763-801.
- Valerie Ramey, 2011. "Can Government Purchases Stimulate the Economy?" *Journal of Economic Literature* 49(3): 673–685.
- Parker, Jonathan A. 2011. "On Measuring the Effects of Fiscal Policy in Recessions." *Journal of Economic Literature*, 49(3): 703–718.
- Olivier Blanchard and Roberto Perotti, 2002. "An empirical characterization of the dynamic effects of changes in government spending and taxes on output," *Quarterly Journal of Economics* 117 (4): 1329-1368.
- Marianne Baxter and Robert King, 1993. "Fiscal Policy in General Equilibrium." *American Economic Review* 83(3): 315-334.
- Christopher House and Matthew Shapiro, 2006. "Phased-in tax cuts and economic activity," *American Economic Review* 96(3): 1835-1849.