Guido Ascari University of Oxford Bundesbank Foundations Guest Professors, Freie Universität Berlin July 2014

Course in Monetary Economics

Syllabus

• Intro

Lucas (1976), Lucas (1987)

• The role of money/nominal rigidities: Some facts

Galí (2008): Chapter 1, Walsh (2010): Chapter 1, Christiano, Eichenbaum, and Evans (1999)

• A classical monetary model

Galí (2008): Chapter 2

• The New Keynesian model

- Monopolistic competition and nominal rigidities: Blanchard and Kiyotaki (1987), Kehoe and Midrigan (2012)
- The basic model: Galí (2008): Chapter 3, Walsh (2010): Chapter 6, 8-8.3
- The Taylor principle

• Empirical assessment: Single-equation approach

- Euler equation Fuhrer (2000)
- NKPC: Galí and Gertler (1999), Fuhrer (2011), Mavroeidis (2005)
- Taylor rule and the *Great moderation*: Clarida, Galí, and Gertler (2000), Orphanides (2002), Mavroeidis (2010), Justiniano and Primiceri (2008), Fernández-Villaverde, Guerrón-Quintana, and Rubio-Ramírez (2010)

• Adding bells and whistles: the medium-scale NK model

- Variable capital utilization, investment adjustment costs
- Sticky wages: Galí (2008): Chapter 6-6.1
- cost-channel: Rabanal (2007)

- Liquidity effect: Walsh (2010): Chapter 5.3.1, Christiano and Eichenbaum (1992)
- Empirical Assessment Christiano, Eichenbaum, and Evans (2005), Smets and Wouters (2007), Altig, Christiano, Eichenbaum, and Lindé (2011), Christiano, Trabandt, and Walentin (2011)

• Trend Inflation

Ascari and Sbordone (2013)

- – Trend inflation and the NKPC: Cogley and Sbordone (2008), Benati (2008)
 - Trend inflation and monetary policy: Ascari (2004), Ascari and Ropele (2009), Coibion and Gorodnichenko (2011)
 - Disinflation in an NK model: Ascari and Merkl (2009), Ascari and Ropele (2011)
 - Trend Inflation and price-setting models: Ascari and Rossi (2012)

References

- ABEL, A. (1990): "Asset Prices under Habit Formation and Catching Up with the Joneses," *American Economic Review*, 40, 38–42.
- ALTIG, D., L. J. CHRISTIANO, M. EICHENBAUM, AND J. LINDÉ (2011): "Firm-Specific Capital, Nominal Rigidities and the Business Cycle," *Review of Economic Dynamics*, 14(2), 225–247.
- AN, S., AND F. SCHORFHEIDE (2007): "Bayesian Analysis of DSGE Models," *Econometric Reviews*, 26, 113–172.
- ASCARI, G. (2000): "Optimising Agents, Staggered Wages and the Persistence of the Real Effects of Money Shocks," *The Economic Journal*, 110, 664–686.
- ASCARI, G. (2004): "Staggered Prices and Trend Inflation: Some Nuisances," *Review* of Economic Dynamics, 7, 642–667.
- ASCARI, G., AND C. MERKL (2009): "Real Wage Rigidities and the Cost of Disinflations," Journal of Money Credit and Banking, 41, 417–435.
- ASCARI, G., AND T. ROPELE (2007): "Optimal Monetary Policy under Low Trend Inflation," *Journal of Monetary Economics*, 54, 2568–2583.
- ASCARI, G., AND T. ROPELE (2009): "Trend Inflation, Taylor Principle and Indeterminacy," *Journal of Money, Credit and Banking*, 41(8), 1557–1584.
 - (2011): "Disinflation in a DSGE Perspective: Sacrifice Ratio or Welfare Gain Ratio?," Journal of Economic Dynamics and Control, 36, 169–182.
- ASCARI, G., AND L. ROSSI (2012): "Trend Inflation and Firms Price-Setting: Rotemberg Versus Calvo," *The Economic Journal*, 122(563), 1115–1141.

- ASCARI, G., AND A. M. SBORDONE (2013): "The Macroeconomics of Trend Inflation," Federal Reserve Bank of New York Staff Report No. 628.
- BENATI, L. (2008): "Investigating Inflation Persistence Across Monetary Regimes," Quarterly Journal of Economics, 123(3), 1005–1060.
- BERNANKE, B., J. BOIVIN, AND P. ELIASZ (2005): "Measuring Monetary Policy: A Factor Augmented Vector Autoregressive (FAVAR) Approach," *Quarterly Journal of Economics*, 120(1), 387–422.
- BILS, M., AND P. J. KLENOW (2004): "Some Evidence on the Importance of Sticky Prices," *Journal of Political Economy*, 112(5), 947–985.
- BLANCHARD, O., AND D. QUAH (1989): "The dynamic effects of aggregate demand and supply disturbances," *American Economic Review*, 79(4), 655–673.
- BLANCHARD, O. J., AND N. KIYOTAKI (1987): "Monopolistic Competition and the Effects of Aggregate Demand," *American Economic Review*, 77, 647–666.
- BOIVIN, J., AND M. GIANNONI (2006): "Has Monetary Policy Become More Effective?," *Review of Economics and Statistics*, 88(3), 445–462.
- BUITER, W., AND I. JEWITT (1981): "Staggered Wage Setting with Real Wage Relativities: Variations on a Theme by Taylor," *The Manchester School*, 49, 211–228.
- BULLARD, J., AND K. MITRA (2002): "Learning about monetary policy rules," *Journal* of Monetary Economics, 49(6), 1105–1129.
- CALVO, G. (1983): "Staggered Prices in a Utility-Maximizing Framework," Journal of Monetary Economics, 12, 383–398.
- CANOVA, F. (2007): Methods for Applied Macroeconomic Research, Princeton University Press, Princeton, New Jersey.
- CANOVA, F., AND G. DE NICOLÓ (2002): "Monetary Disturbances Matter for Business Fluctuations in the G-7," *Journal of Monetary Economics*, 49, 1131–1159.
- CANOVA, F., AND L. SALA (2009): "Back to Square One: Identification Issues in DSGE Models," *Journal of Monetary Economics*, 56(4), 431–449.
- CASTELNUOVO, E. (2012): "Monetary Policy Neutrality? Sign Restrictions Go to Monte Carlo," University of Padova Marco Fanno Working Paper No. 151.
- CASTELNUOVO, E., AND P. SURICO (2010): "Monetary Policy Shifts, Inflation Expectations and the Price Puzzle," *Economic Journal*, 120(549), 1262–1283.
- CHARI, V. V., P. J. KEHOE, AND E. R. MCGRATTAN (2000): "Sticky Prices Models of the Business Cycle: Can the Contract Multiplier Solve the Persistence Problem?," *Econometrica*, 68(5), 1151–1180.
- CHRISTIANO, L., M. EICHENBAUM, AND C. EVANS (2005): "Nominal Rigidities and the Dynamic Effects of a Shock to Monetary Policy," *Journal of Political Economy*, 113(1), 1–45.
- CHRISTIANO, L. J., AND M. EICHENBAUM (1992): "Liquidity Effects and the Monetary Transmission Mechanism," *American Economic Review*, 82(2), 346–353.

—— (1997): "Sticky Prices and Limited Participation Models: A Comparison," *European Economic Review*, 41(6), 1201–1249.

- CHRISTIANO, L. J., M. EICHENBAUM, AND C. EVANS (1999): "Monetary Policy Shocks: What Have We Learned and to What End?," in *Handbook of Macroeconomics*, ed. by J. B. Taylor, and M. Woodford, pp. 65–148. Elsevier, San Diego, CA.
- CHRISTIANO, L. J., M. TRABANDT, AND K. WALENTIN (2011): "DSGE Models for Monetary Policy Analysis," in *Handbook of Monetary Economics*, ed. by B. M. Friedman, and M. Woodford, chap. 7, Volume 3, pp. 285–367. Elsevier, San Diego CA.
- CLARIDA, R., J. GALÍ, AND M. GERTLER (2000): "Monetary Policy Rules and Macroeconomic Stability: Evidence and Some Theory," *Quarterly Journal of Economics*, 115, 147–180.
- COCHRANE, J. H. (2011): "Determinacy and Identification with Taylor Rules," *Journal* of Political Economy, 119(3), 565–615.
- COENEN, G., A. T. LEVIN, AND K. CHRISTOFFEL (2007): "Identifying the Influences of Nominal and Real Rigidities in Aggregate Price-Setting Behavior," *Journal of Monetary Economics*, 54(8), 2439–2466.
- COGLEY, T., G. E. PRIMICERI, AND T. SARGENT (2010): "Inflation-Gap Persistence in the U.S.," *American Economic Journal: Macroeconomics*, 2(1), 43–69.
- COGLEY, T., AND A. SBORDONE (2008): "Trend Inflation, Indexation, and Inflation Persistence in the New Keynesian Phillips Curve," *American Economic Review*, 98(5), 2101–2126.
- COIBION, O. (2012): "Are the effects of monetary policy shocks big or small?," American Economic Journal: Macroeconomics, 4(2), 1–32.
- COIBION, O., AND Y. GORODNICHENKO (2011): "Monetary Policy, Trend Inflation and the Great Moderation: An Alternative Interpretation," *American Economic Review*, 101, 341–370.
- (2012): "Why are target interest rate changes so persistent?," American Economic Journal: Macroeconomics, 4, 126–162.
- COOLEY, T. F., AND G. D. HANSEN (1989): "Inflation Tax in a Real Business Cycle Model," *American Economic Review*, 79(4), 733–748.
- COSTAIN, J., AND A. NAKOV (2011): "Distributional Dynamics Under Smoothly State-Dependent Pricing," *Journal of Monetary Economics*, 58(6), 646–665.
- DEL NEGRO, M., AND F. SCHORFHEIDE (2006): "How Good is What You've Got? DSGE-VAR as a Toolkit for Evaluating DSGE Models," *Federal Reserve of Atlanta Economic Review*, Second Quarter, 21–37.
- DEL NEGRO, M., F. SCHORFHEIDE, F. SMETS, AND R. WOUTERS (2007): "On the Fit of New-Keynesian Models," *Journal of Business and Economic Statistics*, 25(2), 124–162.

- DENNIS, R. (2009): "Consumption Habits in a New Keynesian Business Cycle Model," Journal of Money, Credit and Banking, 41(5), 1015–1030.
- EICHENBAUM, M. (1992): "Comment on "Interpreting the Macroeconomic Time Series Facts: The Effects of Monetary Policy" by C.A. Sims," *European Economic Review*, 36(5), 1001–1011.
- EICHENBAUM, M., N. JAIMOVICH, AND S. REBELO (2011): "Reference Prices, Costs, and Nominal Rigidities," *American Economic Review*, 101(1), 234–62.
- ERCEG, C., D. HENDERSON, AND A. LEVIN (2000): "Optimal monetary policy with staggered wage and price contracts," *Journal of Monetary Economics*, 46, 281–313.
- ESTRELLA, A., AND J. C. FUHRER (2002): "Dynamic Inconsistencies: Counterfactual Implications of a Class of Rational-Expectations Models," *American Economic Review*, 92(4), 1013–1028.
- FERNÁNDEZ-VILLAVERDE, J. (2010): "The Econometrics of DSGE Models," SERIES: Journal of the Spanish Economic Association, 1, 3–49.
- FERNÁNDEZ-VILLAVERDE, J., P. GUERRÓN-QUINTANA, AND J. F. RUBIO-RAMÍREZ (2010): "Fortune or Virtue: Time-Invariant Volatilities Versus Parameter Drifting in U.S. Data," NBER Working Paper No. 15928.
- FUHRER, J., AND G. MOORE (1995): "Inflation Persistence," Quarterly Journal of Economics, 110, 127–159.
- FUHRER, J., AND G. RUDEBUSCH (2004): "Estimating the Euler Equation for Output," *Journal of Monetary Economics*, 51(6), 1133–1153.
- FUHRER, J. C. (1997): "The (Un)Importance of Forward-Looking Behavior in Price Specifications," *Journal of Money, Credit and Banking*, 29, 338–350.

—— (2000): "Habit Formation in Consumption and its Implications for Monetary-Policy Models," *American Economic Review*, 90(3), 367–390.

(2006): "Intrinsic and Inherited Inflation Persistence," International Journal of Central Banking, 2(3), 49–86.

- (2011): "Inflation Persistence," in *Handbook of Monetary Economics*, ed. by
 B. M. Friedman, and M. Woodford, chap. 9, Volume 3, pp. 423–486. Elsevier, San Diego CA.
- GALÍ, J. (2003): "New Perspectives on Monetary Policy, Inflation, and the Business Cycle," in Advances in Economic Theory, ed. by M. Dewatripont, L. Hansen, and S. Turnovsky, pp. 151–197. Cambridge University Press.
- GALÍ, J. (2008): Monetary Policy, Inflation and the Business Cycle. Princeton University Press. Princeton, New Jersey.
- GALÍ, J., AND M. GERTLER (1999): "Inflation Dynamics: A Structural Econometric Analysis," Journal of Monetary Economics, 44(2), 195–222.
- GOODFRIEND, M., AND R. G. KING (1998): "The New Neoclassical Synthesis and the Role of Monetary Policy," in *NBER Macroeconomics Annual*, ed. by B. Bernanke, and J. Rotemberg, pp. 231–283. MIT Press.

- GUERRIERI, L. (2006): "The Inflation Persistence of Staggered Contracts," Journal of Money, Credit and Banking, 38, 483–494.
- HAIRAULT, J.-O., AND F. PORTIER (1993): "Money, New Keynesian Macroeconomics and the Business Cycle," *European Economic Review*, 37, 1533–1568.
- IRELAND, P. (2004a): "Money's Role in Monetary Business Cycle," Journal of Money, Credit, and Banking, 36(6), 969–983.
- (2004b): "Technology Shocks in a New Keynesian Model," *The Review of Economics and Statistics*, 86(4), 923–936.
- (2007): "Changes in Federal Reserve's Inflation Target: Causes and Consequences," Journal of Money, Credit and Banking, 39(8), 1851–1882.
- JUSTINIANO, A., AND G. PRIMICERI (2008): "The Time-Varying Volatility of Macroeconomic Fluctuations," *American Economic Review*, 98(3), 604–641.
- JUSTINIANO, A., G. E. PRIMICERI, AND A. TAMBALOTTI (2010): "Investment shocks and business cycles," *Journal of Monetary Economics*, 57(2), 132–145.
- KEHOE, P. J., AND V. MIDRIGAN (2012): "Prices Are Sticky After All," Federal Reserve Bank of Minneapolis, Research Department Staff Report 413.
- KILIAN, L. (2013): "Structural Vector Autoregressions," in N. Hashimzade and M. Thornton (eds.), Handbook of Research Methods and Applications in Empirical Macroeconomics, Edward Elgar, Camberley, United Kingdom.
- KING, R. G., AND A. L. WOLMAN (1996): "Inflation Targeting in a St. Louis Model of the 21st Century," *Federal Reserve Bank of St. Louis Quarterly Review*, pp. 83–107.
- LEVIN, A. T., AND J. M. PIGER (2004): "Is Inflation Persistence Intrinsic In Industrial Economies?," ECB working paper No. 334.
- LUBIK, T., AND F. SCHORFHEIDE (2004): "Testing for Indeterminacy: An Application to U.S. Monetary Policy," *American Economic Review*, 94(1), 190–217.
- LUCAS, R. E. (1976): "Econometric Policy Evaluation: A Critique," Carnegie-Rochester Conference Series on Public Policy, 1, 19–46.
 - (1987): Models of Business Cycles. Basil Blackwell, New York.
- MANKIW, G. N. (2001): "The Inexorable and Mysterious Tradeoff Between Inflation and Unemployment," *Economic Journal*, pp. C45–C61.
- MANKIW, N. G., AND R. REIS (2002): "Sticky Information Versus Sticky Prices: A Proposal to Replace the New Keynesian Phillips Curve," *Quarterly Journal of Economics*, 117, 1295–1328.
- MAVROEIDIS, S. (2004): "Weak Identification of Forward-Looking Models in Monetary Economics," Oxford Bulletin of Economics and Statistics, 66(Supplement), 609–635.
- MAVROEIDIS, S. (2005): "Identi Cation Issues in Forward-Looking Models Estimated by GMM, with an Application to the Phillips Curve," *Journal of Money, Credit and Banking*, 37(3), 421–48.

- MAVROEIDIS, S. (2010): "Monetary Policy Rules and Macroeconomic Stability: Some New Evidence," *American Economic Review*, 100(1), 491–503.
- MAVROEIDIS, S., M. PLAGBORG-MOELLER, AND J. H. STOCK (2013): "Empirical Evidence on Inflation Expectations in the New Keynesian Phillips Curve," forthcoming in *The Journal of Economic Literature*.
- MCCALLUM, B. T., AND E. NELSON (1999): "An optimizing IS-LM specification for monetary policy and business cycle analysis," *Journal of Money, Credit and Banking*, 31, 296–316.
- MCCONNELL, M., AND G. PEREZ-QUIROS (2000): "Output Fluctuations in the United States: What Has Changed Since the Early 1980s?," *American Economic Review*, 90, 1464–1476.
- MILANI, F. (2007): "Expectations, Learning and Macroeconomic Persistence," Journal of Monetary Economics, 54(7), 2065–2082.
- NAKAMURA, E., AND J. STEINSSON (2008): "Five Facts About Prices: A Reevaluation of Menu Cost Models," *Quarterly Journal of Economics*, 123(4), 1415–1464.
- NELSON, E. (1998): "Sluggish Inflation and Optimizing Models of the Business Cycle," Journal of Monetary Economics, 42, 303–322.
- ORPHANIDES, A. (2002): "Monetary Policy Rules and the Great Inflation," *American Economic Review*, 92(2), 115–120.
- (2003): "Historical Monetary Policy Analysis and the Taylor Rule," *Journal of Monetary Economics*, 50, 983–1022.
- RABANAL, P. (2007): "Does Inflation Increase After a Monetary Policy Tightening? Answers Based on an Estimated DSGE Model," *Journal of Economic Dynamics and Control*, 31, 906–937.
- RABANAL, P., AND J. RUBIO-RAMÍREZ (2005): "Comparing New Keynesian Models of the Business Cycle: A Bayesian Approach," *Journal of Monetary Economics*, 52, 1151–1166.
- RAVENNA, F., AND C. WALSH (2006): "Optimal Monetary Policy with the Cost Channel," Journal of Monetary Economics, 53, 199–216.
- ROBERTS, J. M. (1997): "Is Inflation Sticky?," Journal of Monetary Economics, 39, 173–96.
- ROMER, C., AND D. ROMER (2004): "A New Measure of Monetary Policy Shocks: Derivation and Implications," *American Economic Review*, 94(4), 1055–1084.
- ROTEMBERG, J., AND M. WOODFORD (1999): "Interest Rate Rules in an Estimated Sticky Price Model," in *Monetary Policy Rules*, ed. by J. B. Taylor, pp. 57–119. University of Chicago Press.
- ROTEMBERG, J. J. (1982): "Sticky Prices in the United States," Journal of Political Economy, 90, 1187–1211.

(1987): "The New Keynesian Microfoundations," in *NBER Macroeconomics Annual*, ed. by S. Fischer, pp. 69–116. MIT Press, Cambridge, MA.

RUDD, J., AND K. WHELAN (2005): "New tests on the new-Keynesian Phillips Curve," Journal of Monetary Economics, 52(6), 1167–1181.

(2006): "Can rational expectations sticky-price models explain inflation dynamics?," *American Economic Review*, 96, 303–320.

(2007): "Inflation dynamics: A critical review of recent research," Journal of Money, Credit and Banking, 39, 155–170.

- RUDEBUSCH, G. (2002): "Term Structure Evidence of Interest Rate Smoothing and Monetary Policy Inertia," *Journal of Monetary Economics*, 49, 1161–1187.
- SCHMITT-GROHÉ, S., AND M. URIBE (2011): "The Optimal Rate of Inflation," in Handbook of Monetary Economics, ed. by B. M. Friedman, and M. Woodford, chap. 13, Volume 3, pp. 653–722. Elsevier, San Diego CA.
- SHEEDY, K. D. (2010): "Intrinsic Inflation Persistence," Journal of Monetary Economics, 57(8), 1049–1061, London School of Economics, mimeo.
- SIMS, C. (1980): "Macroeconomics and Reality," *Econometrica*, 48(1), 1–48.
- SIMS, C. (1992): "Interpreting the Macroeconomic Time Series Facts: The Effects of Monetary Policy," *European Economic Review*, 36(5), 975–1000.
- SMETS, F., AND R. WOUTERS (2003): "An Estimated Dynamic Stochastic General Equilibrium Model of the Euro Area," *Journal of the European Economic Association*, 1, 1123–1175.

—— (2007): "Shocks and Frictions in US Business Cycle: A Bayesian DSGE Approach," *American Economic Review*, 97(3), 586–606.

- STOCK, J., AND M. WATSON (2001): "Vector Autoregressions," Journal of Economic Perspectives, 15, 101–115.
- TAYLOR, J. (1993): "Discretion versus Policy Rules in Practice," Carnegie-Rochester Conference Series on Public Policy, 39, 195–214.
- TAYLOR, J. B. (1980): "Aggregate Dynamics and Staggered Contracts," Journal of Political Economy, 88, 1–23.
- (1998): "Staggered Price and Wage Setting in Macroeconomics," in *Handbook of Macroeconomics*, ed. by J. B. Taylor, and M. Woodford. Amsterdam, North-Holland.
 - (1999): Monetary Policy Rules. The University of Chicago Press.
- UHLIG, H. (2005): "What are the Effects of Monetary Policy? Results from an Agnostic Identification Procedure," *Journal of Monetary Economics*, 52, 381–419.
- WALSH, C. E. (2010): *Monetary Theory and Policy*. MIT Press, Cambridge, Massachusetts, 3rd edition edn.

- WOODFORD, M. (2003): Interest and Prices: Foundations of a Theory of Monetary Policy. Princeton University Press. Princeton, New Jersey.
- Yun, T. (1996): "Nominal Price Rigidity, Money Supply Endogeneity and Business Cycle," *Journal of Monetary Economics*, 37, 345–370.