

# Business Cycles, Financial Cycles and Economic Policies

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Ph.D. in Economics and Finance

This course focuses on New Keynesian model with frictions in the real and financial sectors and on the role of fiscal and monetary policies in mitigating business and financial cycle fluctuations. We will consider among others the role of recent unconventional monetary and macroprudential policies as business cycle stabilization devices and monetary and fiscal policy coordination during the Pandemic. As modern economies are increasingly exposed to shocks of large magnitude, the course will also focus on the role of macroeconomic policies in DSGE models subject to rare disaster shocks.

We will consider Dynamic Stochastic General Equilibrium (DSGE) models where consumers, firms, banks and the public sector (monetary and fiscal policy) interact in the same economic environment and produce choices in terms of consumption, investment, output and monetary aggregates.

Macro models of monetary policy in a DSGE setting typically involve forward-looking behaviour. To develop practical research skills students will solve linear rational expectation models using MATLAB.

Focussing in particular on the method proposed by King and Watson (1998) we will then solve a larger DSGE model with a banking sector producing the full constellation of financial and monetary spreads as proposed by Goodfriend and McCallum (2007). We consider the macroeconomic effects of unconventional monetary policy, through variation in the composition of central banks' balance sheets, as compared to the conventional monetary transmission mechanism.

## Syllabus

### **Real Business Cycle and New-Keynesian Models with Nominal Rigidities**

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

### **Economic Policies with Financial Frictions**

- Adrian, T., & Shin, H. S. (2008). Liquidity, monetary policy, and financial cycles. *Federal Reserve Bank of New York Economic Policy Review*, 14(1), 1-7.

- Bernanke, B., Gertler, M., & Gilchrist, S. (1999). The financial accelerator in a quantitative business cycle framework. In J. B. Taylor, & M. Woodford (Eds.), *Handbook of macroeconomics* (Vol. 1C). North-Holland Publishing Company.
- Bernanke, B.S. and M. Gertler (2001). Should Central Banks Respond to Movements in Asset Prices? *American Economic Review*, 253-257.
- Bowdler, C. and Radia, A. (2012). Unconventional monetary policy: the assessment, *Oxford Review of Economic Policy*, 28(4), 603-21.
- Chadha, J., L. Corrado and S. Holly (2014). A Note on Money and the Conduct of Monetary Policy, *Macroeconomic Dynamics*, 18(08), 1854-1883.
- Corrado, L., Grassi, S. and Paolillo, A. (2023). Identifying Large Economic Shocks in a Disaster Environment, mimeo.
- Clarida, R., Gali, J., Gertler, M. (1999). The science of monetary policy: a new Keynesian perspective. *Journal of Economic Literature* 37, 1661-1707.
- Gertler M. and P. Karadi (2011). A model of unconventional monetary policy, *Journal of Monetary Economics*, 58, 17-34.
- Gertler M. and P. Karadi (2012). QE 1 vs. 2 vs. 3...A Framework for Analyzing Large Scale Asset Purchases as a Monetary Policy Tool. Available at <http://www.econ.nyu.edu/user/gertler/gertlerkaradifrbconference2012.pdf>
- Goodfriend M. and B.T. McCallum (2007). Banking and interest rates in monetary policy analysis: A quantitative exploration, *Journal of Monetary Economics*, 54, 1480-1507.
- IMF (2008). The Changing Housing Cycle and the Implications for Monetary Policy, *World Economic Outlook*, April.
- Kiyotaki, N., Moore, J., (1997). Credit cycles. *Journal of Political Economy* 105, 211–248.
- Tucker, P (2009). The debate on financial system resilience: macroprudential instruments. Available at [www.bankofengland.co.uk/archive/Documents/historicpubs/speeches/2009/speech407.pdf](http://www.bankofengland.co.uk/archive/Documents/historicpubs/speeches/2009/speech407.pdf)
- Walsh, C. E., (2009). Using Monetary Policy to Stabilize Economic Activity., *Federal Reserve Bank of Kansas City Financial Stability and Macroeconomic Policy*, 2009 Jackson Hole Symposium, 245-296.

## **Solving Macro Models with Rational Expectations**

- Blanchard, O. and K. C. Kahn (1980), "The Solution of Linear Difference Models under Rational Expectations", *Econometrica*, 48(5), 1305-11.
- Brock, W.A. and L. Mirman (1972), "Optimal economic growth and uncertainty: the discounted case", *Journal of Economic Theory*, Vol. 4, pp. 479–513.
- King, R.G and M.W. Watson (1998) The solution of singular linear difference systems under rational expectations, *International Economic Review*, 39 (4) (1998), pp. 1015-1026 Symposium on Forecasting and Empirical Methods in Macroeconomics and Finance.

## **Software**

- Hanselman, D. and B. Littlefield, *Mastering MATLAB 5*, Prentice-Hall, 1998. See also on-line manuals available online at <http://www.mathworks.com/products/matlab/usersguide.shtml>.
- Adjemian, S., Bastani, H., Karamé, F., Juillard, M., Maih, J., Mihoubi, F., Perendia, G., Pfeifer, J., Ratto, M. and S. Villemot, *Dynare: Reference Manual Version 4*. 2011.