

Topics in Applied Macroeconomics

NAKE

Harald Uhlig

7 September 2010: 09.00-12.00 hrs and 14.00-15.00 hrs in K 702

8 September 2010: 09.00-12.00 hrs and 13.00-14.00 hrs in K 702

9 September 2010: 09.00-12.00 hrs and 13.00-14.00 hrs (written exam) in K 702

Abstract

This course applies DSGE and VAR modeling to the following issues:

1. What is the impact of fiscal policy?
2. What is the relationship between asset pricing and macroeconomic dynamics?
3. What are the effects of monetary and fiscal policy shocks?

As approach, we use quantitative dynamic stochastic general equilibrium (DSGE) models as well as applied vector autoregressions (VARs). Along the way, we will discuss tools for solving and estimating dynamic stochastic equilibrium (DSGE) and related models. Students will learn about software such as the “toolkit” and “Dynare”.

Course Outline

1 Topics There is way too much stuff here. Rather than covering everything, we will probably cover a few topics in detail. This will depend on student interest: so make sure you tell me what you wish to learn to maximize your benefit. Furthermore, you need to try out and calculate these things yourself. There is no substitute for that. Don't expect the class to deliver this to you: I can only point the way.

1.1 Fiscal policy in DSGE models

- For fiscal policy in DSGE models: Uhlig (2010), Trabandt and Uhlig (2010), Drautzburg and Uhlig (2010), Coenen and et.al. (2010)
- For solution methods: References: Uhlig (1999), Uhlig (2008), Dejong and Dave (2007), Judd (1999), the Toolkit web site, the Dynare web site, Barillas, Colacito, Kitao, Matthes, Sargent, and Shin (2007), Sims (2001),

the C.A.Sims GenSys web site, Farmer (2002), Schmitt-Grohe and Uribe (2004), Judd (1999)

- For estimation and comparison to data: Fernandez-Villaverde, Rubio-Ramirez, Sargent, and Watson (2007), Uhlig (2003), Christiano, Eichenbaum, and Evans (2005), Canova (2007), An and Schorfheide (2008), the Dynare web site • VAR methods: Mountford and Uhlig (2009), Ramey (2009), Leeper, Walker, and Yang (2009)

1.2 The relationship between asset pricing and macroeconomic dynamics

Lettau and Uhlig (2002), Uhlig (2007c), Uhlig (2007a), Guvenen (2009), Cochrane (2001), Duffie (1992), Uhlig (2007b), Lettau and Uhlig (2000)

1.3 Monetary policy

- For DSGE approaches: Uhlig (2009), Smets and Wouters (2003).
- VAR approaches: Uhlig (2005), Scholl and Uhlig (2008), Sims (1980), Leeper, Sims, and Zha (1996)

References

- An, S. and F. Schorfheide (2008). Bayesian analysis of dsge models. *Econometric Reviews*.
- Barillas, F., R. Colacito, S. Kitao, C. Matthes, T. J. Sargent, and Y. Shin (2007). Practicing dynare. *Draft, NYU*.
- Canova, F. (2007). *Methods for Applied Macroeconomic Research*. Princeton, New Jersey: Princeton University Press.
- Christiano, L. J., M. Eichenbaum, and C. L. Evans (2005). Nominal rigidities and the dynamic effects of a shock to monetary policy. *Journal of Political Economy* 113 (1), 1–45.
- Cochrane, J. (2001). *Asset Pricing*. Princeton University Press.
- Coenen, G. and et.al. (2010). Effects of fiscal stimulus in structural models. *Draft, IMF*.
- Dejong, D. N. and C. Dave (2007). *Structural Macroeconometrics*. Princeton, New Jersey: Princeton University Press.

- Drautzburg, T. and H. Uhlig (2010). Fiscal stimulus and distortionary taxation. *draft, University of Chicago.*
- Duffie, D. (1992). *Dynamic Asset Pricing Theory*. Princeton: Princeton University Press.
- Farmer, R. E. (2002). *Macroeconomics of Self-fulfilling Prophecies*. Cambridge, Massachusetts: MIT Press.
- Fernandez-Villaverde, J., J. Rubio-Ramirez, T. Sargent, and M. Watson (2007). Abcs (and ds) for understanding vars. *American Economic Review* 97, 1021–1026.
- Guvenen, F. (2009). A parsimonious macroeconomic model for asset pricing. *Econometrica* 77 (6).
- Judd, K. L. (1999). *Numerical Methods in Economics*. Cambridge, Massachusetts: MIT Press.
- Leeper, E. M., C. A. Sims, and T. Zha (1996). What does monetary policy do? *Brookings Papers on Economic Activity* 1996, 1–78.
- Leeper, E. M., T. B. Walker, and S.-C. S. Yang (2009). Fiscal foresight and Information flows. *Draft, University of Indiana.*
- Lettau, M. and H. Uhlig (2000). Can habit formation be reconciled with business cycle facts? *Review of Economic Dynamics* 3(1), 79–99.
- Lettau, M. and H. Uhlig (2002). The sharpe ratio and preferences: A parametric approach. *Macroeconomic Dynamics* 6(2), 242–65.
- Mountford, A. and H. Uhlig (2009). *Journal of Applied Econometrics* 24 (6), 960–992.
- Ramey, V. (2009). Identifying government spending shocks: It's all in the timing. *Draft, UC San Diego.*
- Schmitt-Grohe, S. and M. Uribe (2004). Solving dynamic general equilibrium models using a second-order approximation to the policy function. *Journal of Economic Dynamics and Control* 28(4), 755–775.
- Scholl, A. and H. Uhlig (2008). New evidence on the puzzles: Results from agnostic identification on monetary policy and exchange rates. *Journal of International Economics* 76 (1), 1–13.
- Sims, C. A. (1980). Macroeconomics and reality. *Econometrica* 48, 1–48.
- Sims, C. A. (2001). Solving linear rational expectations models. *Journal of Computational Economics* 20, 1–20.

- Smets, F. and R. Wouters (2003). An estimated dynamic stochastic general equilibrium model of the euro area. *Journal of the European Economic Association* 1(5), 1123–1175.
- Trabandt, M. and H. Uhlig (2010). How far are we from the slippery slope? the laffer curve revisited. *draft, University of Chicago*.
- Uhlig, H. (1999). A toolkit for analysing nonlinear dynamic stochastic models easily. In R. Marimon and A. Scott (Eds.), *Computational Methods for the Study of Dynamic Economies*, pp. 30–61. Oxford University Press.
- Uhlig, H. (2003). How well do we understand business cycles and growth? examining the data with a real business cycle model. In M. S. Wolfgang Franz, H.J. Ramser (Ed.), *Empirische Wirtschaftsforschung: Methoden und Anwendungen, vol. 32, Wirtschaftswissenschaftliches Seminar Ottobeuren 2002*, pp. 295–319. Mohr Siebeck, Tübingen.
- Uhlig, H. (2005). What are the effects of monetary policy on output? results from an agnostic identification procedure. *Journal of Monetary Economics* 52, 381–419.
- Uhlig, H. (2007a). Explaining asset prices with external habits and wage rigidities in a dsge model. *American Economic Review* 97, 239–243.
- Uhlig, H. (2007b). Leisure, growth and long run risk. *draft, University of Chicago*.
- Uhlig, H. (2007c). Macroeconomics and asset markets: some mutual implications. *draft, University of Chicago*.
- Uhlig, H. (2008). Approximate solutions to dynamic models (linear methods). In *Palgrave*.
- Uhlig, H. (2009). Monetary policy in Europe vs the US: what explains the difference? In M. J. G. Jordi Gali (Ed.), *International Dimensions of Monetary Policy*. NBER, University of Chicago Press.
- Uhlig, H. (2010). Some fiscal calculus. *draft, University of Chicago*.