Econ 234: Monetary Economics (Winter 2023)

Adrien Auclert   Sebastian di Tella

Lectures: Mondays and Wednesdays, 1:30pm–3:20am in E247 [reminder: macro seminar at 3:30pm]

Course objective: This course is part of the second year PhD Macro sequence at Stanford. We will cover both standard topics and recent advances in the field. The goal is to make you aware of the core body of research in monetary economics, and to inspire and prepare you to write your own research papers.

Textbooks: Although we will not follow any textbook, the following will be useful for background reading:

- Gali, J. (2008). *Monetary Policy, Inflation, and the Business Cycle: An Introduction to the New Keynesian Framework.* Princeton University Press.
- Woofdord, M. (2003). *Interest and Prices: Foundations of a Theory of Monetary Policy.* Princeton University Press.

Grading: Grading will be based on:

a) Three problem sets designed to develop a mixture of theoretical, empirical, and quantitative skills. (Worth 50% of your grade)

b) A research proposal, which should be 4–5 pages long and describe: the question you want to address; why you think it is important; why you think the answer of the previous literature is unsatisfactory; and how you plan to improve it. You will be presenting your research proposal at the end of the class. (Worth 50% of your grade)

Prerequisites: First year core PhD macroeconomics sequence. The class will be technical and will build on knowledge and tools developed in the first year. Please contact us if you want to take the class without having completed the core sequence.

Students with Documented Disabilities: Students who may need an academic accommodation based on the impact of a disability must initiate the request with the Office of Accessible Education (OAE). Professional staff will evaluate the request with required documentation, recommend reasonable accommodations, and prepare an Accommodation Letter for faculty dated in the current quarter in which the request is made. Students should contact the OAE as soon as possible since timely notice is needed to coordinate accommodations. The OAE is located at 563 Salvatierra Walk (phone: 723-1066, URL).

Class plan. The plan for each class is outlined below. There will likely be deviations from the plan, so this is just a general guideline.

Lecture #	Date		Who?	Topic
Part I: Neoclassical monetary economics				
1	Monday	9-Jan	SDT	Overview and evidence
2	Wednesday	11-Jan	SDT	Neoclassical theory of money
	Monday	*16-Jan*		*MLK day — no class*
3	Wednesday	18-Jan	SDT	Segmented markets
4	Monday	23-Jan	SDT	Neoclassical liquidity trap
5	Wednesday	25-Jan	SDT	Risk premium shocks
Part II: HANK				
6	Monday	30-Jan	AA	The standard New Keynesian model
7	Wednesday	1-Feb	AA	The standard incomplete markets model
8	Monday	6-Feb	AA	The canonical HANK model
9	Wednesday	8-Feb	AA	Fiscal policy in the canonical model
10	Monday	13-Feb	AA	Monetary policy in the canonical model
11	Wednesday	15-Feb	AA	Advanced topics in monetary policy
	Monday	*20-Feb*		*President's day – no class*
12	Wednesday	22-Feb	AA	Open economy monetary policy
Part III: Phillips curves and Micro Data				
13	Monday	27-Feb	SDT	State dependent vs time dependent pricing
14	Wednesday	1-Mar	AA	Sticky prices and micro data
15	Monday	6-Mar	AA	Sources of real rigidities
16	Wednesday	8-Mar	SDT	The kurtosis of price changes
17	Monday	13-Mar	AA	Phillips curves in menu cost models
18	Wednesday	15-Mar		Student presentations

Part I: Neoclassical Monetary Economics

1. Overview and evidence

*Friedman, M. (1968). The Role of Monetary Policy. *American Economic Review* 58(1):1–17

Bank of England (1999). The Transmission Mechanim of Monetary Policy. *Quarterly Bulletin* pp. 161–170

*Ramey, V.A. (2016). Chapter 2 - Macroeconomic Shocks and Their Propagation. In: J.B. Taylor and H. Uhlig (eds.) *Handbook of Macroeconomics*, vol. 2, pp. 71–162. Elsevier

*Christiano, L.J., Eichenbaum, M. and Evans, C.L. (1999). Chapter 2–Monetary Policy Shocks: What Have We Learned and to What End? In: J.B. Taylor and M. Woodford (eds.) *Handbook of Macroeconomics*, vol. Volume 1, Part A, pp. 65–148. Elsevier

Romer, C.D. and Romer, D.H. (2004). A New Measure of Monetary Shocks: Derivation and Implications. *American Economic Review* 94(4):1055–1084

Velde, F.R. (2009). Chronicle of a Deflation Unforetold. *Journal of Political Economy* 117(4):591–634

2. Neoclassical theory of money

*Ljungqvist, L. and Sargent, T.J. (2012). *Recursive Macroeconomic Theory*. 3rd ed. The MIT Press, Chapters 26 & 27

Lucas, R.E. and Nicolini, J.P. (2015). On the Stability of Money Demand. *Journal of Monetary Economics* 73:48–65

Sargent, T.J. (1982). The Ends of Four Big Inflations. In: R.E. Hall (ed.) *Inflation: Causes and effects*, pp. 41–98. University of Chicago Press

3. Segmented markets

*Alvarez, F., Lucas, Jr., R.E. and Weber, W.E. (2001). Interest Rates and Inflation. *American Economic Review Papers and Proceedings* 91(2):219–225

*Alvarez, F., Atkeson, A. and Kehoe, P.J. (2002). Money, Interest Rates, and Exchange Rates with Endogenously Segmented Markets. *Journal of Political Economy* 110(1):73–112

Alvarez, F., Atkeson, A. and Edmond, C. (2009). Sluggish Responses of Prices and Inflation to Monetary Shocks in an Inventory Model of Money Demand. *Quarterly Journal of Economics* 124(3):911–967

Grossman, S. and Weiss, L. (1983). A Transactions-Based Model of the Monetary Transmission Mechanism. *American Economic Review* 73(5):871–880

Rotemberg, J.J. (1984). A Monetary Equilibrium Model with Transactions Costs. *Journal of Political Economy* 92(1):40–58

4. Neoclassical liquidity traps

*Di Tella, S. (2020). Risk Premia and the Real Effects of Money. *American Economic Review* 110(7):1995–2040

5. Risk premium shocks

*Di Tella, S. and Hall, R. (2022). Risk Premium Shocks Can Create Inefficient Recessions. *The Review of Economic Studies* 89(3):1335–1369

Part II: HANK

Useful literature overviews

Krueger, D., Mitman, K. and Perri, F. (2016). Chapter 11 - Macroeconomics and Household Heterogeneity. In: J.B. Taylor and H. Uhlig (eds.) *Handbook of Macroeconomics*, vol. 2, pp. 843–921. Elsevier

Kaplan, G. and Violante, G.L. (2018). Microeconomic Heterogeneity and Macroeconomic Shocks. *Journal of Economic Perspectives* 32(3):167–194

Galí, J. (2018). The State of New Keynesian Economics: A Partial Assessment. *Journal of Economic Perspectives* 32(3):87–112

Methods readings

*Auclert, A., Bardóczy, B., Rognlie, M. and Straub, L. (2021b). Using the Sequence-Space Jacobian to Solve and Estimate Heterogeneous-Agent Models. *Econometrica* 89(5):2375–2408

Reiter, M. (2009). Solving Heterogeneous-Agent Models by Projection and Perturbation. *Journal of Economic Dynamics and Control* 33(3):649–665

6. The standard New Keynesian model

*Lecture slides

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

7. The standard incomplete markets model

*Lecture slides

Deaton, A. (1992). *Understanding Consumption*. Oxford University Press, USA

Carroll, C.D. (1997). Buffer-Stock Saving and the Life Cycle/Permanent Income Hypothesis. *Quarterly Journal of Economics* 112(1):1–55

Aiyagari, S.R. (1994). Uninsured Idiosyncratic Risk and Aggregate Saving. *Quarterly Journal of Economics* 109(3):659–684

Kaplan, G. and Violante, G.L. (2022). The Marginal Propensity to Consume in Heterogeneous Agent Models. Working Paper 30013, National Bureau of Economic Research

8. The canonical HANK model

*Lecture slides

*Auclert, A., Rognlie, M. and Straub, L. (2018). The Intertemporal Keynesian Cross. Working Paper 25020, National Bureau of Economic Research,

Werning, I. (2015). Incomplete Markets and Aggregate Demand. Working Paper 21448, National Bureau of Economic Research,

Auclert, A., Bardóczy, B. and Rognlie, M. (2021a). MPCs, MPEs and Multipliers: A Trilemma for New Keynesian Models. *Review of Economics and Statistics* Forthcoming

Broer, T., Hansen, N.J.H., Krusell, P. and Öberg, E. (2020). The New Keynesian Transmission Mechanism: A Heterogeneous-Agent Perspective. *Review of Economic Studies* 87(1):77–101

9. Fiscal policy in the canonical HANK model

*Lecture slides

*Auclert, A., Rognlie, M. and Straub, L. (2018). The Intertemporal Keynesian Cross. Working Paper 25020, National Bureau of Economic Research,

Woodford, M. (2011). Simple Analytics of the Government Expenditure Multiplier. *American Economic Journal: Macroeconomics* 3(1):1–35

McKay, A. and Reis, R. (2016). The Role of Automatic Stabilizers in the U.S. Business Cycle. *Econometrica* 84(1):141–194

Hagedorn, M., Manovskii, I. and Mitman, K. (2019). The Fiscal Multiplier. Working Paper 25571, National Bureau of Economic Research,

10. Monetary policy in the canonical HANK model

*Lecture slides

Auclert, A. (2019). Monetary Policy and the Redistribution Channel. *American Economic Review* 109(6):2333–2367

Kaplan, G., Moll, B. and Violante, G.L. (2018). Monetary Policy According to HANK. *American Economic Review* 108(3):697–743

McKay, A., Nakamura, E. and Steinsson, J. (2016). The Power of Forward Guidance Revisited. *American Economic Review* 106(10):3133–3158

Werning, I. (2015). Incomplete Markets and Aggregate Demand. Working Paper 21448, National Bureau of Economic Research,

11. Advanced topics in monetary policy

*Lecture slides

Auclert, A., Rognlie, M. and Straub, L. (2020). Micro Jumps, Macro Humps: Monetary Policy and Business Cycles in an Estimated HANK Model. Working Paper 26647, National Bureau of Economic Research,

Luetticke, R. (2021). Transmission of Monetary Policy with Heterogeneity in Household Portfolios. *American Economic Journal: Macroeconomics* 13(2):1–25

12. Monetary policy in the open economy

*Lecture slides

*Auclert, A., Rognlie, M., Souchier, M. and Straub, L. (2021c). Exchange Rates and Monetary Policy with Heterogeneous Agents: Sizing up the Real Income Channel. Working Paper 28872, National Bureau of Economic Research,

Galí, J. and Monacelli, T. (2005). Monetary Policy and Exchange Rate Volatility in a Small Open Economy. *Review of Economic Studies* 72(3):707–734

Guo, X., Ottonello, P. and Perez, D. (2021). Monetary Policy and Redistribution in Open Economies. Working Paper 28213, National Bureau of Economic Research,

Aggarwal, R., Auclert, A., Rognlie, M. and Straub, L. (2022). Excess Savings and Twin Deficits: The Transmission of Fiscal Stimulus in Open Economies. Working Paper 30185, National Bureau of Economic Research,

Part III: Nominal Rigidities and Micro Data

12. State dependent vs time dependent pricing

*Golosov, M. and Lucas, R.E. (2007). Menu Costs and Phillips Curves. *Journal of Political Economy* 115(2):171–199

Caballero, R.J. and Engel, E.M.R.A. (2007). Price Stickiness in Ss Models: New Interpretations of Old Results. *Journal of Monetary Economics* 54, Supplement:100–121

Caplin, A.S. and Spulber, D.F. (1987). Menu Costs and the Neutrality of Money. *Quarterly Journal of Economics* 102(4):703–726

13. Sticky prices and micro data

*Nakamura, E. and Steinsson, J. (2013). Price Rigidity: Microeconomic Evidence and Macroeconomic Implications. *Annual Review of Economics* 5(1):133–163

*Klenow, P.J. and Kryvtsov, O. (2008). State-Dependent or Time-Dependent Pricing: Does it Matter for Recent U.S. Inflation? *Quarterly Journal of Economics* 123(3):863–904

Bils, M. and Klenow, P.J. (2004). Some Evidence on the Importance of Sticky Prices. *Journal of Political Economy* 112(5):947–985

Nakamura, E. and Steinsson, J. (2008). Five Facts about Prices: A Reevaluation of Menu Cost Models. *Quarterly Journal of Economics* 123(4):1415–1464

Midrigan, V. (2011). Menu Costs, Multiproduct Firms, and Aggregate Fluctuations. *Econometrica* 79(4):1139–1180

14. Sources of real rigidites

*Woodford, M. (2003). *Interest and Prices: Foundations of a Theory of Monetary Policy*. Princeton University Press (chapter 3)

*Klenow, P.J. and Willis, J.L. (2016). Real Rigidities and Nominal Price Changes. *Economica* 83(331):443–472

*Rubbo, E. (2020). Networks, Phillips Curves and Monetary Policy. *Manuscript*

Nakamura, E. and Steinsson, J. (2010). Monetary Non-neutrality in a Multisector Menu Cost Model. *Quarterly Journal of Economics* 125(3):961–1013

15. The kurtosis of price changes

*Alvarez, F., Le Bihan, H. and Lippi, F. (2016). The Real Effects of Monetary Shocks in Sticky Price Models: A Sufficient Statistic Approach. *American Economic Review* 106(10):2817–2851

16. Phillips curves in menu cost models

*Auclert, A., Rigato, R.D., Rognlie, M. and Straub, L. (2022). New Pricing Models, Same Old Phillips Curves? Working Paper 30264, National Bureau of Economic Research