

Monetary Economics

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Course description

This year I'm going to teach Monetary Economics in two parts. I'll spend the first part of the course on a fairly detailed study of the "new Keynesian" approach to macroeconomics and the implications of this framework for the use of monetary policy and fiscal policy to stabilise business cycle fluctuations. I'll spend the second part of the course on topics in banking and financial intermediation that I think are useful for understanding the financial crises of 2007-2009 and the resulting global recession.

For completeness, here's the official blurb, which I wrote for a much earlier version of the course:

An advanced introduction to modern monetary economics. Covers topics such as neo-classical monetary theory; price rigidities; interest rates, inflation targeting and central banking; rules versus discretion in monetary policy; microeconomic foundations of monetary economics. Both theoretical and empirical issues will be emphasised. Open economy aspects of monetary economics will be covered where appropriate.

Course material

There is no required text, but you will probably want to make sure you have access to the following:

- ◇ [Jordi Gali \(2008\): *Monetary Policy, Inflation and the Business Cycle*. Princeton Univ. Press.](#)

This is a streamlined introduction to the new Keynesian approach to monetary economics covered in the first part of the course. The problem sets in the first part of the course are often closely based on problems in this book.

The second part of the course will be based on various journal articles and working papers (see below). But as background reading, you might also enjoy:

- ◇ Gary Gorton (2010): *Slapped by the Invisible Hand*. Oxford Univ. Press.

I will post copies of the journal articles and working papers and other course materials to the LMS.

Assessment

The grade for this course will be based on:

<i>Task</i>	<i>Due date</i>	<i>Weight</i>
Problem set #1	in class, Thursday August 7th	5%
Problem set #2	in class, Thursday August 28th	5%
Problem set #3	in class, Thursday September 11th	5%
Problem set #4	in class, Thursday September 25th	5%
Problem set #5	in class, Thursday October 9th	5%
Problem set #6	in class, Thursday October 23rd	5%
Midsemester exam	take home, due in class, Tuesday October 7th	0 or 20%
Final exam	exam block	50 or 70%

Problem sets (30 marks). There will be six problem sets over the course of the semester that test your understanding of class material. The problem sets can be done in groups subject to the following rules: All members of a group submit a single solution and will be given the same mark. No more than four students may make up a group. Students may choose to work and hand in an assignment on their own. No two groups may hand in the same assignment.

Midsemester exam (0 or 20 marks). There will be an **optional** take-home midsemester exam based on Part I of the course.

Final exam (50 or 70 marks). The final exam will be held in the exam block. The final will be cumulative, covering both Part I and Part II of the course.

Timetable

Lectures:

Tuesdays 12:00–1:30pm Alan Gilbert–Theatre 1
 Thursdays 12:30–2:00pm Old Geology–Theatre 1

Review session: to be scheduled, if sufficient demand.

Part I: New Keynesian Monetary Economics

Lectures 1–3 (beginning July 29).

Classical building blocks. Models with no nominal rigidities. Real business cycles. Quantity theories and Fisher equations. Monetary neutrality and the classical dichotomy. Money demand and price level determination.

Reading:

- ◇ Gali (2008), chapters 1 and 2

Reminder: problem set #1 due in class Thursday August 7th, based on lectures 1–3.

Lectures 4–7 (beginning August 7).

The basic new Keynesian model. Imperfect competition. Price setting. Sticky prices. Forward-looking Phillips curve. Output gaps. Short and long run effects of technology and money shocks.

Reading:

- ◇ Gali (2008), chapter 3

Reminder: problem set #2 due in class Thursday August 28th, based on lectures 4–7.

Lectures 8–10 (beginning August 21).

Monetary policy in the new Keynesian model. Efficient allocations. Sources of distortions. Equilibrium uniqueness and stability. Taylor rules and the Taylor principle. Volatility trade-offs. Evaluating simple policy rules. Optimal monetary policy.

Reading:

- ◇ Gali (2008), chapters 4 and 5

Reminder: problem set #3 due in class Thursday September 11th, based on lectures 8–10.

Lectures 11–14 (beginning September 2).

Monetary/fiscal interactions. Fiscal policy and multipliers. Liquidity traps and zero lower bounds. Limits of monetary policy. New Keynesian model in continuous time. Managing a liquidity trap.

Readings:

- ◇ Woodford (2011): Simple analytics of the government expenditure multiplier, *AEJ: Macroeconomics*.
- ◇ Werning (2012): Managing a liquidity trap: Monetary and fiscal policy, MIT working paper.

Reminder: problem set #4 due in class Thursday September 25th, based on lectures 11–14.

Lectures 15–16 (beginning September 16).

Unemployment fluctuations in the new Keynesian model. Real wage rigidities and steady-state unemployment. Sticky nominal wages and unemployment fluctuations. Unemployment and inflation.

Reading:

- ◇ Gali (2011): *Unemployment Fluctuations and Stabilization Policies: A New Keynesian Perspective*. MIT Press.

Reminder: optional take-home mid-semester exam due in class Tuesday October 7th, based on Part I of the course.

Part II: Frictions in Banking and Financial Intermediation

Lecture 17 (September 23).

Background and overview of the financial crisis. Banking industry trends in the run-up. Securitisation and structured finance. CDOs. Tranches. Credit enhancement. Shadow banking. Conventional and unconventional policy responses in the early stages of the crisis. Large-scale asset purchases etc.

Readings:

- ◇ Benmelech and Dlugosz (2009): Alchemy of CDO credit ratings, *Journal of Monetary Economics*.
- ◇ Brunnermeier (2009): Deciphering the liquidity and credit crunch 2007-2008, *Journal of Economic Perspectives*.

- ◇ Cecchetti (2009): Crisis and responses: The Federal Reserve in the early stages of the financial crisis, *Journal of Economic Perspectives*.
- ◇ Coval, Jurek and Stafford (2009): The economics of structured finance, *Journal of Economic Perspectives*.
- ◇ Shin (2009): Reflections on Northern Rock, *Journal of Economic Perspectives*.

Lecture 18 (September 25).

Bank runs, old and new. Liquidity mismatch. The multiple equilibria problem. The run on repo.

Reading:

- ◇ Diamond and Dybvig (1983): Bank runs, deposit insurance, and liquidity, *Journal of Political Economy*.
- ◇ Gorton and Metrick (2009): Securitized banking and the run on repo, NBER working paper.
- ◇ Tirole (2011): Illiquidity and all its friends, *Journal of Economic Literature*.

Reminder: [problem set #5](#) due in class Thursday October 9th, based on lectures 17–18.

After the ‘break’ we will spend several lectures on macro implications of financial market frictions. In addition to the specific readings below, I will draw extensively on:

- ◇ Brunnermeier, Eisenbach and Sannikov (2012): Macroeconomics with financial frictions: a survey, NBER working paper.

Lecture 19 (October 7).

Agency costs, introduction. Costly state verification models. Static amplification and propagation of shocks. Dynamic amplification. Debt deflation.

- ◇ Carlstrom and Fuerst (1997): Agency costs, net worth, and business cycle fluctuations, *American Economic Review*.
- ◇ Bernanke, Gertler and Gilchrist (1999): The financial accelerator in a quantitative business cycle framework, *Handbook of Macroeconomics*.
- ◇ Kiyotaki and Moore (1997): Credit cycles, *Journal of Political Economy*.

Lecture 20 (October 9).

Agency costs, advanced topics. Continuous time approach. Nonlinear dynamics and asymmetric responses to shocks. Endogenous risk. Volatility paradox. Systemic risk and macroprudential policies.

- ◇ Brunnermeier and Sannikov (2014): A macroeconomic model with a financial sector, *American Economic Review*.

Lecture 21 (October 14).

Credit rationing. Asymmetric information and credit rationing. Lemons problems. Volatility and collateral.

- ◇ Stiglitz and Weiss (1981): Credit rationing in markets with imperfect information, *American Economic Review*.
- ◇ Brunnermeier and Pedersen (2009): Market liquidity and funding liquidity, *Review of Financial Studies*.

Lecture 22 (October 16).

Equilibrium margins and leverage. Collateral and endogenous market incompleteness. Dynamic margins. Leverage cycles. Belief disagreements.

- ◇ Geanakoplos (2009): Leverage cycles, *NBER Macroeconomics Annual*.
- ◇ Simsek (2013): Belief disagreements and collateral constraints, *Econometrica*.

Reminder: problem set #6 due in class Thursday October 23rd, based on lectures 19–22.

Lectures 23–24 (beginning October 21).

Recent developments and debates. Recap on financial frictions. How have new Keynesian models changed in light of the crisis? Controversies. Course review.

- ◇ Adrian, Colla and Shin (2012): Which financial frictions? Parsing the evidence from the financial crisis of 2007 to 2009, *NBER Macroeconomics Annual*.

(and other readings to be announced)

Reminder: final exam is cumulative, covering both Part I and Part II of the course.