

Econ 135: Monetary Economics – Spring 2020

- Contact information:

Email: henning.bohn@ucsb.edu. Use subject line: “Econ 135”

Class Page: <http://econ.ucsb.edu/~bohn/135/135classpage.html>

Office hours: TR 11-12 via zoom

Gauchospace is used as drop box for documents & recordings.

- Econ 135 in the Economics curriculum

Monetary Economics = Advanced Macroeconomics

Required prerequisite: Intermediate Macro (Econ 101).

Other electives useful but not expected; e.g. finance, international.

Readings

- Mishkin: Economics of Money, Banking, and Financial Markets, 12th ed.
 - Editions 10-11 still okay. Important: **U.S.** edition.
 - Required = know everything in the chapter.
 - Optional/recommended = supplement to class material.
[Tests cover required readings AND class material.]
- Class page & GauchoSpace:
 - Slides. Announcements. Some lecture notes. Practice problems.
 - Posted announcements considered known - no excuses.
- Financial News:
 - Wall Street Journal (\$\$. Free online data.)
 - Bloomberg.com (Free but limited)

Why take Monetary Economics?

- Understanding Monetary Policy
 - The economic role of the Federal Reserve and other central banks.
 - Their impact on inflation, interest rates, growth, unemployment, etc.
- Understanding Macroeconomics at a more advanced level.
 - Basics: Classical “real” macro. Advanced: New Keynesian macro.
- Understanding Interest Rates and Financial Markets
 - Money markets. Bond markets. Risk structure. Term structure.
 - Stocks, Foreign Currencies. Financial institutions: Banks.
- Current issues: Financial crises. Business cycles.

Standing invitation: *Ask me about current economic issues!*

Outline

- I. Financial System, Money, and Interest Rates
 - II. Macroeconomics and Financial Markets
 - III. Monetary Policy and Financial Institutions
- See the class page for detailed course outline and readings.

Exams & Grading

(Tentative – subject to modifications)

Item	Weight	Covered Material
Quiz #1	15-25%	About 1st third of course
Quiz #2	15-25%	About 2nd third of course
Final Part A = Quiz #3	15-25%	About last third of course
Final Part B = Problem Questions	25-30%	Cumulative
Writing assignments or extra credit	TBD	TBD

- Quizzes cover new material since previous quiz. Problems in final are cumulative.

Exams mandatory: missing an exam without valid excuse means zero points.

- Grades: normal target 25-35% A-range; 65-75% A+B combined.

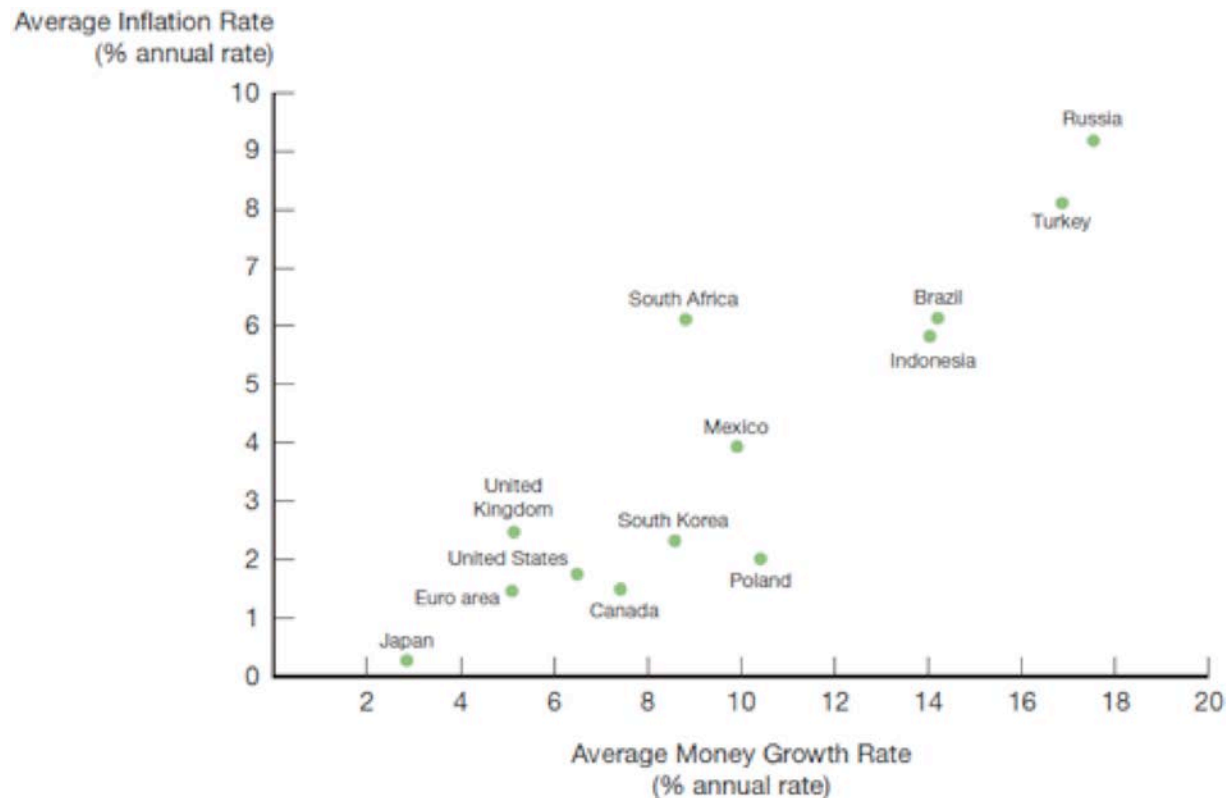
Adjusted if appropriate – always, and especially with “remote” teaching.

No target for grades $< C$. (Ideally everyone $\geq C$, except for outliers.)

Extra points if/when deserved, always given without moving the curve.

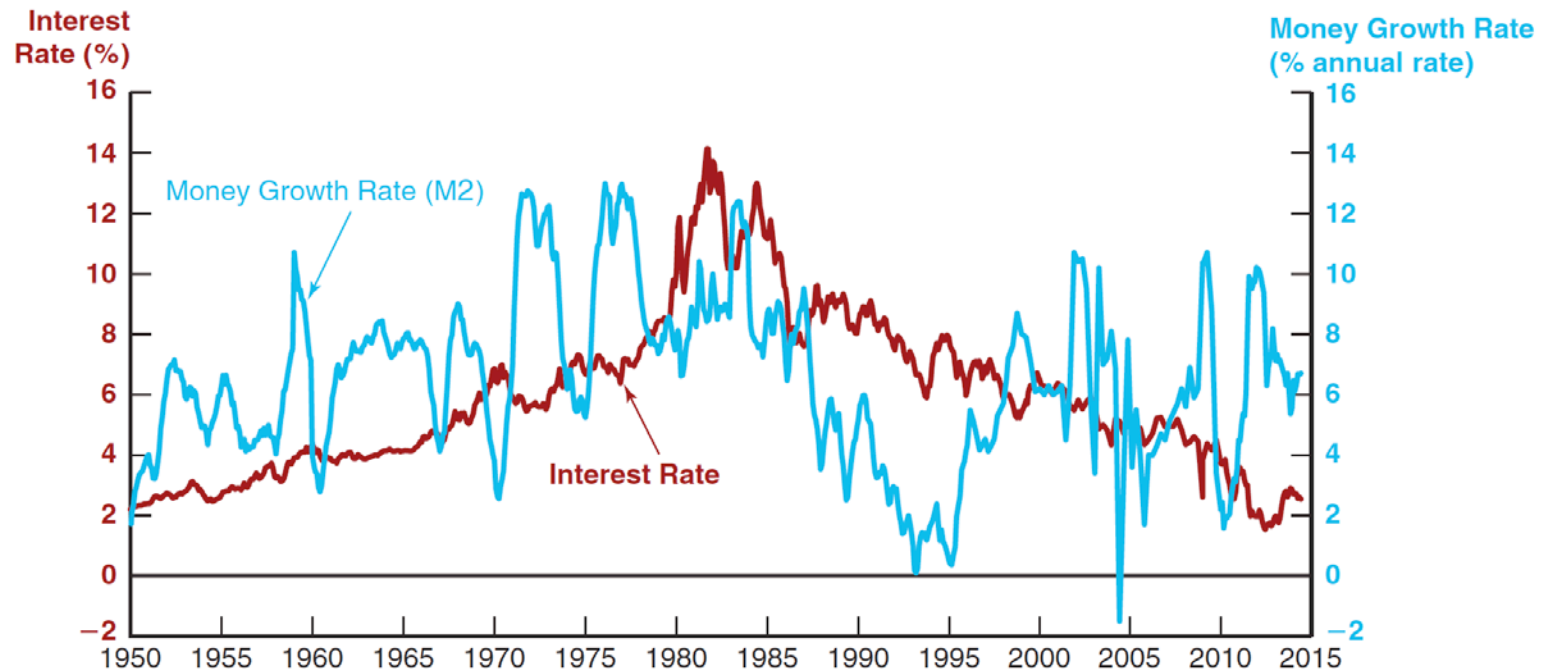
Themes from Mishkin Ch.1: Why study Money & Banking?

1. Money Growth and Inflation (2006-2016)



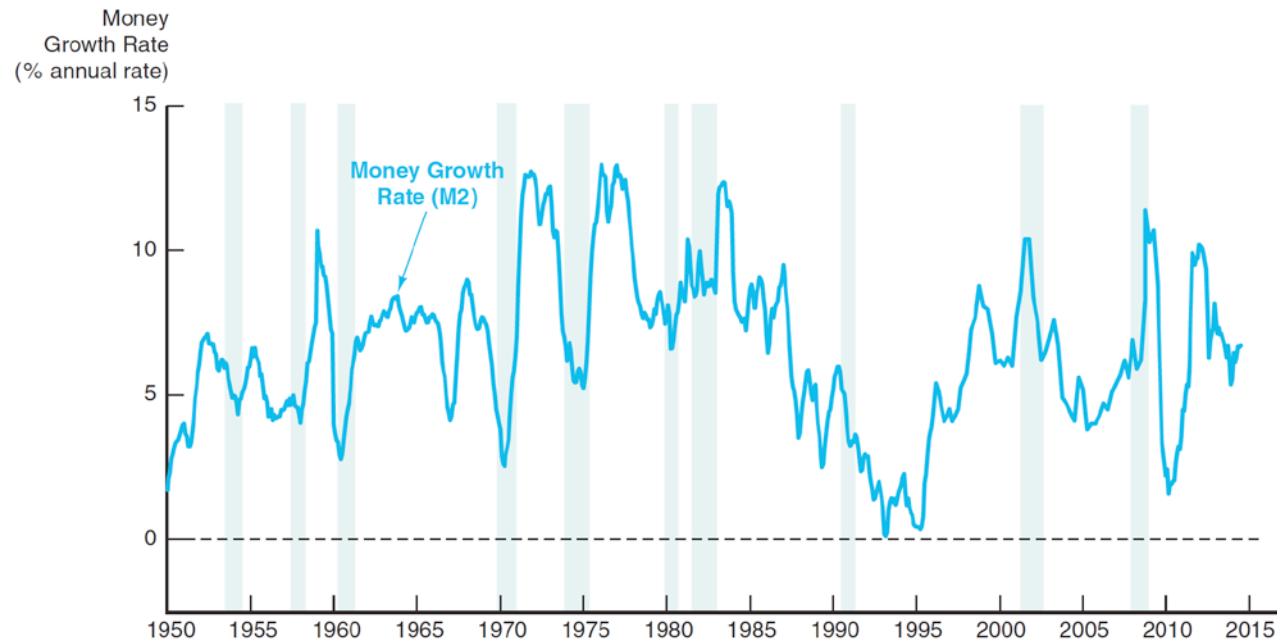
- Central banks are concerned about **price stability** – no inflation, no deflation.
- Inflation rate = Rate of change in the price level. Influence of money growth obvious in extreme cases (hyperinflation); additional factors at moderate inflation rates.

2. Monetary Policy and Interest Rates



- Central banking has evolved from targeting money growth to primarily targeting interest rates. Huge impact on financial markets – on bond prices, stock prices, foreign currency markets. Motivates “Fed watching”.
- Multiple linkages between money growth, inflation, and interest rates. (On chart: 10-year Treasury note).

3. Money Growth and Business Cycles



- Central bankers care about **employment** and about **financial stability**.
(Chart: Money growth is correlated with business cycles; shaded = recessions.)
- Macroeconomic theory connects monetary policy to inflation, interest rates, output, and employment => *Monetary Economics is applied macroeconomics*

Macroeconomic Theory

- Provides conceptual framework. Main elements:
 1. **Aggregate demand for goods**; relation to savings & investment. (*)
 2. **Aggregate supply of goods**; relation to the labor market. (*)
(* = items typically covered in Intermediate Macro; will be reviewed.)
 3. **Demand for money**; relation to velocity and inflation.
 4. **Description of monetary policy**: money supply or interest rate target.
- First pass: Classical model of the real economy + simple theory of inflation.
- Complication: “sticky” prices and wages => New-Keynesian analysis.
 - Two coherent models of the economy – both with strengths and weaknesses.
 - Issues: price setting; sources of shocks; the role of expectations.
- Optional background readings:
 - Classical analysis: Williamson, ch.10-11.
 - Keynesian & classical analysis: Abel/Bernanke/Croushore, ch.7+9.

What do Central Banks do?

- Practical level: control several policy tools [Ch.15 preview—required later]
1. **Impose Reserve Requirements** = Require banks to hold a fraction of customer deposits on reserve at the central bank. Original motive: financial stability; used to control the aggregate volume of bank deposits and the stock of money.
 2. **Grant Discount Loans** = Loans to banks (and sometimes other institutions) at an interest rate called discount rate. Enables central banks to serve as “Lender-of-Last Resort” in financial crises.
 3. **Execute Open Market Operations** = Buy or sell securities on the open market, usually government bonds. Direct impact on bond demand and interest rates, plus impact on bank reserves: Purchases are paid by crediting the seller’s reserve account; sales are paid from the buyer’s reserve account.
 4. **Offer interest on reserve balances (IOR)** – on all bank reserves or only on excess reserves (in excess of required). IOR-rate sets a lower bound for wide range of market interest rates. Recent tool – authorized by Congress in 2008.

How are Central Banks organized?

(Mishkin ch.13)

- **Leading Example: The Federal Reserve System**

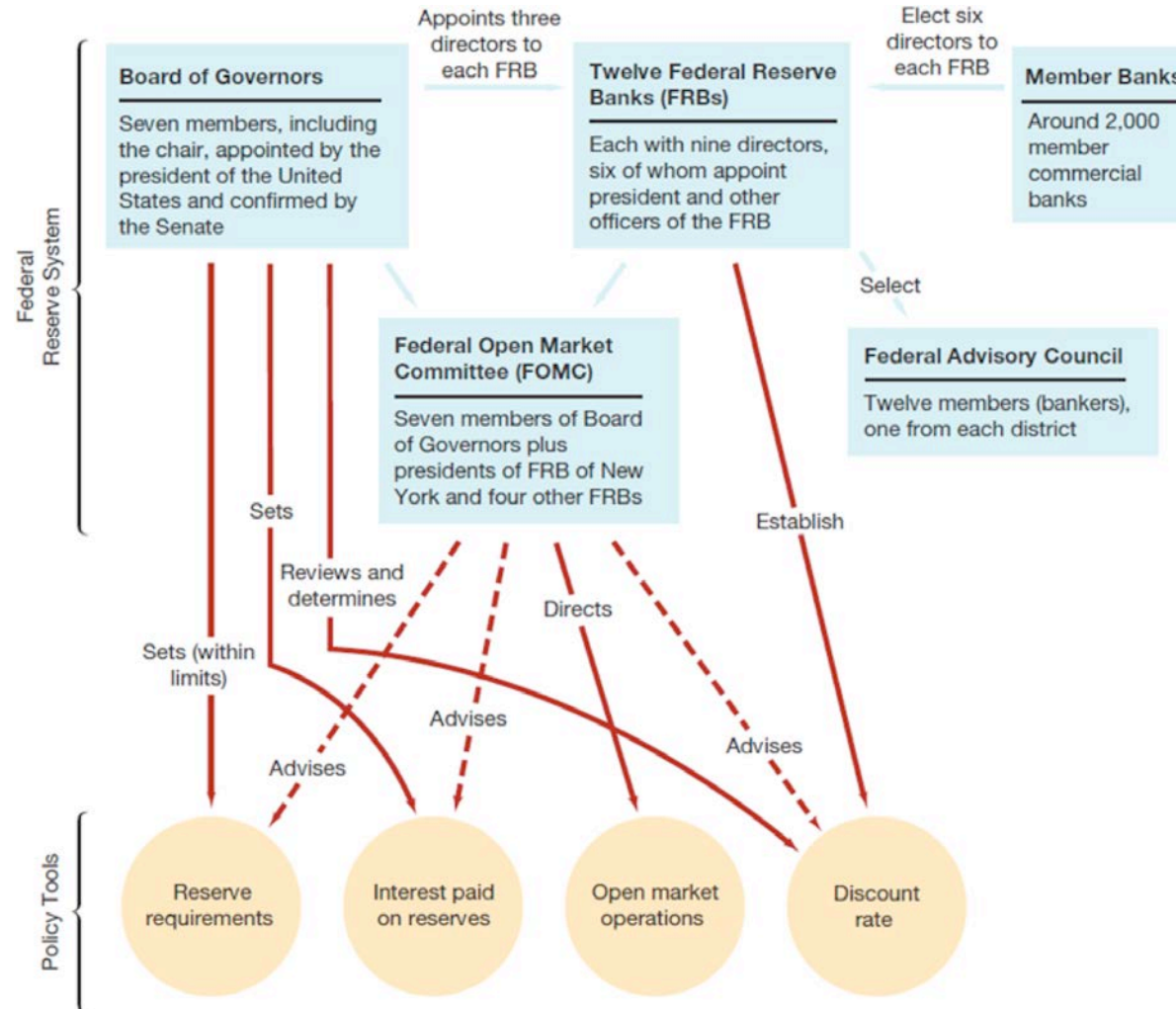
Reading = Mishkin Ch.13:

- Origins of the Federal Reserve System (Fed)
 - Structure of the Federal Reserve System (formal and informal)
 - Central bank independence: How much? Good or bad?
 - Organization and authority of other central banks.
- Motivation for creating the Fed in 1914: avoiding financial crises
 - Decentralized structure due to mistrust of centralized power
 - Evolution of Fed policy:
 - Financial integration (national, then international) => Centralization
 - End of the Gold Standard => Need for “nominal anchor” for prices/wages
 - Keynesian macro => Monetary policy effects on the real economy/employment
 - New policy tools: Open market operations in 1920s. IOR in 2008.

Formal Structure: Decentralized - 12 Districts



Decision Making in the Federal Reserve System



Actual Operation

- **Federal open market committee (FOMC):** Center of decision-making

See Minnesota Fed article (recommended; dated but still good).

- **Role of the Chairman: Does s/he run the show?**

- History of strong leadership:

Paul Volcker (1979-1987)

Alan Greenspan (1987-2006)

Ben Bernanke (2006-2014)

Janet Yellen (2014-2018)

- Currently: Jerome Powell (2018—)

Central Bank Independence

- Foundations of Fed independence: Governors have long 14-year terms. FRB Presidents have votes in the FOMC. Independent budget and revenues.
- Limitations of Fed independence: Federal Reserve Act is subject to change; no constitutional protection. Reporting to Congress.
- Economic argument for independence: Inflationary bias of central banks controlled by politicians – independence enhances credibility.
- Trend towards more independent central banks (from 1970s to early 2000s). Independent ECB created 1999. Bank of England independent since 1997.
- Critique of central bank independence since the 2007-09 financial crisis:
 - Is large-scale emergency lending consistent with central bank independence?
Invites coordination with governments. Creates winners/losers => political lobbying.
 - Why were financial institutions “bailed out” and bank borrowers were not?
Fed emergency loans were very profitable. Bagehot principle: Lender-of-last-resort should charge penalty rates. (Contrast: FNMA, Freddie Mac – taxpayer losses.)
 - Why did central bankers fail to prevent the financial crisis?
Debatable: Lack of foresight vs. political power of the housing/banking industry

Conclusion: Agenda for Monetary Economics

- Understanding the financial system: Interest rates and asset prices, demand and supply, central banks' role as regulators.
 - Traditional monetary policy – focus on a supply-determined stock of money.
 - Classical reasoning: Money \Rightarrow Prices level. Money growth \Rightarrow Inflation.
 - Keynesian reasoning: Money \Rightarrow Interest rates \Rightarrow Aggregate Demand \Rightarrow Influences output, employment, and inflation.
 - Impact on a wide range of financial markets: stocks, bonds, foreign exchange.
 - Technical side: how central banks control the money supply.
 - Recent trends in central banking – focus on interest rates & away from money:
 - Management level: Policy choices re-framed as setting real interest rates.
 - Technical level: Policy implemented via interest on reserves (since 2008) \Rightarrow Money is sidelined – determined by demand at the target interest rate.
 - All assumes central bankers act appropriately – have enough information and political authority to vary interest rates as needed. Problems ahead?
- \Rightarrow Changing economic environment keeps Monetary Economics interesting.