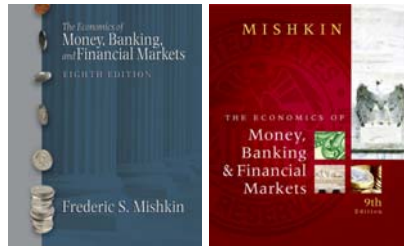


ECON 354 Money and Banking

Professor Yamin Ahmad

Lecture 9

- Structure of the Federal Reserve Board
- Central Bank Independence
- Central Bank Behavior



The central bank

- Monetary policy is conducted by a country's **central bank**.
- A **central bank** is the public authority that regulates a nation's depository institutions and controls the quantity of money.
- In the U.S., the central bank is called the **Federal Reserve** ("the Fed").



*The Federal Reserve Building
Washington, DC*

Note: These lecture notes are incomplete without having attended lectures

The Fed's Goals and Targets

- The Fed conducts the nation's **monetary policy**, which means that it adjusts the quantity of money in circulation.
- In general, the Fed's goals are to keep inflation in check, maintain full employment, moderate the business cycle, and contribute to achieving long-term growth.
- In pursuit of its goals, the Fed pays close attention to interest rates and sets a target that is consistent with its goals for the **federal funds rate**, which is the interest rate that the banks charge each other on overnight loans of reserves.

Note: These lecture notes are incomplete without having attended lectures

Primary Goal: Price Stability

- **Price Stability**: Low and stable inflation
- Inflation
 - Creates uncertainty and difficulty in planning for the future
 - Lowers economic growth
 - Strains social fabric
- Nominal anchor to contain inflation expectations
 - Resolution to the "*Time-inconsistency problem*"

Note: These lecture notes are incomplete without having attended lectures



Other Goals of Monetary Policy

- High employment
- Economic growth
- Stability of financial markets
- Interest-rate stability
- Foreign exchange market stability

Note: These lecture notes are incomplete without having attended lectures



Should Price Stability be the Primary Goal?

- In the long run there is no conflict between the goals
- In the short run it can conflict with the goals of high employment and interest-rate stability
- Hierarchical mandate: puts goal of price stability first
 - E.g. Bank of England, Bank of Canada, Reserve Bank of New Zealand, ECB
- Dual mandate: puts goal of price stability equal to other goal
 - E.g. Federal Reserve

Note: These lecture notes are incomplete without having attended lectures



Origins of the Federal Reserve System

- Resistance to establishment of a central bank prior to 20th century
 - Fear of centralized power
 - Distrust of moneyed interests
- No lender of last resort
 - Nationwide bank panics on a regular basis
 - Banking Panic of 1907 very severe
 - Widespread bank failures and substantial losses to depositors led public to be finally convinced that a “central bank” was needed

Note: These lecture notes are incomplete without having attended lectures



Origins of the Federal Reserve System

- Federal Reserve Act of 1913
 - Fear that the largest corporations and banks would be able to manipulate a centralized authority created opposition to the establishment of a single central bank (like the Bank of England).
 - Elaborate system of checks and balances
 - Decentralized

Note: These lecture notes are incomplete without having attended lectures



The Structure of the Fed

- The key elements in the structure of the Fed are:
 - The Board of Governors
 - The regional Federal Reserve banks
 - The Federal Open Market Committee.

Note: These lecture notes are incomplete without having attended lectures



The Federal Reserve System

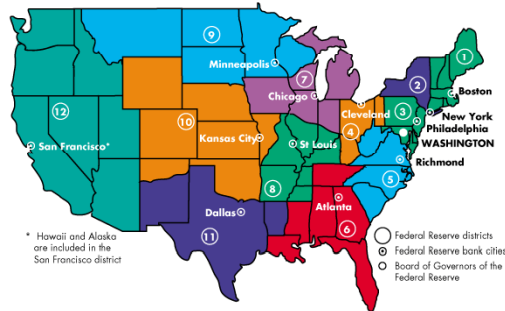
- The Board of Governors has seven members appointed by the president of the United States and confirmed by the Senate.
- Board terms are for 14 years and overlap so that one position becomes vacant every 2 years.
- The president appoints one member to a (renewable) four-year term as chairman.
- Each of the 12 Federal Reserve Regional Banks has a nine-person board of directors and a president.

Note: These lecture notes are incomplete without having attended lectures



The Federal Reserve System

Figure 1 shows the regions of the Federal Reserve System.



* Hawaii and Alaska are included in the San Francisco district

Note: These lecture notes are incomplete without having attended lectures



Role of Federal Reserve Banks

- Clear checks
- Issue New Currency
- Withdraw Damaged Currency
- Administer and make discount loans to banks in their districts
- Evaluate proposed mergers and applications for banks to expand their activities
- Act as liaisons between business community and the Federal Reserve System
- Examine bank holding companies and state-chartered member banks
- Collect data on local business conditions
- Research on monetary policy

Note: These lecture notes are incomplete without having attended lectures



The Federal Reserve System

- The **Federal Open Market Committee (FOMC)** is the main policy-making group in the Federal Reserve System.
- It consists of the members of the Board of Governors, the president of the Federal Reserve Bank of New York, and the 11 presidents of other regional Federal Reserve banks of whom, on a rotating basis, 4 are voting members.
- Chairman of the Board of Governors presides as chairman of the FOMC.
- The FOMC meets every six weeks to formulate monetary policy.

Note: These lecture notes are incomplete without having attended lectures



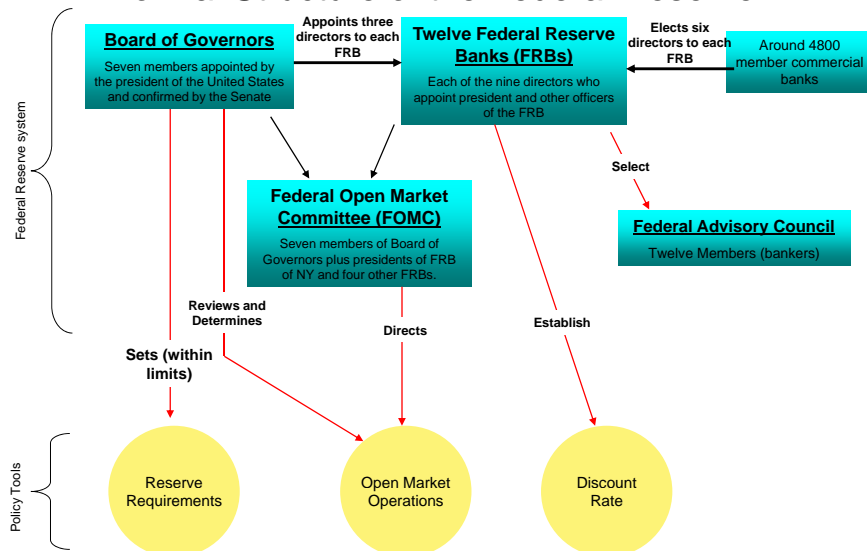
The Federal Reserve System

- The Fed's Power Center
 - In practice, the chairman of the Board of Governors (currently, Ben Bernanke) is the center of power in the Fed.
 - He controls the agenda of the Board, has better contact with the Fed's staff, and is the Fed's spokesperson and point of contact with the federal government and with foreign central banks and governments.

Note: These lecture notes are incomplete without having attended lectures



Formal Structure of the Federal Reserve



Note: These lecture notes are incomplete without having attended lectures



The Federal Reserve Banks and Monetary Policy

The 12 Federal Reserve Banks are involved in monetary policy as follows:

1. Their directors establish the discount rate
2. They decide which banks, member and nonmember alike can obtain discount loans from the Federal Reserve Bank

Note: These lecture notes are incomplete without having attended lectures

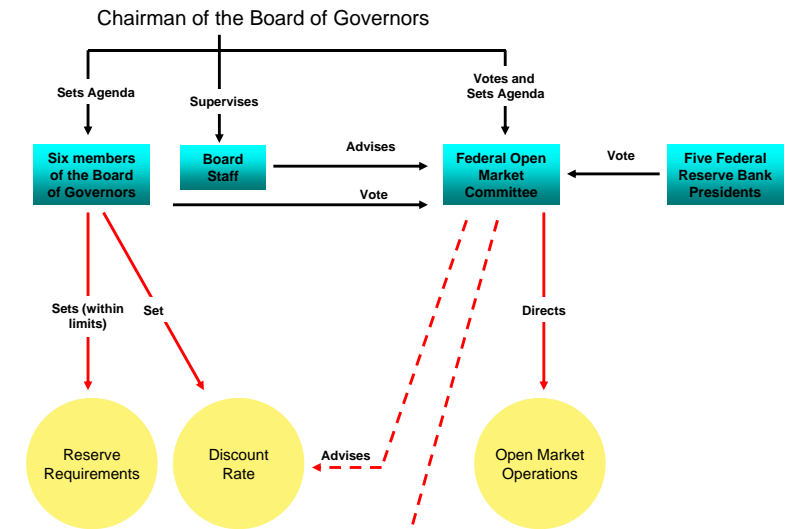
The Federal Reserve Banks and Monetary Policy

The 12 Federal Reserve Banks are involved in monetary policy as follows:

3. Their directors select one commercial banker from each bank's district to serve on the Federal Advisory Council
4. Five of the twelve bank presidents each have a vote in the Federal Open Market Committee, which directs open market operations

Note: These lecture notes are incomplete without having attended lectures

Informal Structure of the Fed



Note: These lecture notes are incomplete without having attended lectures

Board of Governors

- Recall: Board of Governors are members of the FOMC and vote on conduct of open market operations.
- Board has majority of votes: seven governors plus five presidents of district banks
- Board sets reserve requirements (within limits imposed by legislation) and effectively controls the discount rate through “review and determination” process.

Note: These lecture notes are incomplete without having attended lectures

The Fed's Traditional Policy Tools

- Traditionally, the Fed uses three monetary policy tools:
 - *Required reserve ratios*
 - *The discount rate*
 - *Open market operations*

Note: These lecture notes are incomplete without having attended lectures



Additional Policy Tools

- During the 2007 – 2009 Financial Crisis and the Great Recession, the Fed also used three new tools when it's traditional tools failed to work by themselves:
 - **Term Auction Facility**
 - **Primary Dealer Credit Facility**
 - **Term Securities Lending Facility**

Note: These lecture notes are incomplete without having attended lectures



The Federal Reserve System

- The Fed sets required reserve ratios, which are the minimum percentages of deposits that depository institutions must hold as reserves.
- The Fed does not change these ratios very often.
- The **discount rate** is the interest rate at which the Fed stands ready to lend reserves to depository institutions.
- An **open market operation** is the purchase or sale of government securities—U.S. Treasury bills and bonds—by the Federal Reserve System in the open market.

Note: These lecture notes are incomplete without having attended lectures



The Fed's Balance Sheet

- From July 2007 (\$ Billion):

Assets		Liabilities	
Securities		Federal Reserve Notes	\$781.4
	Held Outright	Commercial Bank Reserve Balance	\$16.8
	Repos	Liabilities related to foreign official and US Treasury Deposits	\$42.4
Loans		Other Liabilities	\$5.7
	Primary Lending (Discount Window)		
Foreign Exchange Reserves	\$20.8		
Gold	\$11.0		
Other Assets	\$27.5		
Total Assets	\$880.4	Total Liabilities	\$846.3

Capital (= Total Assets - Total Liabilities) **\$34.1**

Total Asset: \$880.4
 Total Liabilities: \$846.3
 Monetary Base: \$798.2

Note: These lecture notes are incomplete without having attended lectures



The Fed's Balance Sheet

- On the Fed's balance sheet, the largest and most important asset is U.S. government securities.
- The most important liabilities are Federal Reserve notes in circulation and banks' deposits.
- The sum of Federal Reserve notes, coins, and banks' deposits at the Fed is the **monetary base**.

Note: These lecture notes are incomplete without having attended lectures



The Fed's Balance Sheet in 2009

- From June, 2009 (\$ Billion)

Assets		Liabilities	
Securities Held Outright	\$1,115.8	Federal Reserve Notes	\$868.8
US Treasury	\$606.2	Commercial Bank Reserve Balance	\$844.7
Federal Agency Debt	\$82.0	Liabilities related to foreign official and US Treasury Deposits	\$313.8
Mortgage Backed	\$427.6	Other Liabilities	\$6.3
Repurchase Agreements	\$0		
Term Auction Credit	\$372.54		
Other Loans	\$124.2		
Primary Lending	\$42.1		
Asset Backed Commercial Paper	\$23.64		
Credit to AIG	\$43.1		
Term Security Loan Facility	\$15.4		
Commercial Paper Funding Facility	\$142.6		
Maiden Lane Assets	\$62.5		
Central Bank Liquidity Swaps	\$175.7		
		Monetary Base: \$1,713.5	
Foreign Exchange Reserves	\$23.3		
Gold	\$11.0		
Other Assets	\$51.4		
Total Assets	\$2,079.0	Total Liabilities	\$2,033.5

Capital (= Total Assets - Total Liabilities) \$45.7

Note: These lecture notes are incomplete without having attended lectures



The Fed's Balance Sheet in 2010

- From July, 2010 (\$ Billion)

Assets		Liabilities	
Securities Held Outright	\$2,061.0	Federal Reserve Notes	\$902.3
US Treasury	\$777.0	Commercial Bank Reserve Balance	\$1,052.5
Federal Agency Debt	\$159.4	Liabilities related to foreign official and US Treasury Deposits	\$309.4
Mortgage Backed	\$1,124.6	Other Liabilities	\$14.7
Repurchase Agreements	\$0		
Term Auction Credit	\$0		
Other Loans	\$65.6		
Commercial Paper Funding Facility	\$1.0		
Maiden Lane Assets	\$67.1		
Central Bank Liquidity Swaps	\$1.2		
		Monetary Base: \$1,954.8	
Foreign Exchange Reserves	\$23.3		
Gold	\$11.0		
Other Assets	\$97.7		
Total Assets	\$2,335.7	Total Liabilities	\$2,278.9

Capital (= Total Assets - Total Liabilities) \$56.8

Note: These lecture notes are incomplete without having attended lectures



Central Bank Independence

Factors making Fed independent

- Members of Board have long terms
- Fed is financially independent: This is most important
- Instrument and Goal independence

Factors making Fed dependent

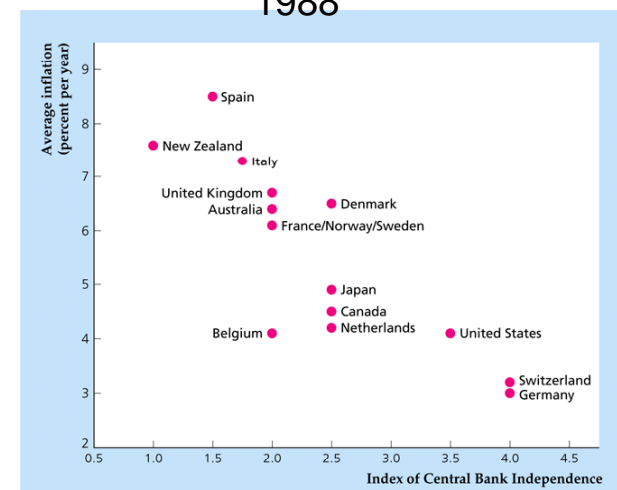
- Congress can amend Fed legislation
- President appoints Chairmen and Board members and can influence legislation

Overall: Fed is quite independent

Note: These lecture notes are incomplete without having attended lectures



Central bank independence and inflation, 1955-1988



Note: These lecture notes are incomplete without having attended lectures



European Central Bank

- Patterned after the Federal Reserve
- Central banks from each country play similar role as Fed banks
- Executive Board
 - President, vice-president and four other members
 - Eight year, nonrenewable terms
- Governing Council

Note: These lecture notes are incomplete without having attended lectures



Differences

- National Central Banks control their own budgets and the budget of the ECB
- Monetary operations are not centralized
- Does not supervise and regulate financial institutions

Note: These lecture notes are incomplete without having attended lectures



Governing Council

- Monthly meetings at ECB in Frankfurt, Germany
- Twelve National Central Bank heads and six Executive Board members
- Operates by consensus
- ECB announces the target rate and takes questions from the media
- To stay at a manageable size as new countries join, the Governing Council will be on a system of rotation

Note: These lecture notes are incomplete without having attended lectures



ECB Independence

- Most independent in the world
- Members of the Executive Board have long terms
- Determines own budget
- Less goal independent
 - Price stability
- Charter cannot be changed by legislation; only by revision of the Maastricht Treaty

Note: These lecture notes are incomplete without having attended lectures

Structure and Independence of Other Foreign Central Banks

- **Bank of Canada**
 - Essentially controls monetary policy
- **Bank of England**
 - Bank of England least independent up until 1997: Govt. made policy decisions
 - post 1997, Bank of England was given the power to set interest rates (instrument independence).
- **Bank of Japan**
 - Recently (1998) gained more independence
- The trend toward greater independence

Note: These lecture notes are incomplete without having attended lectures

Explaining Central Bank Behaviour

Theory of bureaucratic behavior: objective is to maximize its own welfare which is related to power and prestige

- Is an example of principal-agent problem
- Bureaucracy often acts in own interest
 - Fight vigorously to preserve autonomy
 - Avoid conflict with more powerful groups
- Does not rule out altruism

Note: These lecture notes are incomplete without having attended lectures

Central Bank Behaviour

Implications for Central Banks:

- Act to preserve independence
- Try to avoid controversy: often plays games
- Seek additional power over banks

Note: These lecture notes are incomplete without having attended lectures

Should Fed be Independent?

Case For:

- Independent Fed likely has longer-run objectives, politicians don't:
 - evidence is independence produces better policy outcomes throughout the whole
 - Political pressure would impart an inflationary bias to monetary policy
- Avoids political business cycle
- Could be used to facilitate Treasury financing of large budget deficits: accommodation

Note: These lecture notes are incomplete without having attended lectures



Should Fed be Independent?

Case Against:

- Fed may not be accountable
- Hinders coordination of monetary and fiscal policy
- Fed has often performed badly in the past

Note: These lecture notes are incomplete without having attended lectures