Monetary Policy part two
Monetary Policy and the Fed

A central bank is a type of banker's bank whose financial obligations underlie an economy's money supply.

- The central bank in the U.S. is the Fed.
- If commercial banks need to borrow money, they go to the central bank.
- If there's a financial panic and a run on banks, the central bank is there to make loans.
- The ability to create money gives the central bank the power to control monetary policy.

The Federal Reserve System

The Federal Reserve Act of 1913 created the Federal Reserve System.

- To provide for the establishment of federal reserve banks, to furnish an elastic currency, to afford means of rediscounting commercial paper, to establish a more effective supervision of banking in the United States, and for other purposes.
- First United States Bank [1791 - 1811]
- Second United States Bank [1816 - 1836]
- The charters of both were allowed to lapse.
- The 1907 bank crises caused the public to demand the government do something to keep this from happening again.
The Federal Reserve District Banks
- Each Federal Reserve District Bank is owned by the several hundred member banks in that district
- A commercial bank becomes a member by buying stock in the Federal Reserve District Bank
- So, the Fed is a quasi-public-private enterprise, not controlled by the president or Congress
- Effective control is really exercised by the Federal Reserve Board of Governors in Washington, D.C.

The Federal Reserve System
- Board of Governors
  - 7 appointed members
  - Appointed by President
  - Continued by Senate
- Sets reserve requirements
- Supervises & regulates member banks
- Establishes and administers regulations
- Oversees Federal Reserve Banks
- 12 District Banks
- Proposes discount rates
- Holds reserve balances for member institutions
- Lends reserves
- Furnishes currency
- Collects & clears checks
- Handle U.S. government debt & cash balances

Federal Open Market Committee (Board of Governors plus 5 Reserve Bank Presidents). This committee directs open market operations which is the primary instrument of monetary policy.
The Federal Reserve System

Structure of the Fed

Duties of the Fed

- Conducts monetary policy (influencing the supply of money and credit in the economy)
- Supervises and regulates financial institutions
- Lender of last resort to financial institutions
- Provides banking services to the U.S. government
- Issues coin and currency
- Provides financial services to commercial banks, savings and loan associations, savings banks, and credit unions
The Tools of Conventional Monetary Policy

- The Fed influences the amount of money in the economy by controlling the monetary base
  - **Monetary base** is vault cash, deposits of the Fed, and currency in circulation
- Monetary policy affects the amount of reserves in the banking system
  - **Reserves** are vault cash or deposits at the Fed
  - Reserves and interest rates are inversely related

Open Market Operations*

- Open market operations are the primary way in which the Fed changes the amount of reserves in the system
  - **Open market operations** are the Fed’s buying and selling of Treasury bills and Treasury bonds
  - To **expand** the money supply, the Fed **buys** bonds
  - To **contract** the money supply, the Fed **sells** bonds

Open Market Operations*

- An open market **purchase** is expansionary monetary policy that tends to reduce interest rates and increase income
  - When the Fed buys bonds, it deposits money in its accounts at a bank
  - Bank reserves are increased, and when banks loan out the excess reserves, the money supply increases
Open Market Operations*

- An open market sale is a contractionary monetary policy that tends to raise interest rates and lower income
  - When the Fed sells bonds, it receives checks drawn against banks
  - The bank's reserves are reduced and the money supply decreases

The Federal Open-Market Committee (FOMC)

- To fight recessions, the FOMC buys securities
  - This increases the rate of growth of the money supply
- To fight inflation, the FOMC sells securities
  - This decreases the rate of growth of the money supply

Executing Open Market Operations**

- To expand money supply, the Fed buys bonds.
- To contract money supply, the Fed sells bonds.
An Open Market Purchase

- When the Fed buys bonds, it deposits the money in federal government accounts at a bank.
  - Bank cash reserves rise, encouraging banks to lend out the excess.
  - The money supply rises.

An Open Market Sale

- When the Fed sells bonds,
  - In return for the bond, the Fed receives a check drawn against a bank.
  - The bank's reserve assets are reduced and money supply falls.

The Reserve Requirement and the Money Supply

- The reserve requirement is the percentage the Fed sets as the minimum amount of reserves a bank must have.
- There are other ways the Fed can impact the banks' reserves:
  - The Fed can directly add to the banks' reserves.
  - The Fed can change the interest rate it pays banks on their reserves.
  - The Fed can change the Fed funds rate, the rate of interest at which banks borrow the excess reserves of other banks.
Changing Reserve Requirements

- The Federal Reserve Board has the power to change reserve requirements within the legal limits of 0 and 10% for checkable deposits
- Changing reserve requirements is the ultimate weapon and is rarely used

Borrowing from the Fed and the Discount Rate

- In case of a shortage of reserves, a bank can borrow reserves directly from the Fed
- The discount rate is the interest rate the Fed charges for those loans it makes to banks
  - An increase in the discount rate makes it more expensive to borrow from the Fed and may decrease the money supply
  - A decrease in the discount rate makes it less expensive to borrow from the Fed and may increase the money supply

The Fed Funds Market

- Banks with surplus reserves loan these reserves to banks with a shortage in reserves
  - Fed funds are loans of excess reserves banks make to each other
  - Fed funds rate is the interest rate banks charge each other for Fed funds
- By selling bonds, the Fed decreases reserves, causing the Fed funds rate to increase
- By buying bonds, the Fed increases reserves, causing the Fed funds rate to decrease
**Changing the Discount Rate**

- An increase in the discount rate makes it more expensive for banks to borrow from the Fed.
- A decrease in the discount rate makes it less expensive for banks to borrow from the Fed.

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**The Fed Funds Rate and the Discount Rate since 1990**

- The Federal Reserve Bank follows expansionary or contractionary monetary policy by targeting a lower or higher Fed funds rate.

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**Offensive and Defensive Actions**

- **Defensive actions** are designed to maintain the current monetary policy
  - The Fed buys bonds during emergencies
  - Reserves would otherwise decrease because individuals and businesses don’t get to the bank with their cash
- **Offensive actions** are designed to have expansionary or contractionary effects on the economy
The Fed Funds Rate as an Operating Target

- Monetary policy affects interest rates.
- The Fed looks at the Federal funds rate and other targets to determine whether monetary policy is tight or loose.
- If the Fed funds rate is above the Fed's target range, it buys bonds to increase reserves and lower the Fed funds rate.
- If the Fed funds rate is below the Fed's target range, it sells bonds to decrease reserves and raise the Fed funds rate.

The Complex Nature of Monetary Policy

While the Fed focuses on the Fed funds rate as its operating target, it also has its eye on its ultimate targets: stable prices, acceptable employment, sustainable growth, and moderate long-term interest rates.

The Taylor Rule

- The Taylor rule is a useful approximation for predicting Fed policy.
- Formally, the Taylor rule is:

  Fed funds rate = 2% + Current inflation
  + 0.5 x (actual inflation less desired inflation)
  + 0.5 x (percent deviation of aggregate output from potential)
Limits to the Fed’s Control of the Interest Rate

- The Fed may not be able to shift the entire yield curve up or down, but may make it steeper, flatter or inverted
- A yield curve is a curve that shows the relationship between interest rates and bonds’ time to maturity
- An inverted yield curve is one in which the short-term rate is higher than the long-term rate
- As financial markets become more liquid, and technological changes occur, the Fed’s ability to control the long-term rate through conventional monetary policy lessens

The Yield Curve

Summary: The Tools of Monetary Policy

- To fight recession, the Fed will
  - Lower the discount rate
  - Buy securities on the open market
  - Lower reserve requirements
- This would be done only as a last resort
Summary: The Tools of Monetary Policy

- To fight inflation, the Fed will
- Raise the discount rate
- Sell securities on the open market
- Raise reserve requirements
- This would be done only as a last resort