Monetary Policy

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Chapter Objectives

After completing this chapter, you will be able to answer the following questions

- What is Money and who is responsible for controlling of money supply
- How the real interest rate is determined by supply and demand for money?
- How can the central bank use monetary policy to shift the AD curve?
- In what two ways does fiscal policy affect aggregate demand?
- What are the arguments for and against using active policy to try to stabilize the economy?

What Money Is and Why It's Important

- Without money, trade would require ***barter***, the exchange of one good and service for another.
- Every transaction would require a ***double*** coincidence of wants}-
  a huge waste of resources
- This searching is unnecessary with ***money***}, the set of assets that people regularly use to buy g & s from other people.

The 3 Functions of Money

- ***Medium of exchange***: an item buyers give to sellers when they want to purchase g & s
- ***Unit of account***: the yardstick people use to post prices and record debts
- ***Store of value***: an item people can use to transfer purchasing power from the present to the future

The 2 Kinds of Money

Commodity money:
takes the form of a commodity with intrinsic value

Examples: gold coins, cigarettes in POW camps

Fiat money:
money without intrinsic value, used as money because of govt decree.

Example: the U.S. dollar

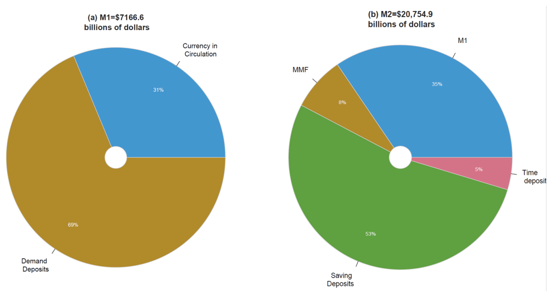
The Money Supply

- The ***money supply*** (or ***money stock***): the quantity of money available in the economy
- What assets should be considered part of the money supply? Two candidates (based on degree of liquidity):
  - ***Currency (in circulation)***: the paper bills and coins in the hands of the (non- bank) public.
  - ***Demand (checkable) deposits***: balances in bank accounts that depositors can access on demand by writing a check.

Measures of the U.S. Money Supply

- ***M1***: currency, demand deposits, traveler's checks, and other checkable deposits.
- ***M2***: everything in ***M1*** plus savings deposits, small time deposits, money market mutual funds

Monetary Aggregates, Sept 2023



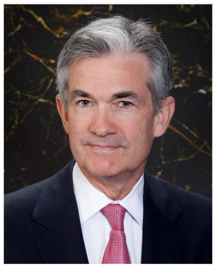
Source:
https://www.federalreserve.gov/releases/h6/current/default.htm

Central Banks & Monetary Policy

- ***Central bank***: an institution that oversees the banking system and regulates the money supply (the Fed of U.S., Bank of England of U.K., etc)
- ***Monetary policy***: the setting of the money supply by policymakers in the central bank

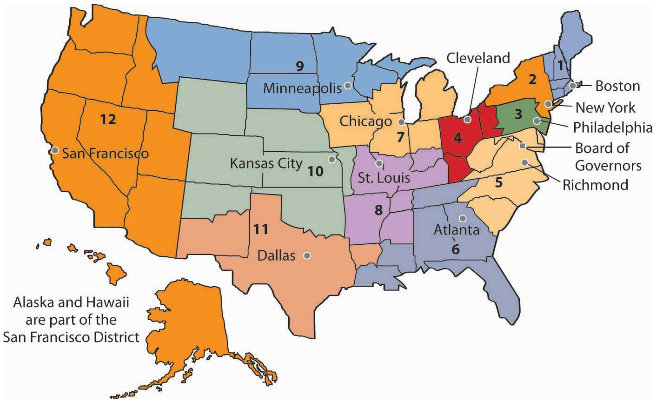
The Structure of the Fed

The Federal Reserve System consists of: Board of Governors, located in Washington, DC, has 7 members; **12 Regional Fed banks**, located around the U.S. **The FOMC, Federal Open Market Committee**, includes the Board of Govs and presidents of some of the regional Fed banks. The FOMC decides monetary policy.



Jerome Powell
Chair of the Fed/FOMC

12 Regional Fed Banks



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The Fed's 3 Tools of Monetary Control

1. *Conducting Open-Market-Operations (OMOs)*: the purchase and sale of U.S. government bonds by the Fed.

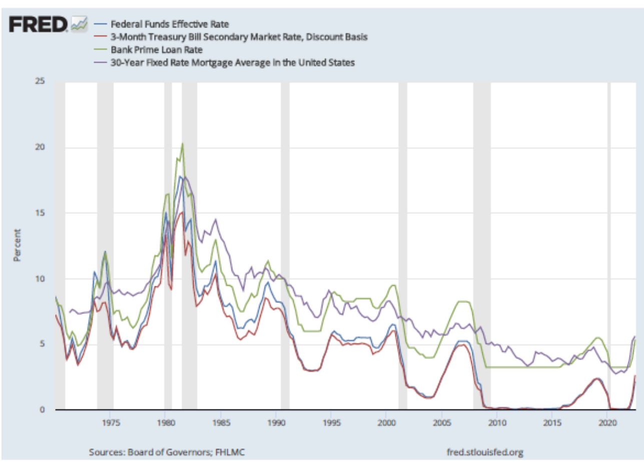
- To increase money supply, Fed buys gov't bonds, paying with new dollars. (bonds in, money out in circulation). To reduce money supply, . . .

2. *Changing Reserve Requirement*: Reserve requirements is the minimum amount of bills and coins a bank must keep in vault against deposits. By changing this rate, the Fed can affect how much money banks can create by making loans.
3. *Changing the Discount Rate*: To increase money supply, the Fed can decrease the discount rate, the rate the Fed charges banks to borrow in discount window

Interbank Loans

- On any given day, banks with insufficient reserves can borrow from banks with excess reserves.
- The interest rate on these loans is the ***federal funds rate***.
- The FOMC uses OMOs to target the fed funds rate.

The Fed Funds Rate and Other Rates, 1975- 2021



Introduction

- Earlier chapters covered:
  - the long-run effects of fiscal policy on interest rates, investment, economic growth
  - the long-run effects of monetary policy on the price level and inflation rate
- This chapter focuses on the short-run effects of fiscal and monetary policy, which work through aggregate demand.

Aggregate Demand

- Recall, the AD curve slopes downward for three reasons: the wealth effect, the interest-rate effect and the exchange-rate effect
- The interest-rate effect is the most important of these effects for U.S. economy
- Next: A supply-demand model that helps explain the interest-rate effect and how monetary policy affects aggregate demand.

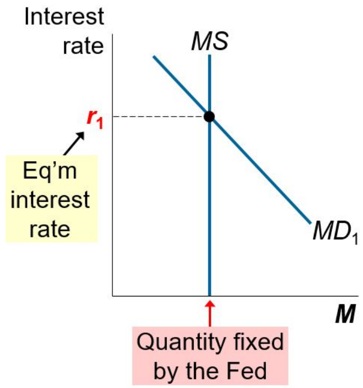
The Theory of Liquidity Preference

- A simple theory of the interest rate (denoted r).
- r adjusts to balance supply and demand for money.
- Money supply: assume fixed by central bank, does not depend on interest rate.

The Theory of Liquidity Preference

- Money demand reflects how much wealth people want to hold in liquid form.
- For simplicity, suppose household wealth includes only two assets: — Money is most liquid but pays no interest — Bonds pay interest but not as liquid
- A household's "money demand" reflects its preference for liquidity.
- money demand is directly related to P and Y, but inversely related to r. Why?

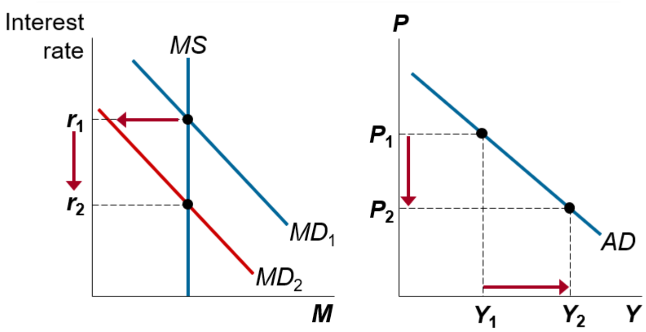
How r Is Determined in the money market



MS curve is vertical: Changes in ***r*** do not affect *MS*, which is fixed by the Fed.

MD curve is downward sloping: A fall in ***r*** increases quantity of money demanded.

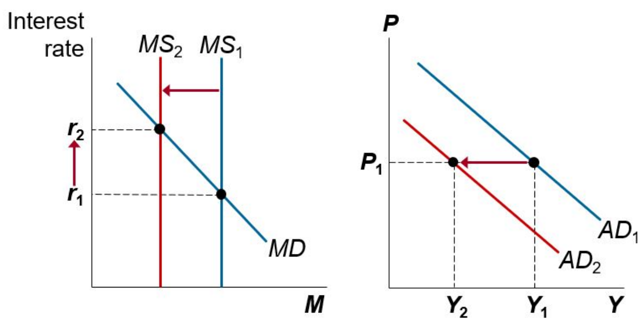
How the Interest-Rate Effect Works



Monetary Policy and Aggregate Demand

- To achieve macroeconomic goals, the Fed can use monetary policy to shift the AD curve.
- The Fed's policy instrument is MS.
- The news often reports that the Fed targets the interest rate.
  - More precisely, the federal funds rate, which banks charge each other on short-term loans
- To change the interest rate and shift the AD curve, the Fed conducts open market operations to change MS.

The Effects of Reducing the Money Supply



ACTIVE LEARNING

Assume the economy is initially at full employment level of output. For each of the events below determine what happens to output and price level and then determine how the Fed should adjust the money supply (or interest rate) to restore the natural rate of output (stabilize output and prices)

A. Congress tries to balance the budget by cutting govt spending.

B. A stock market boom increases household wealth.

C. War breaks out in the Middle East, causing oil prices to soar.

Liquidity traps

- Monetary policy stimulates aggregate demand by reducing the interest rate.
- ***Liquidity trap***: when the interest rate is zero
- In a liquidity trap, mon. policy may not work, since nominal interest rates cannot be reduced further.
- However, central bank can make real interest rates negative by raising inflation expectations.
- Also, central bank can conduct open-market ops using other assets—like mortgages and corporate debt—thereby lowering rates on these kinds of loans. The Fed pursued this option in 2008–2009.