

30.2: Reading- The Federal Reserve System

What Is the Federal Reserve System?

The Federal Reserve System was established by Congress nearly a century ago to serve as the U.S. central bank. President Woodrow Wilson signed the Federal Reserve Act into law on December 23, 1913. Prior to the creation of the Fed, the U.S. economy was plagued by frequent episodes of panic, bank failures, and credit scarcity. The history of the Federal Reserve is bound up in the effort to build a more stable and secure financial system.

The American colonists were limited to using European coinage, barter, and commodity money as their primary means of exchange before independence from British rule. Troubled by foreign coin shortages and the inefficiencies of barter and commodity money, many colonies began minting coins and issuing paper currency by the end of the 17th century. This was ineffective. People lacked faith in colonial currency and the authority of the colonies to issue money was periodically interrupted by their British rulers.

Colonial banks were not like modern banks. They did not take deposits from the public or make loans. Instead, they issued paper currency backed by land or precious metals such as gold. Merchants and other individuals were the primary sources of credit.

The origins of central banking in the United States began with the ratification of the Constitution in 1789. Secretary of the Treasury Alexander Hamilton developed a plan for a federal banking system to solve the nation's credit problems after the War of Independence. This was controversial. Hamilton's plan, backed by commercial and financial interests centered in the northeastern states, called for the creation of a federal bank to provide credit to government and businesses, and to establish a national currency. The federal bank would act as the government's fiscal agent and provide a safe place to store government funds.

Secretary of State Thomas Jefferson led the opposition to Hamilton's plan. Jefferson represented the country's agrarian interests, which looked with suspicion at a central government bank and generally favored state over federal powers. He argued that the Constitution did not expressly authorize the federal government to charter a national bank or issue paper currency.

Hamilton, supported by the Federalist Party, won the debate. The First Bank of the United States was chartered in 1791. A bill to re-charter the bank failed in 1811. Without a centralized banking and credit structure, state banks filled the vacuum, issuing a multitude of paper currencies of questionable value. Congress attempted to solve the country's financial problems by chartering the Second Bank of the United States in 1816. This second bank lasted until President Andrew Jackson declared it unconstitutional and vetoed its re-charter in 1836.

A period known as the Free Banking Era followed the demise of the Second Bank of the United States. Over the next quarter century, U.S. banking was a hodgepodge of state-chartered banks not subject to federal regulation. By 1860, nearly 8,000 state banks operated, each issuing its own paper notes. Some of the more marginal institutions were known as "wildcat banks" supposedly because they maintained offices in remote areas ("where the wildcats are") in order to make it difficult for customers to redeem their notes for precious metals.

The need for reliable financing during the Civil War prompted the passage of the National Banking Act in 1863. The legislation created a uniform national currency and permitted only nationally chartered banks to issue bank notes, but did not create a strong central banking structure.

As the industrial economy expanded, the weaknesses of the nation's decentralized banking system became more acute. Bank panics or "runs" occurred frequently. Many banks did not keep enough cash on hand to meet unusually heavy demand. Panics and runs often occurred when customers lost confidence in their banks after hearing news of failures of other banks. Fearful customers would rush to their banks to withdraw money, which often could not meet the sudden demand for cash. That sometimes created a contagion that triggered a succession of bank failures. A particularly severe panic took place in 1907 that abated only when a private individual, the financier J.P. Morgan, personally intervened to arrange emergency loans for financial institutions. This episode fueled a reform movement, which prompted Congress to establish the Federal Reserve System in 1913.

Since the creation of the Federal Reserve, other pieces of legislation have shaped the structure and operation of the nation's central bank. Following the Great Depression, Congress passed the Banking Act of 1935, which established the Federal Open Market Committee (FOMC) as the Fed's monetary policymaking body. The Federal Reserve Reform Act of 1977 was enacted during a period of surging inflation. It explicitly set price stability as a national policy goal for the first time. The Full Employment and Balanced Growth Act, approved in 1978 and known informally as the Humphrey-Hawkins Act, established full employment as a second goal of monetary policy and required the Fed to report to Congress on its policy twice a year. Most recently, following the severe financial crisis of 2007-08, Congress passed the Wall Street Reform and Consumer Protection Act of 2010. The law, known

as the Dodd-Frank Act, affects the Fed in many ways. It changes the Fed's governance, increases its transparency, expands its regulatory responsibilities, and transfers most Fed consumer protection responsibilities to a new Consumer Financial Protection Bureau.

The Tools of the Fed

Now that we understand some of the history of the Federal Reserve, The Fed seeks to stabilize prices by regulating the money supply and interest rates. In turn, stable prices promote economic growth and full employment—at least in theory. To conduct monetary policy, the Fed relies on three tools: *reserve requirements*, the *discount rate*, and *open market operations*. Remember, these tools are used to help the Fed achieve three major goals:

1. Price stability
2. Sustainable economic growth
3. Full employment

Reserve Requirements

Under what circumstances would the Fed want to change the reserve requirement for banks? The purpose of controlling the money supply is primarily to lessen the threat of *inflation* (a rise in the overall price level) or *recession* (an economic slowdown gauged by a decline in gross domestic product). Here's how it works (again, in theory). If the Fed *raises* the reserve requirement (for example, from 10 percent to 11 percent), banks must set aside more money. Consequently, they have *less to lend* and so raise their interest rates. Under these conditions, it's harder and more expensive for people to borrow money, and if they can't borrow as much, they can't spend as much, and if people don't spend as much, prices don't go up. Thus, the Fed has lessened the likelihood of inflation.

Conversely, when the Fed *lowers* the reserve requirement (for example, from 10 percent to 9 percent), banks need to set aside less money. Because they have *more money to lend*, they keep interest rates down. Borrowers find it easier and cheaper to get money for buying things, and the more consumers buy, the higher prices go. In this case, the Fed has reduced the likelihood of a recession.

A 1 percent change in the reserve requirement, whether up to 11 percent or down to 9 percent, may not seem like much, but remember our earlier discussion of the *money multiplier*: because of the money-multiplier effect, a small change in the reserve requirement has a dramatic effect on the money supply. (For the same reason, the Fed changes reserve requirements only rarely.)

The Discount Rate

To understand how the Fed uses the discount rate to control the money supply, let's return to our earlier discussion of reserves. Recall that banks must keep a certain fraction of their deposits as reserves. The bank can hold these reserve funds or deposit them into a Federal Reserve Bank account. Recall, too, that the bank can lend out any funds that it doesn't have to put on reserve. What happens if a bank's reserves fall below the required level? The Fed steps in, permitting the bank to "borrow" reserve funds from the Federal Reserve Bank and add them to its reserve account at the Bank. There's a catch: the bank must pay interest on the borrowed money. The rate of interest that the Fed charges member banks is called the discount rate. By manipulating this rate, the Fed can make it appealing or unappealing to borrow funds. If the rate is high enough, banks will be reluctant to borrow. Because they don't want to drain their reserves, they cut back on lending. The money supply, therefore, decreases. By contrast, when the discount rate is low, banks are more willing to borrow because they're less concerned about draining their reserves. Holding fewer excess reserves, they lend out a higher percentage of their funds, thereby increasing the money supply.

Even more important is the carryover effect of a change in the discount rate to the overall level of interest rates. Robert Heilbroner and Lester Thurow, *Economics Explained* (New York: Simon & Schuster, 1998), 134. When the Fed adjusts the discount rate, it's telling the financial community where it thinks the economy is headed—up or down. Wall Street, for example, generally reacts unfavorably to an increase in the discount rate. Why? Because the increase means that interest rates will probably rise, making future borrowing more expensive.

Open Market Operations

The Fed's main tool for controlling the money supply and influencing interest rates is called open market operations: the sale and purchase of U.S. government bonds by the Fed in the open market. To understand how this process works, we first need to know a few facts:

- The Fed's assets include a substantial dollar amount of government bonds.
- The Fed can buy or sell these bonds on the open market (consisting primarily of commercial banks).

- Because member banks use cash to buy these bonds, they decrease their reserve balances when they buy them.
- Because member banks receive cash from the sale of the bonds, they increase their reserve balances when they sell them.
- Banks must maintain a specified balance in reserves; if they dip below this balance, they have to make up the difference by borrowing money.

If the Fed wants to decrease the money supply, it can *sell* bonds, thereby reducing the reserves of the member banks that buy them. Because these banks would then have less money to lend, the money supply would decrease. If the Fed wants to increase the money supply, it will *buy* bonds, increasing the reserves of the banks that sell them. The money supply would increase because these banks would then have more money to lend.

The Federal Funds Rate

In conducting open market operations, the Fed is trying to do the same thing that it does in using its other tools—namely, to influence the money supply and, thereby, interest rates. But it also has something else in mind. To understand what that is, you need to know a few more things about banking. When a bank's reserve falls below its required level, it may, as we've seen, borrow from the Fed (at the discount rate). But it can also borrow from other member banks that have excess reserves. The rate that banks pay when they borrow through this channel is called the federal funds rate.

How does the federal funds rate affect the money supply? As we've seen, when the Fed sells bonds in the open market, the reserve balances of many member banks go down. To get their reserves back to the required level, they must borrow, whether from the Fed or from other member banks. When Bank 1 borrows from Bank 2, Bank 2's supply of funds goes down; thus, it increases the interest rate that it charges. In short, the increased demand for funds drives up the federal funds rate.

All this interbank borrowing affects you, the average citizen and consumer. When the federal funds rate goes up, banks must pay more for their money, and they'll pass the cost along to their customers: banks all over the country will raise the interest rates charged on mortgages, car loans, and personal loans. Figure 1, "Key Interest Rates, 2002–2011," charts ten-year fluctuations in the discount rate, federal funds rate, and prime rate—the rate that banks charge their best customers. Because all three rates tend to move in the same direction, borrowers—individuals, as well as organizations—generally pay more to borrow money when banks have to pay more and less when banks have to pay less. Notice that the prime rate (which banks charge their customers) is higher than both the federal funds and discount rates (which banks must pay when they need to borrow). That's why banks make profits when they make loans. Note, too, that the Fed lowered the discount rate and federal funds rate drastically in 2008 in an attempt to stimulate a weakening economy. Despite continued low rates through 2011, the economy is still very weak. The U.S. Mone

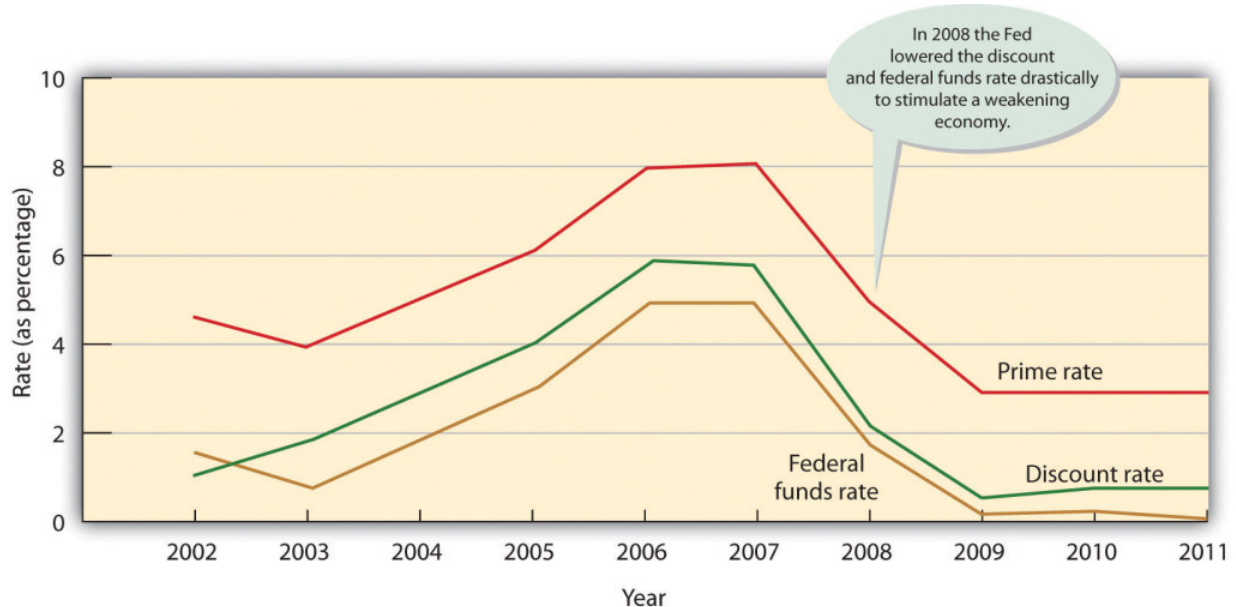


Figure 30.2.1: Key Interest Rates, 2002–2011

The Banker's Bank and the Government's Banker

The Fed performs another important function: it serves its member banks in much the same way as your bank serves you. When you get a check, you deposit it in your checking account, thereby increasing your balance. When you pay someone by check, the

dollar amount of the check is charged to your account, and your balance goes down. The Fed works in much the same way, except that its customers are member banks. Just as your bank clears your check, the Fed clears the checks that pass through its member banks. The monumental task of clearing more than fifteen billion checks a year is complicated by the fact that there are twelve district banks. If someone in one district (for example, Boston) writes a check to a payee in another district (say, San Francisco), the check must be processed through both districts.

Prior to 2004, clearing checks took days because the checks themselves needed to be physically moved through the system. But thanks to the passage of Check 21 (a U.S. federal law), things now move much more quickly. Instead of physically transporting checks, banks are allowed to make an image of the front and back of a check and send the digital version of the original check, called a “substitute” check, through the system electronically. The good news is that Check 21 shortened the time it takes to clear a check, often down to one day. The bad news is that Check 21 shortened the time it takes to clear a check, which increases the risk that a check you write will bounce. So be careful: don’t write a check unless you have money in the bank to cover it.

In performing the following functions, the Fed is also the U.S. government’s banker:

- Holding the U.S. Treasury’s checking account
- Processing the paperwork involved in buying and selling government securities
- Collecting federal tax payments
- Lending money to the government by purchasing government bonds from the Treasury

The Fed also prints, stores, and distributes currency and destroys it when it’s damaged or worn out. Finally, the Fed, in conjunction with other governmental agencies, supervises and regulates financial institutions to ensure that they operate soundly and treat customers fairly and equitably.

KEY TAKEAWAYS

- Most large banks are members of the central banking system called the **Federal Reserve System** (commonly known as “the Fed”).
- The Fed’s goals include price stability, sustainable economic growth, and full employment. It uses *monetary policy* to regulate the money supply and the level of interest rates.
- To achieve these goals, the Fed has three tools:
 1. it can raise or lower **reserve requirements**—the percentage of its funds that banks must set aside and can’t lend out;
 2. it can raise or lower the **discount rate**—the rate of interest that the Fed charges member banks to borrow “reserve” funds;
 3. it can conduct **open market operations**—buying or selling government securities on the open market.

Check Your Understanding

Answer the question(s) below to see how well you understand the topics covered in this section. This short quiz does **not** count toward your grade in the class, and you can retake it an unlimited number of times.

Use this quiz to check your understanding and decide whether to (1) study the previous section further or (2) move on to the next section.

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