Chapter 8

The Federal Reserve System (the Fed)

Chapter Introduction

In this chapter we briefly study the history of the Federal Reserve System (the Fed), the central banks of the United States. We learn about the predecessors of the Fed—the First Bank of the United States and the Second Bank of the United States. We also learn about the structure of the Fed and its functions in the US economy.

A Brief History of the Central Bank of the United State

The Federal Reserve Act of 1913 established the Federal Reserve System (the Fed, for short). President Woodrow Wilson, the 28th president of the United Stated, singed the bill that established the central bank of the United States, on December 23, 1913. In the coming pages and chapters, we will learn about the importance of the functions that the Fed performs.

Ever since the founding of the United States, the young nation had struggled to have a stable medium to facilitate the commerce. While Americans agreed that the nation needed a strong financial system and a stable currency, what shape these would take was not clear. It took several tries to establish the main contours of a central bank for the nation.

The Bank of the Unites States (The First Bank of the United States)

In December 1790, Alexander Hamilton, the first Secretary of Treasury of the nation, presented a report to the United States Congress. In this report he outlined the need for establishing a national bank. Hamilton used the Bank of England as a model for the proposed national bank. According to the Hamilton plan, the bank would "…issue paper money…, provide a safe place to keep public funds, offer banking facilities for commercial transactions, and act as the government's fiscal agent, including collecting the government's tax revenues and paying the government's debts."[1] After an extended debate, the bill passed both the House and the Senate, and President Washington signed the bill into law in February 1791.

The Bank of the United States, which later came to be known as the First Banks of the United States, was a public-private partnership. To finance the Bank's operations, the government put two million and private entities put eight million. The operations of the First Bank of the United States were overseen by a Board of Directors. The Board was composed of twenty-five members; five members of the Board were appointed by the government and the remaining 20 were chosen by private entities who put eight million dollars to finance the operations. The Secretary of Treasury had the authority to audit the Bank's operations.

[1] Hamilton's plan to establish a central bank. https://www.federalreservehistory.org/essays/first-bank-of-the-us. (Accessed: December 19, 2022)

The First Bank of the United State opened branches in Boston, New York, Charleston, and Baltimore in 1792. Later, four more branches were opened—Norfolk, VA, in 1800, Savannah, GA, in 1802, Washington, D.C. in 1802, and New Orleans, LA, in 1805.

Note that except for the D.C. branch, all branches were in port cities. The reason was that, at the time, most of government's tax revenue was coming from customs duties. And as the government's fiscal agent, it was easier for the government to collect taxes at the ports.

The First Bank of the United States was chartered for 20 years. While the Bank provided stability in the credit markets, the opposition to its establishment continued. The opponents of the First Bank of the United Stated included, among others, Thomas Jefferson, and James Madison. The bill to re-charter the Bank in 1811, did not pass. The First Bank of the United State closed its doors.

The Second Bank of the United State

After the First Bank of the United States closed its door, only state-chartered banks were left to facilitate the nation's commerce and function as the fiscal agents of the federal government. A chaotic period followed. In the absence of a federal agency regulating the state-chartered banks, bank credit expanded rapidly. The War of 1812 with Britain did not help either. Soon many state-chartered banks refused to honor their contracts. These events forced former opponents of a national bank to come around. One opponent of the First Bank of the United States, Henry Clay, who was Speaker of the House at the time, cited the "force of circumstance and the lights of experience" the reason for his conversion.[2] James Madison, who was an opponent of the First Bank of the United States, now President of the United States, singed the bill into law in April 1816.

The structure of the Second Bank of the United States was resembled that of the First Bank of the United States, with a few differences. First, as opposed to the First Bank of the United States, which had eight branches, the Second Bank of the United States had twenty-eight branches. The second difference was the amount of funds needed to finance the operations—35 million dollars versus 10 million dollars. Other than that, the Second Bank of the United States was similar to the First Bank of the United States; to finance the Bank's operations, one-fifth of the funds were provided by the federal government, and the remaining four-fifth of the funds were provided by private businesses, individuals, and state governments. The members of the Board of Directors were assigned proportionately—one-fifth of the members were appointed by the President and confirmed by the Senates, and the remaining four-fifth of the members were chosen by the private entities who provided private funds to finance the Bank.

Similar to the First Bank of the United States, the Second Bank of the United States served as a fiscal agent to the federal government. And just like the First Bank of the United States, it was chartered for 20 years. The charter was not renewed once it ran out; the bill failed in April 1834, and the Bank closed its doors soon after.

[2] Clay and "force of circumstances." https://www.federalreservehistory.org/essays/second-bank-of-the-us. (Accessed: December 19, 2022)

The need for a central bank kept showing up. During the banking panic of 1837 banks stopped converting currency into gold and silver. Economic activity decreased significantly, and a depression followed. President Martin Van Buren, who was sworn into office on March 4, 1837, proposed to withdraw all federal funds from state-chartered banks, and establish branches of the United States Treasury, or "sub-treasuries." These branches of the US Treasury were responsible for the collection, disbursement, and safekeeping of public funds. The establishment of sub-treasuries did not do the trick. The Panic of 1837 was followed by banking panics in 1873, 1893, and 1907. By the time the Federal Reserve Act passed in 1913, there were about 7,500 banks chartered at the national level, and about 17,000 state-chartered banks. There was a widespread acknowledgement that a central bank was needed.

The Federal Reserve System (the Fed) and Its Structure

As noted above, the Federal Reserve System is the central bank of the United States. It was created with the passage of the Federal Reserve Act of 1913. The full title of the Act is "An Act 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."[3] The text of the Act's title is informative; it explicitly lays out the objectives of the formation of the Federal Reserve System. As we go through the details in the coming pages and chapters, we will define and clarify certain terms and phrases, such as "elastic currency" and "rediscounting commercial paper."

The Fed has a unique structure. While the Fed has a central governing Board, it is a decentralized "system" of 12 Federal Reserve Banks, and a public and private partnership. By law, the Fed is mandated to promote maximum employment, stable prices, and moderate long-term interest rates in the US economy. As we will see in the coming pages, the Fed meets these mandates through monetary policy. Monetary policy refers to the changes in money supply. While the Fed is a public-private partnership, its purpose is to serve the public interest.

There are three main entities in the Federal Reserve System—the Federal Reserve Board of Governors, the 12 Federal Reserve Banks, and the Federal Open Market Committee.

The Federal Reserve Board of Governors (or Board of Governors) is the governing body of the Federal Reserve System. The Board of Governors meets in Washington, D.C. The Board is composed of seven members. The Board members are nominated by the US President and confirmed by the US Senate.

The Fed has a decentralized structure. The 12 Federal Reserve Banks are dispersed throughout the country. Table 8.1 presents the names of the Federal Reserve Banks and the areas that each Bank serves.

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[3] Official title of the Federal Reserve Act of 1913. https://www.federalreserve.gov/aboutthefed/officialtitle-preamble.htm. (Accessed: December 19, 2022)

Table 8.1: Federal Reserve Districts and Federal Reserve Banks

[1]	[2]	[3]
District	Federal Reserve Bank	Areas Served
1	Federal Reserve Bank Boston	Connecticut (excluding Fairfield County), Massachusetts, Maine, New Hampshire, Rhode Island, and Vermont
2	Federal Reserve Bank of New York	New York state, the 12 northern counties of New Jersey, Fairfield County in Connecticut, Puerto Rico, and the U.S. Virgin Islands
3	Federal Reserve Bank of Philadelphia	[E]astern Pennsylvania, southern New Jersey, and Delaware
4	Federal Reserve Bank of Cleveland	Ohio, western Pennsylvania, the northern panhandle of West Virginia, and eastern Kentucky
5	Federal Reserve Bank of Richmond	Virginia, Maryland, the Carolinas, the District of Columbia, and most of West Virginia
6	Federal Reserve Bank of Atlanta	Alabama, Florida, Georgia, and portions of Louisiana, Mississippi, and Tennessee
7	Federal Reserve Bank of Chicago	Iowa, and most of Illinois, Indiana, Michigan, and Wisconsin
8	Federal Reserve Bank of St. Louis	Arkansas and portions of six other states: Missouri, Mississippi, Tennessee, Kentucky, Indiana, and Illinois. The St. Louis Federal Reserve Bank serves most of eastern Missouri and southern Illinois.
9	Federal Reserve Bank of Minneapolis	Minnesota, Montana, North and South Dakota, 26 counties in northwestern Wisconsin and the Upper Peninsula of Michigan
10	Federal Reserve Bank of Kansas City	Colorado, Kansas, Nebraska, Oklahoma, Wyoming, northern New Mexico, and Western Missouri
11	Federal Reserve Bank of Dallas	Texas, northern Louisiana, and southern New Mexico
12	Federal Reserve Bank of San Francisco	Alaska, Arizona, California, Hawaii, Idaho, Nevada, Oregon, Utah, Washington, Guam, American Samoa, and the Northern Mariana Islands

Source: M. Ashraf. Data Source: https://www.federalreserveeducation.org/about-the-fed/federal-reserve-districts/. (Accessed: December 21, 2022)

Note that the boundaries of each Federal Reserve Bank do not align with state boundaries. Originally, the service areas of each Bank were determined by the trade and economic relations between the various parts of the country. Since there were significant differences in economic conditions of various areas, it was deemed appropriate that each Federal Reserve would charge a different discount rate—the interest rate that the Federal Reserve Banks charge for loans to commercial banks. Over time, as the regional economies integrated, several changes to the Federal Reserve Act of 1913 followed. Most notable are the revisions to the Act in 1933 and 1935. Over time, due to integration of regional economies, a decentralized monetary policy became ineffective, and monetary policy became more centralized. The Depository Institutions Deregulation and Monetary Control Act of 1980 (Monetary Control Act) led to further coordination among the 12 Federal Reserve Banks.

Each of the 12 Federal Reserve Banks is separately incorporated. Each Bank has a nine-member Board of Directors. The commercial banks located in each of the Federal Reserve district, that have stocks in that Bank, elect six of the nine directors. The remaining three are appointed by the Board of Governors. The directors from each district serve as a link between the Board of Governors and their respective district.

It is important to note that the US Congress does not finance the functions of the Fed. The functions of the Fed are financed by the interest that it earns on government securities (more on this later) and other fees that it collects for performing various services for the commercial banks. Furthermore, after meeting its expenditure and its surplus fund needs, which is limited to $6.785 billion (at the time of this writing), the Fed returns its excess revenue to the US Treasury.

The Federal Open Market Committee (FOMC) is the body that conducts the open market operations. The US Congress enacted changes to the Federal Reserve Act of 1913, in 1933 and 1935. The creation of the FOMC was the result of those changes. Open market operations are buying and selling of government securities, i.e., buying and selling of government bonds in the open market. This has been the main tool of the Fed to conduct monetary policy. As the US economy evolved and we learned more about the functioning of the economy, the Fed's tools to conduct monetary policy changed as well. We will go into a lot more detail about the monetary policy tools used by the Fed.

The FOMC has 12 members; seven Board of Governors, the president of the Federal Reserve Bank of New York, and four members are from the remaining 11 Federal Reserve Banks, who serve one year as members of FOMC on rotating basis. The FOMC meets in Washington, D.C. The FOMC holds eight meetings in a typical year. It may hold additional meetings if needed.

The Functions of the Fed

Broadly speaking, the Fed serves the following function.

- Conduct Monetary Policy.

  Recall that monetary policy is related to changes in money supply. We will go into more details about what money is and how these tools affect money supply in coming chapters.

For now, we briefly note that there are four main tools that the Fed uses to change money supply.

- Open Market Operations: Buying and selling of government securities (i.e., bonds).
- Discount Rate: The Fed serves as a "bankers' bank." Commercial banks and other depository institutions, which include credit unions, savings institutions or thrifts, may borrow from the Fed to meet their needs. The interest rate that the Fed charges commercial banks is called the discount rate.
- Required Reserve Ratio: The Fed, through the Federal Reserve Act, is authorized to require depository institutions to hold a portion of their deposits as reserves, to meet the withdrawal needs of depositors. This is called the required reserve ratio. This is reserve requirement depends upon, among other factors, the financial health of the institution. Because of the changes in the economy, as of March 26, 2020, the required reserve ratio has been set to zero. As such, the importance of this tool to conduct monetary policy has diminished.
- Interest on Reserve Balances: The Federal Reserve Regulatory Relief Act of 2006, authorized the Federal Reserve Banks to pay interest on the reserves that the depository institutions keep at the Banks. The original effective date was set to October 1, 2011. Later, the Emergency Economic Stabilization Act of 2008, moved the effective date to October 1, 2008. The interest rate on reserve balances is set by the Board of Governors.

There are other monetary policy tools that were created to deal with 2007-2009 financial crisis. These are referred to as "Non-traditional Tools." Some of these tools have since expired.[4]

- Promotion of Financial Stability: A stable financial system is the backbone of a modern economy. In a stable financial system, financial resources flow smoothly from lenders to borrowers; financial intermediaries—banks, credit unions, savings and loans organizations—and financial markets help transfer funds from lender to borrowers. The Fed looks for signs of systemic weakness in the economy and abroad and takes proactive steps to minimize the risks.
- Safety and Soundness of Individual Banks: To this end, the Fed monitors to ensure that individual banks and financial institutions are in good financial health and are not over-leveraged. An over-leveraged bank will have too high debt-to-equity ratio. Furthermore, the Fed ensures that banks and financial institutions are playing by the rules, and that risky actions by individuals banks are not spilled over the overall economy.
- The Bank of the Government: While the US Treasury acts as an accountant to the government, the Fed serves as a bank to the US government. Federal government funds are transferred through the Fed. The Fed also provides banking services to the foreign central banks, foreign monetary authorities, and other international organizations such as

[4] Other tools of monetary policy. https://www.federalreserve.gov/monetarypolicy/policytools.htm (Accessed: December 23, 2022)

International Monetary Fund and the World Bank. You and I, as individuals, cannot open an account at the Fed.

- Bankers' Bank: The Federal Reserve Banks serve as financial institutions for the banks and other depository institutions. In this capacity, the Fed clears inter-bank payments, lends to commercial banks who are facing liquidity problems, and provides safe-keeping facilities, among a whole host of other services.
- Consumer Protection: In its role as a regulator, the Fed ensures that commercial banks and other lending agencies play by the rules and follow the fair lending laws of the US government.

The Independence and Transparency of the Fed

The Fed is free of political influence in setting the nation's monetary policy. While the Governors and Directors of the Fed surely have political views and affiliations, they act as technocrats and are not influenced by politics. This is by design.

As we will learn in greater detail in coming chapters, monetary policy can affect output and unemployment in the short run, in the long run, however, monetary policy is ineffective. This means that if the Fed were influenced by the politics of the incumbent president and the political party in power, it could formulate monetary policy such that the economic outcomes that favored the incumbent president closer to elections. These outcomes, however, may not be in the interest of the nation in the long run. Indeed, countries whose central banks are not independent, and are influenced by the political party or the individuals in power, lead to economic instability. As we have learned more about the impact of monetary policy on the economy and the benefits of central bank independence over the decades since the Great Depression, more and more countries around the world are making their central banks increasingly independent and the actions of their central banks more transparent.

The independence of the Fed does not, however, mean that it can act as it pleases, and is not answerable to the public. The Chair of the Fed and other officials appear before the Congress twice a year and answer questions regarding the Fed's actions. The Fed's financial statements are also audited by an independent accounting firm annually and are made public. The FOMC meeting minutes are also made public. These requirements and actions make the Fed officials accountable and the functioning of the Fed more transparent.

Chapter Conclusion

In this chapter we learned about the history of the Fed and its functions. One of the functions of the Fed is to conduct monetary policy. Monetary policy is related to the changes in money supply. We listed the tools that the Fed uses to conduct monetary policy. In the in the next chapter, we will define what money is, how the Fed changes money supply in greater detail.

A Review of Terms

- The Federal Reserve System (the Fed): It is the central bank of the United States.
- Monetary Policy: Changes in the money supply.
- Monetary Policy Tools: The actions that the Fed takes to change the money supply. These include Open Market Operations, Changes in Discount Rate, Changes in Required Reserve Ratio, and Interest on Reserve Balance
- Open Market Operation: Buying and selling of government bonds.
- Discount Rate: The interest rate that the Fed charges commercial banks for loans.
- Required Reserves: The part of deposits that commercial banks are required to keep, to meet their withdrawal needs.
- Interest on Reserve Balances: It is the interest that the Fed pays to the commercial banks on the deposits held at the Federal Reserve Banks.
- The Federal Open Market Committee (FOMC): It is the body that conducts the open market operations.