The Federal Reserve, the US' Invisible Hand for World Dominance

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By

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Cambridge Scholars Publishing

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PREFACE

Yosef Bonaparte is a Professor in Finance at the *Business School* of the *University of Colorado in Denver* and the director for external affairs in finance and the Director of Masters in FinTech. He has a Ph.D. in Economics from the University of Texas and has taught at several institutions and universities in the United States and Canada. His research has focused on **household finance**, asset pricing, demographic and racial finance, and political finance. Specifically, Professor Bonaparte analyses how political climate and political affiliation influence key household financial decisions, such as the level of risk tolerance and participation in the stock market.

Professor Bonaparte has been active in research in macroeconomic and monetary policy and has published several articles in this field. In fact, Professor Bonaparte is the only person who quantifies what is called transitory inflation, first introduced by Federal Reserve Chair Jerome Powell. Moreover, Professor Bonaparte recently researched the impact of monetary policies on household decisions, especially the decision to participate in the stock market. Professor Bonaparte has published articles in top finance and economics journals, including the *Journal of Financial Markets*, and magazines about monetary policy and the impact of Federal Reserve seniority on the financial market. In his article in the *Journal of Monetary Economics,* Bonaparte analyzes the sensitivity of households' saving-consumption decisions to interest rates.

Professor Bonaparte has published two books about cryptocurrencies and blockchain as well as about Environmental, Social and Governance (ESG). One book was published with Cambridge Scholars and titled *Cryptocurrency, Decentralized Finance Blockchains and Robust Trading Strategies.* The second book is self-published for self-marketing and is titled *ESG Investing and Trading: Myths vs Facts.*

Professor Bonaparte won the University of Colorado at Denver DEI Award for Pandemic Research and Creative Activities in 2021 for his research on the effects of COVID-19-19 on wealth inequality in the US, including African Americans investing during the pandemic and the need for greater access to financial education for minorities. In addition, he was a public speaker for several events supporting equality, diversity and financial inclusion. One of these events was a workshop with Charles Schwab to fight financial literacy in 2022.

Finally, Professor Bonaparte's research has been published in top finance and economics journals, and his work has been featured in major newspapers and magazines, including *The New York Times, Wall Street Journal, Market Watch*, the *Denver Post*, Yahoo Finance and MSN, and he has been featured on several TV networks including ABC and Fox News.

BOOK OVERVIEW

The goal of this book is to educate readers about the extensive role of the Federal Reserve (the "Fed") in our daily lives, which overarches the role that the government plays, its consequences in the world's economy and how the world is impacted by the Federal Reserve and its world dominance. This world dominance recently caused greater opposition in the world, something we witnessed with the Russian invasion of Ukraine and the rise of BRICS (Brazil, Russia, India, China, and South Africa).

The book stands on three pillars that portray the entire picture of the Federal Reserve's role in the US and the world. The **first pillar** is about the history of central banks and fiat money and how hyperinflation forces government leaders to search for innovative ways to help fight inflation. This history review is critical because it is fundamental to understanding how the US Federal Reserve gained power and became a world dominance. In fact, the outcome of WWII made the US almost a single-world power in the Western hemisphere, and the US dollar became the method and medium of exchange across countries. This unlimited power placed the Federal Reserve in a spot to be world dominant because the Federal Reserve determines the interest rate and US dollar supply, which has implications on the dollar exchange and strength.

The **second pillar** builds the structure on how the monetary policy influenced key macroeconomic quantities, such as inflation and unemployment, as well as GDP growth. Indeed, these macroeconomic quantities are more influenced by the Federal Reserve than the government via fiscal policies. With this pillar, we analyze how monetary policies influence household finances and portfolio choices. In particular, we analyze the impact of money supply and interest rate on household investing and trading decisions, as well as the sensitivity of consumption and saving decisions to the interest rate.

The **third pillar** analyzes the key challenges that the Federal Reserve faces, including whether the Federal Reserve chair is political. Then, we analyze monetary policy and the central bank's independence, as well as present new ideas for Federal Reserve reform that suggest adding new roles for the Federal Reserve and presenting more accountability and better board structure with more diversity and representation. With this pillar, we focus on the Federal Reserve's dominance as a classroom where we present a syllabus as well as a literature review about the Federal Reserve that is widely cited in the academic world. We will then present slides that can be used for a monetary class.

We believe these three pillars present a new vision of the way one needs to know about the Federal Reserve. In a survey conducted with finance and economics students, it was realized that for most of the students, the 'Fed' is viewed as a black box; some even suggested that we should not criticize the Federal Reserve, and the majority exhibit a lack of understanding the imperative role that the Fed plays. The book contains six chapters plus an appendix for classroom materials, a literature review and slides. Each chapter is broken down into six subsections.

What Motivated this Book?

In the last midterm election of November 2022, my students encouraged me to participate in the US election and vote; this is odd coming from young people to someone 50 years old; usually, the seniors among us motivate the young to take part and place their voice so to shape their future. My students explained to me that this midterm election is critical because of the war in Ukraine, women's rights, abortion, etc. Despite this being my first opportunity to vote in a national election since I neutralized and became a US citizen, I ended up disappointing my beloved students and did not vote. In fact, I spent my time pondering why every time they say to us that this election is different, critical and crossroads, people buy into this nonsense!

After the election was over, I asked my students who voted, and I was surprised that the majority actually voted and placed their voice. Then I asked them do you really think the elected governments impact the US economy? Yes, they all said yes. Then I asked them can you live with no oxygen and no water? They said no; then I told them the oxygen for any economy is the level of the interest rate, and water is the money supply; do you know who controls the water and oxygen? Not your elected government but the Federal Reserve. The students did believe that they voted for the wrong position and that democracy is a small market in any country; I felt somebody had to shed light on this critical issue and the Federal Reserve's dominance.

Some argue that the president chooses the Federal Reserve chairperson, so what? After the appointment and congressional approval, it is hard to move the chair because you need two-thirds of Congress's support. But we parents bring up our kids, and when they become over 18, we have almost no control over them, and they become the children of the world and do what is best for them. So, the selection process has nothing to do with control. Moreover, we observe that many Federal Reserve chairs appointed by previous presidents from different parties had been appointed for second and third terms by a president of the opposing party; recall Chairman Jerome Powell, who was selected by President Trump and selected for a second term by President Biden. Perhaps both parties have the same views when it comes to the selection of the chair of the Federal Reserve.

Indeed, I rest my case. This is the purpose of this book. People do not know that they vote for the weak role and keep the biggest role that shapes the economy to a group of "wise guys" who are mostly out of touch and perhaps do not know the cost of tomatoes in the grocery store. The first who acknowledged the superpower in the hands of the Federal Reserve was President **John Fitzgerald Kennedy**, under Executive Order 11110, yet he was assassinated before accomplishing his goals. The Federal Reserve committed several large mistakes or "crimes" with no accountability or even oversights.

Several reasons inspired me to write the book that all converge on one purpose and goal. The purpose of this book is to educate the world in general and the American people specifically about the large and decisive role that the Federal Reserve plays in their ecosystem. This is a wake-up call for the world that governments that are driven by democratic elections have a small margin of opportunity for shaping the world economy. Even the rich and entrepreneurs among us also have a small margin to shape the world's economy. Indeed, most of the power is in the hands of the Federal Reserve, which determines the two key macroeconomic quantities: the level of interest rate and the amount of money in circulation.

Another motivation for the book is to suggest and propose some ideas for Federal Reserve reform, in which we add to the current objectives another line of responsibilities, such as lowering the uncertainty in the financial market. Indeed, during the bear markets of 2022 and 2023, instead of the Federal Reserve being the source of certainty, we actually observed that the uncertainty increased every time the chair of the Federal Reserve, Jerome Powell, had a press conference.

Finally, as I was working on my academic research, I found that president wanted to outline that President **John F. Kennedy** (JFK) was among the first who acknowledged the inflatable role of the Federal Reserve in the US economy, and in fact, he issued an **Executive Order 1110** that is not covered in our modern news. I feel an obligation to highlight the role of JFK as a vehicle to shed light on the great role of the Federal Reserve in our lives. Some suggest and link the assassination of JFK with this Executive Order, yet this is not the purpose of this book to discuss controversy or conspiracy but rather to heighten the big role of the Federal Reserve in our lives.

What is a Central Bank and What is a Monetary Policy?

This subsection explains what a central bank is, or the Federal Reserve in the US, and then explains what a monetary policy is. A central bank is a public financial institution that oversees the currency and monetary policy of a country and supervises the commercial banking system. Some name the central bank as the commercial bank since it supervises and regulates banks' powers to ensure stability in the financial market, avoid fraudulent behavior by bank members and limit the risk-taking by these banks.

The central bank retains a monopoly on implementing the monetary base and intends to have a large margin of independence from the government and politics. Vice versa, government and policymakers in the government should not interfere in the decisions made by the Federal Reserve and not use any power or authority over central banks.

Now we turn to explain what monetary policy is and how it is different than fiscal policy. Monetary policy is a set of actions that are related to the level of money supply and interest rate. The level of the money supply includes the reserve requirement level and buying or selling notes or bonds on the open market. The rate of interest rate is determined via the lending and borrowing level. Expansionary monetary policy is when the money supply increases and/or the interest rate decreases. Some also call it quantitative easing, while contractionary monetary policy is when the money supply declines and/or increases the interest rate.

Unlike monetary policy, fiscal policy is managed and executed by the federal government's several agencies and is related to the level of taxation and subsidies, bills and regulations, tariffs and government spending on goods and services. The goals of the Federal Reserve's monetary policy and the federal government's fiscal policy might be different. While the Federal Reserve's basic goal is low inflation and a low unemployment rate, the federal government's ultimate goal is to be reelected.

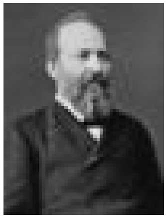
Key Quotes about the Federal Reserve

"It is no coincidence that the century of total war coincided with the century of central banking."

Ron Paul served as the US representative
for Texas's 22nd Congressional district.

"Whoever controls the volume of money in any country is absolute master of all industry and commerce."

James A. Garfield, President of the United States



"The Federal Reserve is an independent agency. And that means basically that there is no other agency of government which can overrule actions that we take. So long as that is in place, and there is no evidence that the administration, or Congress, or anybody else is requesting that we do things other than what we think is the appropriate thing, then what the relationships are don't frankly matter. And I've had very good relationships with presidents."

Alan Greenspan

Executive Order 11110

On June 4, 1963, President **John Fitzgerald Kennedy** issued Executive Order 11110, which aimed to ban the Federal Reserve of its authority to credit money to the United States Federal government with interest.

- This Executive Order was amended to issue silver certificates, as amended by the Gold Reserve Act.
- The order allowed the Secretary to issue silver certificates and use Federal Reserve notes.
- Jim Marrs offered the theory that Kennedy was trying to restrict the power of the Federal Reserve.
- Marrs, in his book *Crossfire,* claims that the issuance of Executive Order 11110 was an effort by Kennedy to transfer power from the Federal Reserve to the United States.
- Author Richard Belzer claimed that "billionaires, power brokers, and bankers... working in tandem with the CIA and other sympathetic agents of the government."
- In March 1964, Secretary of the Treasury C. Douglas Dillon paused the redemption of silver certificates for silver dollars.
- On June 24, 1968, all redemption in silver ceased.

Appendix: A Copy of the Executive Order 11110

President Kennedy's Executive Order (E.O.) 11110 modified the pre-existing Executive Order 10289 issued by US President Harry S. Truman on September 17, 1951, and stated the following:

The Secretary of the Treasury is hereby designated and empowered to perform the following-described functions of the President without the approval, ratification, or other action of the President...

E.O. 10289 then lists tasks (a) through (h) which the Secretary may now do without instruction from the President. None of the powers assigned to the Treasury in E.O. 10289 relate to money or to monetary policy.

President Kennedy's E.O. 11110, in its entirety, follows:

SECTION 1. Executive Order No. 10289 of September 19 [sic], 1951, as amended, is hereby further amended --

(a) By adding at the end of paragraph 1 thereof the following subparagraph (j):

"(j) The authority vested in the President by paragraph (b) of Section 43 of the Act of May 12, 1933, as amended (31 USC. 821 (b)), to issue silver certificates against any silver bullion, silver, or standard silver dollars in the Treasury not then held for the redemption of any outstanding silver certificates, to prescribe the denominations of such silver certificates, and to coin standard silver dollars and subsidiary silver currency for their redemption," and

(b) By revoking subparagraphs (b) and (c) of paragraph 2 thereof.

SEC. 2. The amendment made by this Order shall not affect any act done, or any right accruing or accrued or any suit or proceeding had or commenced in any civil or criminal cause prior to the date of this Order but all such liabilities shall continue and may be enforced as if said amendments had not been made.

JOHN F. KENNEDY
THE WHITE HOUSE,
June 4, 1963

SECTION I:

THE ORIGIN OF THE FED AND WORLD DOMINANCE

CHAPTER 1

THE ORIGIN OF CENTRAL BANKS

1.1 Chapter Review

This chapter portrays the history of central banks in general, with a special focus on the establishment of the Federal Reserve in the United States. Figure 1.1.1 reviews the historical steps of central banks from 400 BC until the 21st century. In approximately 1200, the first form of the bank was established in Greece. Since then, banks have developed, and currently, in all countries, there is some form of financial institution.

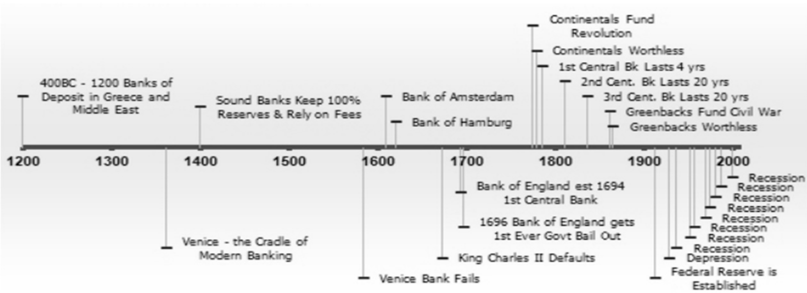


Figure 1.1.1: History of Money and Banking
Source: Stop printing Money! http://www.stopprintingmoney.com/Learning/History_of_Money_and_Banking/

In this chapter, we start with the history of banks and with some emphasis on the modern era, especially the history of **The Amsterdam Wisselbank** in the early 1600s and the Bank of England in the late 1600s, as well as listing the establishment of central banking institutions before the 18th century.

We then turn to review the Federal Reserve's key historical steps starting from 1775, including during the financial crisis of 2007–2008. After reviewing the history, we next analyze the Federal Reserve's structure, goals and objectives, the key goal being to maintain inflation at 2%–2.5% and low unemployment between 3.5% and 4.5%. These goals and objectives are analyzed based on the Federal Reserve Act of 1913.

The last two subsections of the chapter analyze the Federal Reserve balance sheet as well as reviewing key changes in these balance sheets, especially during the crisis, namely, the 2007–2008 financial crisis and the 2020 COVID-19 crisis. The final subsection of this chapter reviews the biography of each Federal Reserve chair between 1936 and 2023, including twelve chairmen and chairwomen; hence, from chairman Marriner S. Eccles in 1936 until the current Federal Reserve chairman Jerome H. Powell as of March of 2023.

Before we turn to review the history of money and the central bank, we ought to depict the historical inflation in the United States from 1774 until 2022. The figure demonstrates that in the history of the US economy, namely before the establishment of the Federal Reserve, we observed high inflation levels and a mix of inflation and deflation spikes, while in the modern area, especially post WWII, the inflation spikes less and there is almost no deflation in the economy.

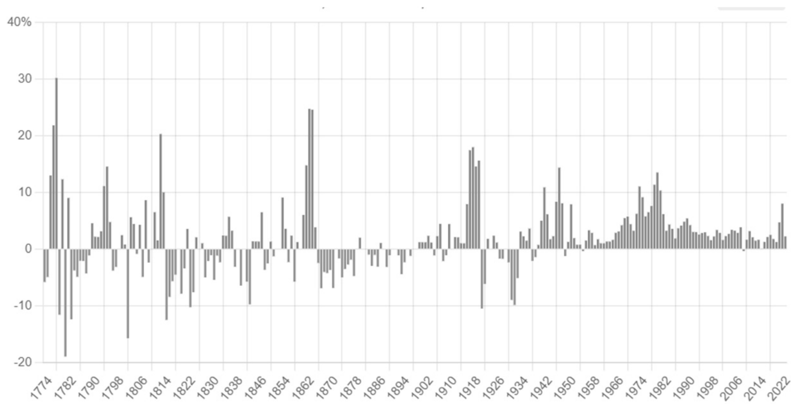


Figure 1.1.1: annual inflation in the United States between 1774 and 2022.
Source: The Bureau of Labor Statistics Consumer Price Index (CPI)

This suggests that the Federal Reserve has a good record of stabilizing inflation. During the 970s, we observed some inflationary spikes due to the oil supply shock resulting from the 1973 war, in which the West sided with Israel against the Arab world, resulting in an oil embargo on some Western countries.

1.2 History of Money and the Central Banks

This section reviews and discusses the history of central banks and how it is related to money. Indeed, there is a long history dating back to the Egyptians (2750–2150 BCE), who used the Shat as a medium of exchange to measure the value of goods, which also was linked to gold and the Shat value determined by the government. This pattern follows other countries in Asia and Southern and Central Europe.

Back then, the monetary system was controlled by government institutions, largely via the coinage prerogative, where banks used ledgers and book money to create deposits for their clients, lending and transferring it with no governmental control. The modern central banks, as of today, are generally associated with fiat money. In the 19th and early 20th centuries, central banks in most of Europe and Japan developed under the international gold standard.

As banking grew and became larger and conducted transactions in several territories, there was the need to consolidate the monetary system, and this network was established at the beginning of the 17th century, especially in the main European trade centers. **The Amsterdam Wisselbank** was founded as the first institute in 1609 and is considered the precursor to modern central banks. Additional exchange banks were established in Hamburg, Venice and Nuremberg; the central bank of Sweden ("Sveriges Riksbank" or simply "Riksbanken") was established in Stockholm from the remainder of the unsuccessful bank Stockholms Banco in 1664. These institutions provided a framework and international payment system in order to enhance the efficiency of international trade and to strengthen monetary stability, which mimics the current role of central banks by issuing their currency and, on some occasions, lending money to the government.

The Bank of England

The Bank of England is considered to be the role model for most modern central banks and was established by Charles Montagu, 1st Earl of Halifax, in 1694. The establishment was followed by a proposal by the banker **William Paterson**. Back in the 1690s, the Kingdom of England was in short supply of public funds, especially the low credit of William III's government. It was so hard even to borrow the £1,200,000 to fund the ongoing Nine Years' War with France. To encourage payment to the loan, they suggest that contributors be incorporated as The Governor and Company of the Bank of England with lasting banking rights counting the issue of notes. The lenders offered to provide the government with cash and liquidity, yet they issued notes against the government bonds, which could be lent again. As such, a Royal Charter was arranged on 27 July via the passing of the Tonnage Act 1694. Long story short, the £1.2 million was raised in 12 days, and about half of this money was used to rebuild the navy. It is important to mention that the currency crisis of 1797, instigated by panicked depositors withdrawing from the banks, led to the government hanging the "convertibility" of notes into *specie* payments.


The Bank of England, established in London in 1694.

The massive growth of central banks occurred in many European countries during the 19th century. Napoleon Bonaparte created the Banque de France in 1800 as a path to finance his frequent wars; this bank continued to be the most significant central bank throughout the 19th century.

Table 1.2.1 reports the list of central banking institutions before 1900 and dismisses central banking institutions in several banks around the world, such as the Netherlands Antilles (est.1828), Indonesia (1828), Bulgaria (1879), Romania (1880), and Serbia (1883). These central banks were owned by a small group of powerful family banking houses, characterized by the **House of Rothschild**, **the Hottinguer family** and **the Oppenheim family,** with branches in major cities across Europe. While these banks were originally established as a private institution by these families, by the end of the 18th century, they gradually became viewed as a public authority with civic accountability to maintain a strong and healthy financial system.

Table 1.2.1: List of Central banking institutions before 1900

Bank	Founded	Monopoly note issue	Lender of last resort (decade)
Sverige Riksbank	1668	1897	1890
Bank of England	1694	1844	1870
Banque de France	1800	1848	1880
Bank of Finland	1811	1886	1890
Nederlandsche Bank	1814	1863	1870
Austrian National Bank	1816	1816	1870
Norges Bank	1816	1818	1890
Danmarks National bank	1818	1818	1880
Banco de Portugal	1846	1888	1870
Belgian National Bank	1850	1850	1850
Banco de España	1874	1874	1910
Reichs bank	1876	1876	1880
Bank of Japan	1882	1883	1880
Bank D'Italia	1893	1926	1880

Source: Naked Keynesianism http://nakedkeynesianism.blogspot.com/2016/10/history-of-central-banks-tutorial.html

The headquarters of the People's Bank of China (established in 1948) in Beijing

The European Central Bank building in Frankfurt

The history of central banking in the United States began when Alexander Hamilton, Secretary of the Treasury in the 1790s, strongly encouraged the development of the banking system despite the substantial opposition from Jeffersonian Republicans and established the First Bank of the United States that then broke due to funding the war of 1812 against the UK without a central bank which altered their views. The Second Bank of the United States, established between 1816 and 1836 underneath Nicholas Biddle, operated as a central bank that regulated the swiftly growing banking system. In 1913, the United States created the Federal Reserve system through the passing of **The Federal Reserve Act**, which established the Federal Reserve system as the central bank of the United States and offered the nation a secure and stable monetary and financial system. The Federal Reserve Act was passed by the 63rd United States Congress and signed into law by President Woodrow Wilson on December 23, 1913.

Continental Note, 1776 American Currency Exhibit, Federal Reserve Bank of San Francisco

Second Bank of the United States, $1,000 Note American Currency Exhibit, Federal Reserve Bank of San Francisco

It is important to mention that the Federal Reserve Act came six years after the panic of 1907, which occurred over three weeks starting in mid-October after the New York Stock Exchange reduced by almost 50% from its peak the previous year. This panic arose during a time of economic recession that caused people to trust the banks and companies less, and there were frequent raids on banks.

1.3 Federal Reserve Key Historical Stops

This subsection reviews the key historical stops of the Federal Reserve, including the period when fiat currency was initiated in the US between 1775 and 1791. This valuable data was collected from this Federal Reserve History ORG https://www.federalreservehistory.org/.

17754–1791: US Currency

- The Continental Congress issued the first fiat paper money named "continentals."
- The large quantity of fiat money notes issued caused inflation, especially as the war progressed.
- Hyperinflation caused people to lose trust in these notes; "Not worth a continental" or "utterly worthless."

1913: The Federal Reserve System Was Born

- On December 23, 1913, President Woodrow Wilson signed the Federal Reserve Act into law.
- Decentralized central banking.
- Balancing the interest of private banks and populist sentiment.

1914: Open for Business

- The bare bones of the new law had to be created before operations
- November 16, 1914, 12 cities were chosen as regional Reserve Banks
- This happened as Europe erupted into World War I

1914-1919: Fed Policy During the War

- US banks continued operations during World War I because of emergency currency.
- Reserve Banks could discount banker's acceptances.
- Indirectly helped finance the war until 1917, when the US declared war on Germany.

1920s: The Beginning of Open Market Operations

- Benjamin Strong realized that gold no longer served as the central factor in controlling credit.
- His action stemmed from a recession in 1923 through a larger purchase of government securities.
- During the 1920s, the Fed began using open market operations as a monetary policy tool.
- Strongly promoted relations with other central banks, especially the Bank of England.

1929-1933: The Market Crash and the Great Depression

- Virginia Representative Carter Glass recognized dire consequences for the stock market, and this resulted in the Great Depression.
- The Great Depression began in October 1929 and was the worst in history.

- From 1930–1933, nearly 10,000 banks failed, and President Roosevelt declared a bank holiday.
- Inadequate understanding of monetary economics for the Fed to help.

1933: The Depression Aftermath

- Congress passed the Banking Act of 1933 (the Glass-Steagall Act).
- Separation of commercial and investment banking and the requirement of government securities as collateral for Federal Reserve notes.
- Establishment of Federal Deposit Insurance Corporation (FDIC).
- Holding companies became a prevalent structure for banks over time.
- Roosevelt recalled all the gold and silver certificates, ending the gold and any other metallic standard.

1935: More Changes to Come

- The Banking Act of 1935 called for further changes in the Fed structure.
- Creation of the Federal Open Market Committee (FMOC).
- Removal of Treasury Secretary and Comptroller of the Currency from the Fed's governing board and member terms became 14 years.
- The Employment Act was added to maximize employment.
- The 1956 Bank Holding Company Act named the Fed as the regulator of bank-holding companies owning more than one bank.
- The 1978 Humphrey-Hawkins Act required the Fed chair to report to Congress twice annually on monetary policy goals and objectives.

1951: The Treasury Accord

- In 1942, the Federal Reserve system committed to maintaining low interest rates.
- Cheaper debt financing of the war.
- The Fed was forced to give up control of the size of the portfolio and money stock.
- The conflict between the Fed and Treasury over maintaining the peg after the start of the Korean War in 1950.

- President Harry Truman and Secretary of the Treasury John Snyder were both strong supporters of the low-interest rate peg.
- Marriner Eccles understood that the forced obligation to maintain the low peg on interest rates produced an excessive monetary expansion that caused inflation.
- After a fierce debate between the Fed and the Treasury for control over interest rates and US monetary policy, their dispute was settled, resulting in an agreement known as the Treasury-Fed Accord.
- Eliminated the obligation of the Fed to monetize the debt of the treasury at a fixed rate.
- Became essential to the independence of central banking and how monetary policy is pursued by the Federal Reserve today.

1970s–1980s: Inflation and Deflation

- 1970s inflation skyrocketed, and producer and consumer prices rose.
- The federal deficit more than doubled, and oil prices soared.
- August 1979, with Paul Volcker sworn in as Fed chair, there were drastic actions to break the inflation stranglehold on the US economy.
- Volcker's leadership as Fed chair during the 1980s was successful overall in bringing double-digit inflation under control.

1980 Setting the Stage for Financial Modernization

- The Monetary Control Act of 1980 required the Fed to price financial services completely against private sector providers and establish reserve requirements from eligible financial institutions.
- Beginning a period of modern banking industry reforms.
- Interstate banking proliferated, and banks began offering interest-paying accounts and instruments to attract customers from brokerage firms.
- Barriers to insurance activities.
- 1999 Gramm-Leach-Bliley Act was passed, which overturned the Glass-Steagall Act of 1933.
- Allows banks to offer a menu of financial services like investment banking and insurance.

1990s: The Longest Economic Expansion

- The stock market crashed on October 19, 1987, two months after Alan Greenspan took office.
- October 20: "The Federal Reserve, consistent with its responsibilities as the nation's central bank, affirmed today its readiness to serve as a source of liquidity to support the economic and financial system."
- The 10-year economic expansion ended in March 2001.
- Short and shallow recession ending November 2001.
- The Fed lowered interest rates rapidly in response to the 1990s stock market bubble.
- Fed used monetary policy on multiple occasions, including the credit crunch of the early 1990s.
- The decade was marked by declining inflation and the longest peacetime economic expansion in US history.

September 11, 2001

- The Federal Reserve as the central bank was put to the test on September 11, 2001.
- The terrorist attack disrupted US financial markets.
- Fed sent out a statement reminiscent of its announcement in 1987: "The Federal Reserve System is open and operating. The discount window is available to meet liquidity needs."
- Fed lowered interest rates and loaned more than $45 billion to financial institutions.
- By February, Fed lending returned to pre-September 11 levels and a potential liquidity crunch was averted.
- Fed played a pivotal role in dampening the effects of the September 11 attack.

January 2003: Discount Window Operation Changes

- 2003 Federal Reserve changed discount window operations to have rates at a window set above the prevailing Fed Funds rate.
- Provide rationing of loans to banks through interest rates.

2006 and Beyond: Financial Crisis and Response

- In early 2000, low mortgage rates and expanded access to credit made homeownership possible for more people.
- Increased demand for housing which drove up house prices.
- The housing boom got a boost from increased securitization of mortgages.
- Securitization of riskier mortgages expanded rapidly, including subprime mortgages made to borrowers with poor credit records.

1.4 Federal Reserve Structure, Goals and Objectives

This subsection presents the structure of the United States Federal Reserve and its goals and objectives. But first, we ought to discuss the key Federal Reserve responsibilities. The first and most important one is implementing the **monetary policy** by determining the interest rate, which is also known as the federal fund effective rate and also managing the money supply. Another key responsibility for the Federal Reserve is "reserve management," which is overseeing a country's foreign exchange as well as government notes, notes and currency issuance. There are other responsibilities, such as **financial stability**, and we observed that during the financial crisis in 2008, **banking supervision** by regulating and supervising banks and **payments systems** in oversite payment inter-banking clearing systems. The Federal Reserve also hosts economic research and statistical collection and provides advice to the government.

Next, we discuss the structure of the Federal Reserve. Figure 1.4.1 depicts the structure of the Federal Reserve, which is in three nests: the US central bank, the three key entities in the central bank and the five key functions that it operates on.