A Study of the Financial Crisis and Relevant Monetary Policies

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Abstract. This essay examines several pivotal moments in recent economic history in order to demonstrate the significant influence of monetary policy on global financial crises. Exploring the complex relationship between central banks, particularly the Federal Reserve, and the various crises that occurred, the study navigates through the consequences of monetary policy interventions. Beginning with an overview of the Federal Reserve's roles and mechanisms, the narrative unfolds into critical periods, including the stagflation of the 1970s, the subprime crisis in the 2000s, and the unprecedented challenges posed by the COVID-19 pandemic. Each crisis serves as a crucible for evaluating how well monetary policies can stabilize the economy in turbulent times. The examination centers on the application of diverse financial tools, encompassing interest rate modifications, open market operations, and non-traditional actions like asset acquisitions. Through meticulous examination, this paper seeks to explain how monetary policies, often evolving in response to economic paradigms, have shaped and reshaped the global financial landscape during times of crisis. By identifying the commonalities across these different crises, the study highlights the evolution of the Federal Reserve's strategies, underscoring its adaptability and resilience. These monetary interventions have broad implications for global financial stability, emphasizing the critical role of central banks in navigating the complexities of a rapidly evolving economic environment.

Keywords: Monetary Policy, Financial Crisis, Central Banking, Government Intervention.

1. Introduction

The Federal Reserve, the US central bank, is essential to the stability of the country's financial system and economy. In response to the pre-Fed era's frequent bank runs and financial panics, the Federal Reserve was founded in 1913. Over the years, its mandate has expanded, encompassing a range of responsibilities aimed at regulating and safeguarding the U.S. financial system. One of the primary functions of the Fed is the regulation of the nation's commercial banks. By implementing policies and setting reserve requirements, the Fed aims to prevent bank runs and ensure the stability of the banking sector. Reserve requirements determine how much money banks must have in reserve in order to thwart excessive withdrawals that would cause the system to become unstable. This regulatory role underscores the Fed's commitment to maintaining a sound and secure banking environment. In addition to its regulatory functions, the Fed wields significant influence over the overall economic landscape through the execution of monetary policies. The central tool in its arsenal is the manipulation of the money supply, a mechanism that can either stimulate economic expansion or curb inflationary pressures. The Fed may modify interest rates, which impacts borrowing costs and, consequently, decisions about investments and expenditures, by managing the money supply.

The Fed employs various instruments to adjust the money supply, and these tools form the backbone of its monetary policy toolkit. The reserve ratio adjustment is one such tool that establishes the percentage of deposits that banks are required to retain as reserves. The quantity of money banks may lend and, consequently, the total money supply is directly impacted by changes in this ratio. Furthermore, the Fed employs open market operations as a strategic tool in its monetary policy endeavors. This involves the buying or selling of short-term securities, such as Treasury bills, to alter the liquidity of banks and, consequently, the money supply. By engaging in these transactions, the Fed can effectively influence interest rates and credit conditions, shaping the broader economic landscape. The discount rate, or the amount that commercial banks can borrow from the central bank, is likewise subject to change by the Fed, which has the authority to modify the money supply. The cost of borrowing for banks is impacted by this interest rate, which has an impact on their lending practices and, in turn, the amount of credit available to the economy as a whole. The Fed's multifaceted approach to monetary policy, encompassing reserve requirements, interest rates, discount rates, and open market operations, highlights its intricate role in shaping the economic trajectory of the United States. As we delve into the subsequent sections of this paper, we will explore how these monetary policy tools have been deployed during critical periods in recent economic history, examining their impact on the global financial landscape.

2. 1970-1980 Stagflation

2.1. Background

The term "Stagflation" is used to describe the rare coexistence of economic stagnation and inflation in the United States and other major developed countries in the 1970s. Before the 1960s, according to the Phillips curve principle, traditional economics believed that inflation and unemployment presented an alternate relationship, that is, in the economic upward stage, the unemployment rate fell, but the inflation rate rose; In a downturn, unemployment rises but inflation falls. However, since the mid-1960s, the United States and other major developed countries have witnessed the simultaneous rise of unemployment and inflation, which can no longer be explained by the principle of the Phillips curve, and macroeconomic policies are in a dilemma: if tightening policies are adopted, economic growth will further decline; If expansionary policies are pursued, inflation will rise further. The US economy from Jan 1977 to Jan 1980 was in an upswing phase (see Figure 1), but there was only 15.4% industrial growth in this 37-month period, which is equivalent to about 4.8% per year, lower than previous upswings [1].

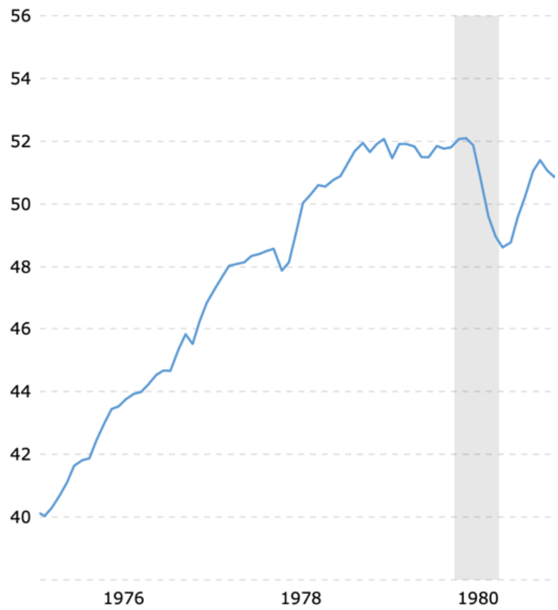

Figure 1. The Fed's Industrial Production Index [1]

To make matters worse, the U.S. economy has suffered greatly, the foreign trade imbalance has widened, and the stagflation tendency has intensified since the second oil crisis broke out in late 1979 and oil prices skyrocketed. Over the last three years, the U.S. economy has seen multiple ups and downs; the industrial output index, for example, displays a W-shaped decline-recovery-decline curve. Business failure rates have increased dramatically to levels not seen since 1933. At 10.8%, unemployment was at an all-time high. During the crisis, prices often increased significantly; in 1980, inflation in the US reached 13.4%. Additionally, the international trade imbalance reached a record-breaking $36.4 billion, as exports decreased by 19.8% during the second quarters of 1981 and 1983.

There were multiple factors that made the US economy which was experiencing extremely high inflation to face stagnation in the meantime: Firstly, the initial boost to US economic growth and expenditure from the conflict is fading off. For instance, the pent-up demand for fixed assets, house building, and consumer durables created by the world wars, as well as the stimulation of the Korean and Vietnam conflicts, contributed to the industrial boom in the United States in the 1950s and 1960s. However, these drivers began to dissipate after the 1970s. Second, there has been little advancement in science and technology. The creation and use of atomic energy and electronic information technology, which drove the explosive growth of American industry in the 1950s and 1960s, catapulted capitalist nations like the United States to the forefront of a technological revolution in the late 1940s. But by the early 1970s, the technological revolution had lost much of its impetus following almost two decades of technological development. Third, American exports are starting to lose value on the global market. Due to the substantial reduction of barriers to the worldwide flow of commodities and production inputs brought about by economic globalization and regionalization, which occurred during the 1960s, competition in global markets has increased. About one-third of global exports came from the United States in 1947; this percentage dropped to 23.5% in 1948, 18.2% in 1960, and 15.5% in 1970. The United States experienced a $1.303 billion international trade deficit for the first time since 1971.

2.2. Implementation of Monetary Policies

The Fed has steadily moved from price objectives to quantity targets in its monetary policy since the fall of the Bretton Woods system. But because of Keynesianism, the Federal Reserve still views interest rates as the most important component of the monetary policy framework in actuality. Consequently, there was eventually too much money in circulation due to the erratic monetary policy during this period of transition, high inflation, and excessive interest rate volatility.

Shortly after assuming office in 1970, Burns declared a target for the money supply, although the federal funds rate was the ultimate objective. Every six weeks, in order to align with the federal funds rate, the Federal Open Market Committee updates the target ranges for several monetary aggregates. The money supply is changed to keep the federal funds rate within the target range, regardless of whether it is above or below it. Because of this, the money supply is quite volatile and has a tendency to rise or fall suddenly. Because of the surplus money supply, the Fed's monetary policy was perceived as contributing to inflation during the era of stagnation even if it did not succeed in fostering economic growth.

3. Subprime Crisis

3.1. Background

In the US, loans are rather prevalent. Rarely do locals purchase their properties at full price. On the other hand, they typically obtain long-term loans. On the other hand, reemployment and unemployment are frequent. Subprime borrowers have bad credit histories and inconsistent or nonexistent income. A high-risk, high-yield business, subprime mortgages are loans given by some lenders to borrowers who have low incomes and bad credit, indicating a comparatively low ability to repay the loan. Subprime mortgages are not the same as conventional standard mortgages since their interest rates are substantially higher than those of ordinary mortgages. Applying for a subprime mortgage is a way for those who have been turned down for a prime mortgage by a bank because of their bad credit history or inadequate capacity to repay the loan.

Before 2006, because of the continuous prosperity and boom of the US housing market, low taxes, and low interest rates, the subprime mortgage market developed rapidly. However, the Fed decided to increase interest rates with a gradual easing of economic conditions. As a result, the cost of borrowing for subprime mortgage borrowers rose sharply and the repaying burden for house buyers greatly increased [2]. At the same time, the price of US housing has reached a peak with little potential for further increase and the demand for housing became to decline. People found it more difficult to refinance their mortgages or sell their properties. Because of his predicament, many subprime mortgage consumers stopped making loan payments, which in turn allowed the banks to seize their houses. Banks with plenty of housing were not able to sell at a high or even adequate price at that time because of a surplus caused by a sudden increase in supply compared to sluggish demand. Furthermore, subprime and other non-prime risk mortgages were stopped by lenders as a result of the collapse of bond financing for subprime mortgages, which caused them to suffer large losses [3]. Then a vicious cycle has been created between low demand for housing, high cost of borrowing, and difficulty to sell housing or refinance mortgages. The Fed's aggressive response to the liquidity bubble that engulfed financial markets following Lehman Brothers' failure is seen in the rapid pace of expansion during the initial brief time, as Figure 2 below illustrates [4].

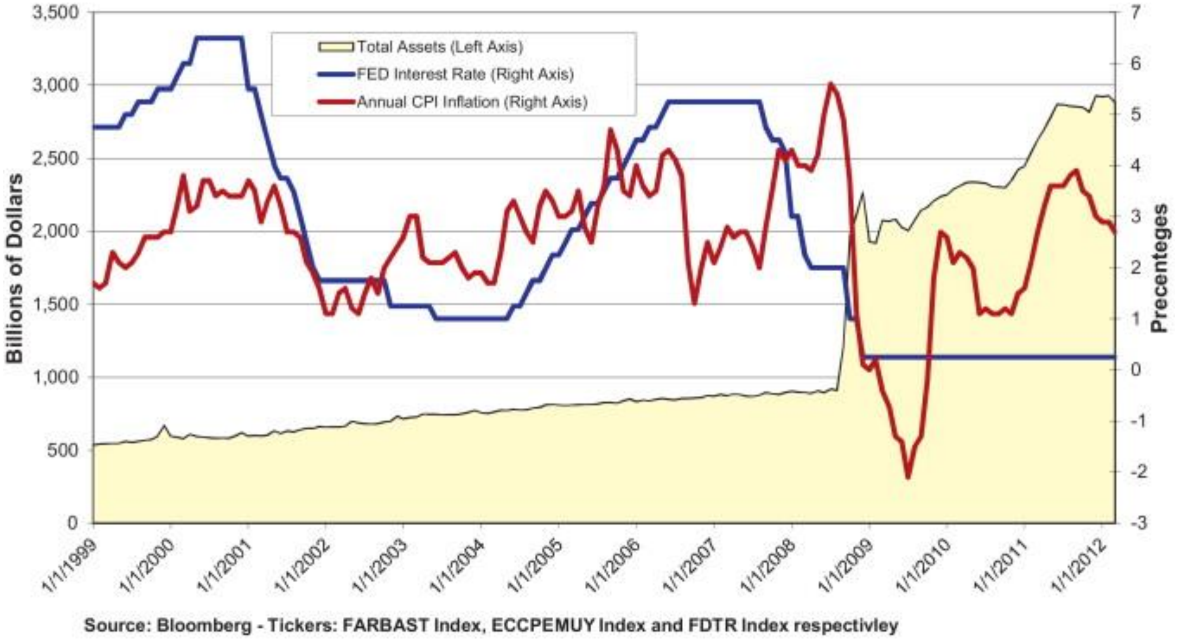

Figure 2. Fed's balance sheet plus interest rate and annual CPI inflation (US) [4].

3.2. Implementation of Monetary Policies

During this period, the Fed used several conventional monetary policies to conduct a comprehensive intervention in financial market operations:

(1) Liquidity is injected through open market activities. Starting on August 9 and continuing until the end of the month, the Federal Reserve regularly injected and removed liquidity through open market operations. To address the market's continuous liquidity demands, 14-day repo deals were utilized many times in addition to the customary overnight repo trades. Liquidity injections reached a peak of $35 billion on August 10, far surpassing the daily exchanges of tens of billions.

(2) Lowering the federal funds rate. On September 18, 2007, the Federal Reserve lowered its benchmark federal funds rate from 5.25% to 4.75% for the first time since June 2003, in spite of the pressure to pay its debts. The federal funds rate has since been lowered many times, most recently to two percent [5].

(3) Lower the discount rate. On August 17, 2007, the Federal Reserve made the decision to temporarily extend the discount period from the usual overnight to 30 days, with the option to extend further if necessary, and to lower the discount rate by 0.5%, from 6.25% to 5.75% [6]. Discount bonds, on the other hand, are collateralized by a range of assets, including securities backed by mortgages. By August 30, 2008, the amount of discounted loans had increased significantly and the discount rate had been decreased over a dozen times, giving the banking system significant liquidity support [7].

Furthermore, central banks have been in severe crisis as a result of the Federal Reserve's liquidity operations, which have formed a "cooperation" in attempt to contain the spread of the subprime crisis. Large-scale open market operations conducted by the European Central Bank over the past three days have pumped 94.8 billion euros, 61 billion euros, and 47.6 billion euros into the banking system, respectively. The central banks of Australia and Japan have also contributed money. These operations took place on August 9, 10, and 13.

4. COVID-19 Crisis

4.1. Background

A sharp world economy downturn was triggered by the COVID-19 pandemic. Due to anti-infection purposes, the government-imposed restrictions on gathering of people during the pandemic. For many firms in manufacturing and secondary sectors, the production process requires the gathering of workers in front of production lines. As a result, the supply of many goods and services was largely disrupted. Likewise, for businesses in the tertiary sector, such as restaurants and clothes stores, it requires face-to-face interactions between employees and consumers. The demand for these goods and services also experienced a sharp decrease because consumers no longer hang out and spend as usual due to fear of exposure to the virus. Moreover, plenty of small businesses were not able to maintain their sales, being closed due to policy requirements, and eventually shut down. Large businesses, although having a relatively stronger capital base, were also inevitably hit and then underwent multiple rounds of layoffs to cut costs and survive. As a result, there was a soar in unemployment and a decrease in average income. Simultaneously, people bear less purchasing power and become pessimistic about the economic prospect.

Combining these factors together, there was a decline in both consumption of goods & services and business investment, resulting in a decrease in aggregate demand and gross domestic product (GDP) as well as a contraction of economic activity and a decrease in economic growth: First, last quarter's GDP fell at an annualized pace of 32.9%, marking the worst output fall since the government started keeping data in 1947. In the second quarter of 1958, the GDP fell by more than three times the historical average of ten percent. The first quarter saw a 5.0% contraction in the economy (see Figure 3). In February, a recession struck [8].

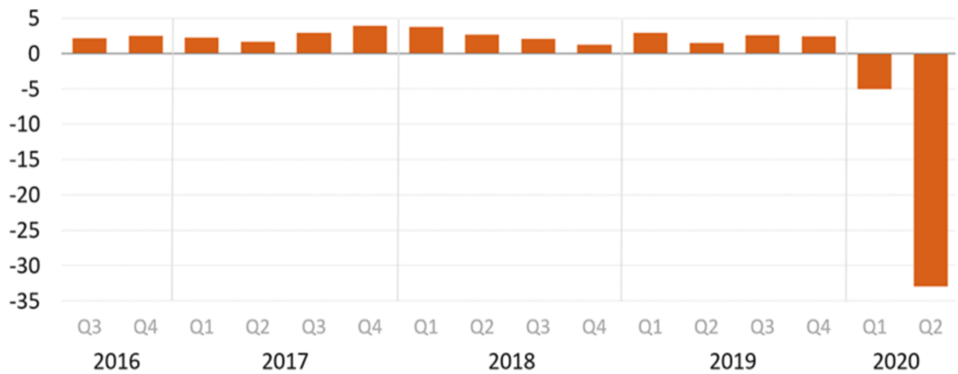

Figure 3. Real GDP: Percent change from preceding quarters [8].

Second, the world consumer spending in Figure 4 experienced the first decline of a 4.52% decline from 2019 to 2020 in the past 5 years [9]. It indicates a decrease in consumer confidence and average disposable income. Third, since March 2020, there has been a notable increase in underemployment and unemployment as a result of the public health emergency caused by the COVID-19 pandemic. During the COVID-19 pandemic, the proportion of employed workers to the non-institutionalized population fell sharply (see Figure 5). After being around 60% the year before, the employment-to-population ratio dropped to 51.3% in April 2020. It has subsequently increased to 57.9% in April 2021. When compared to pre-February levels of the epidemic, employment decreased by about 25 million in April 2020 but by over 7.6 million in April 2021 [10].

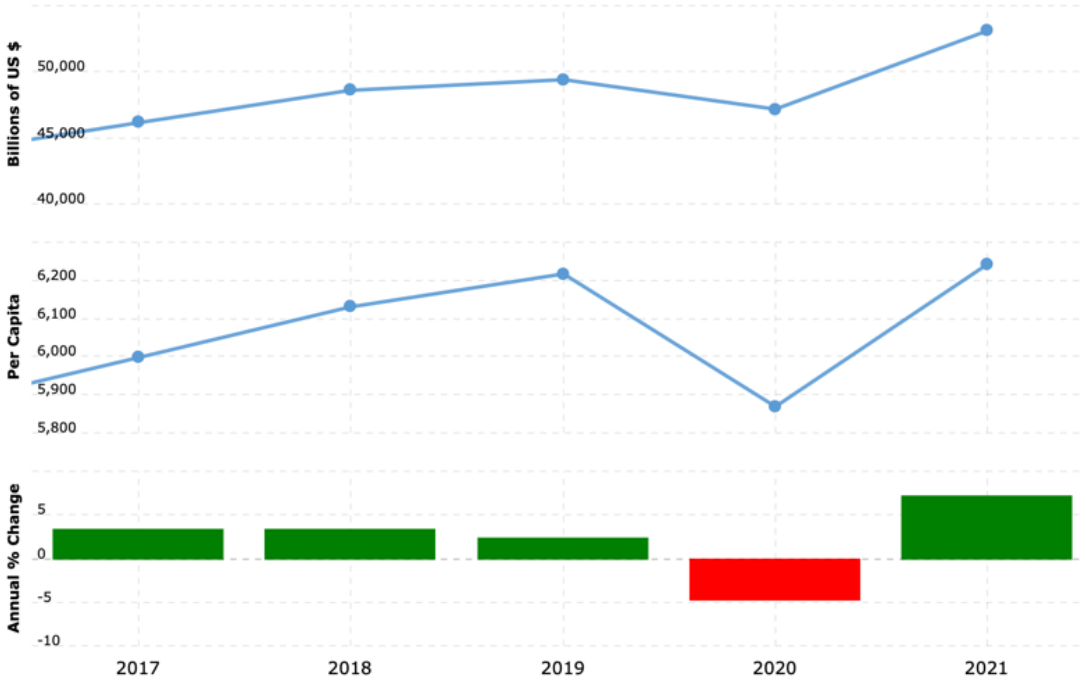

Figure 4. World consumer spending 2017-2021 [9]

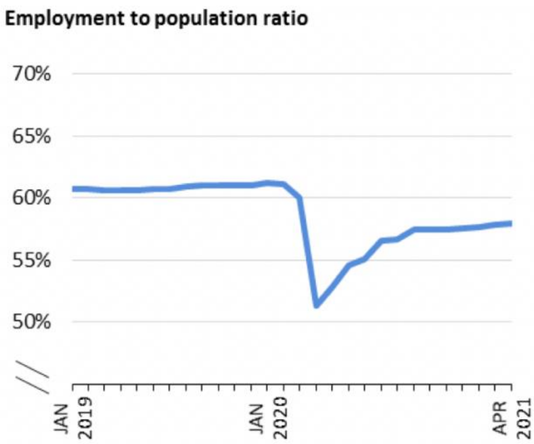

Figure 5. The employment situation [10]

4.2. Implementation of Monetary Policies

Several monetary policy actions have been taken by the Federal Reserve. First, the Fed cut interest rates due to the recent crown pneumonia's negative economic effects. Moreover, it is confidence and liquidity that keep the banking system healthy. The Fed offers forward guidance to the public, saying it has the confidence that the economy can eventually pass the recent events and achieve the goals of higher employment and price stability. Besides, it continued to monitor incoming public health news and global events. These actions aimed to improve consumers' confidence about the economy and maintain social stability. In order to protect market operations, the Fed also engages in open market operations. It works to make more short-term funding available. In order to support the money market's operation, boost market activity, and enhance market stability, the Federal Open Market Committee (FOMC) expanded the scope and quantity of overnight and term repurchase agreement (repo) operations. Additionally, it instituted a new weekly cycle of term repo operations. All of these actions contributed to the financial system's increased liquidity.

Third, the Federal Reserve made asset purchases by reorganizing its program to acquire agency mortgage-backed securities (MBS) and Treasury securities. The trading desk was directed by the Federal Open Market Committee to boost its holdings of agency MBS and Treasury securities. It set a standard of authorized amount of purchase of those securities that can support the market to function smoothly and monetary policy to be passed effectively to various financial conditions. Subsequently, as the FOMC had reached it goals, it adjusted the scale of asset purchases back to the usual level. Fourth, in an effort to more directly promote the flow of credit to individuals, companies, and local governments, the Federal Reserve implemented a number of facilitation measures. Additionally, in an effort to persuade banks to facilitate these flows, they have temporarily modified regulatory and supervisory procedures [11].

5. Conclusion

Finally, by tracing significant moments in recent economic history, this study offers a thorough examination of the significant influence of monetary policy on the global financial crisis. By analyzing pivotal moments like the 1970s stagflation, the subprime crisis in the 2000s, and the difficulties presented by the COVID-19 epidemic, the research illuminates the outcomes of monetary policy actions by the Federal Reserve. From standard measures like interest rate adjustments and open market operations to nontraditional tactics like asset purchases, the analysis methodically assesses the efficacy of various monetary tools. Through meticulous examination, the paper underscores the adaptability and resilience of the Federal Reserve, emphasizing its evolving strategies in response to changing economic paradigms.

By identifying commonalities across different crises, the study not only provides insights into the historical evolution of monetary policies but also highlights the broader implications of these interventions on global financial stability. It emphasizes the crucial role of central banks, particularly the Federal Reserve, in navigating the complexities of a rapidly evolving economic environment. In essence, this paper contributes to our understanding of how monetary policies shape and reshape the global financial landscape during times of crisis, emphasizing the continuous evolution and significance of central bank strategies.

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