

Federal Reserve Policies in the Context of the Global Financial Crisis

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Abstract: One of the most powerful central banks in the world, the U.S. Federal Reserve System (Fed), has been instrumental in handling international economic issues since the end of the 20th century. As is evident, the global financial crisis that broke out in 2007 and 2008 highlighted even more how important the Fed is to preserve economic stability and encourage the sound operation of the financial system. Using theoretical analysis, literature review, and macroeconomic principles, this paper aims to provide a thorough elaboration and analysis of the policies and tools that the Federal Reserve, the primary subject of study, adopted during the global financial crisis, as well as the roles and effects of these measures in coping with the crisis. According to the study, it can be found that a series of traditional and non-traditional policies adopted by the Federal Reserve effectively stabilized the financial market in the short term and promoted economic recovery; however, in the long term, there are certain negative impacts and potential risks. The research in this paper provides an important reference for the management of future financial crises and the formulation of macroeconomic policies and emphasizes the importance of strengthening macroeconomic management, combining different instruments, and addressing future risks.

Keywords: Federal Reserve, global financial crisis, macroeconomics, monetary policy.

1. Introduction

Developed nations such as the United States and the United Kingdom were primarily to blame for the global financial crisis that started in 2007 and 2008. The US economy has suffered greatly as a result of the crisis, with the real estate market collapsing and being disrupted, numerous large financial institution bankruptcy, soaring unemployment, and more. In addition, the crisis not only affected many countries and regions, but it also caused the global stock markets to collapse, sharply lowering the value of stocks.

The Federal Reserve, being the US central bank, is tasked with the crucial responsibility of overseeing the macroeconomic environment. The Federal Reserve adopted several measures during the global financial crisis, both conventional and novel. These actions included non-traditional tactics like launching innovative liquidity instruments in addition to conventional ones like decreasing the federal funds rate, carrying out quantitative easing, and offering forward guidance. With these policies, the Fed has stabilized financial markets and promoted economic growth and employment stability. Along with having a significant impact on the global economy, these instruments have

stabilized international financial markets and sped up the process of icebreaking in the world's main economies. They have also been crucial in the recovery of the American economy.

The policies of the Federal Reserve and its function in managing the macroeconomy during the global financial crisis are the topic of this article. Additionally, it seeks to provide a thorough analysis of the specific implementation procedures and economic impacts of the policies, assess the extent to which these policies and instruments have aided in the recovery of the economy during the financial crisis, and weigh the benefits and drawbacks of both traditional and innovative instruments.

2. Analytical Framework

In this paragraph, an overview of the global financial crisis will be discussed, together with an assessment of its effects, including its origins, the context in which it occurred, and how it unfolded. Emphasis will also be placed on analyzing the range of tools used by the Federal Reserve and the process of implementation and assessing the impact of the use of these tools, as well as their effectiveness and limitations.

2.1. Origins and Development

Financial crises are typically caused by the interaction of several macro- and microeconomic causes, particularly when they occur on a global scale. Two major causes of the financial crisis that have dealt an extremely deep blow to the United States and the world at large are the emergence of new financial innovation instruments, whose flaws masked the potential for market economies to exist in Crisis, and the inflation of asset price bubbles, which stimulated short-term distortions in market valuations. Additionally, there was a certain amount of corporate and business incompetence, for instance in risk management to guarantee the execution of risk control procedures. There is also a failure on the part of regulators and supervisory agencies to fulfill their responsibilities, lacking the necessary oversight and constraints on excessive risky behavior by market participants [1]. The confluence of these key factors ultimately led to the outbreak of a series of problems.

The causes of the financial crisis and its evolution are particularly notable at the macroeconomic level. Prior to 2008, the United States economy experienced a period known as the “Great Moderation”, which was characterized by low interest rates and low inflation. From the beginning of 2001 to June 2004, the U.S. federal funds rate was cut 13 times, from 5.98% to 1.03%. Such a low-interest rate policy stimulated the growth of bank lending, while the government's home purchase incentives and relaxed mortgage approval conditions further pushed up home prices and contributed to the buoyancy of the consumer and investment markets. While this economic environment contributed to economic growth in the short term, it was also risky, laying the groundwork for the subsequent financial crisis. The combination of low interest rates and high leverage, as well as an over-reliance on market liquidity, contributed to the build-up of risk and financial market instability [2].

2.2. Impact on the US Economy

The economic crisis that erupted globally had far-reaching consequences not only for the United States but also for the world, with the United States, as the economy at the root of the situation, bearing the consequences in all areas. The financial crisis, which was triggered by the collapse of the United States real estate market, quickly spread to the global financial system, causing the United States economy to suffer heavily. Since Lehman Brothers declared bankruptcy in September, turmoil in financial markets has intensified and economic activity in major economies around the world has rapidly fallen into recession. In such a volatile and highly uncertain economic environment, business, and consumer confidence have been hard hit. Spending on non-essential items was drastically reduced

by households, and purchases of manufactured products also declined precipitously. Due to this shift, the world's industrial output fell precipitously in the latter part of 2008, which significantly reduced the GDP of several large economies. The recession in the members of the Group of Seven (G7) intensified in December and the downturn began to spread to other parts of the world. During this period, growth expectations for G7 and the global economy suffered a sharp downward revision of more than 5%, a drastic change that was unprecedented in history (shown in Figure 1).

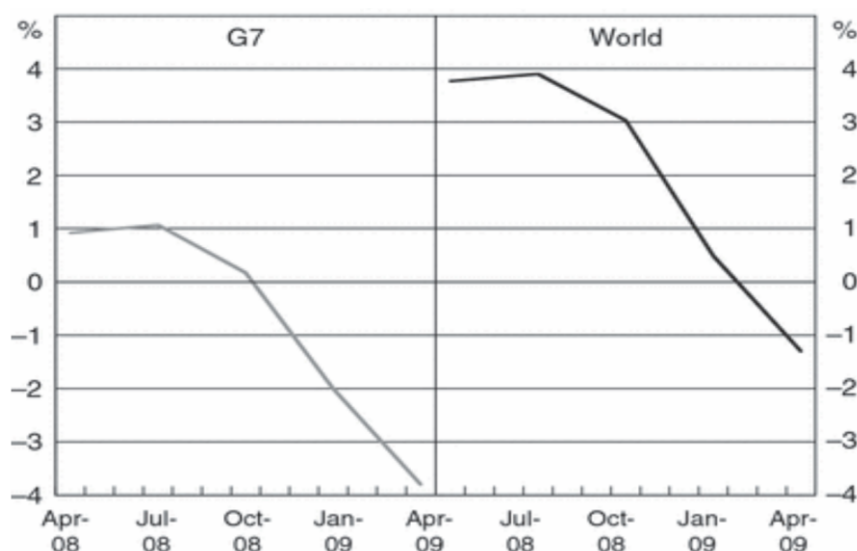


Figure 1: Year-average percentage change [3].

A careful analysis of the statistics indicates that the US economy has been significantly impacted by the global financial crisis. A swift reduction in GDP growth, a notable spike in unemployment, considerable harm to the real estate sector, and a steep contraction of the credit market were among the immediate consequences. As the crisis continued to spread and the recession intensified, uncertainty about the economic outlook increased significantly, and consumer and business confidence suffered. This has led to a reduction in consumer discretionary spending and a drop in demand for credit, both of which have further exacerbated the economic downturn. Long-term, the effects of the financial crisis have been more complex and persistent, with the potential economic growth rate declining, labor productivity growing more slowly, and income inequality rising. These factors have put the long-term health and stability of the US economy in jeopardy, compelling the US government to expedite structural reforms to boost the country's economy. But the financial crisis has also exposed structural weaknesses in the financial system, including inadequate risk management, a lack of regulation, and market failures.

Several academic studies have exposed the fact that global financial crises tend to affect emerging market countries more acutely than low-income countries because of the latter's lower level of participation in international private capital markets. In particular, the transition economies of Central and Eastern Europe experienced a rapid withdrawal of private capital because of large current account deficits, vulnerabilities in their domestic financial systems, or a combination of both, which triggered unfavorable expectations [4]. Although these emerging and developing economies were not the direct source of the crisis, they still bore a significant negative impact. The reversal of international capital flows because of the global financial crisis has left many emerging markets and developing countries suffering from capital outflows, which have exacerbated the rate of depreciation of their currencies. At the same time, because of the reduction in demand from developed countries, exports from those countries had fallen sharply, not only disturbing their trade balance but also putting pressure on

economic growth. In addition, the ability of these countries to attract foreign investment has been significantly and negatively affected.

2.3. Responding to the Policy

Lowering the federal funds rate was the first action done. Central banks utilize this weapon, among others, to respond to financial crises and slowdowns in the economy. Its primary goal is to boost economic expansion and recovery. It also seeks to revive the labor market and bring jobs back to the workforce. Cuts to borrowing rates also attempt to stimulate firms and consumers to invest more and consume more. The Federal Reserve supported the economy during the financial crisis by lowering interest rates, which helped to stabilize the financial market. On September 18, 2007, the Fed moved quickly to lower interest rates by 50 basis points in an emergency due to significant volatility in the financial market. Later, in reaction to the economic downturn, the Fed further reduced interest rates in a series of monetary policy meetings throughout the first four months of 2008. The federal funds rate was progressively dropped from the previous 4.25% to 2%. During the last quarter of 2008, the tightening of credit markets and increased difficulty in making loans had a markedly negative impact on the economy. Although the Federal Reserve essentially cut interest rates to near zero in the months that followed, the measure was not effective in boosting the volume of lending [5]. After December 16, 2008, in the wake of the extreme turmoil in the financial markets triggered by the Lehman Brothers bankruptcy, the Federal Reserve took the even more aggressive step of lowering the federal funds rate to an ultra-low level close to zero, with the range set between 0% and 0.25%. The implementation of this policy, the so-called “zero interest rate policy” (ZIRP), marked the limit of the Fed's traditional monetary policy toolbox (shown in Figure 2).

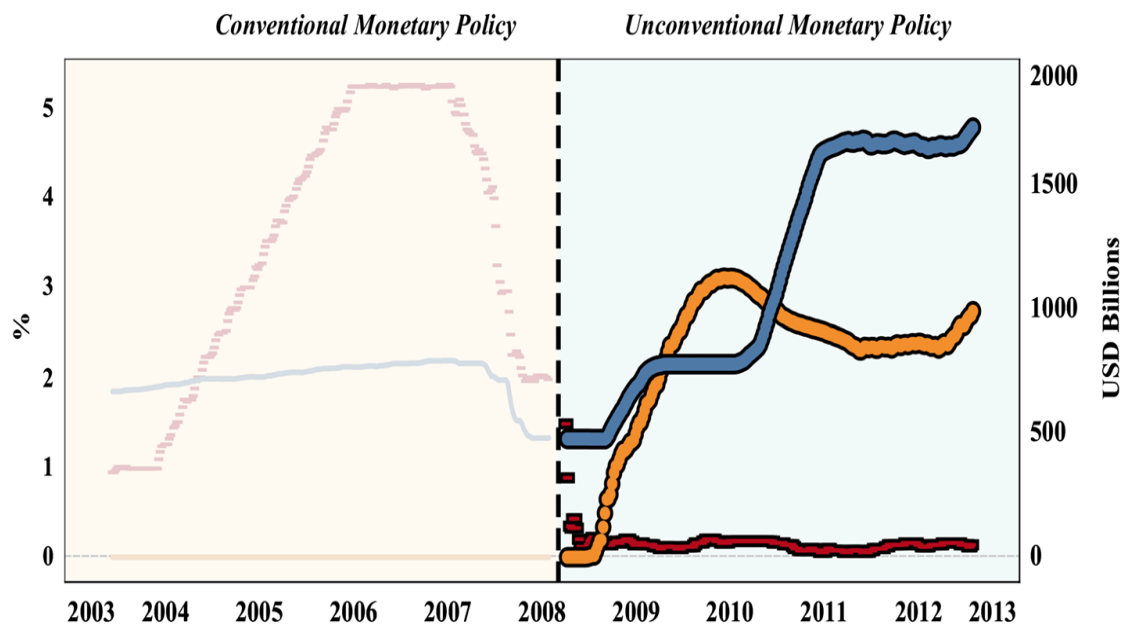


Figure 2: United States monetary policy instruments [5].

When traditional monetary policy proves to be ineffective at controlling the economy, central banks turn to quantitative easing (QE), a non-traditional monetary policy tool. Even when the federal funds rate is maintained at a low level or near to zero, the Federal Reserve generates bank reserves by massive asset purchases in the open market, a practice known as quantitative easing [6]. To encourage economic growth and increase inflation, central banks use this strategy of buying huge amounts of long-term financial assets to decrease long-term interest rates and increase the money

supply. As Ben Bernanke famously put forward in 2014 that the problem with quantitative easing is that it works in practice, but not in theory [7]. This quote aptly reflects the complexity and unmanageability of quantitative easing, as well as the possibility of exceeding theoretical expectations in practice.

By purchasing \$1.75 trillion in long-term federal bonds and mortgage-backed securities, also referred to as QE1, the Federal Reserve's fall 2008 program essentially doubled the monetary base while lowering long-term interest rates and boosting market liquidity. The Federal Reserve raised the monetary base to more than double its pre-crisis level in 2010 and 2011 with this longer-term, steadier QE2 program. It bought an additional \$600 billion in long-term Treasury bonds to accomplish this. The Fed continued its program of asset purchases into 2012 and 2013, increasing the monetary base to four times its normal level. In QE3, the Fed adopted a strategy of no fixed purchase size, purchasing \$40 billion in mortgage-backed securities and \$45 billion in long-term Treasuries each month, respectively [6]. Through these quantitative easing measures, the Federal Reserve has actively promoted the stability of the financial markets and economic recovery and has succeeded to some extent in achieving the effect of warming up the economy.

2.4. Innovative Monetary Policy and Liquidity Tools

The previous section focused on two key monetary policy tools - lowering the federal funds rate and quantitative easing. These tools were the main instruments used by the Federal Reserve to steer the direction of the economy and have yielded positive results in specific cases. However, during the complex financial crisis, traditional macroeconomic measures were insufficient to stabilize the U.S. economy, which fell into a sharp recession. The Federal Reserve developed new liquidity instruments in addition to reimagining its framework for monetary policy to address this challenge. And these innovative tools are designed to directly alleviate macro-level pressures on markets and businesses. For example, the CPFF supports the commercial paper market and provides issuers with a channel for short-term financing; the AMLF eases redemption pressures on money market funds; and the TALF enables broader credit flows by supporting the asset-backed securities market. The Fed has also managed to release liquidity from the macroeconomy, injecting new dynamism into the U.S. financial markets [8].

In addition to this, the Fed employs an extremely specific instrument - forward guidance. Unlike the policies and instruments mentioned above, forward guidance, while belonging to the category of non-traditional monetary policy, is more focused on the future adjustment of interest rates. By publicly communicating its policy expectations and direction, the central bank intends to steer market expectations to influence future economic conditions. The Federal Reserve began to depend more heavily on explicit forward guidance as one of the primary tools for carrying out accommodating monetary policy after the Federal Open Market Committee (FOMC) dropped the federal funds rate to the effective lower bound (ELB) in December 2008 [9]. Toward the end of the year, the Fed began releasing information to the markets about the future direction of its policy to hopefully reduce the concerns of nervous markets about future uncertainty. The Fed started moving closer to precise forward guidance by 2009. The Fed employed forward guidance, which focuses more on guidance on future interest rates than on current policy adjustments, as a very specific and significant instrument in the latter phases of the financial crisis and beyond.

2.5. Policy Effect and Implication

The impact of these policies is the focus of this paper's next section. The Federal Reserve employed conventional methods to reduce the federal funds rate during the financial crisis, even going so far as to almost zero levels for a while. By directly lowering borrowing costs and easing borrowing pressure,

this action made credit more accessible to both consumers and enterprises, which in turn encouraged investment and consumption. Furthermore, because of the interest rate reduction, there has been a notable decrease in the public's demand for savings, which has decreased savings' relative attractiveness while increasing the attractiveness of investment and consumption. The Federal Reserve's measure released the market liquidity, promoted consumption and investment, and increased the overall economic vitality, effectively against the trend of economic recession. However, this policy has also brought some potential adverse effects. Low interest rates may create a situation of over-borrowing, and a prolonged low-interest rate environment may induce investors' attention to shift to products with higher risks and higher returns, thus triggering asset bubbles. Moreover, lowering interest rates may increase the likelihood of inflation in the long run even as it can guard against deflation in the short term.

While individual country conditions and trends may vary, the overall pattern suggests a substantial correlation between quantitative easing and a decline in long-term government bond yields. Quantitative easing can be viewed as a signal that future short-term interest rates are expected to be lower than previously forecast by the market, and these effects may reflect monetary policy signaling effects. As expected from the signaling hypothesis, in most cases short-term interest rates have declined, although there are differences in the degree of response to this policy across countries [7]. The Federal Reserve started quantitative easing to expand the money supply and cut long-term interest rates by purchasing massive quantities of long-term bonds. The approach has been in place for a while and has contributed to financial market stabilization and economic growth, but it is not without potential risks and challenges. The policy can provide the necessary liquidity to stabilize markets while preventing a credit crunch. However, the impact of the policy could be limited if markets lose confidence in its effectiveness.

The economic policies of many countries are becoming more intertwined against the backdrop of globalization. In addition to having significant effects within the United States, the Federal Reserve's policy decisions have had a major impact on other countries, especially during a critical period like the current global financial crisis. For example, while the Fed's tightening of monetary policy has had a markedly negative impact on economic activity in Europe, the Middle East, and Africa, the response of consumer price indices in these regions has been relatively modest. This inconsistent response reveals the dilemma faced by these regions in monetary policymaking, namely, how to find a balance between maintaining real economic stability and controlling consumer prices. The disparate effects of the Fed's policy adjustments on the price levels and economies of various regions indicate that these regions' central banks must carefully analyze the volatility of the world financial markets when formulating their monetary policies and evaluate the possible effects of these oscillations on the stability of their economies and the inflationary trend [10]. At the same time, this also emphasizes the need for countries to pay attention not only to the domestic economic impact but also to the spillover effects of policies while formulating them.

3. Limitation and Future outlook

This paper mainly analyzes and evaluates the historical data and past events comprehensively, but there are deficiencies in model construction and quantitative analysis. To more accurately assess the impact of the financial crisis on the economy and the effectiveness of specific policies, future research will introduce more rigorous calculation methods and models. Current research focuses mainly on theoretical discussions, while it is inadequate in case studies and lacks in-depth analysis of specific cases. From the perspective of macroeconomics, the analysis method is rather rough and fails to effectively combine with microeconomic theories, resulting in an incomplete understanding of economic phenomena. In future research, more econometric models and computational tools will be introduced to assess the actual effects of policies and the dynamic relationship between economic

variables. At the same time, research on specific cases will be strengthened, and representative and targeted cases will be selected for in-depth analysis, to better understand the mechanism of policy action in different economic environments. There will also be a greater focus on the examination of the economic cycle's multiple phases, including how policies affect them at each stage and how they might be modified in response to shifts in the cycle.

4. Conclusion

Since the late 20th century, the Federal Reserve, one of the most powerful central banks in the world, has taken on the significant responsibility of macroeconomic regulation. This article focuses on the extensive effects of the global financial crisis on the US economy after first reviewing the history, causes, and development of the crisis. The essay then goes into detail on the steps the Federal Reserve took throughout the crisis, the instruments it used, and how these actions affected the financial markets in the United States and around the world. In addition to using conventional monetary policy instruments, the Federal Reserve deployed a range of cutting-edge liquidity management strategies in response to the crisis. These measures were intended to lower borrowing rates, boost market liquidity, stabilize the financial system, and encourage job creation and economic expansion. This paper assesses the effectiveness of the Fed's policies and explores their potential risks and costs by integrating the literature and analyzing the theory. It concludes that the unconventional measures taken by the Fed have helped to boost economic recovery and have been successful in reducing financial market tensions in the near term. Long-term dangers associated with these strategies included asset bubbles, growing debt levels, and potential inflationary pressures. All things considered, the Fed's actions throughout the financial crisis demonstrate how crucial a role it played in bolstering financial stability and encouraging economic recovery. To guarantee a better reaction to comparable economic crises in the future, however, the longer-term effects and possible hazards of these policies demand constant attention and in-depth study.

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