
ANALYSIS OF THE MONETARY POLICY IN THE USA

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Abstract: *The establishment of the Federal Reserve System (FRS) in 1913 marked a pivotal moment in ensuring financial stability. This article scrutinizes the structure, trajectory, and evolution of monetary policy since the inception of the Fed. With shifting trends and the achievement of a low inflation environment coupled with the lower bound challenge, maintaining a dual mandate and the autonomy of the Fed raises questions about the efficacy of current monetary policies. The authors analyze the effectiveness of implemented policies and propose an alternative approach to monetary policy implementation, advocating for mechanisms beyond quantitative easing and forward guidance. They suggest leveraging macroprudential policies and preemptive strategies, such as introducing safeguards and simultaneously setting a diverse range of federal fund rates to address specific market segments in alignment with the Fed's objectives.¹*

Keywords: *US Monetary Policy, Federal Reserve System, interest rates, unemployment rate, monetary policy tools, money supply, inflation targeting, federal funds rate*

Introduction

Amidst the intricacies of economic governance, the monetary policy of the United States holds a pivotal role, meticulously tailored to fulfill diverse objectives set forth by the Congress. Woven into its mandate are imperatives such as ensuring price stability, fostering full employment, nurturing economic growth, and fortifying stability within financial markets. In this article, the authors embark on a thorough examination of the multifaceted landscape of US monetary policy, meticulously scrutinizing its objectives, mechanisms, and the intricate interplay between economic theory and practical implementation.

At the heart of monetary policy lies the pursuit of price stability, enacted through a strategic arsenal of tools wielded by the Federal Reserve, encompassing open market operations, discount rate adjustments, and reserve requirements modulation. Simultaneously, the pursuit of full employment emerges as a complex puzzle, shaped by the intricate dynamics of wage growth and the ever-fluctuating unemployment landscape. While the ideal of zero percent unemployment remains a theoretical aspiration, contemporary economic paradigms

¹ The authors wish to thank Professor Charles Bartlett for his comments on this project.

redefine full employment within the realm of a 4-5 percent unemployment threshold, navigating the delicate balance between labor market dynamics and inflationary pressures.

Furthermore, the trajectory of US monetary policy is intricately linked to its role as a catalyst for economic growth and development. Against the backdrop of relentless technological advancement, the Federal Reserve navigates the terrain of interest rate management and productivity enhancement to steer the economy towards sustainable growth trajectories. However, the evolution of financial markets and the proliferation of diverse market participants pose a myriad of challenges, casting a shadow of uncertainty over the stability of the financial system amidst the backdrop of market dynamism.

In this scholarly pursuit, the authors endeavor to unravel the intricacies of US monetary policy, tracing its historical roots, grappling with contemporary challenges, and seeking equilibrium amidst the ever-evolving landscape of global economics. Through rigorous analysis and scholarly inquiry, we strive to illuminate the mechanisms shaping the economic destiny of the United States and its reverberations on the global stage.

Analysis of recent research and publications. The analysis of monetary policy garners significant attention from a broad array of scholars. Examination of current research and publications reveals a diverse spectrum of perspectives among leading economists regarding the intricacies of monetary policy implementation. The authors of this article have grounded their theoretical framework by studying the works of B. Bernanke, J. Bullard, O. Dzuibluik, A. Greenspan, M. Ananiev, V. Urbanovich, O. Demchenko, M. Friedman, A. Schwartz, G. Selgin, W. Lastrapes, and L. White. However, monetary policy has encountered the challenge of exhaustiveness in tools available to fulfill its dual mandate, opening a fertile ground for the introduction of new policies to ensure economic stability.

The purpose and objectives of the research is to examine trends in the monetary policy of the United States during the 20th and 21st centuries and provide recommendations for mitigating the consequences of the latest economic crises. The Federal Reserve System, consisting of the Board of Governors in Washington, the Federal Open Market Committee, and twelve Reserve Banks, has implemented various policies and utilized a wide variety of tools necessary to combat inflation, decrease a level of unemployment, and promote wise economic growth. Nonetheless, it is crucial to research the specific effects of each embedded tool, analyzing outcomes and exploring available alternatives that have either led to economic growth or caused stagflation. The authors of the research focus on understanding the results and investigating alternative approaches.

To achieve this goal, the following objectives are defined:

1) investigate the primary objectives of monetary policy and their importance for the economy.

2) examine the principal instruments of monetary policy.

3) analyze the structure and role of the Federal Reserve in implementing monetary policy and stabilizing the financial system.

4) conduct an analysis of the execution of monetary policy and evaluate its effectiveness.

5) research the history and effectiveness of the Federal Reserve's quantitative easing programs.

6) explore alternative approaches and tools in the realm of monetary policy.

The object of this study is to provide an extensive overview of the monetary regulation conducted by the Federal Reserve of the United States spanning the period from 1960 to 2024.

The subject matter of research encompasses an analysis of the implemented policies and their impact on key indicators of global financial stability. Additionally, the research

explores shifts in the prioritized areas of focus within the Federal Reserve System and contemporary trends in monetary policy.

The methods of scientific research. In the process of writing this article, the methods of analysis used are listed below: analytical methods, abstract and logical methods, systematic approach and logical generalization, inductive and deductive methods, scientific abstraction, synthesis and historical analysis, method of factor and comparative analysis.

The information base for the research comprises a comprehensive array of publications authored by prominent economists and scholars in the field of monetary policy. The research incorporates data from official reports and publications issued by the Federal Reserve Board, as well as relevant academic journals and institutional publications dedicated to economic research and policy analysis. Through this diverse information base, the research endeavors to offer a comprehensive understanding of the dynamics and implications of monetary regulation in the United States over the specified timeframe.

The obtained results of the research. This study elucidates the interplay between interest rate management, productivity enhancement, and long-term development objectives by investigating the role of monetary policy in promoting sustainable economic growth and financial stability. Examining individual monetary policy tools reveals their specific effects on economic outcomes, offering insights into their strengths, limitations, and optimal utilization strategies. This exploration of alternative approaches to monetary policy implementation opens avenues for innovation and adaptation in response to evolving economic challenges.

The practical significance of the research. By analyzing trends in US monetary policy over the past six decades and evaluating the effectiveness of policy measures implemented by the Federal Reserve System, this study provides a roadmap for navigating the complexities of economic governance. Through a meticulous examination of monetary policy tools and their specific effects on economic outcomes, this research provides recommendations for mitigating the consequences of economic crises and embedding novel tools for the challenges policymakers face in an ever-evolving economic landscape.

The Main Research Material

Monetary Policy Goals

The Federal Reserve System works to promote a strong U.S. economy. Specifically, Congress has tasked the Fed with conducting the nation's monetary policy to support the goals of maximum employment, stable prices, and moderate long-term interest rates. When price levels exhibit stability, it fosters the maintenance of long-term interest rates at a moderate stance, thereby harmonizing the dual objectives of price stability and the preservation of moderate long-term interest rates. As a result, the objectives of maximum employment and stable prices are often referred to as the Fed's "dual mandate."

Ensuring price stability involves regulating the demand for goods and services created in the economy using monetary policy tools such as open market operations, the discount rate, and reserve requirements. It is worth noting that maintaining price stability, if prioritized, will stimulate aggregate demand, thereby ensuring economic growth.

The challenge in achieving this goal lies in the reduced ability of the Federal Reserve to influence monetary policy, as attempts to achieve political goals will intersect with economic ones. During periods of economic instability, the Fed has taken on the political commitment to act as the lender of last resort to support insured financial institutions by providing liquidity to

commercial banks, savings institutions, credit unions, or branches and agencies of foreign banks, taking decisive action to avoid recession and subsequent crisis. Additionally, the creation of the Fed in 1913 aimed to establish a central bank that would provide the nation with a more flexible, safer, and more stable monetary and financial system. Although the Fed does not aim to be independent, its structure has relative political independence. Thus, to achieve price stability, the Fed must balance between two interconnected areas, using its political tools as it sees fit to best achieve its goals.

The other part of the dual mandate is achieving maximum employment, defined as the highest level of employment or the lowest level of unemployment that the economy can sustain while maintaining a stable inflation rate. Experience over the past few decades has shown that low unemployment and a strong labor market can be maintained without leading to unwanted inflation growth. For example, during the economic expansion following the Great Recession, when the unemployment rate fell below sustainable estimates, the labor market proved exceptionally adaptable. This provided many benefits and opportunities for families and communities that too often were left behind. Therefore, low unemployment in the absence of other risks will not be a cause for concern on its own. Of course, when unemployment is high, the Fed will actively seek to reduce it. For this reason, the Fed aims to mitigate the shortfall in employment from its maximum level estimates.

The leading direction of monetary policy is to positively impact economic growth and development. Increasing productivity, achieved through the creation of new technologies, and maintaining interest rates at moderate levels ensure the realization of this defined goal.

It should be noted that there is a conflict between the goals of monetary policy. According to the Phillips curve, an inverse relationship exists between the level of employment and inflation processes. Additionally, economic growth also affects both indicators, hindering the full implementation of the dual mandate and, consequently, achieving complete economic stability. Given this, the Federal Reserve must find compromises between the outlined goals, sometimes sacrificing relevant indices.

In 2020, the concept of FAIT (Flexible Average Inflation Targeting) was implemented, as reflected in the FOMC statement from September 2020. Following the standard approach adopted in 2012, FAIT maintains the inflation target at 2%, flexibility in responding to both inflation and employment targets, and transparency regarding the Committee's outlook and policy plans.

In conclusion, the complexity of ensuring economic stability and maximum employment requires the Federal Reserve to continually adapt its methods and strategies. Utilizing modern data analysis methods and developing predictive models allows for more accurate assessments of the economy's state and informed monetary policy decisions. Moreover, cooperation with other branches of government is crucial in achieving macroeconomic stability. This includes coordination with fiscal policy, financial sector regulation, and international cooperation with other central banks.

Thus, applying a comprehensive approach, continually improving methods, and collaborating with all stakeholders helps the Federal Reserve achieve its goals in ensuring the stability and efficiency of the U.S. economy.

Monetary Policy Tools

The toolkit for managing the economy includes operations in the open market, the discount rate, and reserve requirements. The discount rate is defined as the interest rate set by

the Federal Reserve System on short-term loans to commercial banks and financial institutions. The authority to regulate the discount rate lies with the Federal Reserve Board of Governors.

Equally significant is the open market operations, which fall under the purview of the Federal Open Market Committee (FOMC). Through the buying and selling of securities, the Federal Reserve System influences the federal funds rate – the interest rate used in transactions between depository institutions for overnight reserve balances. The concept of managing the federal funds rate revolves around controlling the level of excess reserves – deposits that financial institutions hold in accounts with the Federal Reserve. Thus, if the Federal Reserve intends to raise the said rate, Treasury securities are offered for sale to a select group of private financial firms known as primary dealers. As investors bid on these securities, reserves are systematically reduced, prompting banks to compete for limited resources and raise the federal funds rate. Conversely, if there is a need to lower the federal funds rate, the Federal Open Market Committee purchases securities.

In order to facilitate easier financial conditions in the markets, the FOMC employs a reduction in the federal funds rate. This, in turn, impacts improvements in real estate markets by lowering mortgage rates, encourages capital investments – resulting in higher stock prices, and stimulates exports through the weakening of the US dollar. Similarly, if economic stability is threatened by intensified inflationary pressures, monetary policy is activated, and federal funds rates are raised.

Delving into reserve requirements – a mechanism employed to augment the money supply within the economy and exert influence over interest rates. The task of establishing these requirements falls under the purview of the Federal Reserve Board of Governors. Notably, this instrument boasts a heightened efficacy during periods of crisis, wherein the Federal Reserve assumes the role of lender of last resort. In scenarios where depositors lose confidence in banks or other financial entities, a natural response is to withdraw their funds from said institutions. Consequently, the Federal Reserve extends loans to banks to meet depositor demands, leveraging banking assets and other monetary instruments as collateral. Solvency stands as an indispensable prerequisite for extending assistance to financial institutions. This policy framework serves to forestall frequent financial crises and facilitates the stabilization of economic cycles, thereby averting the specter of recession and depression as necessary.

A pivotal shift occurred on March 15, 2020, when the Federal Reserve Board announced that effective March 26, 2020, reserve requirement ratios would be set at 0%. In contrast to the previously announced reform, reserve requirement ratios on net transaction accounts varied depending on the amount of net transactions held by the institution.

The Federal Reserve's Role and Structure

On December 23, 1913, the Federal Reserve System was founded as the primary regulator of monetary policy in the United States, serving as the country's central bank. Structurally, the Federal Reserve System consists of a Board of Governors located in Washington, D.C., possessing overarching supervisory authority, and twelve regional Federal Reserve Banks, each enjoying significant autonomy. The regional Federal Reserve Banks are strategically located in major cities across the country, including New York, Richmond, Chicago, Boston, Philadelphia, Atlanta, Cleveland, San Francisco, St. Louis, Kansas City, Minneapolis, and Dallas.

The Board of Governors consists of seven members, currently chaired by Federal Reserve Chairman Jerome Powell. The President appoints each member to a fourteen-year term

following Senate confirmation in a staggered manner. The Chairman and Vice Chairman of the Board, as well as the Vice Chairman for Supervision (following regulatory reforms in 2010), are appointed by the President and confirmed by the Senate for a four-year term. Discrepancies in policy between the head of state and the Federal Reserve do not constitute grounds for the dismissal of incumbent Board members. Preconditions for such action may include misconduct, abuse of power, and impeachment by Congress.

The twelve regional banks within the Federal Reserve System each have a board of directors, whose candidates are drawn from private, public, and civic institutions. The board of directors based in Washington D.C., approves the president of the local board of directors. Despite the fact that the regional Federal Reserve structures possess equal legal status, the Federal Reserve Bank of New York is considered first among equals.

The primary objectives of the Federal Reserve System's policy encompass the prevention of inflationary pressures, reduction of unemployment, anticipation of financial crises, and mitigation of economic instability. Overall, the Board of Governors serves as the lender of last resort, employing preemptive measures to stabilize the economic landscape. Additionally, within the purview of the Board of Governors lies the establishment of the discount rate, oversight of compliance with capital requirements for banks and other holding companies. The regional reserve banks ensure adherence to the rules set forth by the Board of Governors and regulate the activities of local financial institutions.

The Board of Governors is part of a larger body, the Federal Open Market Committee (FOMC), which formulates and implements monetary policy through the regulation of short-term interest rates and other financial instruments to ensure economic stability. The FOMC consists of seven members of the Board of Governors, the twelve presidents of the regional reserve banks, and staff members from both structures. Each year, the chair of the FOMC is elected from the Board of Governors.

Meetings are held eight times a year, during which the formulation of Federal Reserve monetary policy takes place. The voting process helps to prevent misguided policy decisions by diversifying the participants in the voting process. The twelve permanent representatives involved in decision-making include the seven members of the Board of Governors, the president of the Federal Reserve Bank of New York, and four representatives who are elected annually from among the other eleven presidents of the reserve banks.

It is essential to emphasize that since its inception in 1913, the Federal Reserve System has undergone significant changes in its organizational structure. Prior to the enactment of the Banking Act of 1935, the regional branches of the Federal Reserve System enjoyed greater operational autonomy. However, the delegation of some of its responsibilities to the Board of Governors of the Federal Reserve System in Washington positively influenced the subsequent development of the Federal Reserve System.

The reforms also affected the internal organization of the institution, increasing the independence of the Federal Reserve from the executive branch by removing the Secretary of the Treasury and the Comptroller of the Currency from the Federal Reserve Board of Directors.

Another foundational innovation in shaping the policies of the Federal Reserve was the Federal Reserve Reform Act of 1977. A key feature of this act is the dual mandate, which is based on the maintenance of stable prices and the achievement of full employment. Full employment is defined as the natural rate of unemployment, which is estimated to be around 4-5 percent.

Analysis of Monetary Policy Implementation

The implementation of monetary policy in the United States is aimed at reducing unemployment level, controlling inflationary pressures, and fostering economic growth. Key instruments of monetary policy used to overcome economic recessions in the American economy include the federal funds rate, purchases of Treasury securities, and ensuring a reduction in reserve requirements.

Notwithstanding the effectiveness of the regulatory components during the 1960s to 1990s, the Federal Reserve faced a new challenge at the beginning of the 21st century. Achieving the set goal of maintaining consistently low inflation levels, ranging between 2-2.5%, and nearly full employment, reduced the toolkit available for stimulating the economy. Under such circumstances, the decision was made to implement a policy of quantitative easing. The essence of this program involved the purchase of Treasury securities and securities backed by mortgage loans issued by government-sponsored enterprises and federal agencies to achieve the goals of monetary policy.

Further analysis of the Federal Reserve's activities demonstrates that maintaining interest rates on federal funds at relatively low levels contributed to the emergence of financial bubbles in the real estate and mortgage markets. Among the preconditions for the creation of financial bubbles, economists highlight financial innovations, a shortage of reliable assets, and a global savings glut. Despite the federal funds rate reaching 5.25% in 2006, the subsequent lowering of rates and the expansionary policy measures led to significant excess demand for new capital investments globally and discrepancies between savings supply and demand. This dynamic caused inflation and manipulations in the aforementioned markets. Economists concur that the Federal Reserve's quantitative easing operations after 2008 were unprecedented in scale and laid the groundwork for mitigating the effects of the global financial crisis. However, the expansionary policies also contributed to financial imbalances that preceded the crisis.

With the complexities in the economy, emergence of new actors, and deepening integration of national financial markets worldwide, the Federal Reserve System has encountered the necessity to seek new instruments and alternative pathways to stimulate the economy and achieve set objectives. The real capabilities of the Federal Reserve are limited due to the negative trend towards reducing interest rates on federal funds (see Figure 1).

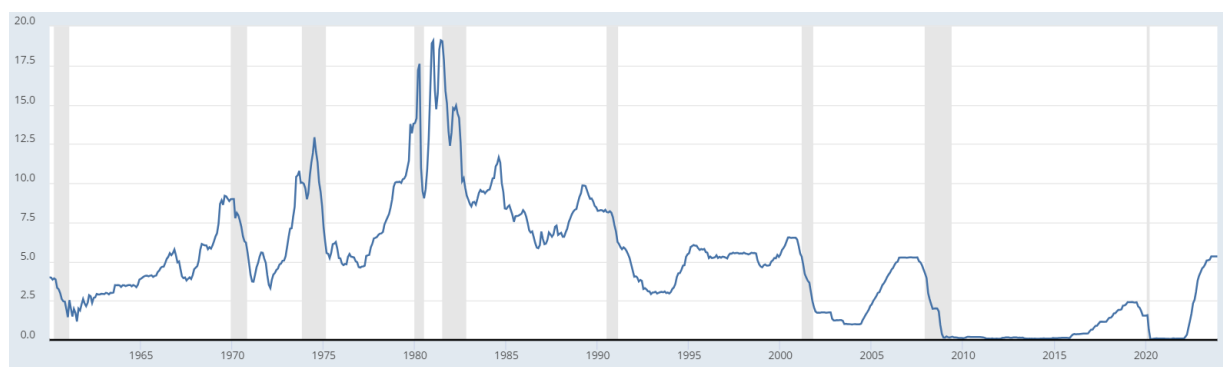


Figure 1. Federal Funds Effective Rate, 1960-2024.

Graph from *Federal Reserve Bank of St. Louis*, 11 Apr. 2024, <https://fred.stlouisfed.org/series/FEDFUNDS>.

This compels the U.S. government to utilize fiscal policy, including resorting to unprecedented increases in the size of the national debt, as a supplement to monetary policy.

The global financial crisis that began in June 2007 underscores the interdependence of monetary and fiscal policies. According to Ben Bernanke, a prominent economist and the 14th

Chairman of the Federal Reserve System, significant factors contributing to the global financial panic included: uncertainty in the mortgage market and stock exchanges, loss of investor confidence in the reliability of loans in banks and other financial institutions due to complexities in securities and the inability to establish their profitability, and an increase in the number of insolvent banks and other financial institutions due to discrepancies between held assets and liabilities.

The Federal Reserve took measures to mitigate the dire consequences of the global financial crisis, employing two conceptually distinct yet interconnected approaches. Firstly, its role as the lender of last resort necessitated the Federal Reserve to provide short-term loans to solvent banking institutions experiencing temporary liquidity shortages. Collateralizing these loans with assets and liabilities of financial institutions, however, was restricted by the Federal Reserve's statute, which stipulated that only banking institutions were entitled to receive such assistance. Consequently, Section 13(3) of the Federal Reserve Act was invoked based on extraordinary and exigent circumstances, permitting loans to shadow and investment banks, thereby supporting the wholesale funding market and providing liquidity as part of the government's efforts to avert the collapse of systemically critical firms.

Secondly, overcoming the global financial crisis was made possible through monetary policy – initially by lowering standard interest rates and subsequently by implementing a fundamentally new policy. By the end of 2007, the FOMC reduced the target federal funds rate to 4.25. Further reductions by 0.75%, 0.5%, and 1%, bringing the federal funds rate down to 2%, led to marginal improvements in the spring and summer. Nonetheless, the rise in oil prices to historic highs at that time (\$135 per barrel) offset previous successes in improving the economic situation and raised the inflation rate to 4% by June 2008.

After substantial and frequent injections of funds into both financial and non-financial institutions, acting as the lender of last resort, the Federal Reserve flooded the markets with billions of U.S. dollars. Seeking to mitigate the devastating consequences and rescue financial and non-financial institutions from bankruptcy, the Federal Reserve lost the ability to influence the federal funds rate – one of the primary instruments of monetary policy. Investors deposited money with banks, which in turn placed them in reserve accounts. As a result of these actions, an excess of reserves led to a low federal funds rate, leaving little room for the implementation of monetary policy. Therefore, a decision was made to create a new tool – the payment of interest on excess reserves, approved by the U.S. Congress in October 2008. In the long term, the effectiveness of this instrument was indisputable, unlike in the short term.

The necessity compelled resorting to decisive measures to significantly alter the situation in favor of a soft landing, and such an opportunity presented itself. In November 2008, Bernanke announced a large-scale purchase of long-term securities, specifically government-guaranteed mortgage-backed securities – a policy known as “Quantitative easing.” This government intervention was intended to reduce the yields on long-term Treasury and mortgage-backed securities, simultaneously keeping inflation levels low and not impeding economic growth. According to O. Dzuibluik, a positive outcome of the “Quantitative easing” policy was the increased economic feasibility of investors reallocating their portfolios towards stocks and corporate bonds, stimulating the deposition of capital into the real sector of the economy. However, drawbacks of using this program included growing inflationary threats to the U.S. economy and generated inflation expectations. The US has recently experienced inflation, leading to the creation of a novel monetary policy presented in next paragraph.

Chronology of Quantitative Easing Programs

The first phase of implementation occurred at the end of 2008. A decision was made to purchase \$500 billion in mortgage-backed securities and \$100 billion in government-sponsored enterprise securities (see Figure 2). The dynamics of purchasing mortgage-backed securities and Treasury bonds are observed in Figure 1. Starting from the second half of 2008, as depicted in Figure 2, the balance sheet of the Federal Reserve System began to grow rapidly, corresponding to the increased injections of funds to support the QE1 program. According to calculations based on data analyzed from the St. Louis Federal Reserve, a direct positive correlation dependency is observed, which is significant.

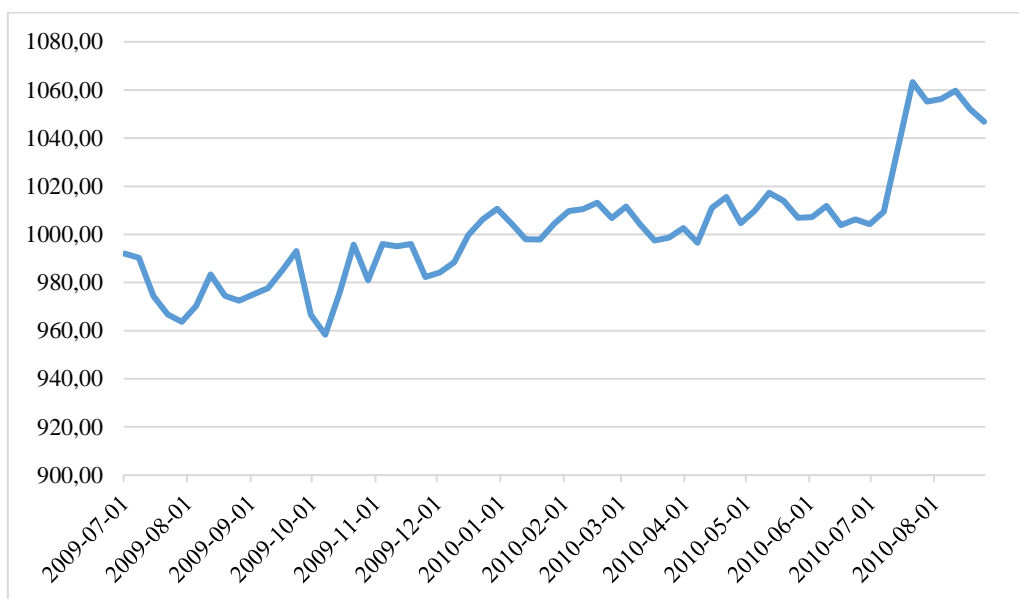


Figure 2. Treasury and Agency Securities: Mortgage-Backed Securities (MBS), All Commercial Banks, Billions of U.S. Dollars, Weekly, Seasonally Adjusted, 2009-2010
*Graph from Federal Reserve Bank of St. Louis, 15 Apr. 2024,
<https://fred.stlouisfed.org/series/TMBACBW027SBOG>*

The results of the quantitative easing program (QE1) are not unequivocal: on one hand, there is the achievement of goals in calming financial markets, reducing unemployment and inflation; on the other hand, there is the actual doubling of the size of the Federal Reserve’s balance sheet. Despite achieving relative stability in the mortgage markets and curbing inflation expectations, the Federal Reserve’s involvement in addressing the crisis did not conclude there.

Up until 2008, during the period of the Great Recession, the balance sheet of the Federal Reserve primarily consisted of Treasury securities, which served as assets, and currency in circulation, which constituted liabilities. Through reserve management, the Fed maintained the federal funds rate at an optimal level, effectively addressing imbalances in the economic sector. However, with the initiation of the quantitative easing program, the Fed expanded its balance sheet by acquiring predominantly long-term Treasury obligations and MBS issued by government-sponsored enterprises (see Figure 3). This complicated the implementation of monetary policy and led to renewed concerns within American society. In November 2010, the FOMC decided to continue the quantitative easing program, which became known as QE2.

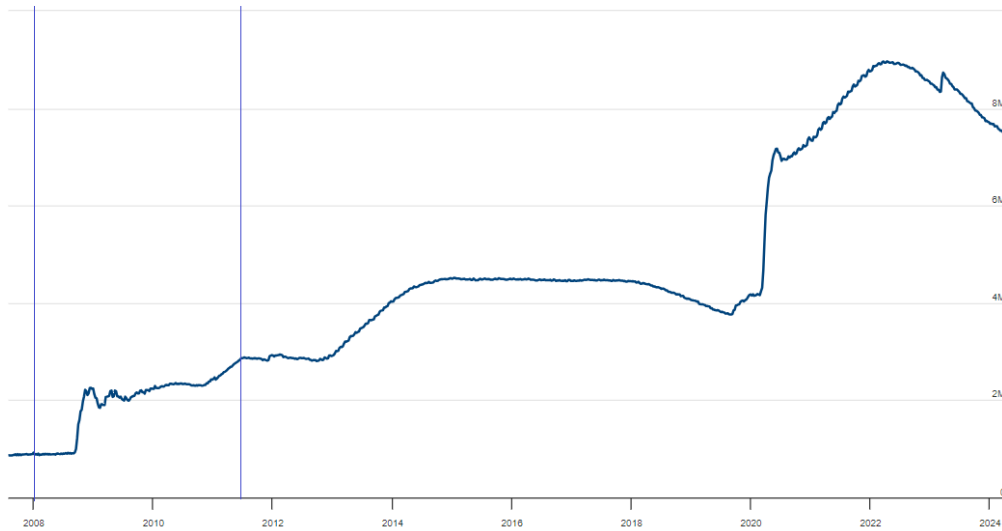


Figure 3. Recent balance sheet trends, 2008-2024

Graph from Federal Reserve Board, 2 Apr. 2024,

https://www.federalreserve.gov/monetarypolicy/bst_recenttrends.htm

This policy had clear timeframes and specific directives: it was planned to purchase long-term Treasury securities amounting to \$600 billion at a pace of \$75 billion per month until June 2011, increasing the size of the balance sheet to approximately \$2.9 trillion. It is important to recognize that the consistently low interest rate stimulated the QE2 policy, posing a threat of reserve accumulation on the balance sheet. As the Fed buys these securities with money essentially created in unlimited quantities and unbacked by production, leading economists, such as those at the Federal Reserve, believed that this would make the economy vulnerable to uncontrollable inflation.

Disregarding warnings from financial analysts and economists, September 2012 marked the launch of the third round of quantitative easing (QE3), characterized by an open-ended date, meaning the tie to time was eliminated and replaced by the achievement of specific economic indicators. The priority direction became a dovish approach – combating economic weakness and reducing unemployment levels. The strategy of QE3 involved monthly purchases of Treasury securities amounting to \$45 billion and mortgage-backed securities totaling \$40 billion. Similar to previous rounds, the new round of securities purchases would increase demand for long-term securities, thus lowering yields, and ease overall financial conditions. However, unlike QE1 and QE2, QE3 partially addressed the issue of reserve accumulation on the Fed's balance sheet by implementing The Maturity Extension Program (MEP), achieved through selling an equal amount of short-term Treasury securities with a maturity of three years or less. The alternative name, Operation Twist, attributed to MEP, was adopted due to its similarity to the Martin program, where the Fed bought long-term securities and sold short-term ones, attempting to “twist” the yield curve by lowering long-term rates (to stimulate spending in the economy) while simultaneously raising short-term rates (to protect the dollar's exchange value). As a result, although the purchases significantly extended the average maturity of the Fed's securities holdings, the overall size of the balance sheet remained unchanged. The limitation of this new approach pertained to the limited supply of short-term Treasury securities, which, upon exhaustion, would potentially force the Fed back into reserve expansion. The main risk of several quantitative easing programs remained the complication of exiting from a large

balance sheet when the time comes, as Fed assets would generally take longer to mature (see Figure 4).

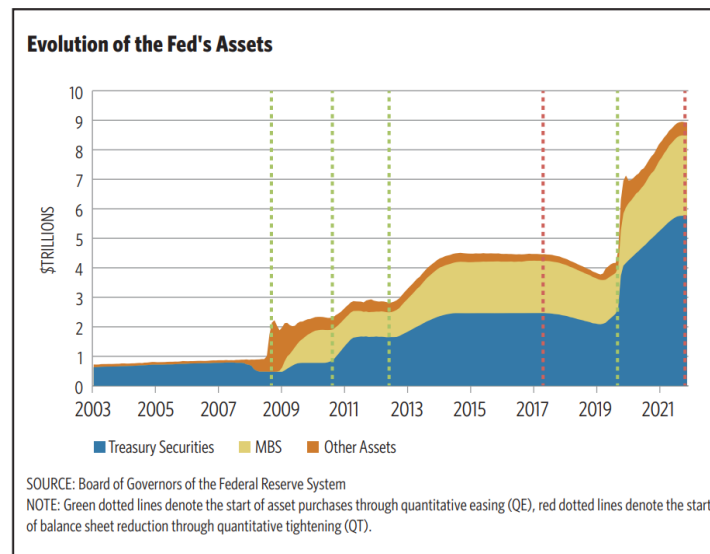


Figure 4. Evolution of the Federal Reserve's Assets, 2003-2021

Graph from Board of Governors of the Federal Reserve System, March 2022,

<https://www.kansascityfed.org/Economic%2520Review/documents/9251/EconomicReviewV107N4GulatiSmith.pdf>

Exploring Innovative Monetary Policy Approaches

In his book “21st Century Monetary Policy,” Ben Bernanke emphasizes the necessity of taking decisive measures to prevent global financial crises. Recent trends in global economic development, namely, the decline in real interest rates, persistently low inflation rates, and inadequate regulation of non-bank institutions and other entities, have limited the effectiveness of traditional monetary policy tools. Faced with the challenge of grappling with the persistent lower bound, the economic authorities of the Federal Reserve System have been compelled to turn to unconventional monetary policy instruments. Among the proposed innovations, those most realistic are drawn from the experiences of the European, British, and Japanese central banks, which have responded to the challenges posed by lower bound. Policies such as Funding for Lending, negative interest rates, yield curve targeting, and expanding the scope of financial assets purchased through Quantitative Easing (QE) are options that could be implemented in the American economy. However, Bernanke expresses skepticism regarding their suitability to the expectations of American society and the complexities of their potential consequences.

Analyzing the proposed ways to overcome the challenges of the 21st century for monetary policy, the authors of this study have formulated a hypothetically new approach to the utilization of the federal funds rate. According to Ben Bernanke's calculations, the response to the threat to financial stability, predominantly arising in mortgage markets and credit markets, should be sufficient to mitigate the risk but not to harm other sectors of the economy. Approximately 8 percent is deemed necessary to pacify hot markets, which would adversely affect other markets in relative stability. As a conclusion, this would lead to a protracted recession across the entire economy and deal a blow to foreign emerging markets.

The authors of this research propose considering the simultaneous establishment of a range of different federal funds rates tailored to the needs of market groups. The division of bank deposits forming reserves into categories based on their association with real markets aims

to facilitate effective management of monetary policy. In the event of a need to reduce the federal funds rate in real estate and credit markets funds from such accounts are redistributed to other accounts. This ensures alignment of the specified rate according to the principle: a reduction in reserves in one account leads to an increase in the interest rate for the corresponding sector, helping to prevent threats to financial stability. Other accounts, to which these reserves are allocated at the discretion of the Federal Reserve System, decrease federal funds rates by increasing the supply of reserves, thereby promoting the necessary stimulation of economic activity for the relevant markets requiring monetary policy easing.

This approach to the distribution of bank deposits and management of federal funds rates can have various consequences. Let us consider some of the positive impacts. Firstly, effective allocation of reserves and differentiation among them by categories will contribute to the comprehensive and rational development of markets that require attention. Simultaneous establishment of multiple federal funds rates will help cool overheated markets, stimulating other sectors through the regulation of supply and demand for reserves. Thus, we return to the initial idea of regulating the federal funds rate without the need for quantitative easing policies in non-crisis times. The lower bound problem, corresponding to an excess of reserves, can be addressed through this distribution, as each market's reaction will be different, and the average value for the federal funds rate, trending towards 0, will be eliminated.

Secondly, Ben Bernanke acknowledges the inevitability of financial crises from time to time. Unlike the theory of Nikolai Kondratiev, which predicts cyclical economic cycles every 50-60 years, globalization has shortened this period to 13-14 years. Considering the global financial crisis of 2007-2009 and the 2020 pandemic, the introduction of new monetary policy instruments or alternative uses of existing ones are deemed necessary. While quantitative easing policies combined with forward guidance have proven effective during crises, they are not sufficient for rapid adaptation after periods of instability. Additionally, the accumulation of reserves will keep the federal funds rate low, and the problem of running them off before the onset of another cycle troubles leading economists. Therefore, in addition to macroprudential policy tools and the existing QE and forward guidance, the establishment of multiple federal funds rates will help avoid imbalances in the financial system and reduce the risk of undesirable consequences for financial stability.

Amidst the novel tools that could be considered as alternatives, the idea of utilizing “fuses” – automatic regulators that activate under specific conditions – is particularly intriguing. Despite a significant drawback related to the delayed manifestation of monetary policy, negative consequences can be mitigated through pre-established mechanisms. In essence, these fuses act as predetermined triggers that automatically activate certain policy measures when specific conditions are met, thereby providing a proactive mechanism to alleviate spillovers.

For illustrative purposes a scenario where the central bank aims to control inflation is provided. Instead of relying solely on reactive adjustments to interest rates or reserve requirements after inflation has already surpassed a target threshold, the central bank could implement a fuse mechanism. This mechanism could be designed to automatically trigger a tightening of monetary policy measures, such as increasing interest rates or raising reserve requirements, when leading indicators suggest that inflationary pressures are building up to a certain level. Preemptively activating these measures based on predetermined thresholds or triggers, will allow policymakers potentially reduce the severity of inflationary pressures and limit their adverse effects on the economy.

Additionally, the use of such automatic regulators can enhance the transparency and predictability of monetary policy, providing stakeholders with clearer signals about the central

bank's intended actions and helping to anchor inflation expectations. However, it is important to recognize that the effectiveness of fuse mechanisms in monetary policy hinges on the accuracy of the triggers and thresholds chosen, as well as the ability to anticipate and respond to changing economic conditions in a timely manner. Moreover, careful consideration must be given to potential unintended consequences and the need for flexibility in policy implementation.

Ultimately, an essential aspect to consider is the synergy between fiscal and monetary policies. However, scholars such as Bernanke caution against the full integration and unification of these policies, citing concerns about the potential merging and overlapping of their respective responsibilities. This integration is deemed unfeasible for the United States due to the inherent need to safeguard the Federal Reserve System's (FRS) independence.

Nevertheless, it is recognized that fiscal policy can complement monetary policy effectively. While the FRS maintains a certain level of independence, there remains a need to explore avenues for combining fiscal and monetary policies in a manner that enhances their collective efficacy. Fiscal policy, in particular, can serve as a complementary tool to monetary policy, providing additional support when the latter alone cannot ensure financial stability. Therefore, it is imperative to identify mechanisms through which fiscal and monetary policies can work in tandem, leveraging their distinct strengths to address economic challenges comprehensively. When monetary policy reaches its limits in stabilizing the economy, fiscal policy can step in to provide additional support, thereby fostering a more robust and resilient economic framework.

Conclusions

Throughout the article, the objectives outlined in the introduction were successfully achieved. Based on the tasks completed, several key conclusions were drawn:

The Federal Reserve System operates under a dual mandate that outlines the primary economic objectives of monetary policy, including ensuring price stability, promoting full employment, prioritizing economic growth, and establishing stability in financial markets. Given the existing contradictions between the stated goals, the Federal Reserve must find compromises between these objectives, conceding on corresponding indicators.

The effectiveness of the Federal Reserve's policy in combating inflation has been a focal point. Through tools such as managing interest rates, forward guidance, and quantitative easing, the Fed has addressed inflationary pressures while striving to maintain price stability. Despite challenges, policy interventions have generally succeeded in keeping inflation within the target range.

The Federal Reserve System (Fed) is the central bank of the United States and plays a critical role in implementing monetary policy and stabilizing the financial system. Its structure consists of the Board of Governors, twelve regional reserve banks, and the Federal Open Market Committee (FOMC), which maintain financial stability through the implementation of monetary policy.

Analyzing the implementation of monetary policy in the United States, it should be noted that the Federal Reserve relies on a defined set of tools to ensure a rapid response to changes in the political-economic environment. This makes monetary policy more flexible and adaptive, which in turn helps maintain financial and economic stability. At the same time, it should be noted that the limited mechanisms of monetary policy regulation necessitate the search for new tools that can curb inflation and promote maximum employment.

Quantitative easing programs are aimed at large-scale purchases of long-term treasury and/or mortgage-backed securities to lower future interest rates and influence the present. The first round of quantitative easing was the most successful and proved effective during the global financial crisis of 2007-2009. The second round took place from 2010-2012 and involved purchasing \$600 billion to mitigate the effects of the crisis and prevent a prolonged recession. The third round, starting in 2012, unlike the first and second, did not have a fixed timeframe, and its completion depended on achieving the set goals, which was accomplished in 2014. Thus, quantitative easing programs have become an important part of the set of monetary policy tools used in times of crisis to prevent threats to financial stability.

Research into alternative approaches to monetary policy has revealed innovative opportunities such as automatic regulators and adjustments of multiple target interest rates. These approaches offer ways to enhance policy effectiveness, transparency, and adaptability in addressing new economic challenges. Based on the analysis conducted, recommendations for mitigating the effects of recent economic crises include maintaining policy flexibility, strengthening coordination between fiscal and monetary authorities, and increasing the resilience of financial systems. The application of innovative policy tools and proactive measures can strengthen the economy's ability to withstand shocks and promote sustainable growth.

References

1. Ananiev, M. (2017). Monetarna polityka ta yii vplyv na rozvytok rynku tsinnykh paperiv. *Investytsii: praktyka ta dosvid*, 11(20), 75-82. Available at: <http://www.investplan.com.ua/?op=1&z=5548&i=12>
2. Bernanke, B. S. (2022). *21st century monetary policy: the federal reserve from the great inflation to COVID-19*. W.W. Norton & Company.
3. Bernanke, B. S. (2012). Five Questions about the Federal Reserve and Monetary Policy. *Speech At the Economic Club of Indiana*. Available at: <https://www.federalreserve.gov/newsevents/speech/bernanke20121001a.htm>
4. Bullard, J. (2010). Three lessons for monetary policy from the panic of 2008. *Federal Reserve Bank of St. Louis Review*, 92(3), pp. 155-63. Available at: <https://files.stlouisfed.org/files/htdocs/publications/review/10/05/Bullard.pdf> (Accessed 4 May 2024).
5. Dowd, K., Hutchinson, M. (2014). "How Should Financial Markets Be Regulated?" *Cato Journal*, 34, 353-88. Available at https://ciaotest.cc.columbia.edu/journals/cato/v34i2/f_0031478_25526.pdf (Accessed 6 May 2024).
6. Dzubliuk, O. (2014). Antykryzovi zakhody monetarnoi polityky FRS SShA: natsionalni osoblyvosti i hlobalni erspektyvy. *Ukrainska nauka: mynule, suchasne, maibutnie*, 19(1), 25-34. Available at: <http://dspace.wunu.edu.ua/bitstream/316497/5520/1/%D0%94%D0%B7%D1%8E%D0,%B1%D0%BB%D1%8E%D0%BA%20-%20%D0%90%D0%BD%D1%82%D0%B8%D0%BA%D1%80%D0%B8%D0%B7%D0%BE%D0%B2%D1%96%20%D0%B7%D0%B0%D1%85%D0%BE%D0%B4%D0%B8%20%D0%A4%D0%A0%D0%A1%20%D0%A1%D0%A8%D0%90.pdf> (Accessed 5 May 2024).
7. Federal Reserve Bank of St. Louis. Federal Funds Effective Rate. Available at: <https://fred.stlouisfed.org/series/FEDFUNDS> (Accessed 3 May 2024).
8. Federal Reserve Reform Act of 1977. (1997). *U.S. Government Printing Office*, 95-188, 91 Stat. 1387.

9. Friedman, M. (1983) *A Program for Monetary Stability*. Fordham University Press.
10. Friedman, M., Schwartz, A. (1963). *A Monetary History of the United States, 1867-1960*. Princeton University Press, Princeton.
11. Gulati, C., Lee Smith, A. The Evolving Role of the Fed's Balance Sheet: Effects and Challenges. Available at: <https://www.kansascityfed.org/Economic%2520Review/documents/9251/EconomicReviewV107N4GulatiSmith.pdf> (Accessed 1 May 2024).
12. Ihrig, J., Meade, E., Weinbach, G. (2015). "Rewriting Monetary Policy 101: What's the Fed's Preferred Post-Crisis Approach to Raising Interest Rates?" *Journal of Economic Perspectives*, 29(4), 177-198. Available at: <https://doi.org/10.1257/jep.29.4.177> (Accessed 2 May 2024).
13. Kovacevich, R. (2014). "The Financial Crisis: Why the Conventional Wisdom Has It All Wrong." *Cato Journal*, 34, 541-56. Available at: <https://www.cato.org/sites/cato.org/files/serials/files/cato-journal/2014/9/cj34n3-5.pdf> (Accessed 5 May 2024).
14. Krishnamurthy, A., Vissing-Jorgensen, A. (2011). "The Effects of Quantitative Easing on Interest Rates: Channels and Implications for Policy." *Brookings Papers on Economic Activity*, no. 2, 215-287. Available at: <https://doi.org/10.1353/eca.2011.0019> (Accessed 4 May 2024).
15. Lanham, M. (1988). *The Theory of Free Banking: Money Supply under Competitive Note Issue*. Rowman & Littlefield.
16. Preston, H. (1935). The Banking Act of 1935. *Journal of Political Economy*, 43(6), 743-62.
17. Recent balance sheet trends. Available at: https://www.federalreserve.gov/monetarypolicy/bst_recenttrends.htm (Accessed 3 May 2024).
18. Selgin, G., Lastrapes, W., & White, L. (2012). Has the Fed been a failure? *Journal of Macroeconomics*, 34(3), 569-596. Available at: <https://www.sciencedirect.com/science/article/abs/pii/S0164070412000304> (Accessed 5 May 2024).
19. Selgin, G. (2021). "The fiscal and monetary response to COVID-19: What the Great Depression has – and hasn't – taught us." *Economic Affairs*, 41(1), 3-20. Available at: <https://doi.org/10.1111/ecaf.12443> (Accessed 6 May 2024).
20. Steelman, A. (2012). The Federal Reserve's 'Dual Mandate': The Evolution of an Idea. *Federal Reserve Bank Richmond Economic Brief*, 11-12.
21. Swanson, E. (2011). "Let's Twist Again: A High-Frequency Event-Study Analysis of Operation Twist and Its Implications for QE2." *Brookings Papers on Economic Activity*, 1, 151-188. Available at: <https://doi.org/10.1353/eca.2011.0006> (Accessed 1 May 2024).
22. Timberlake, R. (1993). *Monetary Policy in the United States: An Intellectual and Institutional History*. University of Chicago Press.
23. Treasury and Agency Securities: Mortgage-Backed Securities (MBS), All Commercial Banks. Available at: <https://fred.stlouisfed.org/series/TMBACBW027SBOG> (Accessed 2 May 2024).
24. Urbanovich, V., Demchenko, O. (2018). Osoblyvosti funktsionuvannia Federalnoi Rezervnoi Systemy SShA. *Molodyi Vchenyi*, 5(57), 770-773. Available at: <https://molodyivchenyi.ua/index.php/journal/article/view/4630> (Accessed 4 May 2024).
25. Vissing-Jorgensen, A. (2021). "The Treasury Market in Spring 2020 and the Response of the Federal Reserve." *Journal of Monetary Economics*, 124, 19-47. Available at: <https://doi.org/10.1016/j.jmoneco.2021.10.007> (Accessed 3 May 2024).