A Study of the Relationship Between Monetary Policies and Financial Crises

Keyu Wu*

School of Nature Sciences, The University of Manchester, Manchester, M13 9PL, United Kingdom

*Corresponding author: keyu.wu@student.manchester.ac.uk

Abstract. In the process of the financial crisis evolving into a global crisis, the Federal Reserve has diligently applied the lessons gleaned from historical financial upheavals, including the Great Depression of 1929, the Stagflation Crisis of 1970, and the Subprime Crisis of 2008. Through a proactive approach to crisis management via monetary policy, the Federal Reserve has endeavored to mitigate the impact of such crises. This paper conducts a comprehensive analysis, drawing upon a brief retrospective examination of relevant literature and historical experiences in monetary policy during crisis periods. It delves into the operational strategies employed by the Federal Reserve Bank to respond to crises, along with the development of novel monetary policy instruments aimed at sustaining liquidity within the financial system. Additionally, the paper explores the dynamics of international monetary policy cooperation amidst crises. Ultimately, within the framework of heightened economic globalization, it underscores the imperative for central banks to wield monetary policy with precision in addressing financial crises.

Keywords: Financial Crisis; Crisis Management; Monetary Policy; COVID-19.

1. Introduction

The global economic landscape has faced unprecedented challenges since the emergence of the COVID-19 crisis in 2020. The repercussions were swiftly felt in the stock and currency markets worldwide, as they underwent extreme fluctuations. These market dynamics have reflected deep economic uncertainties, greatly affected investor sentiment and caused a sharp decline in many national stock market indices. The foreign exchange markets have not been spared, with currency values experiencing significant volatility. This has resulted in unpredictable fluctuations in currency exchange rates, contributing to the overall instability of international financial markets. Such market conditions underscore the interconnected nature of the global economy, where shifts in one region can ripple through to others. Furthermore, the pandemic-induced lockdowns have disrupted global trade flows. The sudden halt in economic activity led to supply chain breakdowns and export restrictions, diminishing trade volumes significantly. This has had a detrimental impact on the international financial system, putting additional strain on multinational corporations, many of which have faced critical challenges.

In the wake of these disruptions, a silver lining emerged as conditions began to improve, leading to a cautious revival of investor confidence. Financial markets started showing signs of recovery, and international capital began gravitating towards economies that showcased stability and potential for growth. This shift marked the beginning of a recalibration of financial policies on a global scale. In response to these economic trials, central banks across major economies took decisive action. Interest rate reductions and quantitative easing became common tools to bolster economic stability. The U.S., European Union, and Japan adopted these measures prominently. In contrast, China pursued a more conservative monetary approach, emphasizing stability and risk management. The inclination towards quantitative easing, while a strategic response to immediate economic distress, has led to a tendency towards currency devaluation. Some economies have utilized this approach to enhance their export competitiveness and fuel economic recovery. However, this tactic has not been without its challenges, as it has sparked rate disputes among nations, potentially leading to heightened tensions and increased global financial instability.

These recent events have highlighted the significance of monetary policy in crisis management. Yet, the nuances of each financial crisis necessitate that central bank tailor their strategies accordingly. The effectiveness of monetary policies across different crises, such as those seen in the 1929 Great Depression, the 1970s stagflation, and the 2008 subprime mortgage crisis, reveals a complex web of interconnected outcomes and varying degrees of success. As this article move forward, it is imperative for central banks to continuously adapt their monetary frameworks to the evolving economic conditions. They must strike a delicate balance between multiple objectives, considering the lessons learned from past crises while navigating the uncertainties of a rapidly globalizing economic environment. This ongoing process of evaluation and adjustment is crucial in fostering a resilient and stable international financial system.

2. 1929 Great Depression

In the aftermath of World War I, the capitalist economy experienced rapid growth, propelling it into an era of prosperity. This period, however, was marred by a vast economic crisis lurking beneath the surface, characterized by inequitable distribution of wealth and a significant disparity between the rich and poor. Excessive cheap labor led to a production capacity that far exceeded purchasing power, causing demand to trail behind production speed and fostering a false sense of economic boom. From 1920 to 1928, the DJIA steadily rose, with U.S. stock prices increasing fivefold from 1924 to 1929. Yet, the economic crisis that unfolded in 1929 began in the United States and quickly spread to the capitalist world, leading to tariff wars, currency wars, and trade wars that disrupted the global economic order. This period saw the initial bankruptcy of stock exchanges in the U.S., with stock prices plummeting despite attempts by banks to intervene. From the peak of the DJIA near 400 points in 1929, it fell to a low of about 50 points by 1932, as Figure 1 shown. The crisis was compounded by banks issuing a substantial amount of currency, leading to inflation and currency devaluation. With more money in hand and seeking to avoid devaluation, people turned to investing in stocks and funds, which increased their demand and prices. However, the rapid rise in stock and fund prices created an economic bubble, as the actual value did not match the inflated stock prices.

Two key issues emerged: first, production exceeded demand, leading to inventory surplus and insufficient profits to cover interest payments, resulting in business closures and bankruptcies, and a rise in unemployment. Second, when production outstripped purchasing power, it led to a deteriorating economy. The real economy faced problems, and as investor confidence waned, a massive sell-off in stocks occurred, sparking a credit crisis and numerous bank failures. This led to a panic in the securities market and a further drop in stock prices. During this period, the Federal Reserve made critical errors in judgment, failing to provide liquidity to banks and reducing the money supply. The adoption of a contractionary monetary policy, with persistently low interest rates, accelerated the economic decline and led to a deflationary spiral. According to Friedman and Schwartz, the Federal Reserve could have prevented the worsening of the economic depression but did not fulfill its role as a lender of last resort, nor did it manage the monetary system to alleviate the banking panic effectively [1]. Instead, the Fed raised discount rates and tightened currency, leading to a substantial contraction in the money supply and the collapse of the banking sector. The stock market continued to decline significantly over the next two years, with a drop exceeding 80%. Ultimately, over 4,305 banks failed, which was more than half of the banks in the U.S. at the time. Due to the banking sector's collapse, the survivors tightened lending, leading to a shortage of market liquidity and a subsequent wave of business failures. The Great Depression of 1929 serves as a cautionary tale of monetary policy mismanagement, profoundly affecting the financial systems and structures and shaping central bank responses to crises for decades [2]. This crisis not only influenced the financial arrangements and structural changes in the following years but also affected how central banks react to crisis shocks with their monetary policy decisions.

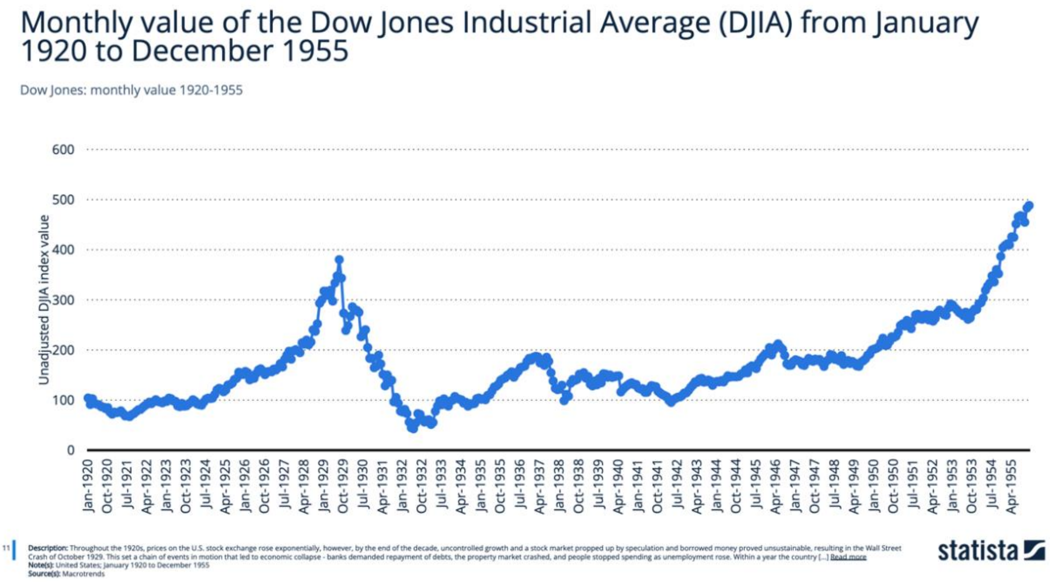

Fig. 1 Monthly value of the Dow. Jones Industrial Average (DJIA) from January 1920 to December 1955 in USA [3]

3. 1970-1980 Stagflation

Table 1. GDP, real GDP, Inflation Rate, Unemployment rate from 1970 to 1990

Metric	1970	1974	1979	1982	1990
Gross Domestic Product ($billion)	1051.22	1616.116	2789.842	3274.302	6004.733
Real GDP(%)	0.2%	-0.5%	3.2%	-1.8%	1.9%
Inflation Rate (%)	5.84%	11.05%	11.25%	6.13%	5.40%
Unemployment rate (%)	3.9%	5.6%	5.9%	10.8%	5.5%

Data source: Fred and Statista.

In the mid-1960s, the United States faced escalating inflationary pressures, and the Federal Reserve's contractionary monetary policies failed to control the trend of rising prices. Instead, these policies led to tighter credit, higher unemployment, and slower economic growth, resulting in stagflation by 1970. In response, the Fed shifted to expansionary monetary policy, maintaining lower market interest rates to counteract inflationary expectations and stimulate economic recovery. Initially successful, this approach saw real GDP growth and a reduction in unemployment and inflation rates (see Figure 2, Figure 3, and Figure 4). However, the oil crisis of 1973 led to a sharp increase in inflation and negative economic growth in 1974, plunging the US into deeper stagflation. Despite frequent adjustments with various monetary tools, the overall economic downturn persisted with high unemployment and inflation rates. By 1979, inflation again reached double digits, and signs of economic recession reemerged (see Figure 5) [4]. The Fed's monetary policy during this period, centered on adjusting market interest rates, included operations like open market transactions, discount rate adjustments, and changes to the deposit interest rate ceiling, all aimed at influencing the federal funds rate (EFFR) and market liquidity.

Reflecting on the pivotal years of stagflation—1970, 1974, and 1979—the policy of low-interest rates proved unsustainable. At the end of the 1970s, with the US facing stagflation again, the Fed sought policy reform centered on curbing inflation, leading to an aggressive contractionary monetary stance in the early 1980s. This shift resulted in a significant decrease in inflation rates by 1983 and a subsequent economic recovery, with real GDP growth rates averaging over 4% in the following years, outpacing inflation and reducing unemployment rates, steering the US out of stagflation, as Table 1 shown.

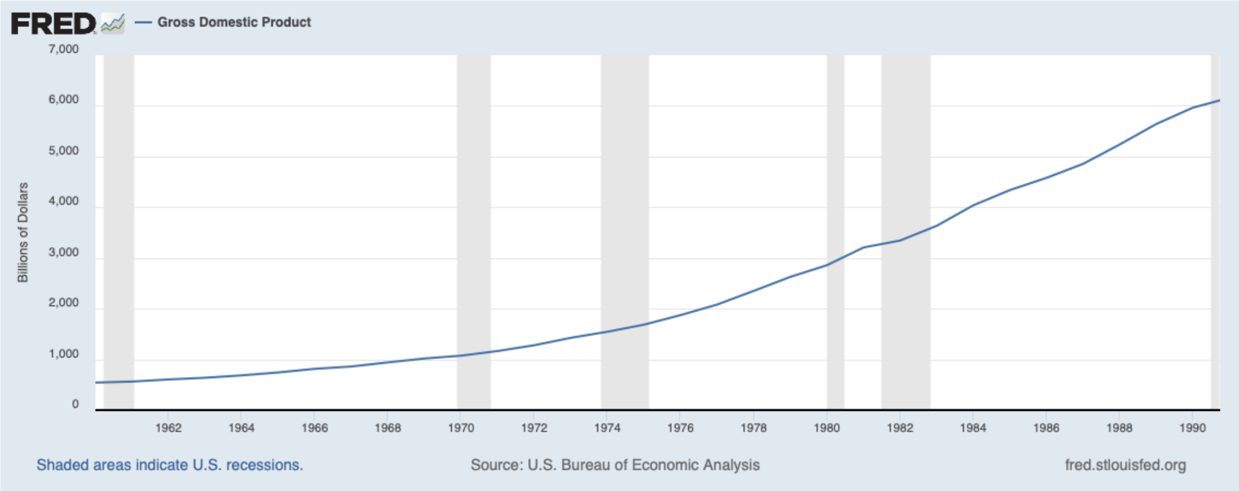

Fig. 2 GDP in USA from 1960 to 1990 [5]

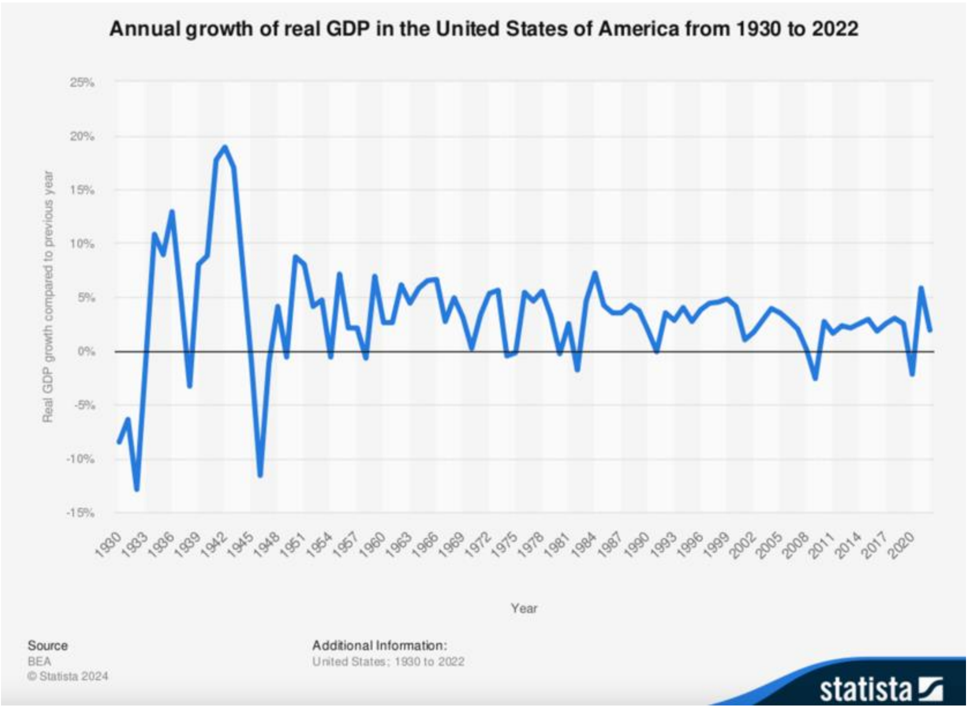

Fig. 3 Real GDP in USA from 1960 to 1990 [3]

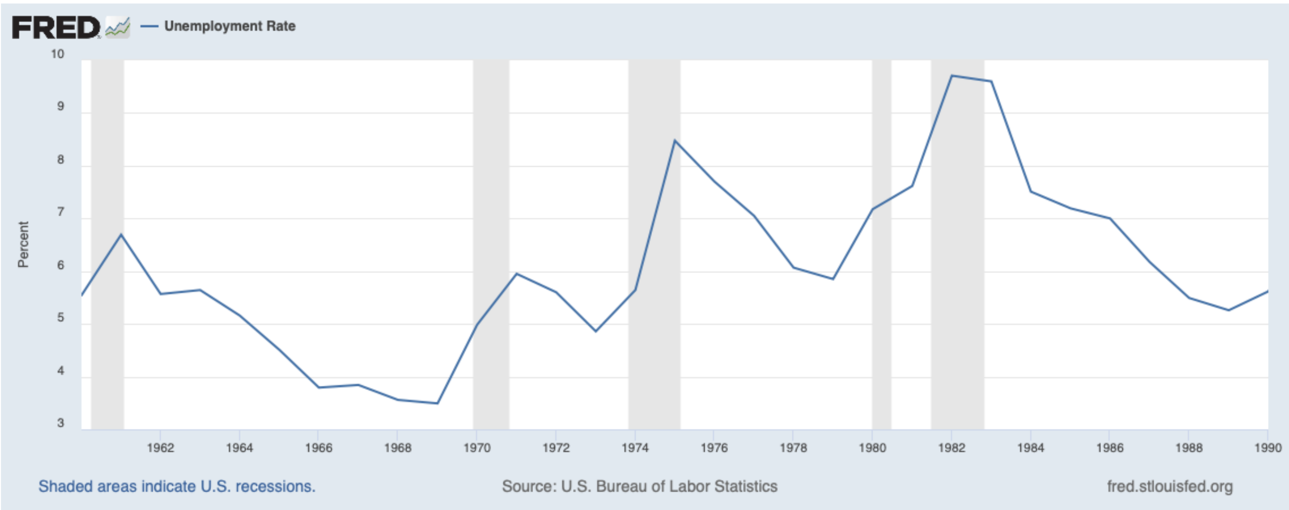

Fig. 4 Unemployment rate in USA from 1960 to 1990 [5]

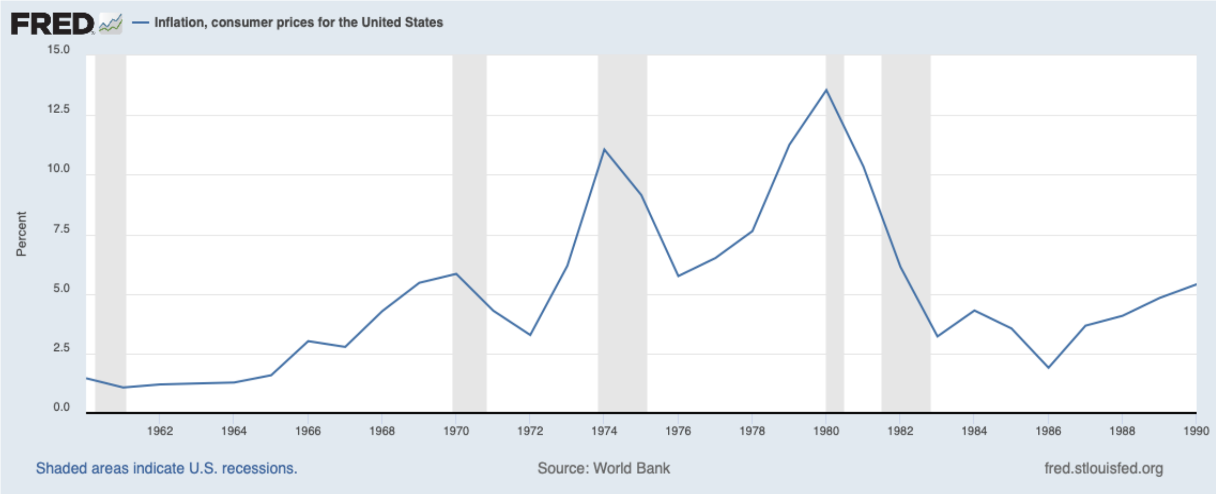

Fig. 5 Inflation in USA from 1960 to 1990 [5]

4. 2008 Subprime Crisis

The aftermath of the U.S. subprime mortgage crisis unfolded into a global financial turmoil. It not only affected the U.S. housing market but also echoed in Europe and other regions, causing property values to drop. Governments in the U.S. and Europe rolled out unprecedented financial rescue plans. The Federal Reserve's crisis management involved evolving and innovative monetary policies. For instance, from early 2004, the Fed tried to cool the economy and the growing real estate bubble by incrementally raising the federal funds rate in seventeen steps of 0.25 percentage points, totaling a 4% increase. By early 2007, as the real estate bubble burst and unemployment began to rise, the subprime crisis spread, leading the Fed to cut the federal funds rate. Especially by late January 2008, in the wake of financial institutions announcing subprime-related asset depreciation, the Fed recognized the escalating crisis could worsen credit tightening and resource utilization [6]. Hence, it significantly reduced the federal funds rate, such as the emergency rate cut of 75 basis points on January 22, 2008, surpassing market expectations, followed by a 50-basis point cut on January 30. By mid-December 2008, the rate had fallen to a range of 0-0.25%. With the federal funds rate nearing zero, further reductions weren't feasible, leading the Fed to implement quantitative easing (QE) in its crisis management. QE required coordination with basic policy tools like open market operations and adjustment of the discount rate. During the subprime crisis management, the Fed expanded the range of assets traded in the open market to include mortgage-backed securities, facilitating liquidity provision and market rate regulation, thereby improving financial conditions. Adjusting the federal funds rate, the Fed also altered the discount rate to better meet financial institutions' reserve and liquidity needs.

Financial crises have international contagion effects through various channels. In a world of deepening economic and financial globalization, any financial crisis can rapidly spread to other countries and regions. The monetary policy operations in crisis management often extend beyond the initially affected nation, making international policy coordination and cooperation a necessary component. During this crisis, international coordination was primarily through dollar liquidity provision via currency swaps and concerted loose monetary policies by major central banks to reduce interest rates substantially [7]. The impact of monetary policy should be considered in both the short and long term. Short-term effects are undeniably positive, as they mitigated the severity of the crisis to some extent and promoted financial system stability. Coordinated rate cuts by central banks eased global financial market panic and restored liquidity, stabilizing investor confidence and positively affecting credit markets and the real economy. In the long term, the Federal Reserve's significant reduction in federal funds rate and liquidity support raises questions about potential inflationary pressures, and the impact of possible U.S. quantitative easing on exchange rates and the international monetary system remains uncertain.

5. COVID-19 Crisis

Since March 2020, the rapid global spread of COVID-19 has plunged the world economy into a deep recession and caused severe fluctuations in the financial markets. Central banks around the world responded with emergency interest rate cuts, lowering the target range for the federal funds rate to 0-0.25%. Aggressive policy measures including large-scale asset purchase programs were reintroduced and innovated from the 2008 financial crisis toolkit, bringing monetary policy to an unprecedented level of easing. This included announcements of rate cuts combined with quantitative easing (QE) strategies. Such ultra-loose monetary policy alongside a very low-interest-rate environment aimed to alleviate liquidity issues, providing some support for economic and financial recovery. However, unfettered global monetary easing inevitably leads to inflationary pressures (see Figure 8 and Figure 9). The constraints of potential inflation ultimately determine the effectiveness of monetary policy in stimulating the economy. As Figure 6 to Figure 9 shown, the inflation rates in the US and EU peaked in 2022, with the US nearing a high of approximately 10%. In response, the Federal Reserve began a series of interest rate hikes in March 2022, and by June, rates had increased multiple times, pushing the federal funds rate to a periodically high range of 5-5.25% [8].

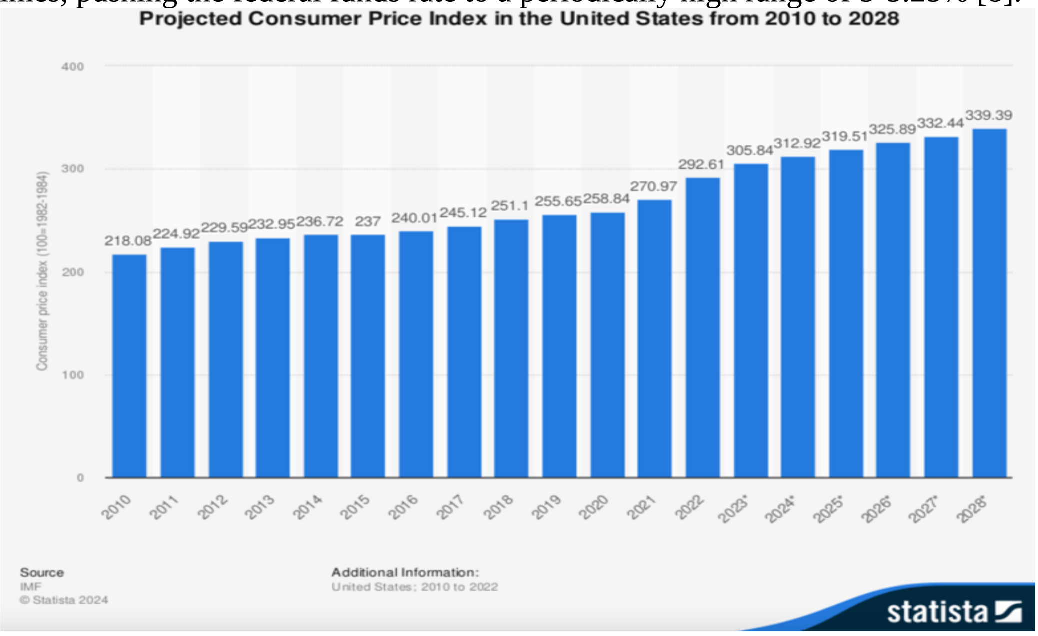

Fig. 6 Projected Consumer Price Index in the United State from 2010 to 2028 [3]

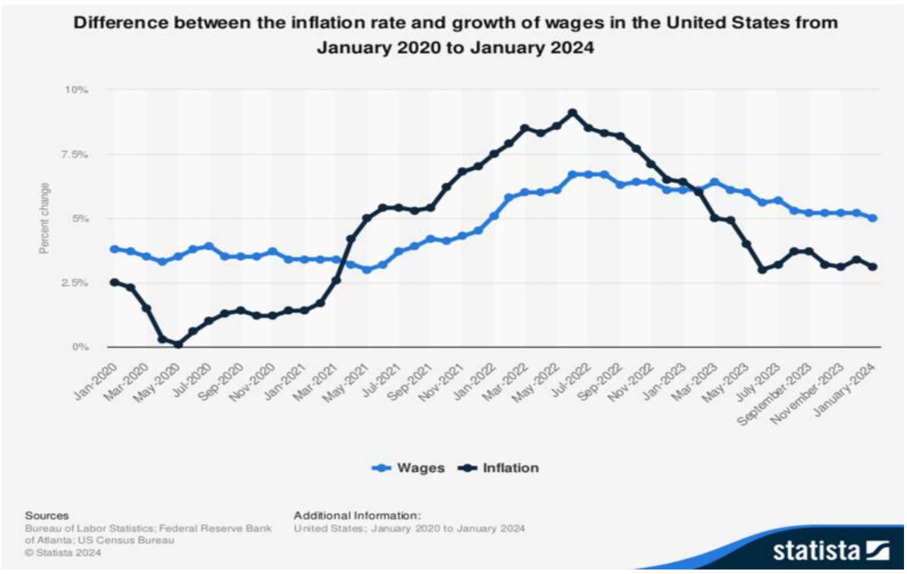

Fig. 7 The Inflation Rate in US from 2020 to 2024 [3]

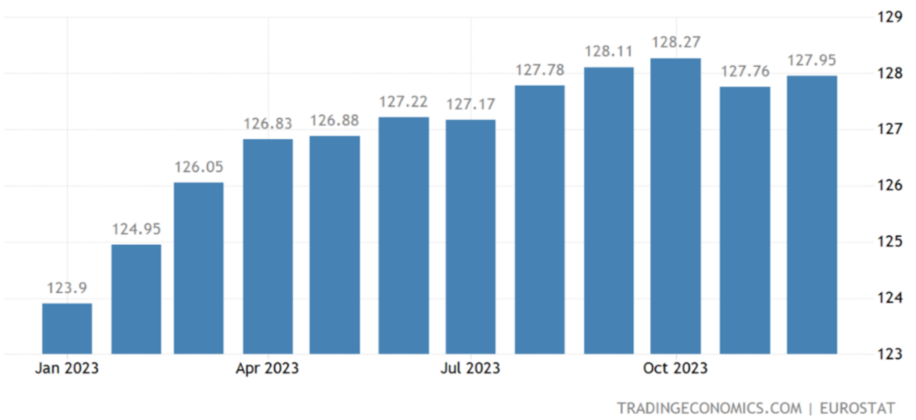

Fig. 8 Projected Consumer Price Index in the EU in 2023 [9]

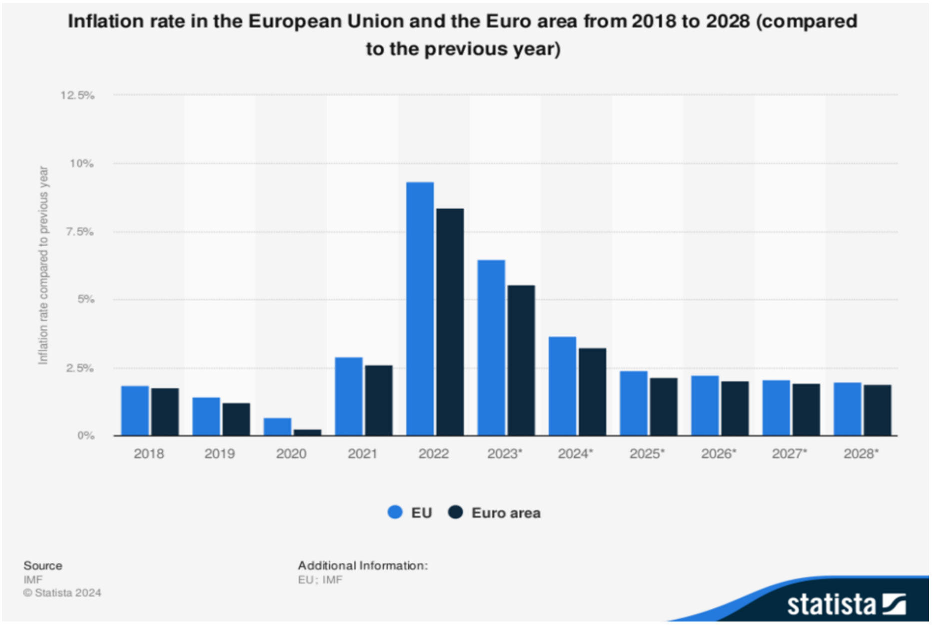

Fig. 9 The Inflation Rate in EU from 2018 to 2028 [3]

In the wake of rapid monetary expansion, central banks globally are at the lower bounds of policy rates, narrowing the monetary policy space and casting uncertainty over long-term effects, exacerbating global financial fragility. By the first half of 2023, major economies had largely emerged from the pandemic, but scars from the crisis and the Federal Reserve's substantial 2022 rate hikes constrained economic recovery. The Fed's initiation of rate increases in March 2022, followed by the ECB's rate hikes, tightened the global monetary environment. Persistent core inflation propels central banks to maintain the momentum for rate hikes, despite the negative economic impacts.

Tightening monetary policies in early 2022 led to increased market liquidity, higher financing costs, and escalated default risks, suppressing demand, amplifying economic downturn pressures, and increasing financial vulnerability [10]. Financial institutions faced significant asset risk exposure, prompting increased risk provisioning and risk accumulation. Notably, the collapse of Silicon Valley Bank and others in the U.S. during March, and the Credit Suisse crisis in Europe, caused global financial market shocks. However, interventions by the U.S. Treasury, the Federal Reserve, and the ECB helped contain further financial risk spread, soothing panic.

High interest rates also dampened real estate and investment activities, as seen in the U.S., where high mortgage rates curbed house sales and weighed heavily on residents' mortgage burdens, weakening investor confidence. The Fed might continue modest rate hikes, with other central banks likely to follow, tightening global financial conditions further. Given the high core inflation rates worldwide, central banks are unlikely to ease policies unless clear recession signals emerge, or systemic financial risks break out. The Fed's rate is expected to remain above 5.25% for a considerable period until core inflation in the U.S. significantly decreases. Other economies might pause rate hikes following the Fed's lead, considering their inflation scenarios. Global financial conditions will likely tighten further until then.

Historically, as the Fed nears the end of a rate hike cycle, the U.S. economy often cools or enters recession, with financial markets volatile, sometimes triggering financial risks that can evolve into economic crises. The current Fed tightening is historically rapid and strong, increasing pressure on financial risks and economic downturns. The lagged effect of the Fed's tight monetary policy on global economic and financial market operations is becoming apparent. While most economists predict a mild U.S. recession, even a mild downturn could evolve into a deep recession if not managed properly, especially with high rates, declining private investment intent, and high mortgage rates severely constraining the real estate market, adding to economic uncertainties.

6. Conclusion

The COVID-19 pandemic has undeniably laid bare the vulnerabilities within the global financial infrastructure. The effectiveness of monetary policy in crisis recovery is indisputable, yet it also highlights an increasing complexity amid advancing globalization and the advent of sophisticated financial instruments. This complexity demands a more precise application of monetary policy tailored to the intricacies of each financial crisis. Critical to mitigating future risks is the exactitude in policy implementation. Moreover, the situation underscores the indispensable role of international cooperation. A concerted effort among central banks and financial institutions is pivotal in shaping policies that not only react to crises but also fortify the global financial system against future shocks. Moving forward, it is imperative that a collaborative approach be championed, fostering a unified front to safeguard financial stability and promote sustainable economic progress on a global scale.

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