Research on the Impact of Monetary Policies on Economic Development: Perspective from the United States

Tszching Chen

Shenzhen College of International Education, Shenzhen, China

s21651.chen@stu.scie.com.cn

Abstract. During COVID-19, the Fed applied several policies to boost the economy, including tax cuts and lower interest rates. In March of 2022, the Fed began raising the interest rates as a response to the inflationary economy, which put a full stop to the COVID-19 period economically. The series of monetary policies used by the Fed have captured widespread attention since it influences different markets and sectors. This essay examines the effects of monetary policies used by the Fed on different markets by looking at the data published by the Fed and the banks, and also include evaluation made by experts in news and essays. This paper can conclude that expansionary monetary policies to some extent, are considered helpful for lowering the inflation rate, however, they will cause some destruction to the housing market, banks, investors, and the whole global economy, the author can see this through criticism and data from the housing market, the bankruptcy of some banks and different industries. This essay includes both the positive and negative effects of a few common monetary policies and makes an overall suggestion.

Keywords: Monetary policies, United States, Data review.

1. Introduction

1.1. Research Background and Significance

Over the past two years, the Fed has kept raising its interest rate in order to fight against inflation. In July, The Federal Open Market Committee (FOMC) raised interest rates to 5.25%-5.50% at the July 2023 meeting [1]. Some experts predict that the Fed will publish one more hike in the year 2023. Apart from the aim to lower inflation, the FED also are aiming for a lower unemployment rate and faster economic growth. Many experts are worried that this will cause more bank failures and instability to the stock market, also many economists predicted that the US would enter a recession in the year 2023, in fact, the US did not. The unemployment rate is also kept at a very low line, mainly because of the huge labor demand after COVID-19, which led to a tremendous rise in wages. However, the change in the monetary policies such as interest rate did lead to turbulence in a few markets and industries. To further see whether the monetary policies contribute to the economy, an analysis of different markets will be given in this essay.

1.2. Literature Review

This essay is built on a few essays. Huong T.T Le and Lai Van Vo explored the effect of interest hikes on the stability of the banks in the US, and they proved that the interest rates are correlated with the bank's unrealized losses, will have a great influence on the HIM and a rise in interest rates could lead to huge losses for banks [2]. A study by Jeongsim Kim shows that the hikes pose greater challenges for emerging countries, different firms react differently based on their size, amount of exports, and foreign investors [3]. Kim evaluated the global impacts of this hike and focused on the Korean economy. OGAWA, Eiji, Shimizu Junko, and Luo Pengfei explored the impacts of the hike on the capital flows in the economy [4]. Carlos Arteta, Steven Kamin, and Franz Ulrich Ruch's study stated that the interest hike contributed to adverse effects in Emerging markets and developing economies [5].

1.3. Research Content and Framework

This essay will first list out the impacts of monetary policies for example interest rate and money supply on inflation, banks, housing market, stock market, and the global impacts with data published by different institutes. Then will give a brief analysis of each of the policies and provide a suggestion for future US policies.

2. Impacts of Monetary Policies of the US

2.1. Impacts of Interest Rate Hike on Different Market

Interest rate is a key monetary policy that could influence the economy significantly by switching people's pro-folio, the investment of companies, and the floating exchange rate. After the outbreak of COVID-19, inflation became an urgent situation for many countries, including the US. In order to battle the chronic inflation in the US, the Fed keeps raising its interest rate. In July, the Fed increased its benchmark interest rate by 0.25% to 5.5%, which is the highest number in 22 years [1] (see Figure 1).

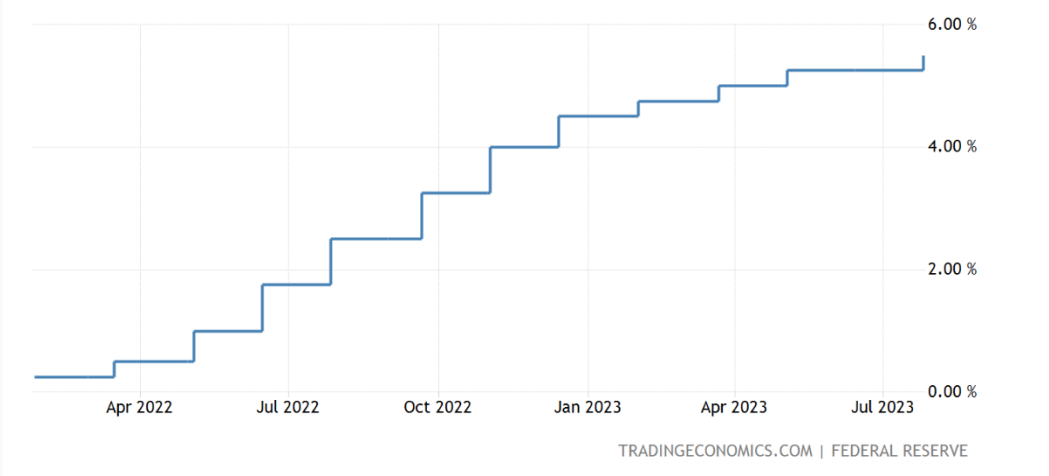


Fig 1. US interest rate trend [1]

There has been some success of this policy since the inflation dropped to 3% in June 2023, but there is still more work to do if the target rate is 2% (see Figure 2).

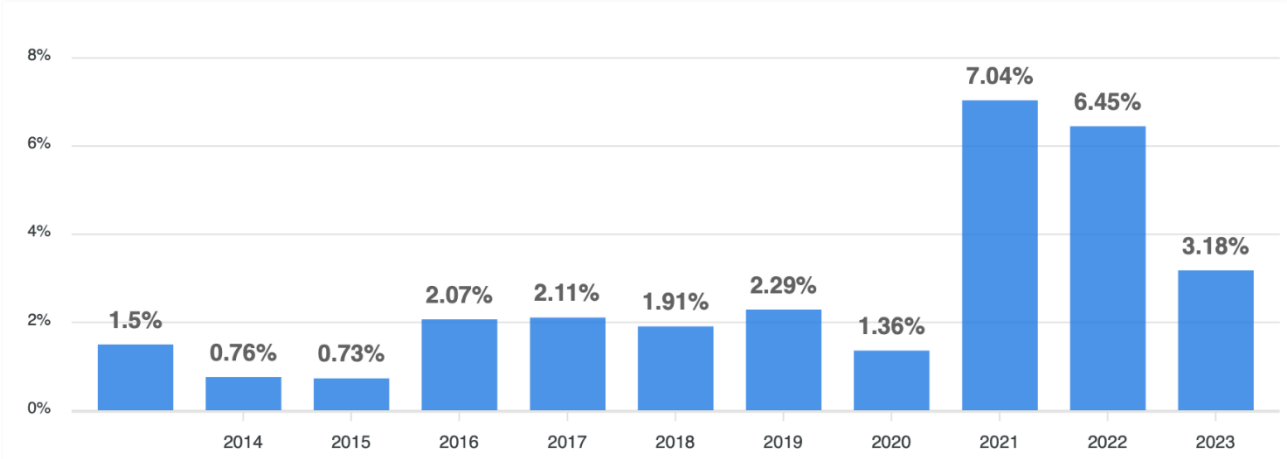


Fig 2. US inflation rate [6]

Meanwhile, there are also a few negative impacts on the economy. For example, it will slow down the economic growth. The result published in April by the Commerce Department says that the economy grew 1.1%, which is a sharp drop compared to 2.6% from the previous quarter [7]. This change is mainly due to the cut in investment as the result of a rising interest rate. Also, it may lead

to some bankruptcy of the bank. During March of 2023, the Silicon Valley Bank (16th largest bank in the United States), Signature Bank(20th largest bank in the US), and First Republic shut down, interest rate became a major contribution since it is a main factor that causing changes to the bonds market. BBC commented that the interest hike 'playing a role in the recent failures of three US banks'[8]. Another key impact is the bond market. The interest rate and the bond price have an inverse relationship. During the interest hike, the bond market has some historical changes. In the middle of August 2023, the yield on the standard 10-year Treasury note hit its highest levels since 2007 (see Figure 3).

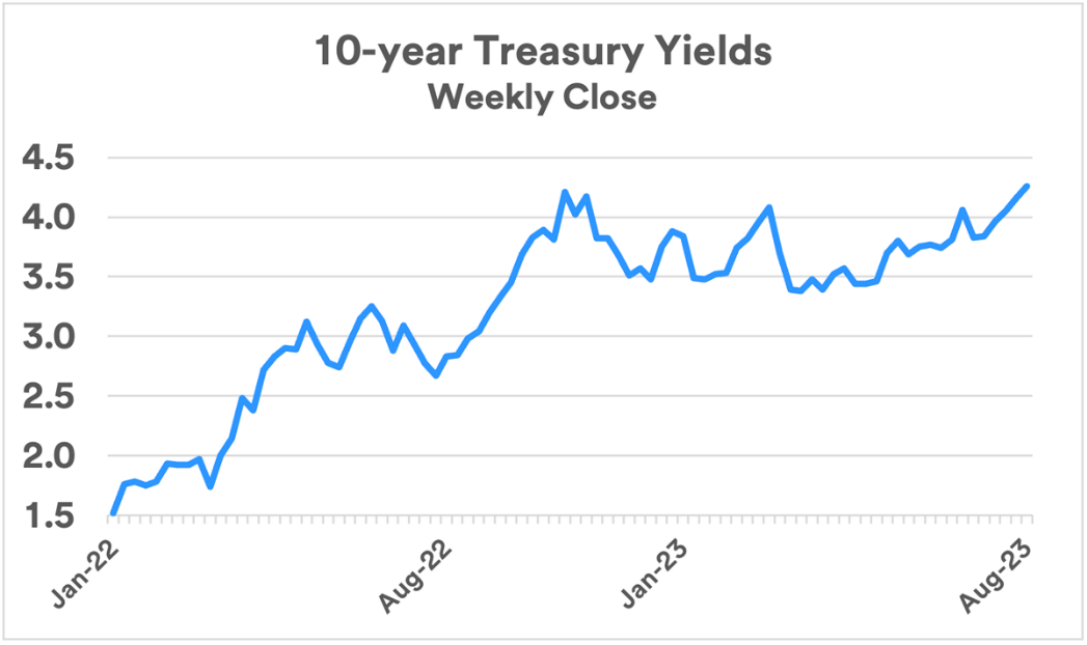


Fig 3. 10-year Treasury Yields Weekly Close [9]

Moreover, the high-interest rate will also cause a housing market crisis. The sharp increase in the interest rate will push the mortgage rate higher, which means it is harder for people to buy a house, in the year 2022, after the hike of the interest rate, the 30-year fixed mortgage rate will jump over 7%, the cost for people to buy a house become much higher. Not only it is a disadvantage for people who want to buy a house, but for house sellers, it is also a disaster since they are unable to sell or rent their houses. The number of homes sold in the US plunged by roughly 17%. Even though the demand dropped, the price still rose. From Figure 4, we can see that from the year 2022, which is the year the US started its interest hike, the 30-year fixed-rate increased sharply.

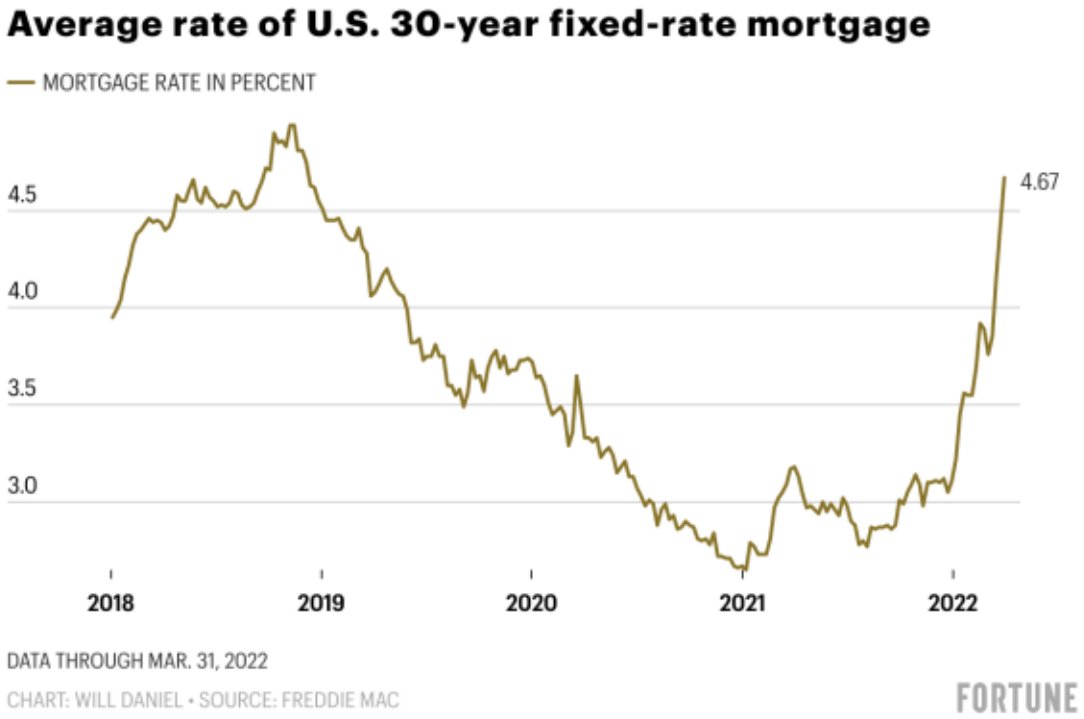


Fig 4. US 30-year fixed-rate mortgage [10]

The interest hike in the US not affects only the native economy but also the foreign economy due to the sovereignty of the US dollars. Emerging economies are facing some financial crises and difficulties in capital outflow due to appreciated dollars and striking debt. For example countries like Korea, where many investors changed their market and left the Korean market, which influenced the Korean economy and the stock market [3].

2.2. Money Supply

The money supply can be changed by various means for example printing money, changing the reserve requirement of commercial banks, placing quantitative easing, or the buying and selling of securities by the government. In the year 2020, the US government pumped $5.8 trillion into the economy and purchased longer-term securities from the market in order to increase the money supply for combating the negative effects of COVID-19. With the hopes of stimulating investment and triggering more production and demand for labor, the monetary policies during the COVID-19 did work. According to the Congressional Budget Office (CBO), the first five rounds of aid with a value of $2.6 trillion brought about GDP growth of approximately $1.5 trillion, resulting in an increase of GDP by 4.7% in 2020 and 3.1% in 2021[11].

However, the money supply and liquidity are now contracted. Figure 5 shows the size of the Fed's balance sheet in 2020, it is clear that during the year 2020, the number rose sharply, this is due to the quantitative easing used to increase liquidity during COVID-19. And the number starts to drop in the April of 2023.

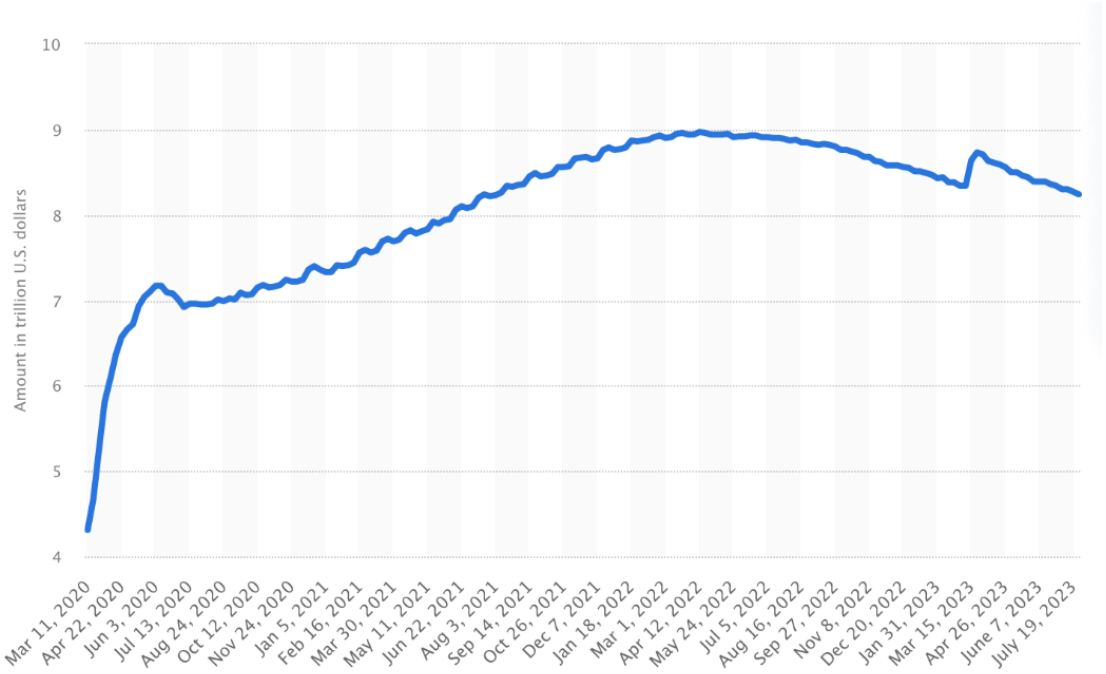


Fig 5. US inflation rate [12]

3. Analysis on the Problems

3.1. Interest Rate and Banks

As the interest rate increases in order to fight against inflation, it is harder for the consumer to borrow money from the bank since the cost is higher, more people will choose to save their money since there will be higher rewards. In this situation, aggregate demand will decrease and the aggregate demand curve will shift to the left, leading to lower prices and lower inflation rates. For firms, making investments will also become harder, hence leading to a drop in investment, low short-term investment levels and high interest rates are related to each other which cut the aggregate supply in the economy [13].

Interest rates became a great rhino that pushed the bankruptcy of the Silicon Valley Bank (SVB). In the year 2020, the covid-19 started to spread, US lowered the interest rate to nearly zero in order to stimulate the economy, at this stage the demand for bonds increased sharply due to a drop in bond prices since the relationship between bond prices and the interest rate is negative. SVB decided to invest 91 billion dollars in long-term fixed-income bonds[14]. In the year 2022, the US starts its interest rate hike, the amount of bonds starts to drop and SVB loses hugely. In the year 2022, the liquidity contracted, and many startup companies, also the main consumers of the SVB, started to take money out of the bank frequently, SVB lost a lot of its savings during the period. What makes the situation worse is that the interest hike will influence the bank's stability. The sudden increase in the interest rate can cause the cost of borrowing to exceed the income generated by assets, reducing net interest margin (NIM) and depleting bank capital [2]. In order to go through this crisis, SVB published its new financing policies and showed its difficulties on financing to the public. However, the market is much more sensitive than policymakers believe after COVID-19, more consumers started to take their money out from the bank, leading to the bankruptcy of the bank and a huge turbulence in the market. The bankruptcy of the banks and the crisis that was presented on the news daily caused the market to enter real panic, mid and small banks entered a credit crisis and there will be a bank run. The bankruptcy of the Signature Bank is the first victim of this panic attack. Even though the bankruptcy of SVB is partially due to its own policies, however, the interest hike is still a major driving force behind it since it is a significant determinant of the bonds market.

3.2. Money Supply

As the money supply increases, people and firms will have money in their hands and will have higher consumption and overall GDP. This stimulates the growth of the economy. Money supply and interest rate have an inverse relationship. As the money supply increases, the interest rate will drop, leading to higher investment and consumption, which act as a tool to adjust its economy. However, inflation may occur if the money supply increases. According to the Quantity Theory of Money (or Fisher Equation), Money supply multiplied by Velocity is equal to Price multiplied by Quantity, if the money supply increases, but if the velocity and output quantity stay unchanged, inflation will occur.

4. Suggestion

Based on data from different markets, it can be seen that interest rate hikes have indeed brought some significant benefits, especially in suppressing inflation, which is a very serious and dangerous problem in the economy. However, at the same time, it will lead to some negative effects for some markets. Even though at the beginning of the year 2023, a study made by the National Association for Business Economics, which contained 48 economists, shows that 58% of them predicted a recession in the year 2023, the economy is resilient and the recession did not happen [15]. However, a continued interest hike may not put the US in a great position, less consumption and slower growth may happen. Inflation already lowered to an appreciable level, therefore, the Fed should consider stopping the interest hike.

5. Conclusion

Under the after-COVID-19 era, the US published a series of monetary policies, including striking interest rates and contractional money supply. This essay explores the impacts of these policies and discusses some data from different markets and makes a brief analysis. The result is that the monetary policies in the US have a great impact on different areas, most importantly, the inflation rate and financial markets like banks and bonds, however, it also triggers some international impacts to different countries, such as Korea. Other impacts, for example, slower economic growth, and higher mortgage rate also happened. This study is important because it includes the situation of various areas which closely related to investor and individual decisions and crucial to the US economy. However, there are a few limitations. Firstly, many markets are not included, so the essay is not sufficient to give a thorough understanding of the whole US economy. Also, there are some other variables that influence the correlation between monetary policies and the economy that are not discussed. In the future, more studies could be done on the labor market, wages, people's consumption, export, and import, which will provide a more in-depth understanding of the operation of the economies under the influence of monetary policies.

References

[1] TradingEconomics, United States Fund Rates, https://tradingeconomics.com/united-states/interest-rate, last accessed, 2023/9/14

[2] Huong T.T. Le, Lai Van Vo, Interest Rate Hike and the Instability in the U.S. Banking Industry, 2023:12-13

[3] Kim, Jeongsim, Stock market reaction to US interest rate hike: evidence from an emerging market. Heliyon, 2023, 9(5) : 2-3

[4] Ogawa, Eiji, Junko Shimizu, and Pengfei Luo. Effects of US interest rate hikes and global risk on daily capital flows in emerging market countries. RIETI, 2019 : 20

[5] Arteta, Carlos, Steven Kamin, and Franz Ulrich Ruch. How Do Rising US Interest Rates Affect Emerging and Developing Economies? It Depends, World Bank Group, 2022:13

[6] Inflation fig: Inflation Tool, United States Inflation Rate, https://www.inflationtool.com/rates/usa, last accessed, 2023/9/14

[7] BBC News, US economic growth slows as firms cut investment, https://www.bbc.com/news/business-65414174,last accessed, 2023/9/14

[8] BBC News, US interest rates raised to highest level in 16 years, https://www.bbc.com/news/business-65474456,last accessed, 2023/9/14

[9] Wealth Management, How rising interest rates impact the bond market, https://www.usbank.com/investing/financial-perspectives/market-news/interest-rates-affect-bonds.html, last accessed, 2023/9/14

[10] Fortune, Homebuyers hit with another blow as mortgage rates soar 24% in March, https://fortune.com/2022/03/31/mortgage-rates-skyrocket-fastest-four-week-increase-ever-home-prices/, last accessed, 2023/9/14

[11] China Money, Evaluation of the Effectiveness and Prospects of US Fiscal Policy under the Epidemic, https://baijiahao.baidu.com/s?id=1697980723009167965&wfr=spider&for=pc, last accessed, 2023/9/14

[12] Statista, size of the Federal Reserve's balance sheet since quantitative easing (QE) measures were introduced from March 2020 to July 2023, https://www.statista.com/statistics/1121416/quantitative-easing-fed-balance-sheet-coronavirus/, last accessed, 2023/9/14

[13] Ysmailov, Bektemir, Interest rates, cash and short-term investments Journal of Banking & Finance, 2021, 132:18

[14] Preficient, 7 Possible Causes of SVB Failure and Predicting the Impact on Regulatory Reporting, https://blogs.perficient.com/2023/03/22/7-possible-causes-of-svb-failure-and-predicting-the-impact-on-regulatory-reporting/,last accessed, 2023/9/14

[15] Fortune, Economists were mostly dead wrong about America crashing into recession. Just look at how they've changed their minds, https://fortune.com/2023/07/24/economists-mostly-wrong-recession-polls-studies-show/, last accessed, 2023/9/14