

The Federal Reserve's Interest Rate Policy and Its Impact Against a Background of Inflation and High Unemployment Rate

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Abstract. This research adopts various economic data sources to investigate the effects of Federal Reserve (Fed) policies on the US economy. Specifically, the study focuses on labor market flows, short and long-term inflation expectations, and interest rates from 1960 to 2023. The findings suggest that over the past three decades, the Fed has artificially manipulated interest rates to curb long-term increases in unemployment. In this regard, this paper discusses the Impact of Business Financing and Costs, Labor Costs and Prices, Impact on Market Supply and Demand on interest rate changes from three perspectives. This study delves into detailed micro data on job vacancy rates and average earnings coefficients for different workers. By analyzing these factors and interest rate data, the paper argues that there is a strong correlation between employment trends and the Federal Reserve's monetary policy. Based on the data, the study projected that even if long-term inflation expectations remained stable, underlying inflation would still be half a percentage point above its long-term trend by the end of 2023. Overall, the paper provides valuable insight into the complex relationship between Fed policy, employment trends, and inflation in the U.S. economy.

Keywords: The Federal Reserve, unemployment rate, interest rate.

1. Introduction

The COVID-19 pandemic, which hit the world in 2020, caused millions of deaths and had a profound the huge impact on the entire global economy. The virus disrupted the balance of the world market and resulted in a global economic recession due to both supply and demand-side factors. At the beginning of the epidemic, people were so scared of the virus that they chose to stay at home and refused to go out to work. Before the outbreak of Covid19, the natural rate of unemployment in the United States was about 4.5%, however, by the end of 2021, there has been a huge rise in unemployment in the United States, up to 5.9%. Afterwards, the long-term trend of unemployment continued to decline and remained around 4.2%, despite an increase in the natural rate of unemployment. At the same time, in order to avoid the huge medical pressure brought by the virus to the society, in 2020, many governments chose to intervene to control the spread of the virus. Among them, many countries have high unemployment due to the virus, which means that people have lost the ability to produce things, and at the same time lost income and purchasing power. This is very harmful to the economies of countries. But at that time, world trade did not stop. In order to ensure sufficient economic development, many countries use government intervention to control economic development. At that time, the United States government controlled the inflation of the country by increasing the interest rate of money nationwide through the Federal Reserve.

The United States Federal Reserve System, which is the United States monetary policy making agency. The main purpose of this thing can be defined as maintaining the correct and reasonable level of inflation in the economy and also the need to stabilize financial markets. When inflation occurs, it adopts a tight monetary policy, such as raising interest rates. In the case of deflation, the government should adopt loose monetary policy, such as reducing interest rates. Within the scope of this article, the author will list the information about interest and tax in the United States under the background of the epidemic and analyze the policy of the Federal Reserve and its impact.

2. Literature Review

Interest, in essence, can be thought of as a fee charged to the borrower for the use of the asset. Assets borrowed can include cash, consumer goods, vehicles, and property. In China, interest rate is an important monetary policy tool. The marketization of interest rate is determined by the demand for money and the supply of money under the premise of the central bank's benchmark interest rate. The controlled interest rate has not adapted to the current economic situation in China. The marketization of interest rate is a major change in China's economic reform. To successfully promote the process of marketization, the policymakers must fully understand the advantages and disadvantages of interest rate marketization and understand the benefits of interest rate marketization to the economy. At the same time, the government should deal with the risks [1].

However, the United States have an absolutely impact difference from the Chinese one. Changing interest rates to maintain the peg would have an impact on the economy. Specifically, a 1 percentage point increase in interest rates in the benchmark country reduces annual GDP growth in the linked country by 0.20 percentage points, while interest rates in floating countries do not change. Looking back at the channels behind this result, the benchmark rate has an impact on domestic interest rates, and much more on the peg, than it does on variables such as exports to the benchmark country. These findings, together with the differences between different exchange rate regimes, suggest that the direct interest rate channel may be the main channel through which the base rate influences other countries, and are consistent with recent evidence that while many countries may exhibit a "fear of floating", interest rates in countries that float are in fact much less linked to the base rate than in countries that peg [2]. Changes in interest rates have a significant impact on employment and unemployment in the short run, with the effects being more pronounced for industries that are sensitive to interest rates [3]. Changes in interest rates have a significant impact on the economy, with the effects being stronger during recessions and weaker during expansions [4]. Changes in interest rates have a modest impact on employment in the short run, but the effects become more significant over longer periods [5].

Overall, the research content of this article consistently shows that changes in interest rates in the US can have a significant impact on the US labor market and inflation rate, especially in the short run. The magnitude of the impact can vary depending on a range of factors, and this article sets out how the Fed's policies affect different economic indicators. Specifically, the authors focus on how the Fed has set interest rates as a means of controlling inflation and boosting employment, and how those policies have worked in the context of recent economic conditions [6].

3. Analytical Framework and Discussion

3.1. Impact on Business Financing and Costs

The first area where the Federal Reserve's interest rate policy affects the economy is in the cost of financing for businesses. When interest rates rise in an economy, the borrowing costs associated with it increase, making it more challenging and more expensive for businesses to access capital. This, in turn, can lead to a slowdown in business investment and expansion, which can negatively impact economic growth and employment [7].

As shown in Figure 1, the interest rate started to increase from 2016 to 2019, and business investment slowed down in 2019. However, due to the COVID-19 pandemic, the interest rate dropped significantly in 2020 and 2021, which led to a rebound in business investment. According to the Federal Reserve Bank of St. Louis, The prime rate can be defined as the interest rate a commercial bank can charge its most creditworthy customers, usually very low, was 5.25% in July 2018. By July 2019, the prime rate had risen to 5.5%, and by July 2022, it had increased to 3.25%. This increase in the prime rate has led to a rise in the cost of borrowing for businesses, which has made it more challenging for them to access capital.

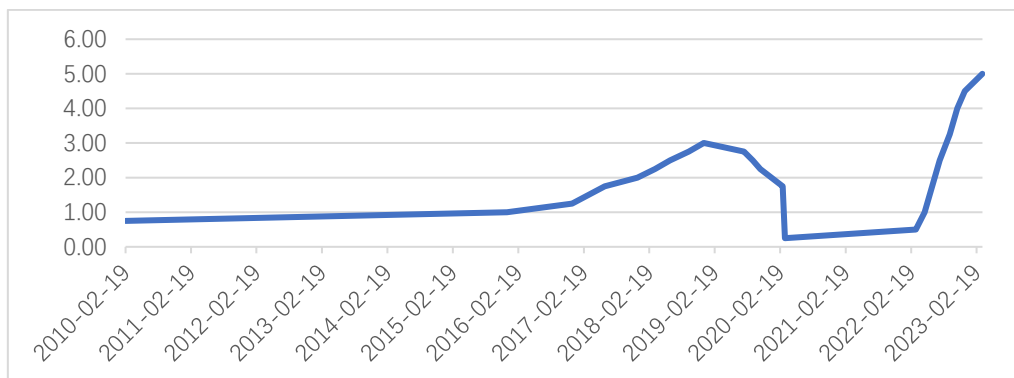


Fig. 1 Primary credit rate (Source: Federal Reserve Bank of St. Louis)

On the other hand, low-interest rates make it easier and cheaper for businesses to borrow, which can encourage investment and expansion [8]. During the COVID-19 pandemic, the Federal Reserve cut interest rates very far until they were close to zero, and the Fed did that in order to stimulate economic activity and the recovery of the overall economic markets. This policy has led to an increase in borrowing and investment, which has helped stabilize the economy.

3.2. Impact on Labor Costs and Prices

The second area where the Federal Reserve's interest rate policy affects the economy is in labor costs and prices. When interest rates rise, borrowing becomes more expensive, leading to higher costs for businesses. This lead to a reduction in the demand for labor and higher unemployment rates as businesses look to reduce their costs.

According to Figure 2, the unemployment rate in the United States was 3.7% in August 2019. When covid 19 firstly happens in the US in April, the enemployment rate is 14.7%. Although it is true that people are afraid to work because of the pandemic, it is more because of interest rates. By August 2021, the unemployment rate had decreased to 5.2%. However, this decrease in the unemployment rate has been accompanied by an increase in labor costs, which can impact business profitability and investment. However, due to the COVID-19 pandemic, inflation spiked in 2021, and the interest rate remained low to support economic recovery. While the interest rate is facing the low dropping after 2021, during the date of 2022 and 2023.

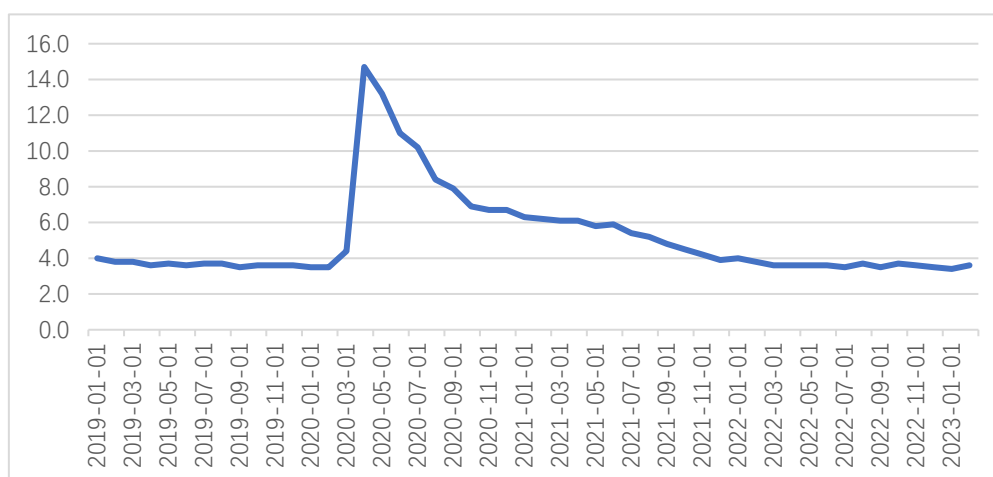


Fig. 2 US unemployment rate (Source from the Bureau of Labor Statistics)

In addition, a rise in interest rates will lead to an increase in the price of goods, and also lead to an increase in the price of services related to it. This is because businesses may have to pay more to borrow money, which can lead to higher costs for raw materials, transportation, and other expenses. This can lead to a rise in the cost of living for consumers, which can, in turn, reduce their purchasing power and further impact economic growth and employment.

3.3. Impact on Investors

During the COVID-19 pandemic, the Federal Reserve cut interest rates very far until they were close to zero, and the Fed did that in order to stimulate economic activity and the recovery of the overall economic markets. In response, the Federal Reserve (the Fed) has taken aggressive actions to support the economy, including cutting interest rates to near zero and implementing a variety of other monetary policy measures. However, these actions have had implications for investors, particularly those who hold fixed-income securities like bonds [9].

The breakeven inflation rate is a financial term that represents the difference between the nominal yield on a fixed-income security and the real yield, adjusted for inflation expectations. It is the level of inflation that would cause an investor to break even, or neither profit nor lose, from holding a particular security. In simpler terms, the breakeven inflation rate is the point at which the rate of return on a fixed-income security, such as a bond, equals the expected rate of inflation. It is the minimum level of inflation that investors require to be compensated for the loss of purchasing power that occurs when they hold a fixed-income security. If inflation exceeds the breakeven rate, then the investor will experience a negative real return, and vice versa. To understand the impact of Fed rate hikes on investors during COVID-19, it's helpful to consider the breakeven rate of inflation. As noted earlier, the break-even inflation rate represents the difference between the nominal yield on fixed-income securities and the yield on inflation-protected securities, with the same maturity. This difference represents the expected rate of inflation over the term of the bond.

During the COVID-19 pandemic, the breakeven rate of inflation has been a key metric to watch, as inflation has been a major concern for investors and policymakers alike. The pandemic has disrupted supply chains, causing shortages of certain goods and driving up prices in some sectors of the economy. At the same time, the Fed's efforts to support the economy have injected massive amounts of liquidity into financial markets, raising concerns about inflation down the road. In this context, Fed rate hikes have had important implications for investors. On the one hand, higher interest rates can help to combat inflationary pressures by reducing demand for goods and services. On the other hand, higher interest rates can also reduce the value of fixed-income securities like bonds, as investors demand a higher yield to compensate for the risk that rising inflation could erode investment values over time.

Figure 3 shows the 5-Year Breakeven Inflation Rate from 2018 to 2023. Suppose an investor holds a 10-year bond that pays a fixed interest rate of 2% per year. If the break-even rate of inflation for that bond is 1%, then the investor's real, inflation-adjusted return on the bond is just 1% per year. If inflation rises above 1%, then the investor's real return will be negative, meaning that the purchasing power of their investment will be eroded over time. At August 22, 2019, which is a date before the covid 19, the breakeven inflation rate is 1.35%, which is a normal or average number at that days. However, when covid happens around 2020, the breakeven inflation rate has been a very rapid decline. At the time covid firstly appeared in the United States, the rate is 1.32% at March 2, 2020. Surprisingly, at March 19, 2020, the rate falls to only 0.19%, which is the lowest breakeven rate in the U.S. when it was founded. Suppose an investor holds a 10-year bond that pays a fixed interest rate of 2% per year. If the break-even rate of inflation for that bond is 1%, then the investor's real, inflation-adjusted return on the bond is just 1% per year. If inflation rises above 1%, then the investor's real return will be negative, meaning that the purchasing power of their investment will be eroded over time. So that the lower break-even rate is used to attract the investor to do investment.

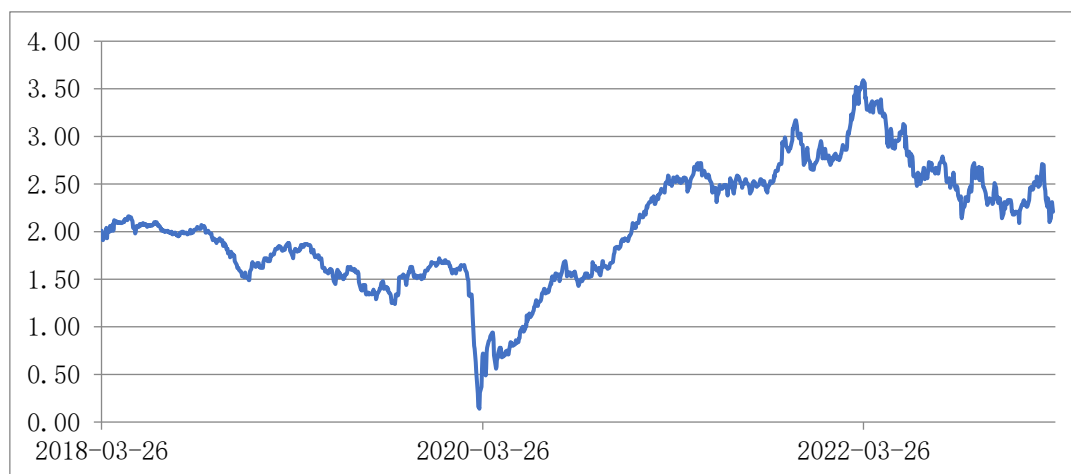


Fig. 3 5-Year breakeven inflation rate (Source: Federal Reserve Bank of St. Louis)

3.4. Impact on Market Supply and Demand

Interest rates affect the availability of credit, the likelihood that a loan will be successful. This directly affects the supply and demand of goods and services. If interest rates rise, that makes borrowing more expensive, which reduces demand for goods and services. This can cause businesses to reduce production, which can lead to a slowdown in economic growth and employment. Inflation is an important factor affecting the economy. Inflation will lead to a decrease in the purchasing power of consumers, so it has an impact on demand and supply. When inflation rises, consumers tend to buy fewer goods and services. In this case, suppliers will raise prices in order to keep revenue stable. However, as consumers have less purchasing power, they will spend more cautiously, which will lead to lower demand for goods and services. In that case, companies are likely to reduce production, further reducing employment.

On the other hand, high interest rates also have a negative impact on consumption and investment. As mentioned above, when interest rates rise, borrowing will become more expensive as interest rates rise, and more expensive borrowing will directly reduce the credit demand of consumers and businesses. If consumer and business demand for credit falls, this will lead to a decline in consumption and investment, and the free market does not need as many employees, with negative effects on employment. In addition, high interest rates will lead to increased costs for enterprises, which will lead to higher prices.

In this context, the Fed's interest rate policy is particularly important. The Fed usually controls the economy by changing interest rates. When inflation is high, the Fed usually raises interest rates to keep inflation in check [10]. On the other hand, when the economy is sluggish and unemployment is high, the Fed usually cuts interest rates to stimulate economic development and job growth.

4. Conclusion

This research content consistently shows that changes in interest rates in the United States can have a considerable effect on both the labor market and inflation rate, particularly in the short term. The magnitude of this impact can differ depending on a variety of factors, and this article aims to outline how the Federal Reserve's policies influence various economic indicators. Specifically, the authors concentrate on how the Federal Reserve has utilized interest rates as a tool to regulate inflation and enhance employment and how these policies have functioned given the current economic climate.

Low interest rates have a significant impact on corporate finance and costs, as they make it easier and more affordable for companies to borrow money. This can encourage businesses to invest in expansion and new projects. In response to the COVID-19 pandemic, the Federal Reserve implemented policies to cut interest rates to near-zero levels in order to stimulate economic activity

and aid in recovery. This policy resulted in increased borrowing and investment, which helped to stabilize the economy.

Higher interest rates can also affect labor costs and prices. This increase in costs can lead to higher prices for goods and services, reducing consumers' purchasing power and potentially affecting economic growth and employment. Investors also take note of interest rates, particularly the break-even ratio. When interest rates are low, it can be attractive for investors to invest in various financial products and opportunities.

In terms of free markets, the Federal Reserve's interest rate policies are crucial. The Fed can influence the economy by adjusting interest rates, which can help to control inflation during times of high economic activity.

In order to alleviate the inflationary pressure and promote the reform of interest rate policy and promote employment in the context of persistently high inflation in the United States, the study puts forward some suggestions after analysis. Educating the public about inflation and its causes can help them make better decisions and become more aware of the economic impact of their actions.

In addition, regularly job training can help workers acquire new skills or transition to new fields, helping to reduce unemployment and boost economic growth. Moreover, the US government could consider creating incentives for small businesses. That's because small businesses are often the engine of job creation. Encouraging entrepreneurship and providing incentives for small businesses can help create new jobs and spur economic growth.

References

- [1] Ye H. Research on the problems and countermeasures of China's interest rate marketization. *China Market*, 2011, (5): 2.
- [2] Herman JB, Lourens B. The relation between unemployment and interest rate, *Economic Reviews*, 2007, 13(2): 217-256.
- [3] Beraja M, Fuster A, Hurst E, et al. Regional heterogeneity and the refinancing channel of monetary policy. *The Quarterly Journal of Economics*, 2019, 134(1): 109-183.
- [4] Peter N. *The Macroeconomic effects of interest on reserves*. Cambridge: Cambridge University Press, 2013.
- [5] Anil K. The Impact of Interest Rates, Income, and Employment upon Regional Housing Prices. *Journal of Real Estate Finance & Economics*, 1990, 3(4): 373-391.
- [6] Mertens TM, Ravn MO. Empirical evidence on the aggregate effects of anticipated and unanticipated US tax policy shocks. *American Economic Journal: Economic Policy*, 2019, 11(2): 1-38.
- [7] Bernanke BS, Gertler M. Inside the black box: The credit channel of monetary policy transmission. *Journal of Economic Perspectives*, 2018, 32(3): 27-48.
- [8] Aikman D, Bridges J, Burgess S. The role of credit ratings in financial regulation. *Journal of Financial Stability*, 2014, 13: 111-125.
- [9] Claessens S, Kose A, Terrones M. How do business and financial cycles interact? *Journal of International Economics*, 2012, 87(1): 178-190.
- [10] Kuttner KN. Outside the box: Unconventional monetary policy in the great recession and beyond. *Journal of Economic Perspectives*, 2017, 31(3): 121-146.