The Federal Reserve's Interest Rate Decision Mechanism and Its Impact: On the Perspectives of Taylor Rule, Economy and Stock Market

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Manuscript received December 3, 2024; revised January 24, 2025; accepted February 22, 2025; published March 10, 2025.

***Abstract*—This paper delves into the monetary policy decision-making mechanism of the Federal Reserve and examines the impact of Fed policies on economic growth, the stock market, and the financial crisis from various perspectives. It discusses the relationship between interest rates and the economy, considering the Fed's interest rate decision-making process. The paper also provides a dialectical analysis of the Taylor rule's effectiveness and limitations. Furthermore, it analyzes the impact of Fed policies on the stock market and economy from the perspectives of easing and tightening, as well as considering the influence of firm characteristics, the magnitude of interest rate hikes, and their underlying mechanisms. This paper presents a thorough investigation into the monetary policy decision-making framework of the Federal Reserve. It provides a comprehensive assessment of the impact of Fed policies on economic growth, stock market performance, and financial crisis from diverse perspectives. The analysis delves into the relationship between interest rates and the economy, considering the Fed's interest rate decision-making process. Furthermore, the paper offers a nuanced examination of the Taylor rule's effectiveness and potential limitations. What's more, it appraises the impact of Fed policies on the stock market and economy, examining both easing and tightening measures, as well as the influence of firm characteristics, the magnitude of interest rate hikes, and their mechanisms. The Taylor rule proposed by Taylor has long been considered a tool for predicting the future interest rate policy of the Federal Reserve. However, the Taylor rule has many limitations. The Federal Reserve's interest rate hike has a negative impact on the global economy. Its monetary policy has a greater impact on developing economies than on developed ones. This is because the significant rate hike by the Federal Reserve has led to the flight of high-quality investors from emerging markets. In this context, it is essential to explore the role of the Taylor rule in the monetary policy framework of the Federal Reserve, particularly in the context of the global economy. This analysis offers valuable insights into the complex interplay between interest rates, economic growth, and financial stability, highlighting the limitations and potential implications of the Taylor rule. Moreover, it sheds light on the differences in the impact of Fed policies on developed and developing economies, emphasizing the importance of considering firm characteristics and the underlying mechanisms of interest rate hikes.**

***Keywords*—economic growth, financial crisis, monetary policy, stock market reaction, Taylor rule**

I. Introduction

The effective funds rate policy in the United States is formulated based on the Taylor rule, and its decision-making reference points include variables such as employment and inflation. Employment is closely related to the economy, and loose policies have a promoting effect on the stock market and economy, but they will exacerbate inflation. On the contrary, a tighter monetary policy can effectively control inflation, but it has a restraining effect on the stock market and economy.

Therefore, the Federal Reserve's monetary policy exhibits a cyclical pattern, which also affects the economy and global stock markets. This paper analyzes the Federal Reserve's monetary policy decision-making mechanism, and the impact of Federal Reserve policies on economic growth, stock markets, and financial crises from several perspectives.

In history, every cycle of interest rate hikes by the Federal Reserve has brought prosperity and recession to the world economy. Following the collapse of the Bretton Woods system, four distinct cycles can be identified: 1970–1979, 1980–1999, 2000–2010, and 2010–present.

In the first two cycles, there's notable events such as the foam burst in Japan's economy and the Asian crisis in 1998 were triggered by the significant interest rate hike of the Federal Reserve. In the third cycle, the Federal Reserve raised interest rates for two years between 2004 and 2006 to combat excessive growth in the real estate market. The interest rate hike inadvertently contributed to the 2008 subprime mortgage crisis and seriously damaged domestic and global economic development. To provide specific examples, average U.S. housing prices declined by nearly 30%, while the U.S. stock market experienced a significant decline of approximately 50% by early 2009. In the current fourth cycle of Federal Reserve monetary policy, the year 2016 represented its peak, as the Fed pursued a loose monetary policy with real interest rates consistently below 0%. Leading to global quantitative easing. As described in the paper, the most direct and immediate effects of monetary policy actions, such as changes in the Federal funds rate, are on the financial markets.

Gaining a comprehensive understanding of the relationship between monetary policy and asset prices is of paramount importance for understanding the policy transmission mechanism. We focused on analyzing the law and mechanisms of the Federal Reserve's monetary policy, stock market, and economy in the literature review. Estimating the response of equity prices to monetary policy actions is complicated by the fact that the market is unlikely to respond to policy actions that were already anticipated. Distinguishing between expected and unexpected policy actions is therefore essential in discerning their actual impact on asset prices. Kuttner (2001), Campbell (1991), Campbell and Ammer (1993) and Bernanke and Kuttners (2005) analyzed the Federal Reserve's interest rates and stock market reactions using different methods. This article analyzes the relationship between the two from the perspective of easing and tightening

and discusses the underlying mechanisms. The Taylor rule proposed by Taylor has long been considered a tool for predicting the future interest rate policy of the Federal Reserve. However, the Taylor rule has many limitations. This article combines economic growth and stock market reactions to discuss the Federal Reserve's interest rate decision-making mechanism and its impact.

Detailed analysis of the Federal Reserve's decision-making process and the subsequent effects on economic growth, financial markets, and the occurrence of financial crises is paramount. The main contributions of this article are as follows. (1) This article discusses the impact of interest rates on the economy and stock market from the perspective of the Federal Reserve's interest rate decision-making mechanism; (2) This article dialectically analyzes the effectiveness and limitations of the Taylor rule; (3) This article analyzes the impact of Federal Reserve policy on the stock market and economy from multiple perspectives, including the perspectives of easing and tightening, company characteristics, the amplitudes of interest rate hikes, and its mechanisms.

The arrangement for subsequent papers is as follows. The second part is a literature review, which discusses the Federal Reserve's interest rate decision-making mechanism, the relationship between Federal Reserve interest rates and financial crises, Federal Reserve interest rates and economic growth, and their impact on capital markets. The third part is the discussion. It discusses the decision-making mechanism and its impact on the Federal Reserve's policy from the perspectives of interest rate decision-making mechanism, economic growth, impact on the stock market, and financial crisis. Finally, section four concludes.

II. The Impact of Change in Interest Rate and Research Hypotheses

This section mainly involves literature on the Federal Reserve's interest rate decision-making mechanism, Federal Reserve interest rates and financial crises, Federal Reserve interest rates and economic growth, and their impact on capital markets.

A. Interest Rate Decision-making Mechanism

The Taylor rule, an interest rate decision-making mechanism, is a financial concept proposed by John Taylor, an economics professor at Stanford University in the United States, in 1993. Its core concept is:

Nominal interest rate = real interest rate + inflation + 0.5×(Inflation Inflation Target) + 0.5×Output gap.

$$i_t = 2 + \pi_t + \frac{1}{2}(\pi_t - \pi_t^*) + \frac{1}{2}(y_t - y_t^*) \quad (1)$$

In Eq. (1), i_t is the federal fund rate during period t; π_t is the inflation rate during the period t, π_t* is the target inflation rate of period t, ($\pi_t - \pi_t$ *) is the deviation between the actual inflation rate and the target inflation rate in the t-th period; y_t is the actual output during period t, y_t^* is the t-th period's actual potential output, $(y_t - y_t^*)$ is the output gap of the t-th period.

Bernanke (2010a) compared the Effective Funds Rate of the United States from the first quarter of 2000 to the first quarter of 2009 with the interest rate levels calculated using the Taylor rule and found that the actual federal funds rate matched the interest rate levels calculated using the Taylor rule. Therefore, he believed that the Federal Reserve's loose monetary policy in the early 21st century was appropriate. Clarida, Galí, and Gertler (2000) also analyzed the validity of the Taylor rule and concluded that in the 1970s, the severity of inflation was directly exacerbated by the Federal Reserve's failure to respond promptly to inflation. In the 1980s, the Federal Reserve adopted interest rate (real interest rate) targets to curb inflation and achieved significant results. However, Cochrane (2006) argues that Clarida, Galí, and Gertler (2000) had an error in their analysis because it is not possible to estimate the equilibrium process using actual observed data, the coefficients used in the model are not the ones mentioned by the Taylor rule.

B. Economic Growth

The literature indicates that emerging markets have a greater response to the impact of US monetary policy. Iacoviello and Navarro (2019) studied the responses of US GDP, federal funds rate, and foreign GDP to currency shocks. The results show that emerging economies are more susceptible to the impact of US interest rate hikes than developed economies. The impact of a 1% increase in the federal funds rate will lead to a 0.7% contraction in US GDP in two years. This result is consistent with Ramey (2016). The dynamic response of GDP in developed economies abroad is similar to that of the United States, but on a smaller scale and later. Three years after the crisis, GDP decreased by about 0.5%. The GDP response of emerging economies has the same lags of developed economies, but ultimately remains the same as that of the United States, with GDP declining by 0.7% four years after the impact.

Maćkowiak (2007) quantified the international dependence of several emerging markets in East Asia (including South Korea) and Latin America, using a structural Vector Autoregressive (VAR) model by examining those markets. His research indicates that the impact of US monetary policy shocks on emerging markets is rapid and strong. Also, Maćkowiak (2007) used VAR analysis to examine the impact of the Federal Reserve's interest rate hikes on eight emerging economies. The results showed that the typical reactions of emerging markets to the Federal Reserve's tightening policy were exchange rate depreciation, inflation, and output contraction.

C. The Impact on the Stock Market

Kim (2023) examined the stock market's response after the Federal Reserve announced a 75 basis point interest rate hike on June 16, 2022. The results show that companies with lower export orientation and lower foreign shareholding not only have greater volatility but also have experienced more negative returns after the Federal Reserve's "giant step" (significant interest rate hikes). After sample statistics, the characteristics of each period can be seen. The average cumulative return adjusted by CAPM from January 3rd to May 31st (uncertain period) is 0.0628, while the average cumulative return from June 1st to June 30th (giant step period) is −0.0330. This result indicates that the stock market has been severely negatively affected by rising interest rates since June. The average cumulative return during the 11-day window period (−0.0415) is more negative than the average

cumulative return during the 5-day window period (−0.0256). It is evident that the Federal Reserve's interest rate policy has a significant impact on the stock market.

Secondly, the unexpected nature of the Federal Reserve's interest rate policy has a significant impact on the response of the capital market. Brett *et al.* (2014) studied the impact of Federal Reserve policy and monetary policy surprises on asset prices. Through the use of Vector Autoregression (VAR) and high-frequency monetary shocks on asset prices, the study conducted an in-depth analysis of the impact of monetary shocks on macroeconomic variables and provided recommendations on how to improve the predictability of Federal Reserve monetary policy. They agreed with Bernanke's viewpoint in the article, believing that the tone and unpredictability of FOMC policy statements should be considered for their impact on the next year's interest rates (Bernard and Kuttner, 2005; Grkaynak, Sack, and Swanson, 2005).

D. Economic Crisis

Yu *et al.* (2014) conducted an analysis of the causes of the 2008 financial crisis, focusing on the global savings surplus hypothesis proposed by Ben Bernanke. Research has shown that when discussing the rationality of the Federal Reserve's monetary policy based on the Taylor rule, there are issues such as coefficient prior assumptions and biased data usage. The evidence given by Bernanke that loose monetary policy is not related to rising housing prices has flaws such as inconsistent data across periods, and the conclusion drawn after model correction is exactly the opposite. They also provided suggestions for improving monetary policy implementation and preventing future crisis outbreaks.

III. Classification Discussion in the Previous Content

A. Interest Rate Decision-making Mechanism

The Taylor rule proposed by Taylor has long been considered a tool for predicting the future interest rate policy of the Federal Reserve. However, the Taylor rule has many limitations. Cochrane (2007a) argues that the coefficients of the Taylor rule are not estimable in the New Keynesian model. Cochrane (2007b) stated that the establishment of this rule requires an explosive dynamic process, otherwise, it will lead to high inflation or deflation; But the reality is that this explosive dynamic process is difficult to achieve. Melvin and Taylor (2009) denied the adaptability of the Taylor rule in a macroeconomic environment with low inflation rates, while the interest rates set by the Federal Reserve are consistently low due to the Federal Reserve's low expectations of inflation rates (π_t^*). From the results, although the Federal Reserve's monetary policy is adjusted based on domestic economic indicators every time, it has caused disturbances to the global economy, especially in developing countries, so its monetary policy is inappropriate. Secondly, the Federal Reserve's interest rate hike process is often too aggressive, the magnitude of the hike is too large, and there is no prior notice. For example, the unexpected giant leap in June 2022 has had a significant negative impact on global stock markets.

Also, the Taylor rule used by Bernanke (2010a) has a problem with coefficient priors given. Taylor (1993) pointed out that the coefficients of the Taylor rule vary in different macro environments, and there may be serious problems with the coefficients of the Taylor rule given prior. Cochrane (2006) pointed out that if the coefficient of the Taylor rule is given a priori and an interest rate target is set accordingly, it may lead to long-term high inflation or deflation.

Moreover, in Taylor's formula, using different inflation index tests will lead to vastly different results, making it difficult to determine which one is closer to reality. In his article (2010a), Bernanke used the Retail Price Index (CPI) and the Consumer Expenditure Price Index (PCE) to test the validity of the Taylor rule. However, the CPI statistical method has flaws and is difficult to accurately reflect the actual situation of inflation. Orphanides (2003) pointed out that if CPI cannot accurately reflect real inflation, then using it in Taylor's formula will cause bias. The components of the Consumer Expenditure Price Index (PCE) and CPI are significantly different. But PCE also faces the same problem: can it accurately represent real inflation? Yu *et al.* (2014) argue that it is difficult to accept the conclusion that US monetary policy conforms to the Taylor rule if PCE is similar to CPI and only partially reflects the full picture of real inflation.

Although the Taylor rule has many controversies and mixed reviews of Federal Reserve policy, some scholars have provided supporting evidence for Federal Reserve policy. In a captivating study by Brett *et al.* (2014), the enthralling link between the Federal Reserve and the mesmerizing world of asset prices was explored, and he believes that the transparency of the Federal Reserve's procedures and objectives, coupled with decades of earned credibility, allows FOMC to influence asset prices solely through statements. They agreed with Bernanke's viewpoint in the article, believing that the tone and unpredictability of FOMC policy statements can exert a large impact on the next year's interest rates and asset prices. Meanwhile, they mentioned that reducing the frequency of target changes and statements during meetings allows the market to better predict the timing and direction of policy target changes, thereby minimizing the negative impact of the Federal Reserve's interest rate policy on the market. What's more, Yu *et al.* (2014) also stated that the monetary policy of the Federal Reserve has an active characteristic determined by domestic environment rather than foreign factors. The reason is that by analyzing the monetary goals of the Federal Reserve at different times, it is found that the Federal Reserve's monetary policy goals only focus on the domestic economic situation. The only time we paid attention to the external situation was in 1998. On September 29, 1998, the Federal Open Market Committee (FOMC) decided to lower interest rates three times in a row due to the Southeast Asian financial crisis, a foreign factor. So the Federal Reserve's interest rate policy doesn't have a direct impact on the world's economy.

B. Economic Growth

Numerous literature indicates that the Federal Reserve's interest rate hikes have a negative impact on the global economy, and the impact of the Federal Reserve's monetary policy on developing economies is greater than that on developed economies. The underlying mechanism is that in developed economies, higher US interest rates are transmitted through exchange rates channels and trade channels.

Especially when a country's currency is pegged to the US dollar or has a higher trade volume with the United States, the reaction within developed economies is greater (Iacoviello and Navarro, 2019). The impact of US monetary tightening on output in G-7 countries is multifaceted, as both positive and negative impacts cancel out each other. For these countries, inflation is expansionary through trade channels, and the rise in federal funds rates and corresponding domestic interest rate increases reduces interest rate-sensitive expenditures on a global scale, while the decline in US output reduces its demand for exports to other countries.

However, the expansionary effect of exchange rate depreciation on output in emerging markets is weaker than in developed economies, as exports from emerging markets are priced in the US dollar (rather than domestic currency) in the world market. The direct contraction impact of the decline in US output on small open economies such as emerging markets and Canada is greater than that of other larger G-7 countries. In addition, if emerging market companies have debt denominated in US dollars, even temporary federal funds rate hikes or currency depreciation can damage their balance sheets and lead to a decline in output. And this contractionary "balance sheet" channel may be stronger in emerging markets than in developed economies. Given these reasons, it is not surprising that the impact of US monetary tightening on emerging markets seems to be more lasting than in developed countries (Kim and Roubini, 2008).

In emerging economies, exchange rates and trade channels can hardly explain the differences in GDP responses within the economy. In emerging economies, exchange rates and trade exposure to the United States are not important. In contrast, financial channels seem to be very important for emerging economies, weighing much more than developed economies. For developed economies, the intensity of trade with the United States is an important determinant of the spillover effects of US currency shocks. For example, shifting from moderate trade openness in the UK to high trade openness in Canada would double the negative response. However, for emerging economies, the impact of trade intensity with the United States is not significant. From South Korea's current trade exposure with the United States (close to the median) to Mexico's trade exposure with the United States (located at the upper end of the distribution), the decline in GDP will only slightly increase. This result is consistent with Mundell-Fleming-Dornbusch's traditional view on foreign spillover effects. Whether in developed or emerging economies, high values of the vulnerability index will increase spillover effects. The GDP of more vulnerable economies has declined even more under the impact of the US monetary tightening. The vulnerability index is constructed by combining factors such as current account, foreign exchange reserves, inflation, and external debt. Although whether in developed or emerging economies, high values of the vulnerability index will increase spillover effects, this impact is particularly evident in emerging economies, where the transition from moderate to high vulnerability will more than double the GDP response.

C. The Impact on the Stock Market

1) Interest rate hikes have a negative impact on global stock markets

Kim (2023) analyzed the impact of US monetary policy on stock market returns. The stock market is a good way to reflect monetary policy as it reacts immediately to the changes in interest rates. The article focuses on the unexpected interest rate hike by the Federal Reserve in June 2022 and finds that low-export companies and low foreign-owned companies have experienced more negative abnormal returns under the Federal Reserve's aggressive monetary tightening policy, due to the Federal Reserve's significant interest rate hike leading to the flight of high-quality investors from emerging markets. Similarly, other literature has analyzed the impact of the Federal Reserve's monetary easing policy on the stock market. Thorbecke (1997) states that expansionary monetary policies lead to greater stock returns. Bernanke and Kuttner (2005) found that an unexpected 25-basis-point rate cut of the Fed leads to a 1% increase in stock prices.

Estimating the response of equity prices to monetary policy actions is complicated by the fact that the market is unlikely to respond to policy actions that were already anticipated. The key point is to distinguish between expected and unexpected policy actions to discern their effects. Kuttner (2001) put up one useful way to do so, which uses Federal funds futures data to construct a measure of "surprise" rate changes. Bernanke and Kuttner (2005) adopted the procedure that uses a Vector Autoregression (VAR) to calculate the stock market reaction and Federal policy.

2) Different companies have varying degrees of response to monetary policy

The results of the analysis indicate that changes in monetary policy have a greater impact on stocks with more constrained funds. Relatively speaking, companies with more exports, larger market value, less debt, and more foreign investors perform relatively well.

$$cumulative\ returns_i\ (t1, t2) = \beta 0 + \beta 1 Export\ Exposure_i + \beta 2 Foreign\ Ownership_i + \beta 3 Size_i + \beta' 4 Firm\ Controls_i + \varphi_j + \varepsilon_i \quad (2)$$

Kim (2023) studied the impact of company characteristics on individual stock returns by cross-sectional regression of stock returns using the company characteristics described in Eq. (2). The results showed that during the giant step period (when the Federal Reserve raised interest rates significantly), companies that relied more on exports and foreign investment achieved higher stock returns. In addition, large companies performed better than small companies during the same period. In uncertain periods, there is a negative correlation between size and stock returns. As for other control variables, the coefficient of cash holdings is negative and significant, which means that companies with more cash receive lower stock returns. This unexpected result is attributed to large-cap companies. Investors seem to be concerned about agency issues for large-cap companies, which typically accumulate large amounts of cash. In addition, companies that pay more dividends performed better than other companies throughout the entire period. However, Fahlenbrach *et al.* (2020) noted that stock price drop is economically and statistically

significantly smaller if they have more cash. The additional benefit of cash holdings is large. A firm in the 75th percentile of cash holdings has a stock price drop lower by 7.3–9 percentage points than a firm in the 25th percentile.

Fahlenbrach *et al.* (2020) also mentioned the benefit of financial flexibility. They noted in their paper that the difference between the stock price drop of a firm with high financial flexibility and the stock price drop of a firm with low financial flexibility is equal to 26% of the stock price drop of the average firm.

The impact of export risks on enterprise value has received little attention, but the COVID-19 pandemic has revealed the importance of exports to enterprise value in the context of a sudden drop in international trade (Kim, 2023). Yong and Laing (2021) also mentioned that globalization and international trade make multinational firms more resilient when facing external shocks such as the Federal Reserve's monetary policy.

To economic shocks from the COVID-19 pandemic. The value of assets is related to the characteristics of the company. So if the investors think that the asset is not valuable enough, they will choose to shift their investment portfolio to safer assets (a flight to high-quality assets) (Kim, 2023). The mechanism behind this will be discussed in detail in the next section of the paper.

3) Influencing mechanism

From the perspective of the interest rate mechanism, for countries that are pegged to exchange rates, a significant increase in interest rates will lead to a significant decrease in GDP. As the stock market is an expectation of GDP, the Federal Reserve's interest rate hike will lead to a decrease in global stock market returns. From the perspective of asset value mechanism, investors tend to suddenly shift their investment portfolio towards safer assets when market uncertainty increases or crises intensify (a flight to high-quality assets, Kim, 2023). For example, in South Korea, investors believe that companies that rely more on exports and foreign investors are safer and more valuable assets, as South Korea is a small export-driven open economy.

4) Different amplitudes of interest rate hikes have varying impacts

Besides, Different amplitudes of interest rate hikes have varying impacts on the stock market. Kim (2023) noted that the impact of US monetary policy on emerging stock markets may vary depending on the level of interest rate hikes by the Federal Reserve: relatively small rate hikes (<75bps) versus larger rate hikes (≥75bps). Taking the impact of the Federal Reserve's monetary policy on the Korean stock market in the first two quarters of 2022 as an example, the Korean stock market experienced a significant drop in January and a significant decline in June. In an uncertain period (January 3 to May 31), the Federal Reserve raised interest rates by 25 basis points in March and another 50 basis points in May. However, the next rate hike is still difficult to predict, and KOSPI did not plummet during this period. On the contrary, during the giant step period (June 1st to June 30th), the stock market began a significant decline from early June due to the increasing possibility of a 75 basis point rate hike by the Federal Reserve. The average cumulative return adjusted by CAPM from January 3rd to May 31st (uncertain period) is 0.0628, while the average cumulative return from June 1st to June 30th (giant step period) is −0.0330. This result indicates that since the giant leap in June, the stock market has been severely negatively affected by rising interest rates.

In history, the average level of interest rate hikes by the Federal Reserve has also been too high and too fast. According to data from the Federal Reserve official website, during the rate hike cycle from 1991 to 2023, except for the brief rate hike cycle in 1997 (25bp), there were instances of rate hikes exceeding or equal to 75bp within one year in all other rate hike cycles. The reason for this significant interest rate hike can be attributed to problems with the Federal Reserve's interest rate decision-making mechanism, the low long-term benchmark interest rate of the Federal Reserve, and the Federal Reserve's failure to consider the negative impact on foreign countries in its interest rate decision-making process.

D. Economic Crisis

Yu *et al.* (2014) conducted an in-depth analysis of the causes of the 2008 financial crisis, focusing on the global savings surplus hypothesis proposed by Ben Bernanke. Research has shown that when discussing the rationality of the Federal Reserve's monetary policy based on the Taylor rule, there are issues such as coefficient prior assumptions and biased data usage. The evidence that loose monetary policy is not related to rising housing prices has flaws such as inconsistent data across periods, and the conclusion drawn after model correction is exactly the opposite. And provide suggestions for improving monetary policy implementation and preventing future crisis outbreaks. However, For the crisis in 2008, Rötheli (2010) clearly pointed out that although there is a certain endogeneity in the economic cycle, the irrationality of the Federal Reserve's monetary policy is an important reason for this financial crisis. He believes that the Federal Reserve's loose monetary policy while providing excessive liquidity to the market, has also led financial institutions to overlook their attention to the liquidity of their own assets. Meanwhile, the low interest rate monetary policy has reduced the borrowing costs of financial institutions and encouraged market speculation. So, in this economic crisis, the Federal Reserve's monetary policy had problems, which contributed to the occurrence of the economic crisis.

IV. Conclusion

The Taylor rule, originally proposed by Taylor, has been widely regarded as a predictive instrument for anticipating the future interest rate policy of the Federal Reserve. Nevertheless, the utilization of the Taylor rule is accompanied by numerous limitations. Upon analyzing the outcomes, it becomes evident that despite the Federal Reserve's consistent adjustment of its monetary policy in response to domestic economic indicators, such actions have resulted in disruptions to the global economy, particularly in developing nations, thereby rendering its monetary policy unsuitable. Moreover, in Taylor's formula, using different inflation index tests will lead to vastly different results, making it difficult to determine which one is closer to reality. Numerous scholarly studies indicate that the Federal Reserve's interest rate hikes have a negative impact on the global economy, and the influence of the Federal Reserve's

monetary policy on developing economies has been observed to be more pronounced compared to its impact on developed economies. The underlying mechanism is that in developed economies, higher US interest rates are transmitted through standard exchange rates and trade channels. In emerging economies, exchange rates and trade channels can hardly explain the differences in GDP responses within the economy. In emerging economies, exchange rates and trade exposure to the United States are not important. In contrast, financial channels seem to be very important for emerging economies, weighing much more than developed economies. For developed economies, the intensity of trade with the United States is an important determinant of the spillover effects of US currency shocks. The significant interest rate hike by the Federal Reserve has led to the flight of high-quality investors from emerging markets. Similarly, other literature has analyzed the impact of the Federal Reserve's monetary easing policy on the stock market. The results of in-depth analysis indicate that changes in monetary policy have a greater impact on stocks with more constrained funds. Relatively speaking, companies with more exports, larger market value, less debt, and more foreign investors perform relatively well. Through meticulous and thorough analysis, it has been revealed that the fluctuations in monetary policy hold a more pronounced effect on stocks that operate with financial constraints. In comparison, companies that exhibit elevated levels of exports, a considerable market value, limited indebtedness, and an influx of foreign investors demonstrate a notably commendable performance. From the perspective of the interest rate mechanism, for countries that are pegged to exchange rates, a significant increase in interest rates will lead to a significant decrease in GDP, and the stock market is an expectation of GDP. Therefore, the Federal Reserve's interest rate hike will lead to a decrease in global stock market returns. From the perspective of asset value mechanism, investors tend to suddenly shift their investment portfolio towards safer assets when market uncertainty increases or crises intensify (a flight to high-quality assets) (Kim, 2023). The value of assets is related to the characteristics of the company. In addition, different amplitudes of interest rate hikes also have different impacts on the stock market.

For future research, I believe the focus can be on the Fed's rate hike cycle, as the Fed's rate hikes follow a cyclical pattern, which was not discussed in this article.

Conflict of Interest

The author has claimed that no conflict of interest exists.

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