

The Spillover Effects of American Monetary Policy Shifts

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Abstract. The monetary policy of the United States has profound impacts on the global economy and financial markets, and the radical adjustments of the monetary policy of the United States and other developed countries are important attributors of global financial risks. Studying the evolvement of the monetary policy of the Federal Reserve and the spillover effects will help us to predict the direction of the monetary policy of the Federal Reserve in the future, and take initiatives to deal with and prevent the potential risks brought by the changes of the monetary policy. By reviewing the existing literatures, it is found that there is heterogeneity in the impacts of US monetary policy shifts on the price levels, interest rates, exchange rates and financial markets of different economies. In the future, researchs on the spillover impacts of US monetary policy shifts can be related to digital currency, Bitcoin and other virtual currencies.

Keywords: Financial risk; spillover effects; the Federal Reserve; monetary policy.

1. Introduction

Looking back to the evolution history of the US monetary policy, the operational paradigm and decision-making framework have been constantly changed and developed with the deduction of the US economic and financial cycle. The monetary policy of the United States has a far-reaching impact on the global economy and financial markets, and the current international financial risks are closely related to the radical adjustments of the monetary policies of the United States and other developed countries. The latest radical adjustment of US monetary policy was after the outbreak of the epidemic, the Federal Reserve first implemented unlimited quantitative easing policy, which laid a hidden danger for the global financial market turmoil. In 2022, in order to combat inflation, the most aggressive rate hike began, sharply pushing up global financing costs. The sharp shift in the direction of the US monetary policy led to the bankruptcy of some small and medium banks in the US, and also led to greater difficulties for emerging markets. Developed economies were also impacted by the spillover effects of the US monetary policy, and all economies showed different degrees of local currency depreciation, stock market turbulence, dollar debt burden and other problems. Saroj et al. found that the US monetary policy uncertainty negatively affects EME exchange rates [1]. Huang et al. found that the impacts of US economic policies on the international crude oil and gold markets cannot be underestimated [2].

At present, the Federal Reserve's monetary policy will shift, and the global macro economy and financial markets will also be affected. Therefore, the analysis of the historical changes and evolution of the monetary policy of the Federal Reserve can help understand the connotation of the monetary policy of the United States and grasp the trend of the monetary policy of the Federal Reserve in the future. Studying the spillover effects of the US monetary policy and discussing the countermeasures will help to deal with and prevent the potential risks brought by the US monetary policy more proactively.

Based on the developments of the US economy history, this paper first sorts out and summarizes the developments and changes of the US monetary policy, and defines the uncertainty of the US monetary policy. Then the paper sorts out the spillover effects of the of the US monetary policy shifts on the global economy, and discusses the spillover effects on the price levels, interest rates, exchange rates and financial markets of other economies. Finally, the paper summarizes the spillover effects of the current US monetary policy and puts forward some suggestions to cope with the US monetary policy shifts.

2. The Evolution of the American Monetary Policy

The existing literatures reviewed the characteristics of American monetary policy in different periods. Reichlin accounted of the evolution of the Fed since the 1950s [3]. Li has studied the development of monetary policy since the establishment of the Federal Reserve [4]. Based on the existing literatures, this paper summarizes the evolution of US monetary policy into five stages.

2.1. Keynesian Monetarism Stage

In the early 20th century, the United States did not have an institution that functioned as a central bank. The banking crisis of 1907 forced the United States to reform its banking system. As a result, the Federal Reserve Act was passed on December 23, 1913, which became the starting point for reform of the US banking system. Before 1952, the United States implemented the pegged interest rate policy, and the Treasury Department became the main body to manipulate the monetary policy. The inflation caused by the outbreak of the Korean War eventually made the pegged interest rate abandoned. In 1951, the Fed officially became independent of the Treasury Department, becoming an independent central bank that could conduct monetary policy on its own. Under the guidance of Keynesianism, the Federal Reserve made monetary policy according to the set objectives and the changing conditions of the economy. From the mid-1970s to the early 1980s, Keynesianism failed as the oil crisis intensified, the marginal effects of fiscal stimulus policies became diminished, and economic stagnation and inflation emerged together.

2.2. The Great Stagflation Stage of the 1970s

At this stage, the economy was in a vicious circle due to complex economic conditions, fluctuating government policy objectives and tight and loose monetary policies. In 1979, Volcker became the chairman of the Federal Reserve, and the monetary policy goal changed from a combination of economic growth and inflation to a unilateral bias toward inflation. He used the discount rate and the money supply as tools for monetary policy operations, eventually overcoming high inflation in the United States. The rapid increase of the Federal funds rate from 9.42% in June 1980 to a historical high of 19.02% in June 1981 effectively curtailed the rapid rise of the CPI, which fell from its peak in March 1980 to 2.36% in July 1983.

2.3. Big Moderation

From the mid-late 1980s to the onset of the subprime crisis in early 2007, Greenspan served as chairman of the Federal Reserve for nearly 20 years. The main difference between his monetary policy and Volcker's was that he put more weight on economic growth. During this period, the US CPI has remained between 1% and 5%, and the Federal funds rate of the Federal Reserve was mainly fine-tuned with a strong perspectiveness. In addition, the United States had only two short-lived recessions, and the economy was in a state of steady growth and low inflation.

2.4. The Subprime Crisis

In 2006, New Keynesian economist Ben Bernanke became chairman of the Federal Reserve. In terms of monetary policy framework, unlike Greenspan, Bernanke advocated "flexible inflation targeting" which maintained long-term price stability while flexibly responding to changes in the US economic situation. The financial crisis broke out in 2007. In order to stimulate the US economy, maintain price stability and promote employment recovery, the Federal Reserve adopted large-scale unconventional monetary policies. The Federal Reserve's policy of low interest rates and quantitative easing brought the recession to an end in mid-2009, and economic growth gradually resumed. In February 2014, Janet Yellen succeeded Ben Bernanke as chairman of the Federal Reserve, and the Federal Reserve continued to implement easy monetary policy. In June 2011, the FOMC discussed the framework for the exit of accommodative monetary policy, and as the US economy improved and unemployment and inflation gradually returned to normal levels, monetary policy began to normalize.

2.5. Post-epidemic Stage

The coronavirus pandemic has dealt an unprecedented blow to the US economy. In response to the huge impacts of the epidemic on the economy, the Federal Reserve quickly lowered the federal funds rate to 0%-0.25% and announced unlimited bond purchases. At the same time, unconventional monetary policies such as CPFF, PDCF, TALF, and MMLF were restarted. The shock of the COVID-19 pandemic has made unconventional monetary policies increasingly normal.

On August 27, 2020, Federal Reserve Chairman Jerome Powell announced at the annual meeting of global central banks in Jackson Hole that the Federal Reserve would keep inflation to average 2% over a period of time, allowing inflation to be above 2% for some time. In the post-epidemic period, the low interest rate and large-scale quantitative easing monetary policy in the United States injected a large amount of dollars into the markets, causing a sharp rise in asset prices around the world and aggravating asset bubbles. Inflation in the United States has risen from around 1% to around 7% in 2021. As the Russia-Ukraine conflict escalated in early 2022, inflation in the United States continued to rise rapidly, reaching a nearly 40-year high of 9.1% in June 2022.

In order to control inflation, in 2022, the Federal Reserve started a strong cycle of interest rate hike and balance sheet contraction, and finally raised the federal funds target rate to 5.25%-5.5%. It can be seen that in order to solve the economic shock in the United States, the Fed quickly shifted monetary policy, but rarely considered the spillover effects on the global impacts and the international responsibility as a major power.

3. Uncertainty from American Monetary Shifts

Since the US dollar has a dominant position in the International Settlement System and an absolute share in the SDR baskets, the uncertainty of the US monetary policy adjustments will pose risks to the world economy. The Fed uses a range of tools to communicate its decisions, such as the Federal Open Market Statement and FOMC minutes. Therefore, the market will interpret and evaluate the future monetary policy trend based on this information. A number of papers use variables generated from publicly released FOMC documents to study FOMC communication. A news-based index, monetary policy uncertainty (MPU) indexes, was constructed to capture the degree of uncertainty that the public perceives about Federal Reserve policy actions and their consequences. Lucas Husted found that positive shocks to uncertainty about monetary policy robustly raise credit spreads and reduce output. The effects are of comparable magnitude to those of conventional monetary policy shocks. policy rate normalization that is accompanied by reduced policy uncertainty can help neutralize the contractionary effects of the rate increases themselves [5].

For the future direction of the Federal Reserve's monetary policy, we can learn from the relevant turning points and indicators of past policy shifts. Looking back at the four-interest rate hike and interest rate cut cycles within the 1990s, it can be found that interest rate cut began after the emergence of interest rate inversion (see Table 1). In the current rate hike cycle that began in 2022, the 10Y-3M spreads have been upside down since November 2022. As the continuous interest rate hike inhibits the endogenous momentum of the economy, the risk of recession in the United States this year is increasing. It is expected that the Federal Reserve is likely to start the interest rate cut cycle within the year. When the policy direction changes, it will also bring volatility to the global economy and financial markets.

Table 1. The relationship between monetary policy shifts and spreads inversion

Interest rate hike	Interest rate cut	Spreads inversion	Remark
1988.3-1989.5	1989.6—1992.9	1989.5—1989.12	The rate cut began 1 month after the inversion appeared
1999.6-2000.5	2001.1—2003.6	2000.7—2001.2	The rate cut began 6 month after the inversion appeared
2004.6-2006.6	2007.9—2008.12	2006.7—2007.8	The rate cut began 14 month after the inversion appeared
2015.12-2018.12	2019.8—2020.3	2019.3—2019.10	The rate cut began 5 month after the inversion appeared
2022.3-2023.6		2022.11 started	

4. Spillover Effects of American Monetary Policy Shifts on the Global Economy

The monetary policy of the United States will be changed based on the changes of its own economic situation. The Federal Reserve will not take the spillover effects into the consideration when making decisions. Many scholars have empirically and quantitatively analyzed the spillover effects of the monetary policy changes of the United States on other countries. This paper summarizes the spillover effects of monetary policy shifts in the United States on price levels, interest rates, exchange rates and capital markets.

Shifts in US monetary policy have spillover effects on the price levels of other countries. Canova found that the tightening monetary policy of the United States will lead to the rise of inflation in emerging market countries, European Union countries and Latin American countries [6]. Li found that China and the United States are important poles of the global inflation divergence, while major developed economies follow the inflation trend of the United States, showing a high degree of consistency [7]. Deng et al. found that the Fed's interest rate hike and balance sheet shrinking will both lead to a decrease in BRICS' output, a decline in inflation, a deterioration in the trade balance [8].

Shifts in US monetary policy have spillover effects on interest rates of other countries. Li pointed out that the Fed's policy interest rate has a significant spillover effect on the short-term money market interest rates of peripheral countries [9]. Margaux found that US monetary policy also had a significant impact on the long-term interest rates of other countries [10]. Nsafoah et al. suggested that positive (negative) US monetary policy shocks increase (reduce) the policy rate in the other countries, and that monetary policy uncertainty in the United States has a negative and statistically significant effects on the monetary policy rate of the other countries [11]. Aeimit et al. found that the uncertainty of US monetary policy made the short-term interest rate of emerging countries indeed rise [12].

Shifts in US monetary policy have spillover effects on exchange rates of other countries. Park et al. studied 10 countries in Asia and showed that MPU tended to increase the variance of exchange rates rather than influence the exchange rate levels [13]. Saroj et al. found that US monetary policy uncertainty negatively affects EME exchange rates, raises EME country spreads, and decreases capital inflows into them [1]. Cheng Yuan et al. found that the Fed's policy of raising interest rates caused China's inflation to increase and the exchange rate to depreciate [14].

Shifts in US monetary policy have spillover effects on financial markets in other countries. Anaya et al. found that the impacts of unconventional monetary policies in the United States would increase the real returns on equity investment in emerging markets [15]. Mumtaz found that the impacts of US monetary policy on the capital markets of different countries were heterogeneous [16]. Huang et al. found that the impacts of US economic policies on the international crude oil and gold market cannot be underestimated, and the prices of crude oil and gold respond quickly to major events [2]. Gu et al. found that six of the eight major cryptocurrencies generated significant excess returns in the two months following the US quantitative easing policy [17]. Zhang found that policy uncertainty increases the stability of cryptocurrency returns [18].

5. The Spillover Impacts of the Current US Monetary Policy and Relevant Suggestions

5.1. The Spillover Impacts of the Current US Monetary Policy

In the context of high inflation in the European and American markets, the current round of interest rate tightening cycle of the Federal Reserve has had impacts on both developed and developing countries. Stock markets in Europe and the United States have become more volatile, but the impacts on emerging markets have been more pronounced. Taking Turkey as an example, the interest rate hike of the Federal Reserve led to a large amount of selling of Turkish currency, a large amount of capital returning to the United States, and a large amount of cross-border capital outflow, resulting in a sharp depreciation of the local currency and high inflation. This phenomenon was also common in

other emerging market countries, such as Brazil, South Africa and other countries. The aggressive interest rate hike in the United States has also led to the depreciation of the yen. For Japan, which mainly relied on imports of energy, ore, food and many other commodities, the depreciation of the yen would further raise prices and exacerbate inflation. Japan had to raise interest rates to protect itself from further yen depreciation, inducing its stock market tumbling. The US reaped global benefits by raising interest rates.

5.2. Recommendations for Dealing with Spillover Effects of US Monetary Policy

The changes of American monetary policy affects the global economy, mainly because of the economic position of the United States in the world and the position of the dollar in the international monetary systems. The following suggestions are made on the spillover effects of US monetary policy.

Ensure stable monetary liquidity and strengthen macro-prudential management of cross-border capital flows. Improve the banking systems, increase the efficiency of internal economic circulation, and reduce cross-border financial risks.

Reduce excessive dependence on the US dollar and diversify the allocation of foreign exchange reserve assets. In cross-border trades and investments, actively promote the use of local currency for transaction settlements and weaken the external influences of US monetary policy.

Counterbalance the dollar-dominated international monetary systems through the developments of financial technology. With the rise and maturity of blockchain technology, paper money will gradually be replaced and only reflect the value scale of money.

Actively promote the digitalization of sovereign currencies and enhance the international acceptance of central bank digital currencies. Central bank digital currencies could help improve existing cross-border payment methods, reduce costs and circumvent sanctions.

6. Conclusion

This paper studies the spillover effects of American monetary policy shifts. Firstly, the developments and changes of the US monetary policy are sorted out and summarized. Then the uncertainty of American monetary policy is defined. The spillover effects of American monetary policy shift on the global economy are sorted out, and the spillover effects on the price levels, interest rates, exchange rates and financial markets of other economies are discussed. Finally, the paper summarizes the spillover effects of the current US monetary policy and puts forward some suggestions to cope with American monetary policy shifts. By reviewing the existing literatures, it is found that there is heterogeneity in the impacts of American monetary policy shifts on the price levels, interest rates, exchange rates and financial markets of different economies. In the future, researchs on the spillover impacts of American monetary policy shifts can be related to digital currency, Bitcoin and other virtual currencies.

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