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The Impact of Fed Monetary Policy on the Chinese Economy

Dehong Chen[1,a,*], Jiayi Sun[2,b]

[1]University of Birmingham, Birmingham, UK
[2]HD Shanghai School, Shanghai, China
a. dxc174@student.bham.ac.uk, b. 2767120523@qq.com
**corresponding author*

Abstract: In order to cope with persistently high inflation since the COVID-19 pandemic, the Federal Reserve has adopted a continuous monetary tightening policy, raising the federal benchmark interest rate three times in a row. Meanwhile, as the United States is a big importer, its monetary policy is bound to affect many countries. Therefore, this article will from the interest rate, import, and export, etc., to analyze the influence on China; the final purpose is how to make it clear that the federal reserve's monetary policy impact China to take appropriate measures to avoid some adverse effect, give full play to the government regulation function, before the crisis timely regulation and economical price, can avoid significant economic losses.

Keywords: component, federal reserve, monetary policy, China

1. Introduction

Since the outbreak of the COVID-19 epidemic in 2020, the world's economy has been affected by it, and the United States is no exception. During the epidemic, the U.S. government issued many relief funds, the goods in ports were blocked, and domestic production was sluggish, which caused the inflation rate in the United States to keep rising. In order to cope with the rising inflation, the Federal Reserve announced the interest rate increase on March 16, 2022, and then started the monetary tightening mode. By July 2022, the Federal Reserve had raised interest rates twice in a row, and the single rate increase was a record. Therefore, America's monetary policy will impact these major countries economically. This article will study how America's monetary policy affects China's economy from the aspects of the exchange rate, import, and export, etc. At the same time, it is also to understand the operating mechanism of American monetary policy, clarify its influence and transmission path on different aspects of China's economy, and help to clarify the transmission mechanism of American monetary policy to China's financial system and the independent formulation and implementation of monetary policy by the People's Bank of China that is suitable for China's national conditions.

2. Foreign Background

Inflation has risen in many countries after the COVID-19 outbreak due to supply-demand imbalances and strong policy support during the pandemic. In addition, the Russian-Ukrainian conflict in early 2022 will lead to additional pressure on the global supply of raw materials, such as energy and food, as well as the operation of the supply chain, further increasing the risk of global inflation.

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Since 2021, due to the Fed's failure to take timely and effective measures to allow the inflation rate to continue to rise, the US consumer price index (CPI) will continue to rise. As a result, it will continue to pressure the Fed to raise interest rates, especially since June, the highest since 1981. The Fed has raised the federal funds rate four times this year, and the current rate has risen to a range of 2.25%-2.5%, and it is expected that by the end of 2023, the federal base rate will rise to 3.75%-4% [1].

3. Domestic Background

Since the new crown epidemic in 2020, China has implemented high-pressure and strict epidemic control measures and brought the epidemic under control. With the arrival of 2022 and the post-epidemic era, China has continued to promote the resumption of production and the recovery of overseas economies [2]. Since July 2022, China's exports have been 332.96 billion US dollars, an increase of 18% year-on-year, an increase of 0.1 percentage points from July, and the export growth rate continued the upward trend. China's imports were 231.7 billion US dollars, a year-on-year increase of 2.3% and 1.3 percentage points from the previous period. According to data released by the National Bureau of Statistics on July 15, according to preliminary calculations, the gross domestic product (GDP) in the first half of the year was 56,264.2 billion yuan, a year-on-year increase of 2.5% at constant prices.

As the Federal Reserve continues to maintain its monetary tightening policy in 2022, the exchange rate of the US dollar against the RMB, US income, and many other aspects will be affected. As a significant trade export to the US, China will inevitably be affected. This paper will explore the impact of the Federal Reserve's monetary policy on China from several aspects.

4. The International Transmission of Monetary Policy

Suppose that in a closed economy, monetary policy adjusts to inflation, unemployment, and output to achieve its original purpose of affecting the economy.

In 1951, the British economist J. Meade believed that when the exchange rate is fixed, the government can only adjust the internal and external balance by mainly using policies that affect the total social demand. The situation laid the theoretical foundation of the Mundell-Fleming model. After that, Roberta Mundell and J. Marcus Fleming proposed the Mundell-Fleming model and analyzed the IS-LM model under the conditions of an open economy. Changes in the model's variables will impact the output in the case of various floating exchange and fixed exchange rates. In other words, when an exchange rate is fixed, a nation's central bank controls the supply of money, whereas when an exchange rate is floating, the global market does so [3]. The Mundell-Fleming model decides based on the IS-LM model's output, aggregate demand, and aggregate supply curves. They contend that no nation can simultaneously achieve the three policy objectives of stable exchange rates, unrestricted capital flows, and independent monetary policy.[4] Later, Krugman summarized the above conclusion in the famous theory, 'The Impossible Trinity.' The theory holds that in the case of a floating exchange rate, where the market determines the exchange rate, the greater the supply of money, the greater the total supply. Relative to the international exchange rate, when the domestic interest rate rises, foreign capital will flow in, and the domestic currency will appreciate, increasing imports and income.[3] High domestic income (GDP) leads to higher imports and thus lowers the share of net exports, and too high foreign income leads to higher imports and, thus, higher net exports.

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5. The Impact of Fed Rate Hikes on the United States

The Federal Reserve recently announced a new round of interest rate hikes, raising the federal benchmark interest rate by 75 basis points.

The Fed's continued tightening of monetary policy can immediately affect people's finances, from their ability to borrow to savings account interest and whether they should refinance their mortgages. The Fed's interest rate policy influences how much commercial banks charge one another for short-term loans [5]. Because borrowing costs increase with a higher fed funds rate, it can cause a reduced demand among banks and other financial institutions to borrow money. As a result, it will cause mortgages and loans to become more expensive.

Those who borrow money to purchase a home or access their existing home equity may soon face a higher housing cost due to a Fed rate hike. This is because home equity lines of credit (HELOCs) and other shorter-term floating-rate mortgages like adjustable-rate mortgages (ARMs) are linked to the Fed funds rate, so when the Fed's rate rises, ARM and HELOC rates quickly follow.

Increasing Fed rates have a largely ambiguous effect on the stock market.[5] Higher rates may, on the one hand, encourage some investors to sell stocks and take profits. However, there is much proof that rate increases do not harm stocks in the long run.

Rate increases have the most significant immediate effect on market psychology in the short term. Professional traders might sell stocks as soon as the FOMC raises rates and switch to more defensive investments rather than waiting for higher rates to spread throughout the economy. However, over the longer term, the data demonstrates that when the Fed tightens monetary policy, stock markets may occasionally rise.

However, savings account interest rates are beginning to increase, which is good news for savers. Federal and deposit rates are not directly related [5]. Banks' annual percentage yield (APY) on deposit accounts, such as savings accounts, money market Accounts, and certificates of deposit, is gradually rising. Under the influence of this series, ordinary people will be more willing to deposit their money in the bank, and many unnecessary expenses will be reduced except for the necessities of life. The Fed tightened monetary policy because of the persistently high inflation rate in the United States. However, the fundamental reason for this was the large number of federal relief payments and the large number of goods blocked in ports at the beginning of the epidemic. 'According to the report, the total number of containerships waiting to berth at US ports had fallen from a peak of 150 at the start of the year to 125,[6] However, many more vessels waiting at facilities on the East Coast continued crunch The purpose of the monetary policy is to reduce the currency circulating in the market to achieve the purpose of curbing inflation and reduce the price of commodity goods. If all the goods accumulated in the port are transported to the market, the commodity price will be further reduced. Overall, the Fed's interest rate hikes reduce currency circulation and people's desire to buy, ultimately curbing inflation. However, it will take a while to see whether tighter monetary policy will lead to a recession in the US. Some economists think it is getting harder for the Fed to balance this rate and prevent the economy from contracting.

6. Impact on China

According to the basic concept of macroeconomics, the US monetary policy will influence the impact of the Chinese economy by interest rate, exchange rate, international commodity price, and income of Americans. This chapter will illustrate how these fundamental economic factors affect the Chinese economy.

Firstly, after three monetary policy meetings from March to June 2022, 1.5% of the interest rate was raised. In July, the Federal Reverse will continue to increase its interest rate by about 0.75%. With the US contractionary monetary policy in 2022, an increase in interest rate in the US will appreciate the exchange rate of the US dollar since more investors tend to save money in the US to get a higher return. As a result, the demand for the US dollar rose, and the supply of the Chinese Yuan increased, resulting in a depreciation in the Chinese Yuan. As a result, the price of Chinese export is relatively decreased, and the price of Chinese imports is relatively high. If the economy is followed by the theory of the Marshall-Lerner condition, which is revealed by British economist Marshall and American economist Lerner, the devaluation of a country's currency will lead to an improvement in its balance of trade with the rest of the world only if the sum of the price elasticity of its export and import is more significant than one. Thus, the net export may rise as export revenue is more significant than import revenue. Aggregate demand is the total spending on an economy's goods and services at a given price level in a given period, and it consists of four components, which are consumption(C), investment(I), government spending(G), and net export (X-M). Theoretically, the aggregate demand will rise due to an increase in net export so that the actual gross domestic product will be more significant.

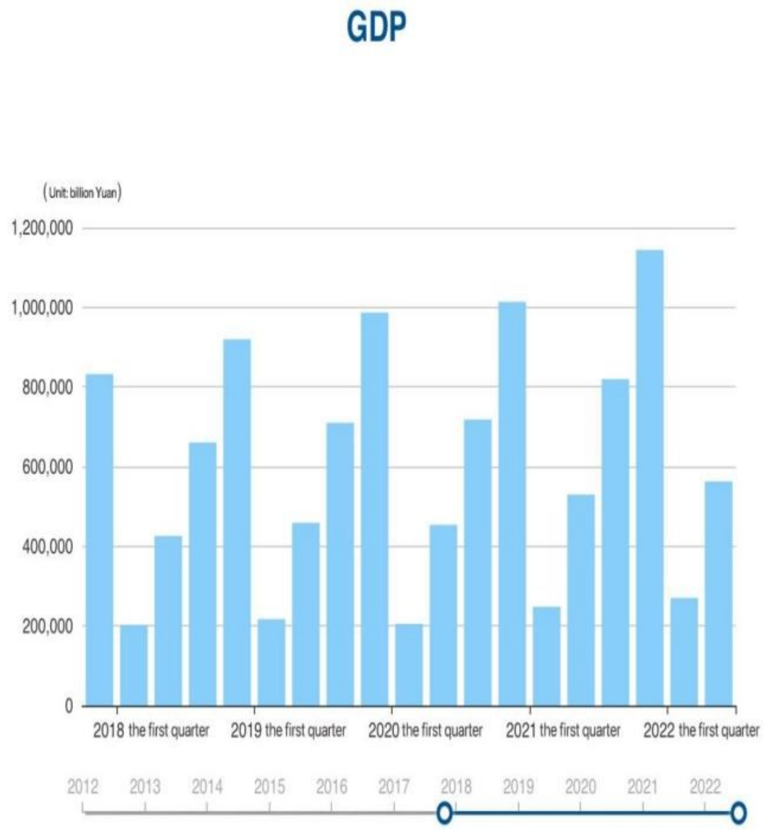

Figure 1: Gross Domestic Production [7].

The data from the China State Statistics Bureau shows that China's gross domestic product (GDP) increased from 270,177.8 billion Yuan in the first quarter of 2022 to 562,641.6 billion Yuan in the second quarter of 2022. Hence, the data verify the theoretical assumption. However, it cannot be ensured that the US monetary policy directly promotes Chinese economic growth since various factors can influence it, which is challenging to achieve ceteris paribus.

Secondly, the natural GDP rise means more outputs are produced, so it requires more labor to produce products, which can increase China's employment. Nevertheless, the China State Statistics Bureau data shows that [8] the unemployment rate peaked in April 2022 and then declined. The fact is opposite to the assumption, and the main reason for this situation is because of the coronavirus.

Shanghai is a big city where many enterprises and factories are located here and has a vast labor force. The coronavirus started in March, but April was the most severe month when everyone living in Shanghai was locked. Since there was no productive activity with that high fixed cost but no revenue, many firms had to close down and go into liquidation. Because of the vast amount of jobs lost by the bankruptcy of firms, unemployment increased significantly.

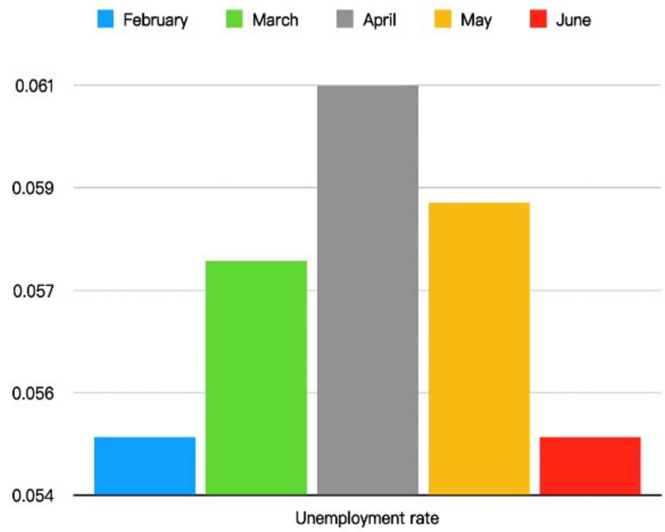

Figure 2: Unemployment Rate [9].

Besides, it can be supposed that an increase in aggregate demand by rising net export may lead to an increase in the price level, but the aggregate supply will play a role in determining the price level. If the increase in aggregate supply exceeds the increase in aggregate demand, the price level may not rise. Besides, it truly depends on the spare capacity of an economy. If the China economy still has a spare capacity that the rising aggregate demand will not increase the price level. The following data shows that China's consumer price index (CPI) increased from 2022 to June. Therefore, the price level of China will rise from the beginning of 2022, and the contraction policy of the US can cause the result.

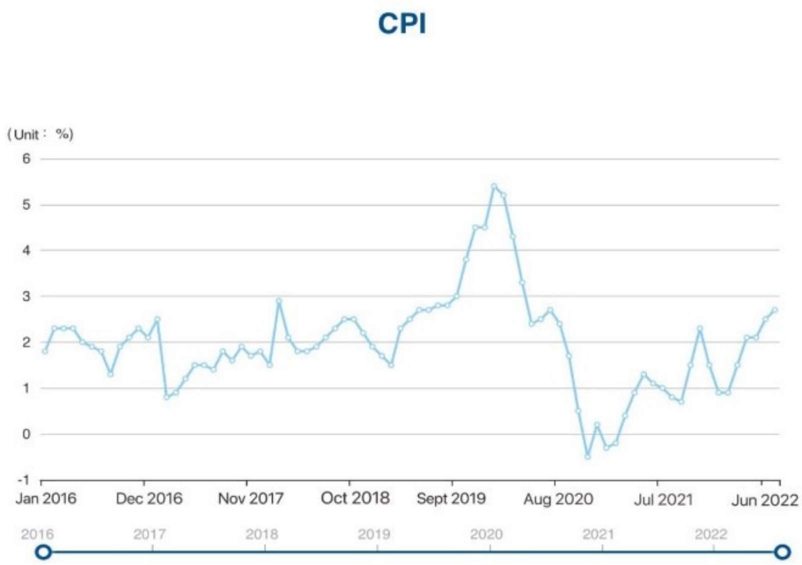

Figure 3: Consumer Price Index [10].

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Moreover, the income of the American people can be another factor to affect China's economy. In the abstract, contractionary monetary policy will reduce aggregate demand so that the real GDP will reduce, and GDP is a way to measure a nation's income. Therefore, the income of Americans may reduce. However, according to the analysis and data from the predicting part of the text, US GDP has risen, which means that the income of Americans has increased. The data from the U.S Bureau of Economic Analysis confirm the assumption that the US disposable personal income keeps rising from February 2022 to June 2022, so the purchasing power of American increases. It is well-known that China is famous for its manufacturing industry. Commonly, most of the goods that American people brought are made in China. As the purchasing power of the American people increases, they may purchase more products made in China. Therefore, the value of export in China will rise. [11] By the data from National Development and Reform Commission, the value of China's export to the US was 18819.0 billion Yuan from January 2022 to June 2022, which increased by 14.8%. Consequently, the income of the American people will indeed influence China's export through contractionary monetary policy.

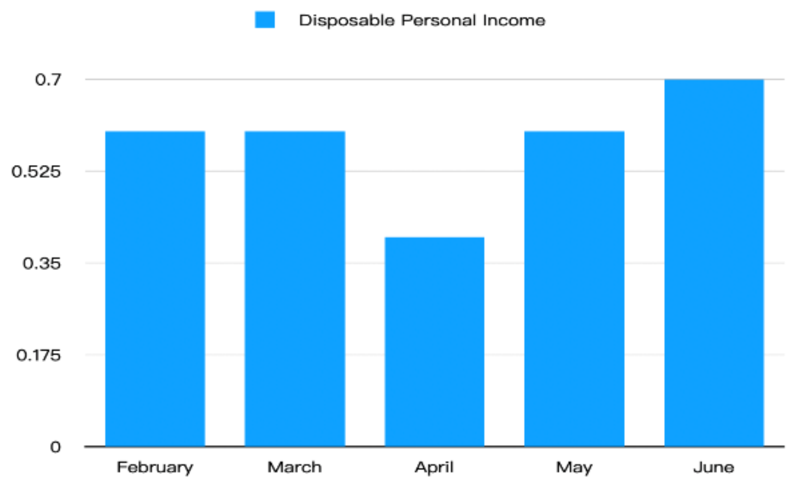

Figure 4: Disposable Personal Income [12].

7. Conclusions

In conclusion, the monetary policy of the United States has been a concern to scholars of various countries. After the covid-19 epidemic period, to recover the US economy, the central bank Federal Reserve keep using contractionary monetary policy by reducing the interest rate to promote economic growth. Firstly, the analysis that the tightening of monetary policy made some impact on the US that it caused the mortgage and loans to become more expensive, but the stock market may rise. The Federal Reserve's contractionary monetary policy aims to decline the inflation rate. However, it is difficult for the US to balance promoting economic growth and controlling inflation.

Since there is a considerable volume of business between the US and China, the policy influences China's economy on different dimensions, including Gross Domestic Production (GDP), the unemployment rate, and Consumer Price Index (CPI). Firstly, the data shows that China's Gross Domestic Product (GDP), consumer price index(CPI), and unemployment rate increase, and unemployment degree increases as time passes. According to the analysis, the impact of the monetary pol-

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icy implemented by the US on China' s macro economy is characterized by a short time, but the impact is sharp. The reasons for the change in China's macroeconomy are complex, such as the commodity and foreign exchange markets. The government gives complete control to its regulatory role and regulates prices and the economy in the face of crisis timely, which can avoid large-scale economic losses.

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