

# Did Monetary Policy Cause a Housing in The US In The First Half Of The 2000S

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**Abstract.** In the early 21st century, a global financial crisis occurred in the global financial history. The US subprime crisis in 2007 has evolved into a global financial crisis, which not only impacted the financial industry of various countries, but also spread to the sandwich economy. In this context, it is of great practical and theoretical significance to timely sort out various academic theoretical views on the causes of the financial crisis and analyze the deep causes of the current financial crisis using Marx's economic crisis theory, which has great enlightenment on the improvement and supervision of China's financial market. Based on data statistics and model recommendations, this paper deeply studies the causes of subprime housing credit in the United States, and concludes that the monetary policy of the Federal Reserve is to a large extent the main cause of the housing crisis in the United States.

**Keywords:** Subprime crisis; Monetary policy; Interest rate; Housing crisis.

## 1. Introduction

"The subprime crisis is also known as the subprime crisis, which is also translated as the subprime debt crisis", which means that the bankruptcy of subprime institutions and the forced closure of investment funds have caused serious shocks to the stock market, and also led to the collapse of the U.S. financial system. The subprime crisis mainly refers to the loans provided by domestic lending institutions similar to banks, investment banks and other large institutions to borrowers with poor credit and low income. The service targets are loan buyers with high debt to income ratio, low credit and high probability of default. Various "subprime loan" products can even repay low-income people. Even if interest rates were raised, they would not be able to repay the loan. However, the real estate market in the United States at that time was also a good phenomenon, which also gave the people at that time an illusion. At that time, people naively believed that the market risk would be "controllable". Even if there was a risk, as long as the house was sold, most problems could be solved.

With the slowing down of the appreciation of US housing prices in 2006, the refinancing capital chain of subprime borrowers using the appreciation of housing prices has encountered problems. As the capital chain is broken, more and more people are unable to repay the mortgage on time. With the reversion of the interest rate level, many people in the process of repaying loans have to give up repaying loans, leading to a gap in the capital chain of the entire lending institution. With the increasing risk of the market, the subprime crisis broke out in the end.

## 2. The Federal Reserve Uses Interest Rates To Regulate The Economy

The main reason for the change of monetary instruments of the Federal Reserve is quantitative easing (QE) in 2008. Since QE, the Federal Reserve has further expanded its balance sheet, resulting in a significant increase in excess reserves.

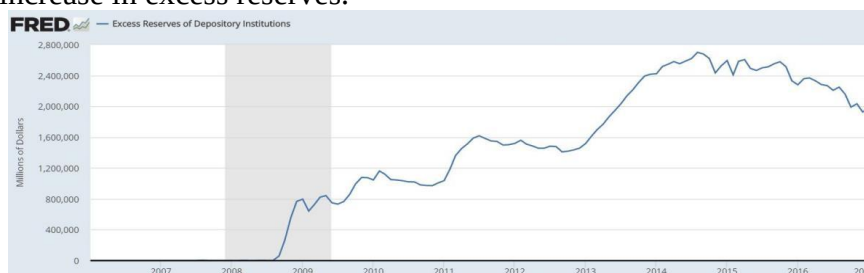


Figure 1. Excess Reserves of Depository Institutions

The Federal Funds Rate is essentially the reserve rate for transactions by financial institutions. Now every financial institution has enough excess reserves. However, this is different from what is shown. Therefore, the Federal Reserve can no longer control the amount of reserves through repurchase and reverse repurchase, which will affect the federal funds rate. Before the financial crisis, the Federal Reserve discussed learning from Europe and Japan and adjusting the federal funds interest rate through interest rate channels. However, this feeling accelerated the occurrence of the financial crisis. After learning the methods of Europe and Japan to adjust the fund interest rate, the US government formally passed legislation in October 2008, and the Federal Reserve began to pay interest to reserves (including statutory reserves and excess reserves). It is also used as the lower limit of the interest rate channel. However, because financial institutions with excess reserves can obtain higher interest rates from the Federal Reserve, they are favored by many financial institutions. More and more financial institutions use this method to obtain more quota. Of course, these financial institutions will not lend their reserves to other institutions at an interest rate lower than  $i_o$ .

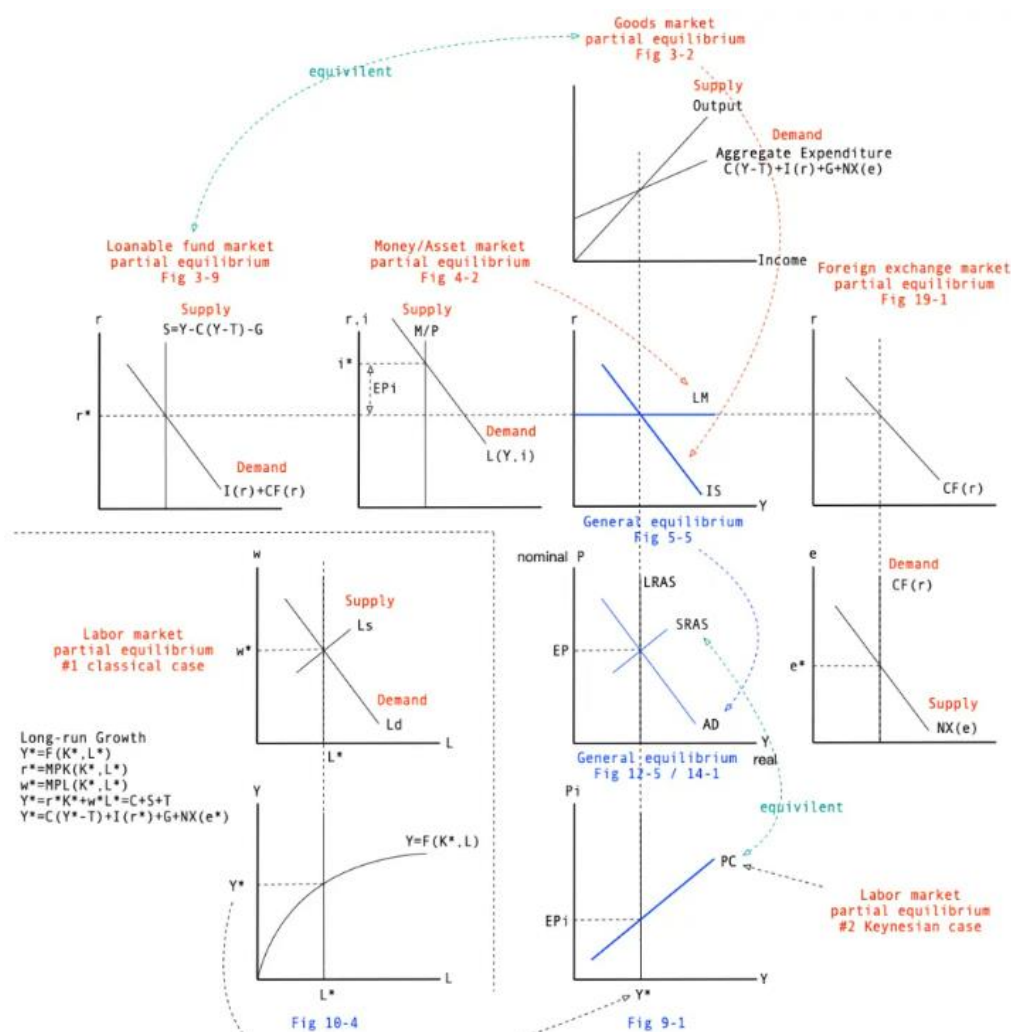
It is worth mentioning that because of the special nature of real estate, its selling price is very sensitive to interest rate, which is opposite to interest rate. Because of the change of the federal funds rate, the house price in the United States also follows the federal funds rate like a roller coaster. First, the federal funds interest rate fell. Second, the real estate loan was the monthly mortgage payment. At that time, the continuous rise of house prices stimulated the desire of a large number of low-income people who could not afford long-term housing loans to buy houses. More and more low-income people came to buy houses. But later, the federal funds interest rate began to rise, leading to the increase of monthly mortgage payments for houses. The impact was that the house prices continued to fall. However, those with low repayment ability can only return the real estate that cannot be repaid to the bank due to their inability to repay the mortgage. Banks suddenly face so many non-performing assets and cash flow problems. In this case, many banks can only choose to declare bankruptcy, which also leads to heavy losses for a large number of domestic and foreign institutions and individuals who buy loans from securities companies, and then affects the entire financial system of the United States. This impact spreads to the world through various financial derivatives.

The political system of the United States determines that it is impossible to give up the use of monetary policy to regulate the economy. In the monetary policy, interest rate regulation is the main choice. However, as a price, it is inevitable to cause chaos if the interest rate is artificially adjusted. Historical experience shows that under the gold standard system with stable currency value and exchange rate, a stable interest rate can not only maintain balance, but also maintain sustainable development.

### 3. IS-MP-PC Model

The reasonable and effective use method of the model. IS-LM model is usually used in a short period of time. The default is  $P$ ,  $Y$ .  $P$  remains unchanged. In the medium term, the IS-IM-PC model is often used. Different from the short-term model,  $P$  and inflation rate are variable, and the default  $Y^P$  is unchanged. Then through the analysis of the model. The so-called demand side impact is actually the following standard variables: it mainly includes changes. The main factor affecting the supply side impact is the fluctuation of crude oil price, **which usually leads to PC displacement**, making the previous balance position unbalanced. The demand side impact will bring about the displacement of IS or LM. This gap will break the equilibrium of the labor market to a large extent, but because people's expectations of the inflation rate are basically wrong. Therefore, in order to get more accurate prediction results, we need computer test results to tell people the correct inflation rate.

Conclusion: The manipulation of short-term aggregate demand management policy on real GDP  $Y^T$  will recover to potential GDP  $Y^P$  in the medium term.



### Figure 2. Model Comparison

#### 4. The Monetary Policy Of The United States Has Added Fuel To The Fire

The monetary policy of the United States is very complex, with many types and policies. Among them, financial instruments are more changeable and financial derivatives are more diversified. Although the financial system and financial derivatives system are complex and changeable, in the final analysis, they all have two characteristics, which are closely related to the subprime crisis and the global financial crisis triggered by it. The first feature is that the pricing of financial basic products and their derivatives is closely related to the average interest rate. Another feature is that financial derivatives are connected to basic financial products, and derivatives themselves are complex.

Financial derivatives not only connect financial basic products with little correlation, but also connect with each other. For example, the correlation between bonds and stocks is very small, but through equity swap, the prices of bonds and stocks are closely related; Internationally, the interest rates between the two countries can be relatively independent, but they are closely linked through currency exchange; Many stocks constitute a stock index, which is derived from stock index futures. Futures are derivatives, options are derivatives, and stock index options are derivatives; Swaps are derivatives, options are derivatives, and swaps are derivatives of derivatives. The complex relationship between basic financial products and derivatives and derivatives makes their prices closely linked, which easily leads to a situation where everyone enjoys prosperity and suffers losses. Before the subprime crisis, long-term capital management companies in the United States collapsed. As the asset scale managed by the long-term capital management company is relatively small, it has not caused significant damage to the financial market. However, the Federal Reserve also took the

initiative to solve this problem. However, once such a widespread problem as subprime broke out, its destructive power was obvious.

The pricing of financial products is closely related to interest rates. The Federal Reserve is the most influential financial institution at present, and its interest rate increase and reduction will largely affect the financial markets around the world, because there is a strong relationship between the pricing of financial products and interest rates. Once the interest rate policy of the Federal Reserve is inconsistent with market expectations, financial risks will arise. Due to the existence of financial derivatives, financial risks will expand rapidly and change from local risks to systematic risks. The subprime crisis has changed from a local risk to a global financial storm, which also stems from the complex financial system and financial products of the United States.

Research shows that monetary policy has a great impact on market behavior. The financial subprime crisis in American history has given us many warnings. Therefore, the country must be very cautious when formulating monetary policy again. Only a reasonable monetary policy can make the country's development more vigorous and upward.

The market has its own operating rules. Although monetary policy can help the healthy development of financial markets to a certain extent, excessive monetary policy will be too much. In 2007, at the beginning of the subprime crisis, the occurrence of the subprime crisis could be controlled through appropriate monetary policies. However, the excessive use of monetary policies by the Federal Reserve made the entire market unable to withstand the huge impact of interest rate changes. Because of the uniqueness of the financial market, it is directly linked to monetary policy. Although the financial market is linked to monetary policy, as an independent and huge market, it has its own operating rules and can guide, but it can not be excessive. Just like educating children, guidance is important, but excessive guidance becomes control. Once it is controlled, there will be uncontrollable situations. Once excessive monetary policy is used in the financial market, it will lead to market imbalance, which led to the subprime crisis in 2007, which brings great warning to people.

## 5. Summary

At that time, due to the sharp decline in interest rates, the traditional monetary policy did not achieve the desired effect. Therefore, in order to solve the situation at that time, the monetary policy of the Federal Reserve became the only straw to save the American economy at that time. At that time, the Federal Reserve conducted four rounds of monetary easing. In the first round of monetary easing, the Federal Reserve stabilized the real estate price by purchasing government bonds, residential mortgage bonds and other means, and basically maintained the stability of the financial market for a period of time. In the second, third and fourth rounds of monetary easing, the Federal Reserve purchased a large number of government bonds to reduce unemployment and improve the labor market. But the monetary policy of the Federal Reserve is also one of the important factors leading to the subprime crisis.

From the subprime crisis in 2007 in the United States, we can clearly see that the outbreak of a crisis must not be accidental. It was a chain of events that led to the final crisis. Looking at the whole process of the subprime crisis, we can clearly feel that the impact of the financial crisis on the market is very huge. Now it is a globalized market, As the largest economy in the world, the United States plays an important role in the financial market. It can be said that every interest rate increase and reduction by the Federal Reserve affects the financial markets all over the world. The global financial markets also fluctuate greatly because of the changes in their interest rates. It is precisely because of this situation that when we watch the subprime crisis in the United States in 2007, It is necessary to understand that the main reason for the outbreak of financial crisis is the sharp change of **monetary** policy. Therefore, when China uses monetary policy to regulate the financial market, it is necessary to know how far the current financial market in China has developed and what kind of monetary policy is suitable for the current financial market in China. It is necessary to use monetary policy reasonably to make the financial market in China develop better. In general, The main reason for the

subprime crisis in the United States is the improper use of monetary policy. We must make rational use of monetary policy.

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