

# Effect Evaluation of Monetary Policy Tools in Maintaining Financial Market Liquidity

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**Abstract:** The purpose of this paper is to deeply discuss the practical effects, challenges and corresponding countermeasures of monetary policy tools in maintaining the liquidity of financial markets. Firstly, this paper expounds the importance of financial market liquidity to economic stability, and points out that monetary policy, as an important means of macro-control, plays an irreplaceable role in maintaining financial market liquidity. At the same time, in order to comprehensively evaluate the effectiveness of monetary policy tools in maintaining financial market liquidity, this paper summarizes the development history and main types of monetary policy tools, and analyzes their application effects in different economic environments. At the same time, this paper also deeply analyzes the actual effect of monetary policy tools in dealing with the tight liquidity in financial markets. The results show that monetary policy tools have significant effects in maintaining the liquidity of financial markets, but the effects of different tools are different and influenced by many factors. At the same time, this paper also reveals the limitations of monetary policy tools in the face of financial market uncertainty, policy transmission mechanism obstruction and market expectation instability.

## 1. Introduction

In the financial market, liquidity is a crucial concept, which is related to the efficiency and stability of the market and the confidence of investors [1]. When the financial market is fully liquid, buyers and sellers can complete the transaction quickly and at low cost, and the market price can accurately reflect the relationship between supply and demand [2]. However, when the market is impacted or faced with uncertainty, the liquidity may quickly dry up, leading to market failure and even systemic risks [3]. Therefore, maintaining the liquidity of the financial market is of great significance for ensuring the normal operation of the market and promoting economic growth [4].

As an important means of macroeconomic regulation and control, monetary policy plays a key role in maintaining the liquidity of financial markets [5]. By adjusting monetary policy tools, the central bank can influence market interest rates, money supply and credit conditions, and then adjust the liquidity level of financial markets [6]. In the period of financial crisis or market turmoil, monetary policy tools have become an important tool to stabilize the market and restore liquidity.

The purpose of this study is to explore the effect of monetary policy tools in maintaining the liquidity of financial markets and evaluate their role in specific market conditions. Through this study, we hope to have a deeper understanding of the mechanism of monetary policy tools in maintaining the liquidity of financial markets, and provide useful reference for policy makers to better cope with possible market challenges in the future.

## 2. Monetary policy tools and theoretical basis of financial market liquidity

Monetary policy tools are the means adopted by the central bank to achieve monetary policy objectives. According to the different frequency and nature of use, monetary policy tools can be divided into conventional monetary policy tools and unconventional monetary policy tools [7].

Conventional monetary policy tools mainly include interest rate adjustment and deposit reserve ratio adjustment. Unconventional monetary policy tools are additional measures taken by the central bank in response to financial crisis or market turmoil under specific market conditions.

Financial market liquidity refers to the ability of market participants to buy and sell financial assets quickly and at low cost [8]. Liquidity is an important embodiment of market efficiency and a key guarantee for market stability. In the financial market, sufficient liquidity means that buyers and sellers can make transactions quickly, and market prices can accurately reflect the relationship between supply and demand, thus helping to reduce transaction costs and improve market efficiency. There are various indicators and methods to measure liquidity, as shown in Table 1.

Table 1 Indicators and methods for measuring liquidity

Measure index	Method
Market depth	Calculate the trading volume or amount at a specific price level, and measure the market's ability to absorb a large number of transactions without causing large price fluctuations.
Market width	Calculate the types and quantities of securities or assets that can be traded in the market, and measure the diversity of the market and the universality of trading options.
Market elasticity	Observe the speed at which the market price returns to the equilibrium level after being hit, and measure the stability and resilience of the market.
Market immediacy	Measure the transaction time from initiation to execution, and measure the transaction efficiency and response speed of the market.
Financing cost	Analyze the difficulty and related costs of financing in the market, and measure the convenience of the market to provide financial support for traders.
Price volatility	Calculate the fluctuation range of market price in a certain period of time, and measure the price stability and risk level of the market.
Trading volume	Count the number or amount of transactions in the market within a specific period of time, and measure the activity and liquidity level of the market.
Bid-ask spread	Observe the difference between the buying price and the selling price in the market, and measure the transaction cost and market efficiency.

Theoretical analysis of liquidity effect shows that monetary policy tools have complex and diverse influences on financial market liquidity, which can not only directly affect the liquidity level by changing market interest rates and money supply, but also indirectly affect investors' expectations and behaviors. Therefore, when analyzing the impact of monetary policy tools on financial market liquidity, it is necessary to comprehensively consider direct and indirect effects, short-term and long-term effects, so as to comprehensively evaluate their effects.

### 3. Practice of monetary policy tools in maintaining financial market liquidity

On a global scale, central banks of various countries widely use monetary policy tools to maintain the liquidity of financial markets, and their application cases are rich and diverse, including the use of conventional tools and the innovation of unconventional tools [9]. Typical countries, such as the United States, Europe and Japan, effectively regulate market liquidity and maintain market stability by flexibly using conventional tools such as interest rate, deposit reserve ratio and open market operation. At the same time, during the financial crisis, these countries also dared to innovate and adopted unconventional tools such as quantitative easing and credit policies to deal with extreme market conditions.

In addition, the application of monetary policy tools in China is constantly evolving and improving. From the early loan scale control to the later adjustment of interest rate and deposit reserve ratio, to the open market operation and macro-prudential management, its types and effects are improving. During the financial crisis, China's central bank can respond quickly and use tools flexibly to effectively maintain the liquidity of the financial market.

### 4. Evaluation of the effect of monetary policy tools on maintaining financial market liquidity

#### 4.1. Evaluation of the effectiveness of conventional monetary policy tools

Conventional monetary policy tools play a fundamental role in maintaining the liquidity of

financial markets. Among them, interest rate adjustment and deposit reserve ratio adjustment are the two most commonly used tools.

The impact of interest rate adjustment on liquidity is mainly reflected in changing the market interest rate level to influence investors' expectations and behaviors. When the central bank lowers the benchmark interest rate, the market interest rate drops, and investors are more inclined to put funds into the market, thus increasing the liquidity of the market. On the contrary, when the central bank raises the benchmark interest rate, the market interest rate level rises, and investors are more inclined to save their funds in savings or other forms, thus reducing the liquidity of the market. Therefore, interest rate adjustment is one of the important means for the central bank to maintain the liquidity of the financial market.

The effect of the adjustment of deposit reserve ratio is mainly reflected in the influence of market liquidity by changing the currency creation ability of the banking system. When the central bank reduces the deposit reserve ratio, the monetary creation ability of the banking system is enhanced, and more loans can be released, thus increasing the liquidity of the market. On the contrary, when the central bank raises the deposit reserve ratio, the monetary creation ability of the banking system will weaken, the loan scale will shrink, and the liquidity of the market will also decrease accordingly. Therefore, the adjustment of the deposit reserve ratio is also one of the important tools for the central bank to maintain the liquidity of the financial market.

#### 4.2. Effect evaluation of unconventional monetary policy tools

Unconventional monetary policy tools play an important role in dealing with financial crisis or extreme market conditions. Among them, quantitative easing policy and credit policy are two typical unconventional monetary policy tools.

The implementation and effect of quantitative easing policy is mainly reflected in increasing the liquidity of the banking system by purchasing a large number of assets such as government bonds and mortgage-backed securities. The implementation of this policy can effectively reduce the market interest rate level, boost investor confidence, and thus increase market liquidity. At the same time, quantitative easing policy can also change investors' behavior by influencing market expectations, and further maintain market stability. Therefore, quantitative easing policy is one of the important tools for the central bank to deal with the financial crisis or extreme market conditions.

The influence of credit policy on the liquidity of a specific market is mainly reflected in the influence of credit conditions and market liquidity in a specific field through window guidance and loan quota control. This policy can be flexibly adjusted according to the actual situation of the market, with strong pertinence and remarkable effect. As shown in Table 2.

Table 2 Examples of the influence of credit policy on liquidity in specific markets

Credit policy tools	Detailed description	Field of influence	Liquidity impact description
Window guidance	The central bank conveys the intention of monetary policy and the orientation of credit policy to commercial banks through window guidance.	Real estate market	Through the guidance of the window, the central bank reminds commercial banks to control the scale of real estate loans, which leads to the tightening of credit conditions in the real estate market, the reduction of market liquidity and the stabilization of housing price increases.
Loan quota control	The central bank sets the upper limit of loan amount in specific areas and controls the scale of credit supply.	Small and micro enterprise loan market	The central bank sets the upper limit of the loan amount for small and micro enterprises, encourages commercial banks to increase credit supply for small and micro enterprises, and increases the liquidity of the loan market for small and micro enterprises, thus promoting the development of small and micro enterprises.

#### 4.3. Comparison and comprehensive analysis of the effects of monetary policy tools

Different monetary policy tools have different effects in maintaining the liquidity of financial markets. Conventional monetary policy tools, such as interest rate adjustment and deposit reserve

ratio adjustment, play a fundamental role and are suitable for daily economic regulation and market maintenance. Unconventional monetary policy tools, such as quantitative easing policy and credit policy, have the characteristics of strong pertinence and remarkable effect, and are suitable for dealing with financial crisis or market extremes.

In terms of the effect of tool combination, the central bank usually chooses and uses different monetary policy tools flexibly according to the actual situation of the market and the control objectives. The combination of these measures can produce better results and maintain the stability of the financial market more effectively, as shown in Table 3.

Table 3 Examples of the effects of different combinations of monetary policy tools

Combination of monetary policy tools	Actual market situation	Control target	Use effect
Interest rate adjustment+deposit reserve ratio adjustment	The economy is overheating and inflationary pressure is rising.	Curb inflation and stabilize economic growth.	By raising interest rates and the deposit reserve ratio, the central bank can reduce the money supply in the market, curb inflationary pressure and stabilize economic growth.
Quantitative easing policy+credit policy	Financial crisis, market liquidity dried up	Restore market liquidity and stabilize financial markets.	The central bank adopts quantitative easing policy, buys a large number of national debt and other financial assets, and increases the liquidity of the banking system; At the same time, provide liquidity support through credit policies to restore market confidence and stabilize financial markets.
Open market operation+credit policy	The demand for credit in specific areas is too strong and the market is unbalanced.	Regulate credit in specific areas and maintain market balance.	The central bank regulates the money supply in the market through open market operations, and at the same time, combined with credit policies, regulates the credit demand in specific areas to maintain market balance and stability.

## 5. Challenges and countermeasures of monetary policy tools in maintaining financial market liquidity

Although monetary policy tools play an important role in maintaining the liquidity of financial markets, they also face many challenges in the actual operation process. These challenges mainly come from the uncertainty of financial market, the obstruction of policy transmission mechanism and the instability of market expectation.

Based on these challenges, this paper puts forward the following countermeasures: first, strengthen the flexibility and pertinence of monetary policy, and flexibly choose and use different monetary policy tools according to the actual situation and control objectives of financial markets; The second is to improve the policy transmission mechanism, improve the efficiency of policy transmission, and ensure that monetary policy can affect the financial market accurately and quickly; The third is to strengthen the communication between the central bank and the market, guide market expectations through effective communication strategies, and enhance the effectiveness of policies.

## 6. Conclusions

Through in-depth research on the practice of monetary policy tools in maintaining financial market liquidity, this paper draws the following main findings:

First of all, monetary policy tools play an important role in maintaining the liquidity of financial markets. Both conventional and unconventional monetary policy tools can affect the liquidity level of the market to varying degrees, thus maintaining the stability of the financial market.

Secondly, the effects of different monetary policy tools are different. Conventional monetary policy tools, such as interest rate adjustment and deposit reserve ratio adjustment, play a

fundamental role and are suitable for daily economic regulation and market maintenance; Unconventional monetary policy tools, such as quantitative easing policy and credit policy, have the characteristics of strong pertinence and remarkable effect, and are suitable for dealing with financial crisis or market extremes.

Finally, monetary policy tools also face many challenges in maintaining the liquidity of financial markets. These challenges mainly come from the uncertainty of financial market, the obstruction of policy transmission mechanism and the instability of market expectation. In order to overcome these challenges, it is necessary to constantly innovate and improve monetary policy tools to improve the effectiveness and pertinence of policies.

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