

A Study on the Impact of Monetary Policy Adjustment on Commercial Bank Credit Behavior

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Abstract: This paper deeply combines the economic theory and related literature, and systematically discusses the complex and far-reaching influence mechanism of monetary policy on the credit behavior of commercial banks. Monetary policy, as the key lever of macroeconomic regulation and control, indirectly but profoundly affects the credit supply capacity, financing cost structure and risk appetite of commercial banks through various means such as interest rate policy, flexible adjustment of deposit reserve ratio and open market operation, so as to achieve effective regulation of real economic activities. The research begins with a review of the main theoretical frameworks of monetary policy, especially the two schools of Keynesianism and monetarism, which provide their own distinctive interpretations of the transmission mechanism of monetary policy. On this basis, the paper further analyzes the specific mode of action of the three core monetary policy tools, namely interest rate policy, deposit reserve ratio adjustment and open market operation, and how the central bank uses these tools to influence the credit behavior of commercial banks to steer the course of the national macroeconomic steadily.

Keywords: Monetary policy, commercial bank, credit behavior.

1. Introduction

The relationship between monetary policy, commercial banks and credit behavior constitutes an important part of the operation of the financial system. As the core of macroeconomic regulation, the central bank guides the credit behavior of commercial banks by adjusting monetary policy, which has a profound impact on the real economy.

Monetary policy is an important tool for the government to manage the economy. By adjusting the benchmark interest rate, and the deposit reserve ratio or conducting open market operations, the central bank can influence the money supply and market liquidity, thereby affecting economic activities. This series of policies has a direct impact on the behavior of commercial banks, especially on credit supply and financing costs [1].

Commercial banks play a core role in the financial system. They promote the flow of funds and the efficient allocation of resources by absorbing public deposits and lending them out. Businesses rely on bank loans for investment and expansion, and consumers also rely on banks to obtain consumer loans such as housing and car purchases. These activities directly promote economic growth. In addition, commercial banks also provide payment and settlement services, so that economic transactions can proceed smoothly. Commercial banks play a key role in the transmission

of monetary policy, both as recipients of monetary policy and as executors of its implementation. Therefore, the central bank indirectly regulates the real economy by influencing the credit behavior of commercial banks.

How monetary policy affects the credit behavior of commercial banks through the transmission mechanism is mainly reflected in the three major channels of interest rate, deposit reserve ratio, and market expectations. First, the interest rate channel is the most important transmission channel, and it is also an indicator of whether the monetary policy is effective [2]. When the central bank lowers the benchmark interest rate, the financing cost of commercial banks decreases, the interest rate level decreases, and the demand for loans increases. Banks are more inclined to expand the scale of credit, thereby driving investment and consumption. On the contrary, when the central bank raises interest rates, the cost of borrowing increases, the demand for credit decreases, and banks tend to be cautious in lending, which inhibits credit expansion.

The deposit reserve ratio is another important transmission channel. The central bank directly affects the lending capacity of commercial banks by adjusting the deposit reserve ratio. It has strong effect, quick results, and convenient use [3]. For example, when the reserve ratio is reduced, the funds available for commercial banks to lend increase, and credit behavior tends to lend; on the contrary, when the reserve ratio is increased, banks need to retain more funds as reserves, so the availability of credit is restricted, thereby reducing the flow of funds to the real economy.

Market expectations are closely related to the first two. By reducing the percentages of the above two, the government can boost market confidence and thus increase economic liquidity, and vice versa. At the same time, the transmission mechanism of market expectations is added, the central bank influences market expectations of future economic and policy trends through policy statements, operational transparency, etc. When the central bank sends a signal of tightening monetary policy, the market will expect future interest rates to rise and credit to tighten, and thus adjust economic behavior in advance. This expectation effect will intensify the actual effect of monetary policy. Conversely, expectations of loose monetary policy will boost market confidence and promote investment and credit activities.

In short, monetary policy is transmitted to commercial banks through interest rates, deposit reserve ratios, and expectation management, affecting their credit behavior and, in turn, the real economy. Commercial banks play a key role in this. They are not only the implementers of monetary policy but also bear the important responsibility of balancing the supply and demand of funds in the credit market. By regulating the credit behavior of commercial banks, monetary policy achieves effective regulation of the macroeconomy, thereby maintaining the stable operation of the economy. The efficient operation of this transmission mechanism is the key to ensuring economic stability and sustainable development in the modern financial system.

By combining the transmission mechanism of the impact of monetary policy adjustments on commercial banks' credit behavior, this paper aims to explore how monetary policy adjustments affect various types of bank credit behaviors, such as the scale, structure, interest rate, and other elements of the credit funds released by commercial banks when adjusting policies such as the benchmark interest rate.

2. Theoretical Basis

Monetary policy mainly focuses on how to influence economic activities, achieve economic growth, stabilize prices and promote employment by regulating money supply and interest rates. To explore in depth how monetary policy regulates money supply and interest rates, and then influences economic activities, aiming to achieve macroeconomic goals such as economic growth, price stability and employment promotion, modern economists have developed a variety of monetary policy theories. The following are several major monetary policy theory frameworks.

First, "Keynesian monetary policy theory" emphasizes the impact of monetary policy on the demand side, advocating to stimulate or suppress investment and consumption by regulating interest rates, thereby regulating economic activities. Keynes believed that in economic downturns, lowering interest rates can encourage corporate investment and personal consumption, thereby promoting economic growth. On the contrary, when the economy is overheated, raising interest rates can suppress demand and prevent inflation.

Second, "monetarism" was proposed by Milton Friedman, who believed that the growth rate of money supply should match the long-term growth rate of the economy [4]. Monetarists believe that inflation is mainly caused by the excessive growth of the money supply, so they advocate that the central bank should maintain a stable growth of the money supply rather than frequently intervene in the economy. They also believe that monetary policy has a limited effect on short-term economic activities and should focus more on long-term money supply control.

After Keynes and Milton Friedman proposed their monetary policy theories, economists such as Lawrence Ball, N. Gregory Mankiw, David Romer, and Olivier Blanchard combined the views of Keynesianism and monetarism to propose "New Keynesianism". Jordan Melmes proposed in his article that New Keynesians emphasize the impact of monetary policy in the short term, while also paying attention to the impact of the "stickiness" of prices and wages on the economy [5]. New Keynesians also believe that through appropriate monetary policies, central banks can influence economic activities and employment in the short term, while the adjustment of prices and wages often lags, further enhancing the short-term effectiveness of monetary policy.

These monetary policy theories have different applications in different economic contexts, providing central banks with different perspectives to consider the implementation of monetary policy when regulating the economy.

Central banks can implement different monetary policies in different situations to stabilize the economy. The basic principle of monetary policy adjustment is to influence consumption, investment and savings behavior in economic activities by regulating the money supply and interest rate levels, thereby achieving macroeconomic goals such as promoting economic growth, maintaining full employment, maintaining price stability and balancing international payments. The central bank mainly uses tools such as interest rate adjustment, open market operations and deposit reserve ratio to implement monetary policy.

The basis for monetary policy adjustment includes economic indicators such as the country's overall economic growth, inflation, employment and balance of payments. The central bank evaluates the current economic situation based on these indicators to decide whether to adopt a loose, contractionary, or neutral monetary policy. In general, the basic principle of monetary policy adjustment is to guide economic activities toward policy goals by timely regulating capital costs and money supply.

While the country adjusts its monetary policy, the changes in the credit behavior of commercial banks based on policy changes are the key step for monetary policy to affect the market economy. When the central bank adjusts the benchmark interest rate through monetary policy, the financing cost of commercial banks will rise or fall accordingly, thereby causing the loan interest rate to rise or fall, which directly stimulates or suppresses the borrowing demand of enterprises and individuals. Finally, it affects the credit balance between commercial banks and individual enterprises, thereby suppressing or stimulating the economy.

Among them, if the central bank adopts a transparent monetary policy, such as inflation targeting, it will relatively reduce the risk in the lending market and increase the lending behavior between commercial banks and individual enterprises in disguise [6].

3. The Impact Mechanism of Monetary Policy Adjustment on Commercial Bank Credit Behavior

3.1. Impact of Interest Rate Policy Adjustments

Interest rates can affect the credit behavior of commercial banks in many ways. First, the cost of funds is a direct way for interest rate policies to affect credit behavior. When the central bank lowers the benchmark interest rate, the financing cost of commercial banks will decrease accordingly. Especially when the funds mainly come from the short-term market, this provides commercial banks with greater room for credit expansion. Conversely, when the benchmark interest rate is raised, the bank's financing cost increases, and the cost of lending increases, which may lead to a reduction in loan supply, thereby inhibiting credit expansion.

Second, interest rate policies will also affect the credit risks between various enterprises and commercial banks. A low-interest rate environment is usually accompanied by economic stimulus policies, and commercial banks have stronger optimistic expectations for the macro economy and are more willing to relax loan conditions and increase credit supply. In a high-interest rate environment, economic growth slows, or funds are tight, and banks are more concerned about default risks and may adopt more cautious credit strategies.

Finally, interest rate policies have certain structural limitations on the stimulation of commercial bank credit behavior, and their impact does not act evenly on all economic entities. Studies have shown that state-owned enterprises, enterprises with equity in financial institutions, and low-growth enterprises have low-interest rate sensitivity. Private enterprises, enterprises without equity in financial institutions, and high-growth enterprises are more sensitive to interest rate changes. For commercial banks, this means that after interest rates are adjusted, their credit behavior will tend to flow to those enterprises with high-interest rate sensitivity to achieve higher returns [7]. Therefore, the transmission efficiency of monetary policy can be further optimized through structural reforms, such as reducing the implicit guarantees of state-owned enterprises and strengthening the supervision of financial institutions in which enterprises hold shares, to improve the responsiveness of these entities to interest rate changes and make the regulatory role of monetary policy more comprehensive and balanced.

3.2. The Impact of the Deposit Reserve Ratio Adjustment

The impact of the adjustment of the deposit reserve ratio on the credit behavior of commercial banks is a by-directional mechanism, which not only directly affects the liquidity and credit supply capacity of commercial banks, but also is affected by the reverse feedback of the fluctuation of the commercial bank's loan-to-deposit ratio [3].

First, the deposit reserve ratio will directly affect the liquidity of credit funds in commercial banks. The increase in the deposit reserve ratio forces commercial banks to deposit more deposits as reserves in the central bank. This directly reduces the amount of funds that banks can use for lending and reduces their credit expansion capacity. On the contrary, the reduction in the reserve ratio releases more loanable funds and improves the ability of commercial banks to support economic activities. This mechanism makes the deposit reserve ratio a direct tool for the central bank to regulate the money supply and credit scale.

Second, the deposit reserve ratio will affect the loan-to-deposit ratio and the cost of credit funds. When the reserve ratio is increased, the loan-to-deposit ratio decreases, indicating that the proportion of banks used for lending has decreased, resulting in their credit behavior becoming more conservative. At the same time, commercial banks need to rely on more expensive interbank lending or market-based financing tools to make up for the lack of liquidity. This behavior increases the

overall cost of funds, restricts banks' lending capacity, and drives up loan interest rates. When the reserve ratio is lowered, the loan-to-deposit ratio increases, and banks are more inclined to expand the scale of credit in pursuit of higher returns, while reducing the cost of funds and stimulating the growth of credit supply.

Finally, the credit behavior of commercial banks will also have a reverse effect on the deposit reserve ratio. The fluctuation of the loan-to-deposit ratio of commercial banks will also form positive feedback on the adjustment of the deposit reserve ratio. When the loan-to-deposit ratio is high, bank liquidity is tightening, which may prompt the central bank to ease liquidity pressure by lowering the reserve ratio. Conversely, when the loan-to-deposit ratio is low, the central bank may raise the reserve ratio to avoid excessive credit expansion.

The adjustment of the deposit reserve ratio is an important tool of monetary policy, and its impact on the credit behavior of commercial banks is multidimensional. By optimizing the adjustment rhythm and synergy with other policy tools, the central bank can better play the role of reserve policy in stabilizing the economy and regulating credit supply and demand.

3.3. The Impact of Open Market Operations

The central bank's open market operations and the certainty of monetary policy have a significant positive impact on commercial banks' credit behavior. Through open market operations, such as buying and selling treasury bonds and issuing central bank bills, the central bank can transparently and certainly regulate the liquidity and interest rate level of the inter-bank market. This transparency enables commercial banks to adjust their monetary policies based on clear policy directions and expectations. In a policy environment with loose liquidity, banks are more likely to expand credit scale to meet market financing needs, while reducing market uncertainty, enhancing banks' confidence in economic prospects, and encouraging banks to take more risks when lending, thereby improving the efficiency of credit resource allocation.

On the contrary, monetary policy uncertainty affects commercial banks' credit supply through information channels and expectation channels. In terms of information channels, the increase in monetary policy uncertainty exacerbates the information asymmetry between commercial banks and enterprises, causing banks to pay more costs in the process of reducing information asymmetry, affecting credit returns. In terms of expectation channels, monetary policy uncertainty makes it difficult for banks to predict future liquidity needs and returns, increases the difficulty and risk of banks' decision-making, and causes banks to make credit decisions more cautiously, thereby affecting credit supply. Among them, monetary policy has different effects on commercial banks of different sizes: larger banks are more sensitive to the financial leverage of monetary policy changes, while smaller banks strengthen the transmission of monetary policy to bank liquidity [8].

In general, the central bank's open market operations and deterministic policies help improve the efficiency of credit resource allocation. Policy uncertainty may lead to a reduction in credit supply and an increase in bank risk management costs.

4. Conclusion

This paper analyzes the impact mechanism of monetary policy and its core tools on the credit behavior of commercial banks from multiple dimensions, focusing on the role of deposit reserve ratio adjustment, interest rate policy, open market operations, and policy transparency and uncertainty on the credit behavior of commercial banks. The analysis shows that monetary policy has a profound impact on the credit behavior of commercial banks through direct and indirect transmission mechanisms, and the selection and implementation of policy tools play a key role in its effectiveness.

First, the adjustment of the deposit reserve ratio is an important tool for the central bank to control money supply, mainly by affecting the liquidity and financing costs of commercial banks to change their credit supply capacity. Increasing the reserve ratio will limit the scale of bank lending and push up the cost of funds while reducing the reserve ratio will release liquidity and promote credit expansion. However, the policy effect of the reserve ratio adjustment is often time-sensitive and unstable and needs to be used in conjunction with other monetary policy tools to enhance its regulatory capacity.

Secondly, interest rate policy is the core tool under the modern monetary policy framework, which affects credit demand and the capital allocation behavior of commercial banks by changing market interest rates. In a low-interest rate environment, banks tend to expand credit to support economic growth. In a high-interest rate environment, banks usually adopt more cautious lending behavior to control risks.

At the same time, as a policy tool with high transparency, open market operations can directly regulate liquidity and provide clear policy expectations, thereby enhancing the credit confidence and decision-making efficiency of commercial banks. Non-public policies or policy uncertainty may lead banks to adopt conservative strategies and suppress credit expansion. In addition, policy transparency is of great significance for alleviating market uncertainty and reducing risk aversion.

In summary, the impact mechanism of monetary policy tools on commercial bank credit behavior is complex and diverse, and different tools have their advantages and limitations. Central banks of various countries should focus on the combined use and transparency of policy tools to balance short-term regulation and long-term economic stability, improve policy transmission efficiency and financial resource allocation, and thus more effectively support the development of the real economy.

When analyzing the impact of monetary policy on the credit behavior of commercial banks, this paper has two major limitations. First, it does not fully consider the impact of regional and institutional differences on the transmission of monetary policy; Second, the interaction between monetary policy instruments is not fully explored. Future research should deepen the discussion of these two aspects in order to more accurately reveal the complex influence mechanism of monetary policy on the credit behavior of commercial banks.

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