

METHODOLOGY OF THE IMPACT OF THE TRANSMISSION MECHANISM BANK CREDIT CHANNEL ON THE ECONOMY

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In order for the interest rate channel to function effectively, the financial market must be highly developed and competitive. Also, the financial market should work efficiently in such a way that the effect of the interest rate change in the monetary policy on the real economy and the gross domestic product should be significant. But the financial market has developed slowly in some countries, including in many cases developing countries, where the impact of interest rate changes on the real economy is imperceptible. Therefore, the amount of credit, as well as the price of credit, remain one of the important channels of monetary policy. In this situation, a new monetary policy channel, that is, the bank credit channel, has become one of the most common channels.

The bank credit channel was first studied by Robert Roose in 1951, but for many years scholars believed that this channel was the same as the interest rate channel.¹ The bank credit channel was mainly developed after 1980, and scientists such as B.Bernanke, M.Gertler, A.Kashyap, J.Stein, A.Blinder, J.Stiglitz and others contributed to it. For example, according to B.Bernanke, the bank credit channel should not be considered as an independent channel that is an alternative to the traditional transmission channels of monetary policy, but rather as an "enhancement mechanism" that includes factors that increase the influence of the interest rate channel. mechanism) puts forward the idea. According to the credit channel theory, the direct effect of monetary policy on the interest rate becomes stronger as a result of the endogenous change in the premium paid by enterprises for external financial sources (external finance premium). The premium paid by enterprises for external financial resources is the costs of the enterprise for attracting resources from outside (costs for loans, changes in the value of collateral for loans, costs for issuing securities, etc.) and creation of internal funds (by retaining the income) is determined as a result of the difference between². The size of premiums for external financial resources is affected by the imperfection of financial markets, which

¹Roose RV, (1951). Interest Rates and the Central Bank. In Money, Trade and Economic Growth: Essays in Honor of John Henry Williams. New York: Macmillan.

²Bernanke, BS and Gertler, M. (1995). Inside the Black Box: the credit channel of monetary policy transmission mechanism. The Journal of Economic Perspectives 9(4), page 35.

creates a problem between financial market participants due to asymmetric information between the client and the bank and the increase in contract execution costs.³.

B. Bernanke and M. Gertler divided the bank credit channel into two sub channels. These are "bank lending channel" (also called "narrow credit channel" and "cost-of-capital channel"), and "balance channel" (balance sheet channel), (also called "broad credit channel" or "financial accelerator channel")⁴.

Bank lending channel. In this channel, the monetary policy transmission mechanism affects the economy not only through the banks' assets, but also through their liabilities. Since banks deal with small businesses, individuals and other categories of borrowers in the bank lending channel, the role of banks as financial intermediaries is important, increasing the problem of asymmetric information between them. To be more specific, according to this theory, as a result of the central bank conducting an expensive monetary policy, the deposits of commercial banks will decrease and, in turn, the loan capital of this bank will decrease. If commercial banks do not compensate for the decrease in loan capital by reducing the portfolio of securities, then they will have to reduce lending to customers. Based on this policy of the bank, entrepreneurs dependent on bank loans, that is, small enterprises or households, are forced to reduce their production or consumption. Large enterprises or well-known enterprises have the opportunity to attract financial resources from the stock market by issuing securities as an alternative to bank loans. But it also depends on the level of development of the stock market in the country. Therefore, the bank lending channel does not have much impact on large enterprises. We can describe the bank lending channel as follows:

$$M \downarrow \Rightarrow \text{Bank resursi} \downarrow \Rightarrow \text{Bank krediti} \downarrow \Rightarrow I \downarrow \Rightarrow Y \downarrow$$

In essence, scholars who have studied this subchannel of the bank credit channel have focused their attention on the bank credit offer. As we mentioned above, Robert Roose was one of the first to study the nature of this channel in 1951, and later A. Blinder and J. Stiglitz studied it in 1983 through the "loan fund theory".⁵. Also, in 1983, B. Bernanke conducted a scientific research on the non-monetary effects of the financial crisis during the Great Depression, paying special attention to the operation of the credit channel during that period. B. Bernanke

³Frederic S. Mishkin (1995). Symposium on the Monetary Transmission Mechanism. The Journal of Economic Perspectives 9(4), page 7.

⁴Bernanke, BS and Gertler, M. (1995). Inside the Black Box: the credit channel of monetary policy transmission mechanism. The Journal of Economic Perspectives 9(4), Page 35.

⁵Blinder, AS, Stiglitz JE (1983). Money, Credit Constraints, and Economic Activity. American Economic Review 73. pp. 297-302.

stated that the long depression that began in 1929-1930 was caused by the increase in information imbalances (asymmetry) and the decrease in the amount of credit in aggregate demand as a result of the increase in costs paid by customers for bank loans. In his opinion, the bank lending channel, like other channels, has a significant impact on macroeconomic changes. This effect is especially evident during the economic crisis⁶.

Historically, many scholars have researched the strengths and weaknesses of the bank lending channel. In particular, according to the analysis of S. Kamin and others, the bank lending channel works slower in developing countries than in developed countries. As a reason for this, they show that the financial market in developing countries is not fully competitive and highly inelastic⁷. But in the case of South Korea in one of the developing countries, according to the analysis of the Bank of Korea, we can see the opposite of the opinion of the above scientists. Also, according to F. Edwards and F. Mishkin, the bank lending channel has a weak tendency to changes in monetary policy in developing countries. The reason for this is the decrease in the importance of banks in the credit market due to the formation of a strong competitive environment in the banking system in recent years and the emergence of financial innovations.⁸.

Balance sheet channel. The balance sheet channel of the transmission mechanism focuses on the impact of changes in monetary policy on the borrower's balance sheet, including net worth, cash flows, liquid assets, and income. Therefore, the financial status of borrowers plays a central role in this transmission mechanism channel, in which interest rate changes work by affecting the borrower's net worth and creditworthiness.

Changes in the interest rate by the central bank affect the demand for all types of assets. As a result, the value of the asset held by the borrower from the bank will also change. Changes in the value of the borrower's assets (assets for marketable collateral, liquid assets and other assets) affect his financial position, as well as his net worth. As a result of changes in the value of the net worth of the borrower, it affects his ability to get a loan from the bank for investment expenses and consumption expenses. This channel occurs as a result of the decrease in the

⁶Bernanke, B. (1983). Nonmonetary effects of the Financial Crisis in the Propagation of the Great Depression. The American Economic Review 73 (3). Page 258.

⁷Kamin S., Turner P., Van'tdack J. (1998). The Transmission Mechanism of Monetary Policy in Emerging Market Economies: An Overview. BIS Policy Paper No. 3, pp. 5-64.

⁸Edwards F., Mishkin F. (1995). The Decline of Traditional Banking: Implications for Financial Stability and Regulatory Policy. Federal Reserve Board of New York Economic Policy Review, 1(2), July, pp. 27-45.

company's wealth, when the bank makes an adverse selection regarding lending to the client, and this creates a moral hazard in the company.

According to Frederic S. Mishkin, monetary policy decisions affect the state of corporate balance sheets in several ways⁹. In the first way, loose monetary policy leads to an increase in the market price of corporate securities. In this situation, as a result of the probability of a negative choice of the bank regarding the loan to the enterprise and the reduction of the moral risk in the enterprise, the investment costs of enterprises will increase and in turn lead to an increase in GDP. We can see this in the diagram below.

$$M \uparrow \Rightarrow P \uparrow \Rightarrow \text{Salbiy tanlov ehtimoli} \downarrow, \text{Ma'naviy risk} \downarrow \Rightarrow \text{Kredit} \uparrow \Rightarrow I \uparrow \Rightarrow Y \uparrow$$

Here: - money supply, - market price of securities, - investment costs of enterprises, - GDP. *MPIY*

Frederic S. Mishkin stated that the balance channel of the transmission mechanism proposed by B. Bernanke should be divided into two subchannels. These are the "Cash flow channel" and "Unanticipated price level channel" of the enterprise. We can see their activity in the following scheme.

Channel of cash flows

$$M \downarrow \Rightarrow i \uparrow \Rightarrow \text{Pul oqimi} \downarrow \Rightarrow \text{Salbiy tanlov ehtimoli} \uparrow, \text{Ma'naviy risk} \uparrow \Rightarrow \text{Kredit} \downarrow \Rightarrow I \downarrow \Rightarrow Y \downarrow$$

Unexpected price level channel

$$M \downarrow \Rightarrow \text{Kutilmagan narx} \downarrow \Rightarrow \text{Pul oqimi} \downarrow \Rightarrow \text{Salbiy tanlov ehtimoli} \uparrow, \text{Ma'naviy risk} \uparrow \Rightarrow \text{Kredit} \downarrow \Rightarrow I \downarrow \Rightarrow Y \downarrow$$

B. Bernanke said that the borrower's ability to get a loan directly depends on the premium paid by the enterprise for external financial sources (external finance premium).¹⁰. That is, the company's net worth and the premium it pays for external financial sources are calculated inversely proportionally.

In our opinion, this is closer to the truth. We can expect that the more financially strong the debtor is, the easier the relationship between him and the bank will be. Because the enterprise is considered financially stable to repay the loan or it can provide the bank with a sufficient amount of collateral for the loan.

⁹Frederic S. Mishkin (2011). The Economics of Money, Banking, and Financial Markets// 6th Edition, Addison Wesley Publishing Company. pp. 638-666.

¹⁰Bernanke BS and Gertler, M. (1995). Inside the Black Box: the credit channel of monetary policy transmission mechanism. The Journal of Economic Perspectives 9(4), page 31.

But the problem with us is that the mechanism of valuation of enterprise assets is not developed enough. At the same time, the stock market takes the main place in developed countries when calculating the assets or wealth of enterprises. If the price of a company's securities issued on the stock market, that is, in circulation, falls, this will automatically lead to a decrease in the wealth of this company. Since we do not have this mechanism, determining the value of the company's assets is a complicated process.

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