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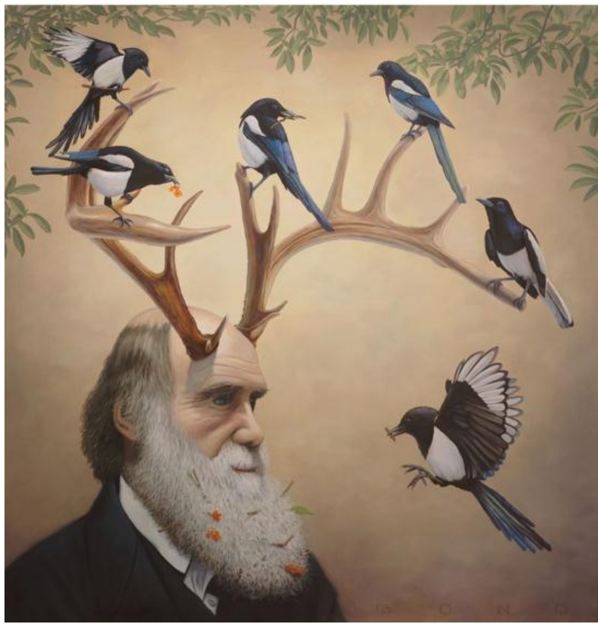

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Credit risk, management behavior and macroeconomic equilibrium in modern banking systems

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Abstract

The aim of the work is to substantiate the strategic directions of the credit market development, which take into account the full range of legal, financial, economic, institutional, organizational and social marketing activities via methods of analysis, synthesis and generalization. It is shown that one of the ways to improve banking regulation and lending, aimed at reducing credit risks, is to establish certain quantitative standards for loan security and profitability of borrowers. In conclusion, the development of effective mechanisms for working with problem assets should be based on the creation of regulatory and legal support for asset management companies.

Keywords: Credit, Risk, Managerial, Behavior, Banking.

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Riesgo de crédito, comportamiento de gestión y equilibrio macroeconómico en los sistemas bancarios modernos

Resumen

El objetivo del trabajo es fundamentar las direcciones estratégicas del desarrollo del mercado de crédito, que tienen en cuenta la gama completa de actividades legales, financieras, económicas, institucionales, organizacionales y de mercadeo social a través de métodos de análisis, síntesis y generalización. Se muestra que una de las formas de mejorar la regulación bancaria y los préstamos, con el objetivo de reducir los riesgos crediticios, es establecer ciertos estándares cuantitativos para la seguridad de los préstamos y la rentabilidad de los prestatarios. En conclusión, el desarrollo de mecanismos efectivos para trabajar con los activos problemáticos debe basarse en la creación de apoyo regulatorio y legal para las empresas de gestión de activos.

Palabras clave: riesgo crediticio, comportamiento gerencial, bancario, macroeconómico.

1. INTRODUCTION

Increased economic uncertainty, increased global macroeconomic instability caused increased credit risks and increased attention to management decisions in the banking sector. An example of the snowball effect in the banking sector is the global economic crisis of 2007–2009, which was caused by significant volumes of speculative financial operations of risky lending, and, consequently, a significant increase in problem loan debt, a liquidity crisis in the banking sector, and destabilization in the financial and credit system generally.

Thus, the study of credit risk in the system of macroeconomic equilibrium and ensuring sustainable socio-economic development is relevant. In modern scientific literature, there are several approaches to the definition of the concept of credit risk: credit risk as a probability (LANGE, 1977), as a change in profit (MINC, 1981), as a level of financial unprofitability (ARROW, 1979), as an objective result of subjective probability, as a distribution of financial losses due to unexpected changes in the credit quality of the counterparty in the financial agreement (GIESECKE, 2004). Today, a number of models exist and are used to assess credit risk. The most successful of them include:

- Credit Metrics (product of JP Morgan, published in 1997);

- KMV (product of the same name company, published in 1993);

- Credit Risk + (product of Credit Suisse Financial Products, published in 1997);

- Credit Portfolio View (product consulting company McKinsey, published in 2001).

Stress testing solves the problem of sharp rises and falls in the evaluation of a loan portfolio or financial instruments. It is a tool for analyzing the simultaneous effects of many key portfolio risk parameters, such as a change in the slope or bend of the yield curve, a change in the absolute value of returns, fluctuations, etc. Thus, for a portfolio, it is possible to investigate changes in its parameters (profitability, current value) both with short-term and long-term market fluctuations, which are expressed in sharp and gradual changes in the profitability of instruments, their correlations, to the modeling of crisis situations. In addition to these models, various mathematical methods that are purely theoretical are used to determine credit risk: Markov models (ATIYA, 2001), models of neural networks (LUO & SHEVCHENKO, 2013), nonlinear parametric models based on Merton’s structural framework (NEUBERG, 2017), dynamic covariance models (KNIGHT, 1965).

2. RESEARCH METHODS

Information base for the study - the data presented in the publications of practitioners and market experts. Methods of analysis, synthesis, generalization became the basis for the study of determining the main directions of development of the credit market to ensure sustainable socio-economic development.

One of the important ways to reduce credit risks is the development by each bank of its own system for the provision of loans, which is designed to reduce the losses of banks from loan defaults. In order to ensure full and timely repayment of loans provided, a thorough study of the mechanisms for its security, the risks associated with credit operations, as well as improving the management of the implementation of the creditor's rights in case of repayment of a bank loan through collateral is necessary. In practice, collateral is a secondary source of loan repayment, and therefore banks are primarily interested in the sufficiency (adequacy) of the collateral amount of the loan provided, its liquidity and the preservation of the market value of the mortgaged property for a certain period of time.

In the process of granting loans, banks use various forms and types of collateral, in particular, a pledge of movable and immovable property, guarantees, third-party guarantees, credit risk insurance, pledge of property rights, securities, precious metals and the like. The degree of risk of non-repayment of a loan depends on the correctly chosen form, type and method of securing the borrower's credit obligations, and hence the amount of reservation for credit risks.

In the process of implementing the credit policy, domestic banks mainly use property (pledge of immovable and movable property, as well as property that is deposited at the bank) and legal (guarantee, surety, penalty, etc.) forms and types of collateral borrower obligations. An additional element of the loan collateral system can be the minimization of credit risks by insuring the borrower's liability for not repaying the loan, insuring the risk of not repaying the loan, insuring property provided by the borrower as collateral, etc. However, these forms are not often used in comparison with the property and legal forms of providing insurance loans.

Unfortunately, today the legislation does not clearly and fully define the rights and obligations of banks and borrowers to work with collateral, which makes it difficult for banks to develop reliable credit support systems and requires the development of additional mechanisms to protect the rights of lenders and borrowers. In order to reduce credit risks and improve work with credit collateral, scientific proposals are put forward to create a division within the bank structure that would assess and manage collateral, suggests packaging such collateral and creating a credit support system, in the event of a shortage of primary repayment sources, it will guarantee full and timely return by the borrower of the loan and interest on it. One of the ways to improve banking regulation in the field of lending in order to reduce credit risks is to establish certain quantitative ratios for loan security and the profitability of borrowers, which include:

1. The requirement for the maximum ratio of loan size and collateral value (LTV - Loan to Value ratio) is used primarily in mortgage lending.

2. The requirement of the minimum amount of the initial payment.

3. The ratio of the maximum loan payment to the borrower's income (PTI - Payment to Income). This indicator is also called the debt load ratio.

4. The ratio of total loan debt to borrower income (DTI - debt-to-income ratio).

The practice of establishing such standards in order to reduce credit risks has become widespread in many countries. The most common practice has been the establishment by regulators of the quantitative value of the LTV indicator, the standards of which are set by the supervisory authorities of Hong Kong (50-70%), India (80%), Canada (95%), China (50-75%), Korea (40-60%), The Netherlands (112%), Turkey (50-75%), Singapore (80%) and other countries. However, in most countries, the LTV indicator is set by regulators, and is determined in the internal regulations of banks as an instrument of their credit policy.

3. RESULTS

Due to the economic downturn and increased instability in the financial markets, there is an urgent need to reduce credit risks and stimulate the credit process. In the scientific literature, the current situation is described as a credit crisis, which refers to the deterioration of the conditions for granting loans or limiting the access of business entities to credit resources due to a reduction in lending volumes and an increase in the cost of credit resources. In this sense, the experience of 2005–2008 is quite indicative, when the average annual growth rates of loans in many countries exceeded 40–60%, as a result of which the economy lent occurred. After the crisis of 2008, a collapse of national currencies occurred, caused by blowing a bubble. The causes of the credit crisis were concentrated both in the banking sector (supply factors) and in the real sector (demand factors).

At the present stage of development of the banking system of the country, a sharp decrease in lending volumes is partly due to the fact that in the conditions of a slowdown in economic growth, the need for new loans also decreases. However, political and economic instability, a significant increase in the discount rate, a decrease in the profitability of many enterprises due to a sharp devaluation of the ruble and accelerated inflation, and an increase in lending standards by banks played a crucial role in reducing lending. The unstable development of the banking system in the period after the imposition of sanctions led to a deterioration in the financial condition of banks, as a result of which the profitability of banking assets and bank capital decreased significantly, and the share of overdue loans increased. In general, the main reasons that increase credit risks and constrain lending to the economy in these conditions can be identified:

1. The rapid decline in economic growth against the background of sanctions, increased political and market risks, increased inflationary and devaluation expectations. This leads to a decrease in incomes of business entities and a decrease in the number of solvent borrowers, which, in turn, forms a cautious credit policy of banks.

2. Lack of credit resources due to the weak domestic monetary base and limited access to international capital markets.

3. Imperfection of credit risk management methods and mechanisms for repayment of loans by insolvent borrowers, as well as problems with the realization of the mortgaged property or the inability to realize other forms of collateral for bank loans.

4. Low level of protection of the rights of lenders and borrowers. Under these conditions, the main task of central banks is to ensure the stability of the banking system and the money market. In addition, according to IMF Managing Director Lagarde, monetary policy should support economic growth, and central banks should continue to liberalize monetary conditions and use unconventional tools to ease tension and provide financing to overcome liquidity constraints (LAGARD, 2012).

Recently, many countries have faced problems in the monetary market, which has increased credit risks. English economist Werner called such a situation the anomaly of bank lending (Werner, 2005). The practice has confirmed that the banking system cannot develop lending arbitrarily, since it occurs only in response to economic growth, and credit has certain economic limits that determine the nature of credit expansion. According to IMF experts, the ratio of loans to GDP is an important indicator characterizing the ratio of lending growth rates to real GDP, and also allows you to determine the volume of credit expansion and the limits of lending.

Based on a sample of 36 countries, it was concluded that if the share of loans in GDP grows faster than 5% per year and is accompanied by a rise in stock prices of more than 15%, the probability of a financial crisis over the next two years is 20%. In addition, indecision in the use of economic methods to prevent and overcome the effects of the crisis has led to the fact that central banks are constantly required to intervene in the distribution of credit resources and to mitigate monetary policy, and to encourage lending to individual enterprises, industries or sectors of the economy. However, as noted by LAVRUSHIN (2012), modern events show that a loan is not only a hostage of the imbalances that exist in the economy but can itself initiate crisis situations.

In the Russian economy in 2009-2014, a significant factor hindering lending was the presence of the crowding out effect of private borrowers by government borrowing and high deposit rates of the Central Bank on mobilization operations. For many banks, the acquisition of government securities has become a more attractive and reliable type of active operations than lending to the real sector. In fact, the situation on the domestic resource market is when the government competes with private borrowers of banking resources.

Under such conditions, an increase in the volume of securities acquired by banks and a decrease in the share of lending in the structure of active operations reduces the access of the corporate sector and households to bank loans, and also stimulates an increase in their value. At the same time, the interest rate policy of the central bank on absorbing excess liquidity also negatively affected the lending process. Under such conditions, it was more profitable for banks to place excess funds on such deposits than to acquire government securities or to make loans, even short-term ones.

In recent years, the weak domestic resource base of banks has led to a significant impact on the containment of bank lending. Today, overcoming the credit crisis caused by sanctions is one of the main prerequisites for economic recovery and the development of the real sector. The basis of this process, in our opinion, should be a system of measures of monetary and fiscal policy, which includes improving the regulation of the banking system, strengthening supervision, creating incentives for the development and sustainable functioning of the private sector. In the field of fiscal policy, a key problem for many countries remains the reduction of the state budget deficit, internal and external public debt, as well as the expansion of incentives for the development of the real sector. According to Lagarde, there is an inverse relationship between the unstable condition of borrowers, weak banks and sluggish economic growth, which constantly negatively affect each other (LAGARD, 2012).

In this regard, noteworthy is the experience of the United States, wherein 2010. The Law on Reforming the Financial Sector and Protecting the Rights of Consumers of Financial Services to Reduce

Risks was adopted (Dodd–Frank Wall Street Reform and Consumer Protection. Act), which significantly changed the concept of supervision of credit institutions. According to this law, more stringent credit requirements have been established, which provide for:

1) The obligatory determination by the lender of the ability of the borrower to repay the loan received in full and on time;

2) The abolition of remuneration for credit managers of banks, depending on the conditions of the loan (except for the principal amount);

3) Obligatory informing borrowers about a planned change in the interest rate on loans with a variable rate of at least 6 months;

4) Cancellation or substantial simplification of penalties for early repayment of loans, etc.

4. DISCUSSION

Credit risks carry the greatest danger to commercial banks in the context of ensuring and maintaining their financial stability, therefore, the introduction of new, more efficient methods of assessment, management, and, therefore, prevention of credit risks should be a priority for the development of the banking system. In order to secure the credit activities of the bank and further successful development of banks, it is generally necessary to implement the recommendations of international financial organizations and the Basel Committee, because the international practice of managing credit risks is dynamic - it is constantly evolving and improving. To obtain the desired effect, it is necessary to reduce the share of lending with combined parties in the loan portfolio of banks; implement a real reduction in the concentration of risks per project; reduce the level of sectoral concentration in the riskiest areas, such as construction, real estate market and financial operations.

To improve the functioning of the credit market, it is necessary to take a number of organizational measures that will improve the quality of the market environment as a whole and increase the efficiency of the credit activities of all market participants, namely:

- Improve macroprudential supervision;

- To stimulate the development of credit market instruments;

- To publish ratings of financial institutions (banking and non-banking);

- improve the procedure for disclosing public information in the statements;

- To introduce an increase in the qualification requirements for employees who directly provide loans in trade establishments and participate in the selection of bank borrowers;

- To initiate the creation of subsidiary structures of credit cooperation, such as stabilization funds, whose main activity would be to provide the possibility of providing financial assistance to credit unions in order to minimize the number of distressed credit unions.

The proposed institutional and organizational measures will provide favorable conditions for the development of modern forms of lending, while improving the mechanism for protecting the rights of lenders and borrowers. An important direction of improving the development of the credit market is the implementation of social marketing activities, which include:

- Development of a social PR campaign to restore public confidence in banks;

- Propaganda of the cumulative behavior of the population;

- The introduction of the responsibility of politicians, officials and the media to create a negative information environment;

- Introduction of financial literacy programs in educational institutions and through the media for wide sections of the population.

Social-marketing measures for developing the credit market should not be underestimated, especially in times of crisis, when the formation of positive expectations among the population and faith in the country's ability to solve their problems through the use of internal resources and potential will give especially tangible results.

5. CONCLUSIONS

The analysis allows to conclude that reducing credit risks and stimulating credit processes should be based on improving the credit climate, using more stringent criteria and standards for lending, effective management of collateral for bank loans, as well as effective mechanisms to protect the rights of lenders and borrowers. One of the ways to improve banking regulation in the field of lending in order to reduce credit risks is to establish certain quantitative ratios for credit support and the profitability of borrowers, which include:

1. The requirement for the maximum ratio of loan size and the value of the collateral (LTV - Loan to Value ratio);

2. The requirement of the minimum amount of the initial payment;

3. The ratio of the maximum loan payment to the borrower's income (PTI - Payment to Income);

4. The ratio of total loan debt to borrower income (DTI - debt-to-income ratio).

In order to improve credit risk management through improved collateral for bank loans, the following are recommended:

1. Ensuring the repayment of a bank loan should be considered as a set of conditions, methods, forms, types and sources of repayment of the borrower's obligations to the bank as a secondary source in case of non-repayment of the loan, and it is necessary to legalize the lender's rights to use such security and organize the bank's control over its sufficiency and acceptability;

2. The development of effective mechanisms for dealing with distressed assets should be based on the creation and regulatory support of asset management companies, which should be created primarily as commercial (non-governmental) financial institutions;

3. Improving the mechanisms of operation and ensuring the transparency of banks using data from the national register of pledged property (movable and immovable), which will allow lenders to significantly simplify procedures and reduce costs for its implementation, as well as reduce the requirements for collateral and the cost of loans for borrowers;

4. Amendments to legislative and regulatory documents to simplify procedures and mechanisms for the sale of pledged property and fulfillment of non-material obligations for the provision of bank loans in the event of a recovery claim in order to fulfill obligations under credit agreements.

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