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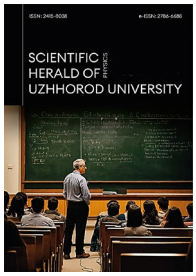

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Modern methodology of metrics monitoring changes in bank lending conditions and credit demand levels

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Abstract

Relevance. The relevance of the article lies in the fact that lending, being a vital aspect of a bank's operations, plays a crucial role as a major investment source. It fosters the ongoing and expedited reproduction process, bolstering the economic capabilities of businesses, holds a prominent position as the primary revenue-generating activity for the bank.

Purpose. The purpose of this study is to develop a modern methodology for monitoring changes in bank lending conditions and credit demand levels. The study aims to provide a comparative assessment of the current practices in analyzing lending fluctuations within the banking sectors of Kazakhstan, the Russian Federation, the USA.

Methodology. To address the analysis task outlined in the study and to identify opportunities for enhancing the methodology, a variety of general scientific methods were employed. These included system-functional, statistical, structural, factorial, logical, graphical methods.

Results. It is shown that the growth of lending in Kazakhstan is supported by demand in the regions, which necessitates the use of a highly sensitive model for calculating indicators reflecting alterations in the conditions of bank lending and demand for loans. The research results can be applied in solving the primary challenges within the industry of lending in Kazakhstan and other post-Soviet countries, and will improve the work of credit institutions, which is especially important after COVID-19 crisis.

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Conclusions. This study highlights the critical importance of modernizing the methodology for monitoring changes in bank lending conditions and credit demand levels. Lending is a vital aspect of a bank's operations, serving as a major investment source and a primary revenue-generating activity. Despite its significance, the full potential of bank lending has not been fully explored. This research provides a comparative assessment of current practices in analyzing lending fluctuations within the banking sectors of Kazakhstan, the Russian Federation, the USA.

Keywords: demand for credit; bank; financial resources; lending conditions; region.

Introduction

Forecasting the macroeconomic indicators of the national banking system is an important and urgent problem in the economic sphere. The problem urgency at the macro level is due to the fact that the definition of parameters and instruments of monetary policy should solve the problem of rational management of lending processes, which is impossible without information about possible scenarios for the future development of the credit market. At the micro level, the urgency of this problem is manifested in the fact that financial planning in a commercial bank is impossible without information on future trends in the borrowed funds market [1].

Bank lending is an essential element of the financial system of Kazakhstan and one of the key channels for the redistribution of financial resources in the economy. The availability of bank loans to end borrowers is one of the essential factors of economic growth [2]. Simultaneously, the accessibility of loans is influenced by factors beyond just the interest rate level, as well as by a wide range of additional conditions for bank lending (hereinafter referred to as Bank Lending Tightness or BLT, according to widely recognized terminology), such as: maximum terms and volumes of loans, requirements for collateral, and the financial position of borrowers.

Improving the methods of analysing the credit market helps to increase the efficiency of the monetary policy of the central banks of various states. The solution to this issue is monitoring the availability of bank loans for end borrowers. To this end, the Central Banks of the USA, Canada, Great Britain, Japan, and other countries conduct regular surveys of changes in the credit policy of banks and, on their basis, calculate and publish Bank Lending Tightness indicators [3].

The combination of the analysis of bank statements with the study of BLT indicators, containing information on changes in non-price conditions for concluding credit transactions (requirements for collateral, loan terms), contributes to a deeper understanding of the ongoing processes in the field of bank lending.

When carrying out lending operations, credit institutions strive to maximize their profits by selecting and lending clients with the most profitable projects with minimal risks of untimely fulfilment of loan obligations. The criteria for selecting groups of credited clients and the conditions for issuing loans to them form the conditions for bank lending.

The future volume of issued loans and, as a consequence, the bank's profit depends on the competent definition of the conditions of bank lending and their further correct modification under the conditions of the changing external environment (the situation with liquidity, competition, conditions of internal and external funding, the situation in the non-financial sector).

On the other hand, commercial organizations in need of short-term and long-term resources seek to find a credit organization for themselves, the lending terms of which will be the most acceptable and economically profitable. If a bank significantly tightens its lending conditions compared to other banks, this will lead to the flow of potential clientele to competitors with softer BLT, which will naturally affect the volume of lending [4; 5]. Thus, the most attractive and acceptable lending terms for both customers and credit institutions are determined by the consensus BLT, which is subsequently expressed in the volume of lending.

At the same time, according to the Organisation for Economic Co-operation and Development (OECD), there are barriers in Central Asian countries that prevent companies, especially small and medium-sized enterprises (SMEs), from accessing finance [6]. Companies and sole proprietors in Central Asia often note difficulties in accessing finance as one of the main barriers to starting, running, and growing their businesses [7].

As in OECD countries, SMEs in Central Asia face significant barriers to accessing finance. About a quarter of all SMEs in Central Asia indicate that difficulty in accessing finance constitutes a major constraint on entrepreneurship. Specific numbers vary widely from country to country: for example, in Mongolia, access to finance is a significant challenge for more than a third of all SMEs, while in Uzbekistan, only 4% of SMEs report such a problem (Figure 1) [8].

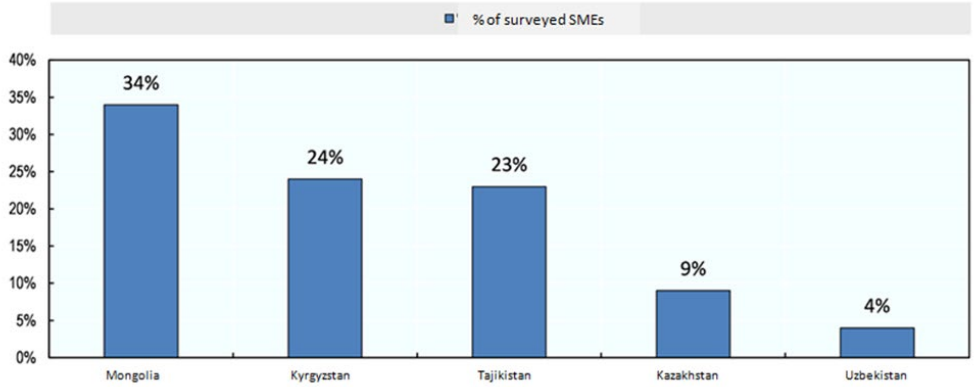

Figure 1. Share of SMEs in Central Asia for which access to finance is the main constraint

Specifically, small and medium-sized enterprises encounter heightened challenges related to elevated interest rates and stricter credit conditions. They are more prone to credit rationing compared to larger corporations, and their access to official funding sources is limited. On the supply side, financial institutions see lending to SMEs as riskier. The reasons for this are often the lack of transparency in SMEs and significant transaction costs, insufficient collateral, poor credit history and, in many cases, lack of knowledge about financial products. Thus, it is obvious that the currently used method for calculating BLT indices gives a correct result only if the distribution of lending volumes in the surveyed banks is equal or commensurate. If this condition is not met, then this technique gives an inaccurate, and in some cases an unreliable result.

Meanwhile, the correspondence of the BLT indices to the dynamics of macroeconomic statistics reflects the ability of banks to assess the situation in the non-financial sector by analysing the financial situation of existing and potential borrowers, which makes it possible to use the BLT indices as leading indicators reflecting the prospects for the situation development within the non-financial segment of the Kazakhstani economy. At the same time, neither fundamental research nor systematized practice-oriented research has been conducted on the methodology of indicators reflecting shifts in the conditions of bank lending concerning credit demand within the context of Kazakhstan, which determines the exceptional relevance of such studies.

Materials and Methods

Practice shows that when conducting credit operations, commercial banks of Kazakhstan are guided both by the norms of the National Bank and by independently developed internal documents. Credit institutions' own regulations on lending and credit risk management are often formal in nature and do not take into account the theoretical basis and accumulated global and domestic experience in this area [9].

At the same time, the current crisis, provoked by the pandemic (more precisely, its economic and social consequences), has exposed the imperfection of the modern philosophy of banking regulation. The processes taking place in the financial world in recent years have led to deterioration in risk assessment and softening of credit conditions [10].

The transition from bank loans to market financing had some important potentially dangerous features:

– a significant increase in liquidity due to global expansionary monetary policy, which seemed to rule out a shortage of it;

– complication of loan products and the sale of high-risk loans to specialized companies;

– a decrease in the interest of banks in the quality of loans as a result of the securitization process;

– increased uncertainty about the risks of structured lending products and investor behaviour in the event of a change in market conditions;

– lack of an effective system for early detection and prevention of bank defaults [3; 11].

Historically, crises in financial markets do not arise spontaneously, but, as a rule, are followed by booms. Booms, on the other hand, are the result of the market's underestimation of the degree of risk, which leads to ill-considered lending and ultimately to another crisis [12]. Also, structural changes in global banking activities affect the banking system of the CIS countries, in particular Kazakhstan, causing the need to reform not only the existing regulatory and supervisory mechanisms, but also internal banking processes in order to increase the reliability and the resilience of the banking system in the face of abrupt economic fluctuations, a decrease in liquidity and bankruptcy of banking institutions.

The objectively formed reality of the modern banking community dictates the need to rethink both theoretical and practical conceptual provisions for analysing the system of lending to legal entities and individuals, based on the definition of metrics tracking alterations in the conditions of bank lending and the level of credit demand.

At the same time, issues related to the choice of a strategy for the regional banking sector development, effective forms of its interaction with the non-financial sector of the economy, the population, have not received the necessary scientific and practical solutions and require further research.

This can be attributed to various factors, including the inadequacy of the methodological framework supporting the organization of the credit process and management of credit risks, the implementation mechanism of credit policies, and the lack of alignment across management

levels due to the absence of a unified concept for the advancement of the banking industry [13].

A number of general scientific and special methods, system-functional, statistical, structural, factorial, logical and graphical methods of analysis were used to solve the analysis task set in the study and determining the possibilities for improving the methodology measures indicating shifts in the terms of bank loans and fluctuations in credit demand.

Results and Discussion

The first quantitative assessment of non-price conditions of bank lending began to be carried out by the US Federal Reserve System, which since 1964 has been systematically conducting surveys of loan officers on lending conditions (Senior Loan Officer Opinion Survey on Bank Lending Practices – SLOOS) (usually quarterly, before meetings of the Committee on operations on open market; on a voluntary basis) [14].

The SLOOS questionnaire includes over 10 standard questions about changes in credit conditions, the reasons for these changes, and shifts in the demand for borrowed funds from borrowers. Most of the questions include a number of sub-questions (up to 14) on specific conditions of bank lending (maximum volume and term of loans, level of risk premiums, requirements for collateral), types of loans and categories of borrowers.

Moreover, the questionnaire includes additional questions related to current changes in the US credit market (for example, back in 2005, the questionnaire included a question about the impact of changes in US bankruptcy legislation on credit conditions, and in 2010 - on the conditions of lending to European companies) [15].

The sample of banks is compiled in such a way as to depict representatively the main regions and banking groups of the country. Banks in the SLOOS sample account for more than 60% of the assets of banks operating in the United States and more than 65% of loans to the non-financial sector [16].

The survey findings generate net percentage indexes reflecting either the overall tightening of credit conditions or specific credit conditions. These indexes are computed by comparing the number of banks that have tightened lending conditions to the number of banks that have eased lending conditions, using the following formula [17]:

$$I = \frac{N_{t_2} + N_{t_1} - N_{s_1} - N_{s_2}}{N_{t_2} + N_{t_1} + N_n + N_{s_1} + N_{s_2}} \times 100\%, \quad (1)$$

where I – tightening bank lending index; N_{t2} – the number of banks that responded to the question about changes in lending conditions "have significantly tightened"; N_{t1} – the number of banks that gave the answer "moderately tightened" when asked about changes in lending conditions; N_n – the number of banks that answered the question about changes in lending conditions the answer "almost did not change"; N_{s1} – the number of banks that gave the answer "moderately softened" to the question about changes in lending conditions; N_{s2} – the number of banks that responded to the question about the change in lending conditions, the answer "significantly softened."

Studies of the dynamics of indices of tightening of bank lending conditions have revealed a stable relationship between these indices and the dynamics of US gross domestic product: during periods of tightening of the BLT, there is a slowdown in economic growth, or recession, during periods of softening of the BLT, there is an acceleration of economic growth [18; 19].

The correlation between bank lending conditions (BLT) and economic growth has attracted the attention of macroeconomists and economic model developers. In particular, the International Monetary Fund (IMF) staff have devised the BLT (bank lending tightness) indicator for global economic models. This indicator is derived by calculating the average of the tightening lending conditions indices in the United States across four primary loan categories: loans to small non-financial companies, loans to large non-financial companies, mortgages, and loans for commercial real estate acquisition [20; 21].

Similar polls are also carried out by the Bank of England, the Bank of Canada, the European Central Bank (ECB), the Bank of Japan. Banks questioning the terms of lending is also carried out by such countries as Albania, Armenia, Hungary, Thailand, South Korea. A number of central banks (Bank of England, ECB) use diffusion indices in calculating BLT indices in accordance with the following formula [22]:

$$DI = \frac{N_{t_2} + 0.5 \times N_{t_1} - 0.5 \times N_{s_1} - N_{s_2}}{N_{t_2} + N_{t_1} + N_n + N_{s_1} + N_{s_2}} \times 100\%, \quad (2)$$

When calculating these indices, the answers "significantly tightened" or "significantly softened" have a more significant impact on the final value of the index than the answers "moderately tightened" or "moderately softened." This makes it possible to more correctly reflect the gradations of changes in the conditions of bank lending. However, this approach places higher demands on the initial information. In neighbouring Russia, the Bank of Russia has been conducting similar studies since 2009. To deepen the analysis of the regional component of the BLT, since 2010, the Bank of Russia has been conducting surveys at the regional level.

The survey encompassed a comprehensive representation of banks operating in Russia, constituting approximately 85% of the loan portfolio within the country's banking sector. On a quarterly basis, the main survey results are summarized in the BLT review published in the Bank of Russia Bulletin. In the Rostov region, 38 banks take part in the BLT survey, of which 11 are regional banks and 27 branches of banks located in other regions, which account for more than 74% of the regional loan portfolio [23].

The Bank of Russia survey uses a concise set of questions compared to the US Federal Reserve or the ECB. It includes three main questions. The first question asks respondents to assess the overall change in lending conditions for different borrower categories. The second question focuses on the specific changes in lending conditions, including loan size, term, interest rates, fees, creditworthiness requirements, collateral, and lending categories. The third question seeks to evaluate the influence of various factors on bank lending tightness. Respondents choose from five possible answers to

characterize the impact of each factor on lending conditions for different borrower categories.

In the Bank of Russia practice, both diffuse indices and "net percentage" indices are used. Diffuse indices are used to analyse the situation on the national credit market, and "net percentage" indices are used when comparing the Russian market with the credit markets of other countries and calculating the BLT indicator for Russia, defined as the arithmetic mean of the indexes reflecting alterations in credit conditions for all three borrower categories.

In Kazakhstan, according to banks, interest rates on their own credit products are still high enough for borrowers. According to banks, the high cost of funding and the existing level of credit risk do not allow banks to significantly reduce interest rates on their own products [7]. In order to maintain lending activities, banks are trying to replace their own loan products with government lending programs, for which the cost of funding is much lower.

The expenses associated with acquiring funding in tenge and the loan portfolio quality, according to banks, will continue to determine the terms of lending and the credit policy of banks in the coming periods. As a result, the availability of loans will remain limited for most borrowers, and the demand for loans from the corporate sector will not be met in the desired volume. Banks representatives note that the existing rigid system for assessing borrowers will allow them to control the main risks in the coming periods – the deterioration of the financial status of borrowers and the deterioration of the quality of collateral [8; 24].

The indicators tracking fluctuations in lending conditions and the level of loan demand represent a qualitative assessment of the situation in the credit market. Their value in the range from -5 to +5 is interpreted as no noticeable change.

In the conditions of a decrease in the solvency of the population and a high cost of funding, banks continue to pursue a tight credit policy in the sector of lending to individuals. A number of key lending conditions aimed at minimizing credit risks were tightened – the maximum loan maturities were reduced, there was an elevation in the criteria for collateral and the financial standing of borrowers. At the same time, in order to increase the client base, some banks increased lending limits and slightly reduced interest rates on consumer loans [23; 25].

The demand for consumer loans has slowed down, while for mortgage loans - has decreased. The factor of competition, according to the banks, will contribute to the gradual easing of conditions for consumer lending and the revival of demand in future periods. The factor of some uncertainty of the population in the ability to service debt, along with the high cost of long-term funding, will limit the demand for mortgages. At the same time, expectations for the launch of the Nurly Zher state mortgage lending program form the banks' optimistic forecasts regarding the growth in mortgage demand [23; 26].

During the COVID-19 pandemic, the availability of loans in both tenge and foreign currency for all categories of borrowers was significantly limited. To the greatest extent, this affected individuals on loans for consumer needs, small and medium-sized businesses, to the least extent - for individuals on loans for real estate financing (Figure 2) [23].

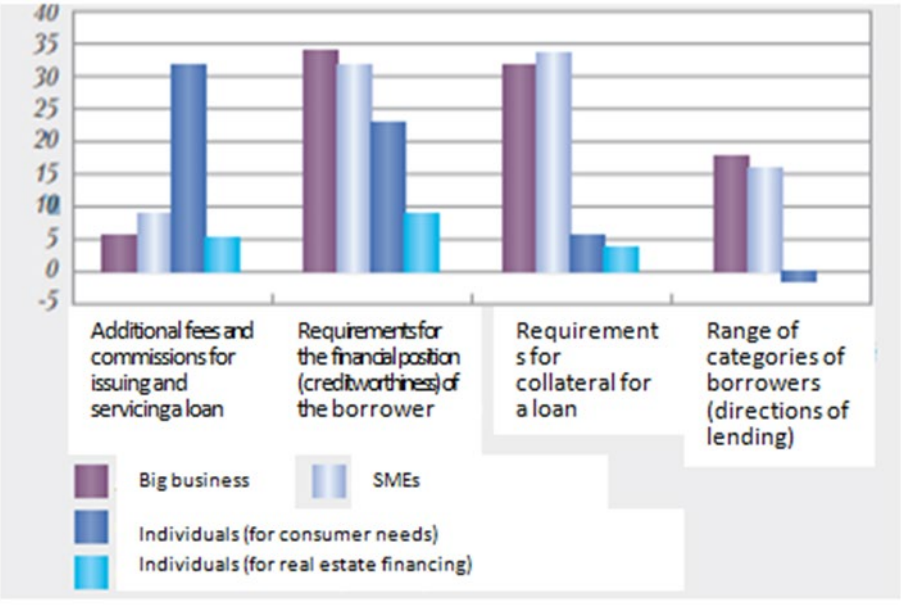

Figure 2. Distribution by types of lending in Kazakhstan

In Q3 2020, the net percentage change in demand from businesses was 34%. Some entrepreneurs in affected sectors gradually resumed activities and loan repayments

as quarantine measures weakened. However, the restaurant and hotel industry still faced loan servicing difficulties. The growth in lending demand during the quarter was primarily driven by deferred demand from SMEs and government programs. NPI indicators showed a demand increase of 41% for small enterprises and 38% for medium-sized enterprises.

For the fourth quarter of the current year, banks expect a slight growth in demand across all retail lending segments, including consumer loans. Consumer lending conditions are anticipated to soften in terms of credit limits and solvency requirements. The survey involved 24 second-tier banks, with an additional 10 banks interviewed. The National Bank conducts this survey on a quarterly basis to evaluate changes in the supply and demand of credit resources. Previously, the National Bank reported that Kazakhstani companies experienced an increase in accounts receivable (over 90 days) from 21.7% to 22.4% during the third quarter, while accounts payable rose from 21.2% to 21.9%. The financial regulator surveyed 2615 enterprises, including managers and financial department employees from various industries such as mining (189), manufacturing (704), construction (354), trade (920), transport and warehousing (248), and agriculture (200).

According to the survey, there have been changes in the situation regarding overdue debts outside the banking sector, specifically in mutual settlements with suppliers, contractors, customers, buyers, and others. The financial regulator observed that 10.6% of the participating enterprises face difficulties in recovering receivables. In the trade sector, this figure stands at 14.1%, in manufacturing - 11.2%, construction - 9.6%, transport and warehousing - 6%, mining - 5.3%, and agriculture - 5%. Additionally, the heads of Kazakhstani companies consider the state of the country's economy as the main obstacle to conducting business.

Despite the pandemic and related restrictive measures, in the overwhelming majority of regions of Kazakhstan, lending has been increasing at a double-digit rate since the beginning of the year. However, in the republic as a whole, bank loans to the economy for eight months grew by only 2.4%. The modesty of the nationwide dynamics is explained by a sharp decline in lending in Almaty. As of September 1, the volume of loans issued by Kazakh banks to the economy amounted to 14.19 trillion tenge, having increased by 2.4% since the beginning of the year.

For comparison, over the past five years, loans have grown by an average of 2.9% annually. The indicator is not high, therefore, even in the current, crisis year, banks' loans are growing faster than the average value for the previous five-year period (Figure 3). If the growth rates are maintained, the year-end growth will amount to 3.6% [23].

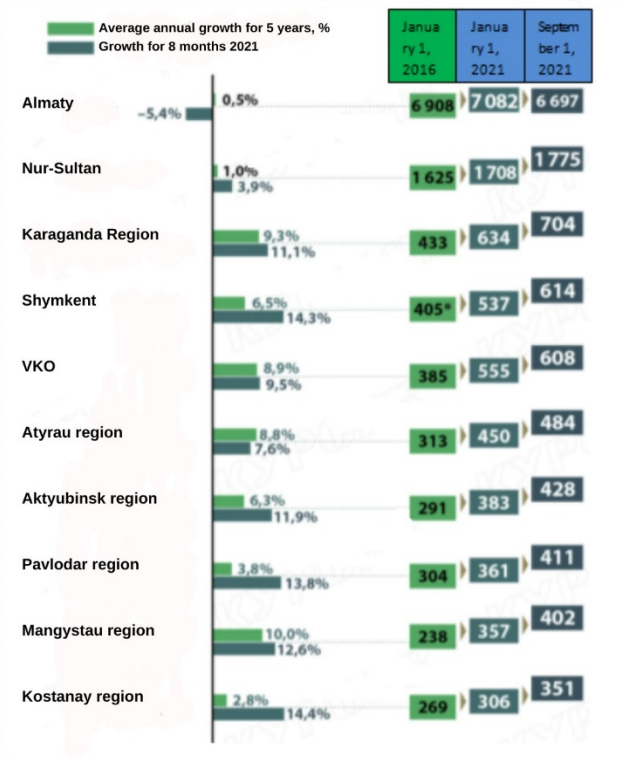

Figure 3. Bank loans by region, Kazakhstan

However, Almaty faced a significant decline, likely due to the impact of the pandemic. This data underscores the importance of regional factors in shaping credit demand and conditions in Kazakhstan. Additionally, the survey conducted by the National Bank of Kazakhstan shows similarities in the list of questions and the overall approach with surveys conducted in the Russian Federation, which is logical given the shared characteristics of post-Soviet economies.

However, if in Russia the monitoring of indexes reflecting alterations in bank lending conditions and the level of credit demand is carried out on a systemic macroeconomic basis, in Kazakhstan such an analysis is poorly conducted, while it is critically necessary to understand the state of the credit market and determine the actions of the regulator, if necessary.

Taking into account the above, the following mechanisms should be implemented in the formulas:

– a mechanism for filtering deliberately inaccurate data, which consists in accounting for responses to changes in the BLT by groups of borrowers, only if the credit institution actually carries out lending operations for these groups [27];

– accounting for each bank in question its weight in the credit market in the context of large corporate business,

small and medium-sized businesses and the population [28].

Credit institutions aim to maximize their profits by selecting and lending to clients with profitable projects and minimal risk of loan defaults. The conditions for bank lending are formed based on criteria for selecting client groups and issuing loans. The future loan volume and bank profit depend on defining and adapting these lending conditions in response to changes in the external environment (such as liquidity, competition, funding conditions, and the non-financial sector) [29; 30].

Conversely, businesses seeking short-term and long-term resources look for credit organizations that offer the most acceptable and economically favourable lending terms. If a bank significantly tightens its lending conditions compared to competitors, potential clients may turn to other banks with more favourable lending terms, impacting loan volume [31-33]. Consequently, the most attractive and acceptable lending terms for both customers and credit institutions are determined by a consensus on lending conditions, which is reflected in the volume of lending.

Several researchers have investigated the contemporary methodology for calculating indices that track variations in bank lending conditions and credit demand. For example, S. Kapounek et al. [3] analyse the factors influencing lending conditions in the EU and explore the roles of credit demand and supply in shaping these conditions. Their study investigates the impact of changes in credit demand and supply on interest rates and credit availability in EU countries. This research is significant as it enhances our understanding of lending dynamics in the EU, which is crucial for assessing financial system health, formulating effective monetary policies, and fostering economic growth.

In another study, L. Gambacorta and D. Marqués-Ibanez [2] investigate the bank lending channel and extract valuable insights from the lessons learned during the financial crisis. They examine how monetary policy measures and financial conditions influenced lending behaviour, such as interest rates, credit availability, and lending standards. By studying the bank lending channel during a period of financial distress, their research contributes to understanding its dynamics, challenges, and its potential as an instrument for economic stabilization and growth.

W.F. Bassett [10] focuses on exploring the relationship between bank lending standards and the macroeconomy. The study examines how changes in lending standards impact credit availability, loan issuance, and broader economic activity. Through empirical analysis and econometric modelling, W.F. Bassett assesses the effects of lending standards on macroeconomic variables such as investment, consumption, output, and employment. This research sheds light on the interplay between lending standards, credit conditions, and overall economic performance.

U. Albertazzi and D. Marchetti [13] investigate bank-firm relationships in the aftermath of the Lehman Brothers' collapse. They analyse credit supply dynamics, the phenomenon of flight to quality, and the practice of evergreening. The study examines how the financial crisis affected banks' lending decisions, their preference for safer borrowers, and the provision of additional credit to financially distressed firms. Understanding the dynamics of bank-firm relationships during financial distress is crucial for comprehending the implications for financial stability, credit allocation, and overall economic functioning.

Furthermore, the Asian Development Bank (ADB) [23] conducted research in 2021 that focuses on assessing the impact of the COVID-19 crisis on Kazakhstan's banking sector. The study examines the effects of the pandemic on financial stability, operational resilience, asset quality, liquidity, capital adequacy, and profitability of banks [34; 35]. Through empirical analysis and economic indicators, the research provides insights into the specific challenges faced by the banking sector in Kazakhstan. Additionally, it offers policy recommendations to mitigate adverse impacts and support the sector's recovery and resilience.

Conclusions

The development of economic systems in recent decades has revealed the emergence of novel patterns linked to more frequent external disruptions, market fluctuations in commodities and finance, decelerating economic growth, the loosening connection between material production and the financial sector, an overreliance on regulatory measures by monetary authorities to maintain financial stability and promote economic growth, among other factors. Efforts to stimulate the business activities of economic entities have proven insufficient, as evidenced by macroeconomic indicators of both developed and developing nations.

The persisting contradictions in their interactions highlight the need for a new paradigm in relationships among the key sectors of the economic system. Such a paradigm should be based on a scientifically grounded concept, with the analysis of the credit market serving as a crucial indicator of the state and prospects of the national economy. Amidst ongoing global instability, forecasts for the banking and real sectors in the near future do not instil optimism, underscoring the significance of a theoretical understanding of their interaction. This understanding should consider new economic realities and destabilizing factors.

Economic science at different periods of time tried to find answers to key questions of the development of economic systems, including with regard to the interaction of real sector and banking industry. Well-known theoretical concepts of classical dichotomy, financial capital, dynamic development, information asymmetry and many others have made a significant contribution to the development of this area of scientific knowledge and practice.

However, these theories do not explain the reasons for the current deepening of contradictions in the interaction of sectors, caused, among other things, by a mutable set of factors, the ambiguity of the results of regulatory impact and the aggravation of the asymmetry of the consequences of incentive and regulatory measures. At the same time, there is a need for a theoretical substantiation of the development of forms and mechanisms of interaction between sectors in the interests of national economies.

In turn, in order to provide reliable data for such a theoretical analysis, a reliable calculation of the corresponding indicators of the index dynamics is

necessary. The study presents an enhanced formula for computing the diffuse index, considering the unique characteristics of the credit market in the Commonwealth of Independent States (CIS) and specifically in Kazakhstan. The advantages of the proposed approach for calculating the BLT indices are in obtaining a more precise and noise-resistant result in comparison with the currently used method.

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Conflict of Interest
None.

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Сучасна методологія моніторингу змін умов кредитування банків та рівнів попиту на кредит

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Анотація

Актуальність. Актуальність статті полягає в тому, що кредитування, як важливий аспект діяльності банку, відіграє вирішальну роль як основне джерело інвестицій. Воно сприяє неперервному та прискореному процесу репродукції, підтримуючи економічні можливості підприємств, займає важливе місце як основна діяльність з генерування доходів для банку.

Мета. Метою цього дослідження є розробка сучасної методології моніторингу змін умов кредитування банків та рівнів попиту на кредит. Дослідження спрямоване на проведення порівняльної оцінки поточних практик аналізу коливань кредитування в банківських секторах Казахстану, Російської Федерації, США.

Методологія. Для вирішення завдання аналізу, викладеного в дослідженні, та виявлення можливостей покращення методології були використані різноманітні загальнонаукові методи. До них належать системно-функціональний, статистичний, структурний, факторний, логічний, графічний методи.

Результати. Показано, що зростання кредитування в Казахстані підтримується попитом в регіонах, що потребує використання високочутливої моделі для розрахунку показників, які відображають зміни умов кредитування та попит на кредити. Результати дослідження можуть бути застосовані для вирішення основних викликів у сфері кредитування в Казахстані та інших пострадянських країнах і покращення роботи кредитних установ, що особливо важливо після кризи COVID-19.

Висновки. Дослідження підкреслює критичну важливість модернізації методології моніторингу змін умов кредитування банків та рівнів попиту на кредит. Кредитування є важливим аспектом діяльності банку, який служить основним джерелом інвестицій та основною діяльністю з генерування доходів. Незважаючи на його значущість, повний потенціал банківського кредитування ще не був повністю досліджений. Це дослідження надає порівняльну оцінку сучасної практики аналізу коливань кредитування у банківських секторах Казахстану, Російської Федерації та США.

Ключові слова: попит на кредити; банк; фінансові ресурси; умови кредитування; регіон.