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ANALYTICAL APPROACHES TO BANKING SYSTEM STABILITY: A STUDY OF METHODS AND CURRENT STATE OF BANKS IN KAZAKHSTAN

The article presents methods of assessing the sustainable development of the banking system, which are highly relevant today, and the current analysis of indicators of financial stability indicators of second-tier banks of the Republic of Kazakhstan. The article examines various methods of assessing the stability of banking institutions, which play a crucial role in ensuring the stability of the financial system. The main focus is on the analysis of approaches and tools used to assess the financial stability of banks, such as stress testing, analysis of financial ratios and rating systems. A comparative analysis of the methods of stability analysis used in the modern banking sector is provided. The features, strengths and weaknesses, opportunities and risks of the CAMELS, BAKIS, PATROL, SREP methods of banking stability analysis thoroughly examined, along with a theoretical justification of their peculiarities. Additionally, the article conducts an analysis of the current state of commercial banks of the Republic of Kazakhstan using comparative analysis and comprehensive stability assessments to prevent financial crises and maintain public confidence in the banking sector. The authors also highlight the necessity of adapting assessment methods to reflect changes in the global economy and the evolving dynamics of the banking sector.

Key words: commercial banks, sustainable development concept, ESG, sustainability assessment, sustainable banks.

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Банк жүйесінің тұрақтылығын қамтамасыз етудің талдамалық тәсілдері: Қазақстандағы банктердің әдістері мен ағымдағы жай-күйін зерттеу

Мақалада бүгінгі таңда өте өзекті болып табылатын банк жүйесінің тұрақты дамуын бағалау әдістері және Қазақстан Республикасының екінші деңгейдегі банктерінің қаржылық тұрақтылық көрсеткіштерінің ағымдағы талдауы берілген. Мақалада қаржы жүйесінің тұрақтылығын қамтамасыз етуде шешуші рөл атқаратын банк мекемелерінің тұрақтылығын бағалаудың әртүрлі әдістері қарастырылған. Негізгі назар банктердің қаржылық тұрақтылығын бағалау үшін қолданылатын тәсілдер мен құралдарды талдауға аударылады, мысалы, стресс-тестілеу, қаржылық коэффициенттерді талдау және рейтинг жүйелері. Қазіргі банк секторында қолданылатын тұрақтылықты талдау әдістеріне салыстырмалы талдау қарастырылған. CAMELS, BAKIS, PATROL, SREP әдістерінің ерекшеліктері, күшті және әлсіз жақтары, мүмкіндіктері мен тәуекелдері, олардың ерекшеліктерін теориялық негіздеумен қатар банктік тұрақтылықты талдау әдістері жан-жақты зерттелді. Сонымен қатар, мақалада қаржылық дағдарыстардың алдын алу және халықтың банк секторына деген сенімін сақтау үшін салыстырмалы талдау мен тұрақтылықты кешенді бағалауды қолдана отырып, Қазақстан республикасының коммерциялық банктерінің қазіргі жағдайына талдау жасалады. Авторлар сонымен қатар әлемдік экономикадағы өзгерістерді және банк секторының дамып келе жатқан динамикасын көрсету үшін бағалау әдістерін бейімдеу қажеттілігін атап көрсетеді.

Түйін сөздер: коммерциялық банктер, тұрақты даму тұжырымдамасы, ESG, тұрақтылықты бағалау, тұрақты банктер.

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Аналитические подходы к обеспечению стабильности банковской системы: исследование методов и текущего состояния банков в Казахстане

В статье представлены методы оценки устойчивого развития банковской системы, которые сегодня весьма актуальны, и текущий анализ показателей финансовой устойчивости банков второго уровня Республики Казахстан. В статье рассматриваются различные методы оценки устойчивости банковских учреждений, которые играют решающую роль в обеспечении стабильности финансовой системы. Основное внимание уделяется анализу подходов и инструментов, используемых для оценки финансовой устойчивости банков, таких как стресс-тестирование, анализ финансовых коэффициентов и рейтинговых систем. Представлен сравнительный анализ методов анализа стабильности, используемых в современном банковском секторе. Подробно рассмотрены особенности, сильные и слабые стороны, возможности и риски методов анализа банковской стабильности CAMELS, BAKIS, PATROL, SREP, а также теоретическое обоснование их особенностей. Кроме того, в статье проводится анализ текущего состояния коммерческих банков Республики Казахстан с использованием сравнительного анализа и всесторонних оценок стабильности для предотвращения финансовых кризисов и поддержания доверия населения к банковскому сектору. Авторы также подчеркивают необходимость адаптации методов оценки с учетом изменений в мировой экономике и меняющейся динамики банковского сектора.

Ключевые слова: коммерческие банки, концепция устойчивого развития, ESG, оценка устойчивости, устойчивые банки.

Introduction

The stability and continuous growth of commercial banks are critical due to their direct impact on the national economy. However, the absence of a unified and comprehensive approach to assessing banking stability in the context of the transition to a digital economy presents a significant challenge. The increasing influence of digital transformation, the Fourth Industrial Revolution, and the complex interplay of internal and external variables have accelerated the need for adaptive assessment methodologies.

In the current economic landscape, characterized by rising inflation, geopolitical uncertainties, and emerging climate-related financial risks, ensuring the resilience of commercial banks is more relevant than ever. Credit institutions must rapidly adapt to these evolving conditions to maintain a stable competitive position and mitigate potential vulnerabilities.

A study published by researchers Dalke A. Yu., Svyatov S. A., and Ruziyeva E. A. analyzes the role of large banks in Kazakhstan in ensuring the country's financial stability. The results show that systemically important banks significantly impact the financial performance and sustainability of the economy (Dalke et al., 2023).

The analytical report from Ranking.kz examines the dynamics of deposit growth in the country's

largest banks. For instance, Bank RBK reported a monthly increase in deposits of 9.1%, indicating depositor trust and the financial institution's stability. According to Ranking.kz, over the past five years, the number of second-tier banks in Kazakhstan has decreased from 28 to 21. This points to a consolidation process in the banking sector aimed at enhancing the stability and reliability of financial institutions.

The National Bank of the Republic of Kazakhstan has developed a research Program defining strategic objectives in the field of macroeconomic policy, financial markets and new technologies. This highlights the regulator's commitment to exploring and implementing best practices to ensure the sustainable development of the banking sector.

Development Bank of Kazakhstan JSC also demonstrates its commitment to the principles of sustainable development and responsible investment, paying attention to the impact of its activities on the economy, society and the environment. This is an example of the implementation of ESG practices in the Kazakhstan's banking sector.

The primary objective of this study is to develop a comprehensive methodology for assessing the stability of commercial banks. To achieve this goal, the research sets forth the following key tasks:

- Identifying critical indicators and methodologies for evaluating banking stability;

- Analyzing the applicability of international assessment frameworks to the banking system of the Republic of Kazakhstan;

- Examining the impact of macroeconomic and regulatory factors on banking resilience;

- Proposing a balanced model that integrates qualitative and quantitative assessment criteria.

Commercial banks, as intermediaries of savings and investments, face a broad spectrum of risks that could lead to financial instability and insolvency. Therefore, assessing and ensuring their sustainable development has become a pressing concern.

The sustainable development of the banking sector requires a multidimensional approach that emphasizes business models aligned with sustainability principles. While sustainable banking practices may not directly influence the financial performance of banks, they shape ownership structures and longevity of financial services. By incorporating macroeconomic factors and state-specific characteristics, commercial banks can enhance their resilience by diversifying their traditional operations. However, there remains a lack of a standardized system of indicators and methodologies for assessing banking stability, necessitating further research and development in this area.

Literature review

As financial institutions, banks participate in business and investment activities that span the entire economic sector. As a result, they have sought to incorporate the principles of sustainable development outlined in the 1987 Brundtland Report into both their short-term and long-term business strategies. The pursuit of sustainable development within the banking system is closely tied to fostering a strong and supportive socio-economic environment. The primary goal is to implement fostering sustainable and innovative banking services that address environmental and social risks while meeting the needs of both current and future stakeholders. Therefore, in order to maintain ecological balance and preserve the environment for future generations, banks must incorporate sustainability science principles through their business plans and combine innovative services with sustainable development goals. The advancement of sustainability bank services is increasingly centered on the development of innovative financial strategies and business models that integrate digital finance, information security, reliable financial technologies, and the contributions of fintech companies (Ibrahim et al., 2019).

At both the regional and national levels, the stability of the banking system is a key indicator of economic security. The transition to a low-carbon economy and the acceleration of sustainable development are greatly aided by the banking industry (Report of the World Commission on Environment and Development, 2021; Report of the World Bank, 2021).

Today's modern banks execute a wide range of tasks, such as providing intermediary payments, participating in the stock and foreign exchange markets, offering settlement services, mobilizing temporarily accessible cash from individuals and legal entities, and distributing these funds on a remunerative, operational, and repayable basis (Bespalov et al., 2019; Cosma et al., 2020).

At present, a number of established studies are examining the various methods used to assess the sustainable development of banks. In a scientific study by Hussein and other authors, the method of constant value added was discussed as a method of analyzing the stability of banking activities. The approach focuses on all dimensions of sustainable development, aiming to conserve current energy resources while enhancing the value of assets for future generations. Furthermore, the authors highlight the necessity for auditors to receive advanced training in the environmental and social spheres (Hussein, 2023).

In their study, Fatih Ecer and Dragan Pamucar put forth a novel multidimensional system, designated as LOPCOW-DOBI, for evaluating the stability indicators of banks. It comprises an objective measurement method and a multidimensional approach to evaluating alternatives (Ecer, F. et al., 2022).

Semenova, Ivanova, and Vasilkina's works present a hierarchical analysis process for evaluating the sustainable development of commercial banks (Semenova, 2011).

Betul O. Dogan and Muhammet B. Kilic discuss the assessment of corporate sustainability indicators in the banking sector using an integrated reporting system and the gray relational analysis method based on an entropy approach (Betul, D. et al., 2022).

Researchers C. Obiora, O. Babamile, E. Opoku-Mansah, A. Frimpong reached the opinion that an increase in landing volumes leads to a rise in the emissions of dangerous substances by corporate entities in a comprehensive scientific study that looks at the functioning of banking and financial systems in 45 countries. On the other hand, the study finds that lower emissions are linked to higher interest rates on loans and savings. This suggests a complex interplay between financial system

activities and environmental impact, highlighting the potential environmental consequences of credit availability and cost (Obiora et al., 2020).

In the field of scientific research, a variety of methods for evaluating the stability of the banking sector are under consideration. He incorporated the Hellwig method of comparative analysis of the banking sector in Central and Eastern Europe into the methods. Paduszyńska and Lesiak (2022) employed a taxonomic approach utilizing indicators such as risk justification, asset quality, liquidity, and capitalization (Yehorycheva et al., 2022). Addition-

ally, the camel system for assessing financial stability (Agarkova, 2022) and stress testing were considered. Furthermore, the Financial Stability Index and the method of regulatory assessment of the stability of the banking system (Business Inform, 2023) were also evaluated. This approach incorporates sub-indicators such as liquidity, management efficiency, asset quality, profitability, and reliability to develop a comprehensive measure of bank stability (Rachita, 2023).

Methodology

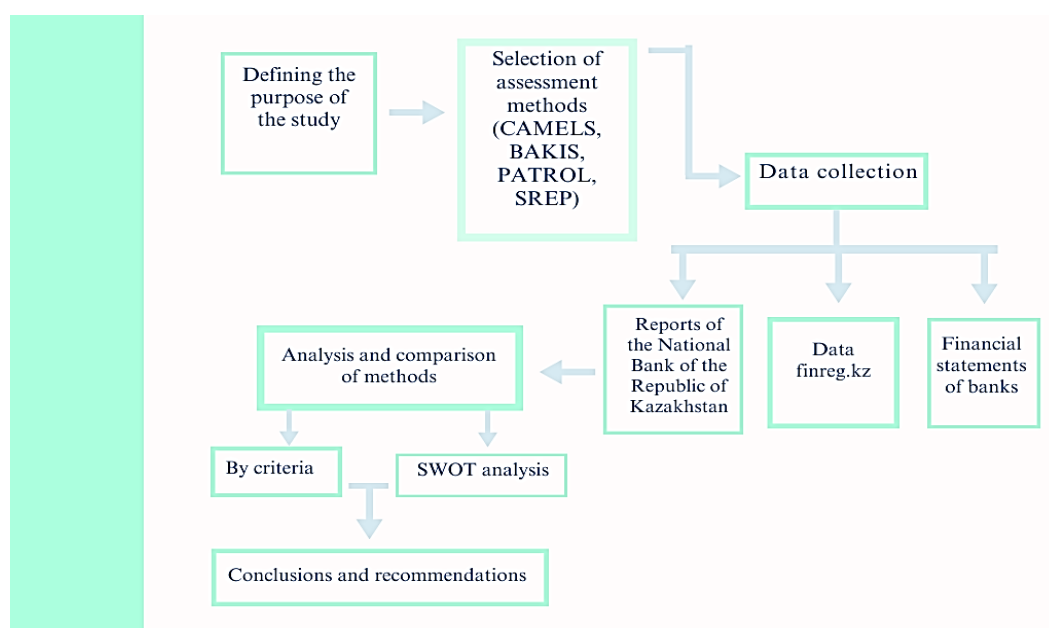


Figure 1 – Stages of the Research Methodology

Note – compiled by the author

In our research methodology, we substantiate the selection of the CAMELS, BAKIS, SREP, and PATROL methods based on a comprehensive set of criteria. The selection process considered the following key factors:

- International applicability;
- Adaptability to the banking system of the Republic of Kazakhstan;
- Balance between qualitative and quantitative indicators;
- Support from regulatory and financial institutions.

In light of these criteria, and based on reports from the National Bank of the Republic of Kazakhstan, the Agency for Financial Market Development and Regulation, as well as second-tier banks, along-

side Scopus-based research and stability analysis of Kazakhstani banks, the scope of these methods is as follows:

The SREP method has been implemented by the Agency for Financial Market Development and Regulation since 2022. It has been specifically adapted to the domestic banking system to assess the stability of second-tier banks.

The CAMELS method is utilized by the National Bank of Kazakhstan as an internationally recognized standard for monitoring the financial soundness of commercial banks.

The BAKIS and PATROL methods, widely applied in Germany and Italy, have been selected as alternative approaches to liquidity and risk management due to their proven effectiveness in these areas.

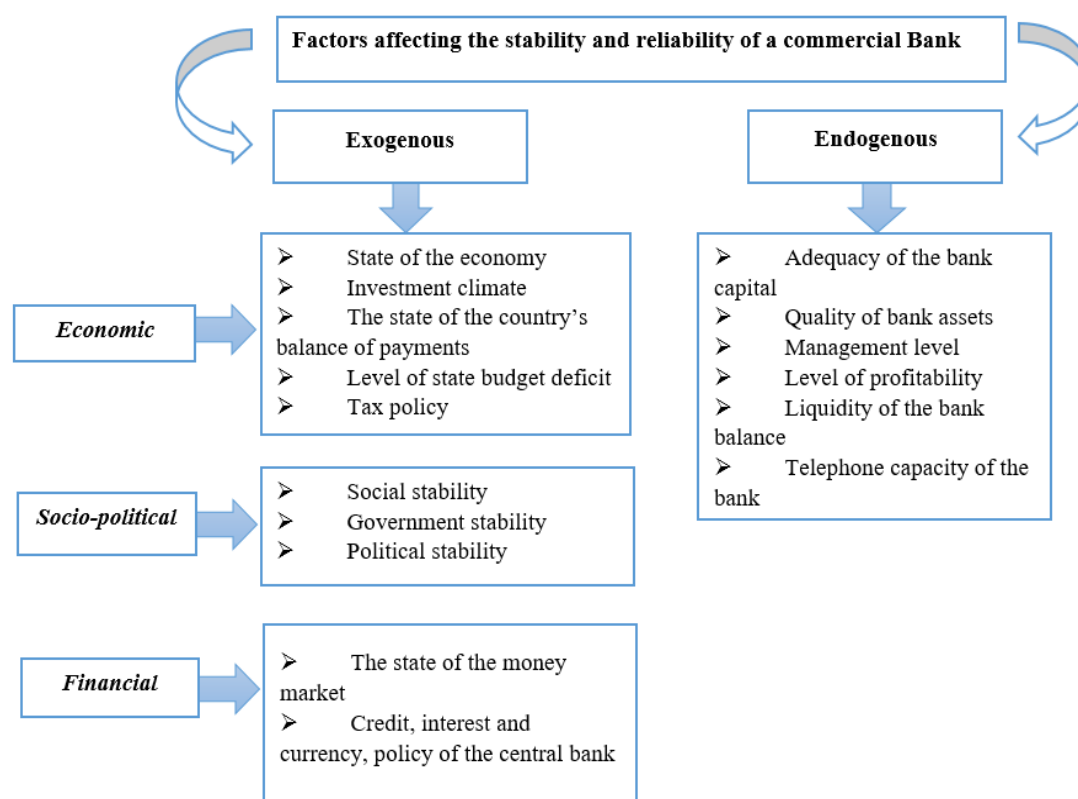


Figure 2 – Structure of influencing factors for stability of commercial banks

Note – compiled by the author based on source (Ostroumova, 2017)

Estimating the bank stability of the Bank of Kazakhstan

The assessment of bank stability in the Republic of Kazakhstan requires analyzing numerous indicators and factors to regulate institutions' ability to work effectively amongst economic variations and potential risks.

Key elements include:

Capital adequacy: A critical measure of financial stability evaluates the capital-to-asset ratio, which shows how well a bank could withstand possible losses. Institutions with larger capitalization levels are generally more resilient.

Credit portfolio quality: Assessing the credit portfolio helps to determine loan default risk. A lower percentage of non-performing loans, combined with stringent credit evaluation criteria, indicates greater stability.

- **Liquidity:** This indicator gauges a bank's capacity to fulfill its financial commitments. Institutions with high liquidity are able to handle short-term financial challenges.

- **Risk management:** Strong risk management procedures, such as mitigation and detection of credit, market, operational, and reputational risks, are essential to stability.

- **Profitability:** Representing prudent financial practices, profitability is a key indicator of financial health. Analyzing the sustainability of income streams is equally important.

- **Regulatory compliance:** Since compliance lowers exposure to financial risks, adherence to regulatory requirements enhances stability.

The broader macroeconomic environment is a significant aspect. The financial stability of second-tier banks can be greatly affected by inflation, GDP growth, interest and unemployment rates.

Table 1 shows a comparison of techniques and methods used to evaluate the stability of a second-tier bank. Notably, these methods mostly utilize quantitative metrics, with sporadic incorporation of qualitative elements. This limitation reduces the comprehensiveness and accuracy of assessing a bank's overall health.

Table 1 – Comparison of techniques for determining the stability of a commercial bank

Method	Quantitative indicators	Qualitative indicators	Expert assessment	Integral result indicator	Standart (recommended) values	Ranking of banks by group	An analysis rating
Foreign methods							
CAMELS (USA)	+	+	+	+	-	+	-
BAKIS (Germany)	+	-	-	-	+	+	-
PATROL (Italy)	+	-	-	-	+	+	-
SREP (Europe)	+	+	+	-	+	+	-
Note – compiled by the author based on the source (Semenova et al., 2021)							

Key factors like liquidity, capital, liabilities quality and assessed, and profitability are usually the focus of the examined approaches. Each method has distinct advantages and disadvantages. Their limited accessibility is a major issue because many of them rely on personal data, which limits their value for external stakeholders and a wider audience. Therefore, regulatory authorities are the main users of these techniques. As a result, these methods are primarily available to regulatory authorities (Semenova et al., 2021).

A sustainable extra value approach, financial stability indicator analysis, banking sector stress testing, assessment of banks' levels of financial stability and risks, and the regulatory and supervisory framework are some techniques for evaluating the bank's sustainable development. Other approaches include the use of complex indicators and indices, such as the Financial Stress Index (FSI) and the Financial Position Index (FCI) (Hussein, 2023; Betul, 2022).

Multidimensional systems and methods, including logarithmic objective measurement (LOPCOW) and Dombi Bonferroni (DOBI), which are based on percentage changes, can be employed to assess

the stability indicators of a bank (Ecer, F. et al., 2022). Furthermore, by taking into consideration five important dimensions- economic, social, environmental, and institutional – the hierarchy analysis approach may be used to assess the sustainable development of commercial banks.

Another innovative method, the exchange method, serves as a patented approach for evaluating e-banking services, aligning them with sustainable development goals. These methodologies provide comprehensive frameworks for integrating sustainability into the evaluation of banking practices.

Results and discussion

All of these factors are examined as part of the analysis of bank stability in the Republic of Kazakhstan, which also includes the state of the Kazakh financial market and its regulatory characteristics. The systematic conduct of such an analysis will allow for identifying potential weaknesses in the banking system and taking measures to eliminate them in order to ensure the stability and reliability of the financial sector.

Table 2 – Comparative SWOT analysis of bank stability analysing methods

Method	Strengths	Weaknesses	Opportunities	Threads
CAMELS	Comprehensive Analysis	Complexity and labor intensity	Integration with new technologies and adaptation to changing regulatory requirements	Changing the regulatory environment
	Wide application Standardization	Limited prospects Dependence on reporting		Competition with alternative methods
BAKIS	Attention to quantitative and qualitative indicators	Complexity Labor intensity	Use in combination with other methods Software development	The need for constant renewal
	Dynamic Update			Possible errors in the assessment

Continuation of the table

Method	Strengths	Weaknesses	Opportunities	Threads
PATROL	Emphasis on operational monitoring Integrated approach	Demanding big data High Requirements for IT infrastructure	Integration with AI and machine learning Adaptive flexibility	Technical risks: Data privacy
SREP	Have a clear and effective development strategy	Lack of long-term planning	Entering new markets	Strengthening competition
	Sufficient financial resources	Low adaptation to market changes	Product line expansion, attracting investment	Market instability, financial crises
	High-tech equipment and modern IT systems	Lack of investment in innovation	Partnership with technology companies	Strengthening environmental legislation
	Environmentally friendly production, positive reputation in terms of sustainable development Highly qualified employees	Outdated technologies that do not meet environmental standards Low level of environmental awareness	Introduction of environmentally friendly technologies Professional development of employees	Negative impact of climate change on production Decrease in productivity due
Note – compiled by the authors on the sources (Agarkova, L. et al., 2022)				

According to the table above, if we reveal the essence of the analysis of the listed methods: CAMELS

Strengths: Comprehensive analysis: includes six essential metrics that give an in-depth picture of the bank's financial health: capital, assets, management, profit, liquidity, and risk sensitivity.

Wide Spread: widely used by regulators and financial analysts worldwide. **Standardization:** a single methodology that allows you to compare different banks.

Weaknesses: Complexity and labor-intensive: considerable resources and time are required to collect and analyze data. **Prospective limitations:** stability is assessed mainly on the basis of historical data, which may not always accurately reflect future risks. **Reporting dependency:** the quality of the analysis depends on the accuracy of the data provided.

Opportunities: Adapting to changing regulatory requirements: the capacity to modify the process to comply with new norms and regulations.

Threats: Regulatory environment change: The technique may need to be significantly adjusted in response to new laws and regulations. **Competition from alternative methods:** the requirement for CAMELS may decline when new methods for evaluating bank stability are developed.

BAKIS

Strengths: Focus on both qualitative and quantitative indicators: contains a wide range of indicators, allowing a more in-depth analysis. **Adaptive**

Updates. The methodology enables assessments to be updated quickly as new data becomes available.

Weaknesses

- **High complexity:** The use of the methodology demands thorough knowledge and specialized experience.

- **Resource-intensive:** The process's high reliance on resources for data collection and processing contributes to high operational costs.

Opportunities:

- **Integration with complementary frameworks:** The methodology can be combined with CAMELS to provide a more effective assessment.

- **Automation through software development:** Creating particular applications enables to optimization of the evaluation process.

Threats

Technical risks: Depends heavily on the reliability of the IT framework and program

Data security issues: Present essential risks of data breaches and misuse.

SREP

Strengths

Strategic Focus: Define, long-term plan that promotes steady growth and development.

Resource availability: takes advantage of substantial financial resources and modern technologies.

Environmental responsibility: Fosters a positive reputation of the company as one that cares about the environment.

Human capital: Operational effectiveness is influenced by low turnover rates and trained staff.

Limitations

Strategic limitations: Struggles quickly adjusting to changing market conditions.

Resource gaps: Insufficient investment in technological upgrades and innovative projects.

Environmental standards: Depends on antiquated manufacturing techniques.

Workforce challenges: There is a lack of expertise in developing and rapidly changing sectors.

Characteristics:

Strategic Capability: Provides opportunities for entering international markets and diversifying products.

Resource: Focuses on attracting additional investments and forming partnerships with leading technology firms.

Environmental: Involves the adoption of advanced environmental technologies and active participation in environmental initiatives.

People: Aims to develop professional growth and incentive programs for employees.

Threats:

Strategic: Rising competition and economic volatility.

Resource: Increased costs of raw materials, which may lead to higher production expenses.

Environmental: Stricter environmental regulations and changes in climate conditions.

Personnel: High employee turnover and decreased motivation.

By utilizing various SWOT analysis techniques, it is possible to examine different facets of a company's operations in a more thorough and organized manner, enabling a more precise identification of strengths, weaknesses, opportunities, and threats.

Each method offers its own set of strengths, weaknesses, opportunities, and threats. To achieve a more comprehensive and precise evaluation of a bank's stability, it is recommended to combine these methods, considering their complementarity and individual advantages.

The Republic of Kazakhstan's agency for Financial Market Regulation and Development uses the SREP approach to evaluate second-tier banks.

Table 3 – Key directions for SREP methodology-based banking system assessment

Main directions	Responsibilities
Growth of assets of the banking sector due to an increase in the credit portfolio and the portfolio of government securities	Improving the supervision process according to the SREP methodology
The stability of banks to foreign economic shocks and the availability of sufficient capital and liquidity	Development and integration of ESQ principles
Conducting an annual full-scale supervisory assessment according to the SREP methodology	Reducing consumer lending risks
Positive changes in the increase in the number of banks with low risks	Restoration of liquidity to lending to the real sector economy
Observational stress testing with stable AQR and less conservative scenarios	IMF and World Bank assessment of Kazakhstan's financial sector
Development of climate stress testing for second-tier banks	Integration of Basel principles into the activities of the bank
Note – compiled by the author based on discussions on the supervisory policy and the main directions of the banking sector development. (Official Website of the Agency of the Republic of Kazakhstan for Regulation and Development of the Financial Market, 2024)	

The total quantity of highly liquid assets has grown by 20,7 % since 2022 (Official Website of the Agency of the Republic of Kazakhstan for Regulation and Development of the Financial Market), and many banks' liquidity ratios are higher than those allowed by law. Banks use excess liquidity

mainly to purchase government securities and to place funds in accounts with the National Bank. Despite geopolitical shocks, liquidity risks in many banks are considered quite moderate, with highly liquid assets accounting for one-third of banks' total assets.

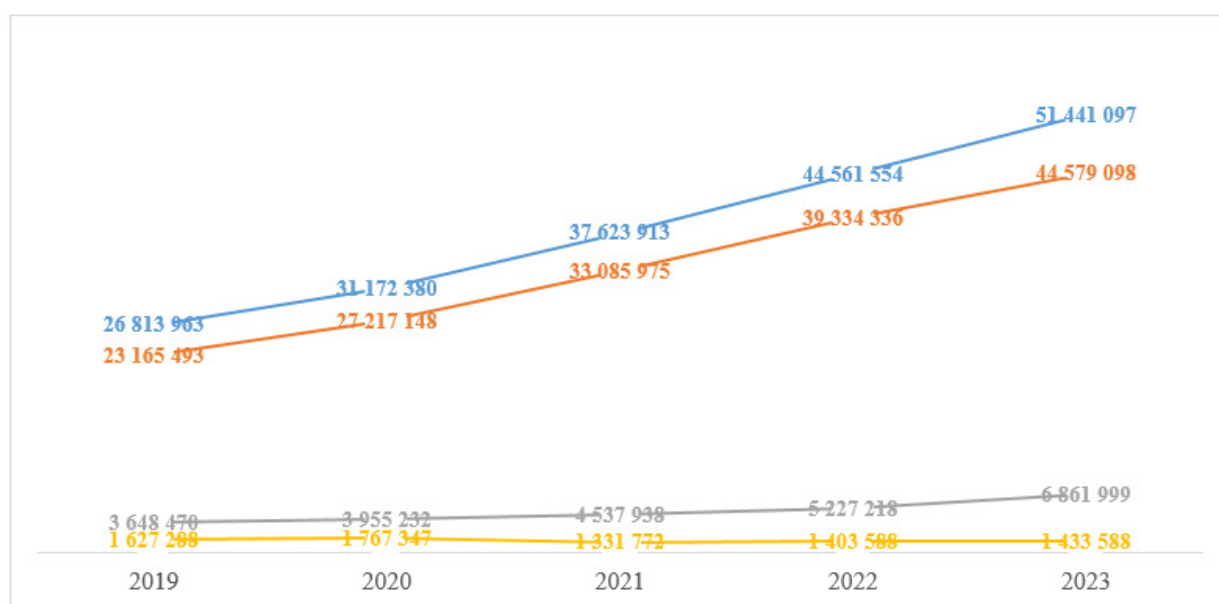


Figure 3 – Dynamics of financial indicators of STBs of the Republic of Kazakhstan, million tenge
 Note – compiled by reports on the financial performance of second-tier banks
 (Official website of the National Bank of Kazakhstan, 2024)

As can be seen from the figure above, if we analyse the main indicators of the banking sector, assets in 2019 will amount to млн 26,813,963 million. 51,441,097 million tenge in 2023. Liabilities will amount to KZT 23,165,493 million in 2019 and 44,579,098 million tenge in 2023. The growth of assets and liabilities reflects the expansion of the banking sector during this period. Equity capital in 2019 was KZT 3,648,470 million, compared to KZT 6,861,999 million in 2023. The authorised capital in 2021 was KZT 1,331,772 mln. In 2020, it was KZT 1,767,347 mln. It remained in of up to tenge and showed minor fluctuations. Excess of current income over current expenses: this figure is 726,803 million in 2022. of KZT 2,184,757 million in 2023. We can see that the tenge fluctuates. The largest increase was observed in 2023, which may indicate an improvement in banks' profitability.

Capital adequacy ratios:

The coefficients (k1-1), (k2-2) and (k2) varied with constants.

This shows that the banking sector is stable and has enough capital to cover risks.

The banking sector shows a significant increase in assets and liabilities over the last five years.

Banks' equity capital has also increased, which is a positive indicator. Capital adequacy ratios remain at a stable level, which indicates the financial stability of the banking sector.

These indicators allow us to analyse the development trends of the banking sector and assess its stability.

In 2023, amid the gradual stabilization of inflation and the subsequent easing of monetary policy, Kazakhstan's financial sector experienced favorable conditions, with no significant unforeseen external or internal disruptions. The national Bank was essential in protecting the stability of the financial system, working in tandem with the Government and the Agency for the regulation and development of the financial market.

The banking sector's financial health remained robust, supported by substantial liquidity reserves, adequate capitalization, and sustained growth in key performance indicators. By the end of 2023, bank assets surpassed 50 trillion tenge for the first time, reflecting an increase of 15.4% (6.9 trillion tenge), compared to an 18.4% rise in 2022. The loan portfolio grew to 29.9 trillion tenge, marking a 23.1% increase (5.6 trillion tenge), compared to a 20.1% growth (4.1 trillion tenge) in 2022.

Additionally, the corporate loan portfolio, including small and medium-sized enterprises (SMEs), expanded by 16.2% (1.7 trillion tenge) by the close of the year, further contributing to the sector's overall stability and growth trajectory (in 2022, 16.7% or 1.5 trillion tenge) and amounted to 12.5 trillion tenge.

According to the National Bank of the Republic of Kazakhstan, the top-10 second-tier banks in terms of assets were analyzed as of 01.05.2024.

This table shows the financial data of the top 10 banks in Kazakhstan, including their assets and liabilities, which are the basis for their net worth.

Table 4 – The financial indicators of second-tier banks as of 01.05.2024 (top 10 banks)

№	Name of the bank	Assets	Obligaions	Net assets
1	Halyk Savings Bank of Kazakhstan JSC	15,109,936,098	12,712,655,124	2,397,280,974
2	Kaspi bank JSC	6,845,732,231	5,991,317,720	854,414,511
3	Bank CenterCredit JSC	5,410,945,407	4,934,632,252,	476,313,155
4	Otbasy Bank JSC	4,016,441,949	3,379,140,380	637,301,569
5	Forte Bank JSC	3,670,567,601	3,188,122,426	482,445,175
6	First Heartland Jusan Bank JSC	2,918,572,877	2,184,904,664	733,668,213
7	Eurasian Bank JSC	2,676,676,461	2,319,041,745	357,634,716
8	Bank Freedom Finance Kazakhstan JSC	2,213,440,469	2,060,312,098	153,128,371
9	Bereke Bank JSC	2,108,877,862	1,941,770,453	167,107,409
10	Bank RBK Bank JSC	1,938605,349	1,754,335,965	184,269,384
Note – compiled by reports on the financial performance of second-tier banks (Official website of the National Bank of Kazakhstan, 2024)				

According to this, the largest banks by assets are
 - Halyk Savings Bank of Kazakhstan JSC: has the largest assets among all banks – 15.1 trillion tenge.

- Kaspi Bank JSC: in second place with 6.8 trillion tenge assets.

- Bank CenterCredit JSC: in third place with 5.4 trillion tenge assets.

For many banks, liabilities are a significant part of assets. For example, Halyk Savings Bank of Kazakhstan JSC has liabilities of 12.7 trillion tenge, which is about 84% of its assets. At Kaspi Bank JSC has liabilities account for about 84% of assets.

Net assets (the difference between assets and liabilities):

- Halyk Savings Bank of Kazakhstan JSC has net assets of about 2.4 trillion tenge.

- Kaspi Bank JSC – about 854 billion tenge.

- Bank CenterCredit JSC – about 476 billion tenge.

The difference between assets and liabilities of Halyk Savings Bank of Kazakhstan JSC is the largest, indicating its high financial stability.

The market leaders are several large banks in Kazakhstan, such as Halyk Savings Bank of Kazakhstan JSC and Kaspi JSC, which are well ahead of other banks in terms of assets and liabilities. The financial stability of some banks can be analyzed through the ratio of their assets to liabilities, where

high net assets reflect the stability of their strong financial position.

In 2023, the National Bank, the World Bank, and the Agency of the Republic of Kazakhstan for Financial Market Regulation and Development collaborated on the Financial Sector Assessment Program (FSAP) for Kazakhstan. The FSAP conducted a comprehensive evaluation of the financial sector, focusing on its stability, resilience to crisis, and adherence to international standards.

The FSAP encompassed several key areas, including:

Financial Security and Crisis Management: Evaluating the sector's preparedness and response capabilities.

Compliance with Basel Core Principles: Assessing adherence to the Basel Committee's Core Principles for Effective Banking Supervision.

Macropprudential Policy: Reviewing measures to mitigate systemic risks.

Climate Risk Analysis: Addressing the impact of climate-related risks on the financial sector.

Stock Market Development: Identifying opportunities and challenges, and capital market growth.

Following the FSAP, the National Bank and the World Bank issued targeted recommendations to address identified gaps and enhance the development of the financial sector. Key recommendations included aligning bank insolvency regulation

practices with international principles and standards. It was mentioned that the Government and the National Bank, if state support is necessary, have a role in the financial safety net, involving the Agency for regulations and development of the Financial market, and that the National bank believes it is essential to increase the government's participation in the regulatory process and exploring the use of state (budgetary) funds to support insolvency frameworks, the Government and the National Bank in case of need for state support, was noted. In particular, the National Bank considers it necessary to strengthen the participation of the government in the regulatory process.

Conclusion

The study systematized theoretical approaches to understanding the economic essence of sustainable development in second-tier banks and examined global methodologies for assessing bank stability. A methodological framework was developed to evaluate a bank's stability, incorporating five key dimensions: social, economic, environmental, institutional, and technological. Based on this framework, the following conclusions were drawn:

This study examines various methodologies for assessing the financial stability of banks, including CAMELS, BAKIS, PATROL, and SREP. Among these, the SREP method, currently employed by the Agency of the Republic of Kazakhstan for Regulation and Development of the Financial Market, has proven to be the most applicable to banks in Kazakhstan. This method encompasses a comprehensive evaluation of the banking system's stability, integrating macroeconomic analysis, stress testing, and adherence to international regulatory standards. Additionally, methodologies based on composite indicators and financial stability analysis, such as the Financial Stress Index (FSI) and the Financial Condition Index (FCI), have also demonstrated effectiveness in assessing financial resilience.

The objective of this study is to analyze the stability of Kazakhstan's banking sector by incorporating modern assessment methodologies and macroeconomic factors. Both quantitative and qualitative analytical approaches have been considered, including CAMELS, BAKIS, PATROL, and SREP. The

findings indicate that the SREP method is the most suitable, given its current implementation in Kazakhstan for evaluating banking stability.

Based on the research findings, the following recommendations have been formulated:

1. For Regulatory Authorities:

- Enhance supervision of banks' loan portfolios and develop mechanisms for early risk detection.
- Implement stress testing methodologies that account for climate-related and macroeconomic factors.
- Encourage credit diversification and reduce reliance on government securities investments.
- Strengthen insolvency regulation frameworks in alignment with international best practices.

2. For Banking Institutions:

- Improve risk management frameworks by integrating digital technologies and artificial intelligence.
- Develop sustainable financial instruments, including green bonds and ESG-oriented lending practices.
- Enhance transparency and corporate governance structures to reinforce investor and depositor confidence.
- Leverage advanced methodologies, such as integrated indicators and artificial intelligence, to enhance financial risk forecasting and resilience analysis.

An analysis of financial indicators reveals that Kazakhstan's banking sector remains stable, exhibiting sustained asset growth, robust liquidity levels, and adequate capitalization. Nevertheless, potential risks persist, particularly in relation to loan portfolio quality, liquidity management, and macroeconomic fluctuations.

To ensure long-term financial stability, it is essential to enhance banking regulations, diversify credit portfolios, and optimize risk management strategies. The adoption of innovative financial technologies and the alignment of domestic banking practices with international regulatory standards will enable Kazakhstan's banking sector to reinforce its resilience amid global financial uncertainties.

Future research may explore alternative methods for assessing the sustainability of second-tier banks.

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