ENHANCING THE METHODS USED TO EVALUATE THE COMPETITIVENESS OF COMMERCIAL BANKS

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ABSTRACT

This study aims to enhance the evaluation methods for assessing the competitiveness of commercial banks in Kazakhstan by analyzing macroprudential policies, proposing approaches to evaluate financial strength, and considering system-level properties. The study employs a systematic approach, including conceptualization, theoretical investigation, acknowledgment of limitations, methodological development, data analysis, a conclusion, and recommendations based on findings. The text explores theoretical approaches to defining stability, acknowledges limitations, and takes a systemic perspective on the banking sector using historical analysis. A stability coefficient is introduced to evaluate short-term and long-term financial resilience. The relationship between financial stability and sustainability, competitive dynamics, and systemic properties for monitoring soundness is examined. The approach provides new knowledge regarding Kazakhstan's banking system. The analysis of macroprudential policies and the integration of local and international research provide insights to improve evaluation methods. Ensuring the financial soundness of banks is crucial for Kazakhstan's economic welfare. The study's focus on a systematic monitoring approach to maintain stability highlights its relevance for policymakers in addressing imbalances.

Keywords: financial sustainability; stability; efficiency; macroeconomics; management

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INTRODUCTION

A country's banking system reacts very strongly to any negative influences from the external environment (social, economic, or environmental) (Schmidt and Hryckiewicz, 2006). Such influences generally contribute to the deterioration of the system, preventing it from sustaining itself. This, in turn, leads to a decline in the country's macroeconomic performance and overall competitiveness (Hanoon et al., 2020). Therefore, ensuring the financial soundness of the banking system is currently the most important economic policy objective applicable to all countries (Ghassan and Fachin, 2016). To effectively address the identified imbalances in the banking system, it is vital to develop and implement a comprehensive approach to monitoring its financial stability (Young, 2020), one based on key indicators, and in which organizational and economic support play a crucial role in making the process more effective (Vimrová, 2015). The concept of financial stability emerged as a response to the practical challenges and identification of financial crises that governments and central banks have faced throughout history (Pham et al., 2019).

The liberalization of capital flows, the rapid growth of the foreign-driven financial services market, and ongoing economic globalization have highlighted the risks associated with financial imbalances and the potential for rapid financial crisis (Alieksieiev & Mazur, 2022). Hence, there is an increased focus on achieving financial sustainability, maintaining stable financial relationships across all sectors of the economy, and reducing the likelihood of systemic financial failures. In turn, quantifying the level of financial stability is a challenging task due to its broad scope and complex linkages between the financial sector and the real economy, as well as financial linkages between different sectors. Developing appropriate economic policy measures requires a comprehensive approach (Makohon & Adamenko, 2023; Prymostka & Kysil 2023). Maintaining financial stability in the banking system, therefore, is crucial for economic welfare, and so monitoring its performance, implementing institutional and economic support, and adopting an integrated approach are necessary to address imbalances and ensure a stable financial environment (Thuy and Duong, 2021; Saif-Alyousfi et al., 2020). All of this suggests, then, that this study is relevant for improving existing methods in assessing the state of the financial system and the competitiveness of banks.

According to statistics, as of July 2021, Kazakhstan had 23 commercial banks, with the five largest banks accounting for over 60% of the sector (International Trade Administration, 2022). Many scholars have studied the peculiarities of the functioning of the banking system in Kazakhstan. A.O. Zhagyparova et al. (2021) described the difficulties that the system faced during the 2008 financial crisis and how it could be improved. Some of the more general features of the development of the country's economy were analyzed by O.F. Demenko (2021), who stressed the need for changes in the country's long-term economic growth model. A.P. Salina et al. (2021) examined the financial sustainability of Kazakhstan's banking sector through a cluster analysis, pointing out the internal changes that took place between 2008 and 2014. The structure of the country's banking system and its existing problems, on the other hand, were studied by K. Kurbanova et al. (2020). The impact and role of financial stability in the development of individual areas of the economy were assessed in a study by S. Mukhtarov et al. (2020).

The purpose of the study is to improve methods for evaluating the competitiveness of commercial banks by identifying and analyzing macroprudential policy instruments, proposing various approaches to assess financial strength, and considering system-level properties for a comprehensive assessment of financial soundness. The study's novelty lies in its unique approach to assessing bank competitiveness within the context of financial sustainability, its comprehensive analysis of macroprudential policy instruments, and its integration of local and international research.

LITERATURE REVIEW

A commercial bank is a financial institution that accepts deposits, offers checking account services, makes various loans and offers basic financial products like certificates of deposit (CDs) and savings accounts to individuals and small businesses (Ahmad et al., 2019; Hübenbecker, 2023). Its balance sheet consists of assets, such as loans and securities, and
liabilities, such as deposits and borrowings. The neoclassical theory of banks states that banks are financial intermediaries that channel funds from savers to borrowers. The Austrian theory of banks suggests that banks create money through the process of credit creation (Qi et al., 2023). The Marxist theory of banks, on the other hand, claims that banks are part of the capitalist system and serve to maintain the power of the ruling class. There are also different banking systems, such as 100% reserve banking and fractional reserve banking (Hu & Chen, 2023).

Macropudential policies aim to prevent systemic risks within the financial system, such as those posed by excessive leverage or maturity mismatches. They are particularly relevant when evaluating the competitiveness of commercial banks because they focus on maintaining overall financial stability rather than just the performance of individual banks (Belkhir et al., 2022). By implementing macroprudential policies, regulators can reduce the likelihood of future financial instability, thereby promoting long-term competitiveness among banks. Examples of macroprudential policies include limits on lending to specific sectors, minimum capital requirements, and restrictions on certain types of transactions (Davis et al., 2022). These policies are designed to limit potential losses and protect the broader economy from the negative effects of any single institution failing.

Assessing the financial strength of banks and ensuring the security of the banking system demands a multifaceted approach. This entails evaluating capital adequacy ratios, asset quality, liquidity, stress testing, earnings, and risk management practices. Prudential and supervisory frameworks play a key role in this assessment, with findings from Basel Core Principles (BCP) assessments providing valuable insights (Medeiros Garcia & de Mendonça, 2023). Factors like asset quality, capital, profitability determinants, and the effectiveness of financial sector assessments are essential in this evaluation. Quantitative analysis of Financial Soundness Indicators (FSIs) combined with information from BCP assessments can aid in interpreting FSIs effectively (Chernukh et al., 2023). The capital adequacy ratio (CAR), asset quality, liquidity ratios, and risk management practices are also crucial metrics for evaluating a bank’s resilience, all of which can be influenced by the bank’s exposure to the property market (Siagian, 2023). Property-related policies must align with regulatory frameworks, encompassing guidelines on risk management, compliance, and stress testing tailored to property market dynamics (Petchenko et al., 2023).

Methods used to evaluate commercial banks' competitiveness encompass various approaches focusing on financial performance, innovation, and technology. Financial indicator analysis involves assessing indicators like return on equity and assets to gauge a bank's efficiency (Dong et al., 2020). Data Envelopment Analysis (DEA) is a non-parametric method comparing input (e.g., assets) to output (e.g., loans) factors for efficiency evaluation (Dellnitz et al., 2021). Additionally, the integration of innovation and technology is crucial for improvements in commercial banks’ sustainable efficiency. This includes leveraging financial technology for transformation and development, as well as assessing the impact of digitalization on efficiency through investments in science and technology. Evaluating competitiveness may also involve frameworks like the G-CAMELS system, which combines factor analysis, entropy methods, and dynamic evaluations to assess banks’ competitive levels based on various criteria (Guan et al., 2019).

Commercial banks are essential financial institutions that provide services to individuals and businesses, including loans and savings accounts. Different theories explain their role, and they can operate under various banking systems. Commercial banking differs from retail banking, and assessing their efficiency and competitiveness is crucial. Ongoing research explores diverse aspects of bank competition, including risk, digitalization, and social impact in microfinance institutions.

**METHODOLOGY**

The methodology employed in this study aims to comprehensively understand financial sustainability within the banking sector. It follows a systematic approach, meticulously designed to offer a holistic perspective on this multifaceted subject. The study begins by establishing a robust conceptual framework for financial sustainability, emphasizing its dynamic and interconnected nature within the broader economic context. This framework serves as the foundation for a nuanced exploration of the
factors and dynamics influencing financial sustainability.

In delving into various theoretical approaches, the study seeks to define financial stability within the banking system. These approaches include identifying and correcting imbalances, fortifying the system's resilience against external shocks, safeguarding the stability of individual banks, and analyzing the interplay among the banking, financial, and macroeconomic systems. Acknowledging its limitations, the study openly recognizes its reliance on theoretical constructs and the absence of empirical evidence. This recognition underscores the necessity for further research, emphasizing the importance of conducting a thorough examination of the banking sector. Additionally, it highlights the need to analyze subtle distinctions within the terminology associated with financial sustainability.

Adopting a systemic approach, the study views the banking industry as part of a larger, interconnected web of influential factors and competitive dynamics. It aims to offer insights into the current state of the banking system through rigorous analysis, anchoring conclusions in empirical evidence using the historical method. Prioritizing clarity and neutrality in language, the study explains complex technical terms when introduced and avoids ornate or figurative expressions, maintaining a formal tone throughout and eschewing colloquialisms or contractions while utilizing hedging to uphold a neutral standpoint.

The data analysis process involves qualitative techniques, including thematic analysis and pattern recognition, to interpret and synthesize information obtained from literature reviews and theoretical investigations. Quantitative data, where available, is subjected to descriptive statistical analysis to identify trends and patterns. Throughout the study, clarity and neutrality in language are prioritized, with complex technical terms explained when introduced and a formal tone maintained. Here, too, colloquialisms and ornate expressions are avoided, and hedging is used to uphold a neutral standpoint.

In practice, the study progresses through distinct stages: conceptualization, theoretical investigations, acknowledgment of limitations, methodological approach, data analysis, concluding, and offering recommendations based on findings. This structured approach provides a comprehensive framework for understanding financial resilience in the banking sector.

RESULTS

In general, the category "financial soundness of a bank" reflects the financial condition of a banking institution under the prevailing conditions, whereby several main components can be identified: the socio-political situation in the country, the general economic condition of the country, the state of the financial market; and the internal soundness of the banking institution. Financial soundness can be seen as a characteristic of its state, in which a bank can withstand financial imbalances in its environment and ensure smooth functioning and strategic development. There are similarities in the treatment of the "financial soundness of the banking system" and the "financial soundness of a bank". However, the main difference lies in their functional nature, as the banking system and the bank as a financial institution have different sets of functions that they perform. In addition, it is equally important to consider the differences in the internal organization of the banking system and banks when explaining these respective concepts, which is highlighted in the definition of “financial soundness of the banking system,” as quoted.

The relationship between the concepts of ‘financial stability' and ‘financial sustainability' is also a subject of debate. Researchers follow the position that financial sustainability characterizes the equilibrium state of the system, maintaining its resilience in the face of negative financial and real shocks, while financial stability is simply a tendency to balance in the absence of shocks. The first approach raises doubts about the feasibility of measuring financial sustainability. The question arises as to the choice of indicators that specifically assess the propensity to return to equilibrium. The second approach, which is also subject to criticism, does not reflect a fundamental difference between these categories since the term “financial soundness of a bank", as already noted, is widely used in modern research. Suggestions to define the financial stability of the banking system based on the soundness of financial institutions partially agree with the second approach. However, to distinguish between the concepts of “financial stability” and “financial sustainability",
the authors focus more on their distinction according to temporal criteria.

A banking system is said to be financially stable over a given period $t_2$ if the central bank and the system banks of a country are financially stable over several distinct periods $t_1$ (where $t_2$ is the set of periods $t_1$). The state of stability can also be seen as a corridor within which the trajectory of the system lies. Studying the stability of banks in arbitrary periods (e.g., $t_1-t_7$, $t_8-t_13$), a set of positive estimates of stability in different periods, can determine the stability of the banking system. Based on this, it is concluded that system stability consists of a set of states of objects within the system.

The distinction between “financial stability” and “financial soundness” is based on a time factor. Financial stability refers to the short-term state of the banking sector in which banks can use their resources and perform their functions under market conditions with minimal risk, considering both external and internal destabilizing factors. On the other hand, financial stability, as opposed to financial stability, implies that there are no obstacles to the long-term development of the banking sector and its effective functioning as a financial intermediary. While financial stability focuses on a bank’s ability to withstand current internal and external destabilizing factors, financial sustainability covers a longer period of operation and the associated dynamics of development. Hence, bank resilience is only one aspect that affects its overall stability, and the term “bank stability over time” can be used to describe it. The proposed estimates for determining the level of financial stability, whether for individual banks, groups of banks, or enterprises, are based on this understanding. While the study primarily looks at long-term estimates for individual entities, the approaches can be adapted to banking system regulatory frameworks. The difference lies in the use of descriptive statistical tools; in particular, measures of variation in the data sample.

The stability measure, or the coefficient of stability, is calculated as the difference between one and the coefficient of variation, considering the gradation of possible values of the latter (less than 0.1% indicates weak change, 0.1% to 0.2% indicates moderate change, 0.2% to 0.4% indicates strong change, and over 0.4% indicates very strong change). A stable system would have a stability coefficient equal to one or as close to one as possible. A modified representation of the range of variation of the series is used to assess the overall financial soundness of a bank. This range is defined as the difference between the initial and final values of the corresponding indicator of banking activity over the time interval relative to the average value of the studied series. The range of variation can take negative values (indicating conditionally stable bank functioning), positive values (indicating stable positive bank development), or equal to zero (indicating stable performance of the bank’s main functions). In international financial institutions (which include banks), the financial stability of a bank is understood as the effective ability to allocate financial resources to ensure financial risk management (which is what banks do). Consequently, sustainability is also assessed through the balance between the sources of the flows of attracted financial resources, which are basic for the functioning of the bank, and the flows determining the directions of use of such resources.

The analysis of the aggregate financial soundness of the banking system allows us to identify three pronounced periods reflecting changes in its level. The first period, which lasted until the end of 2009, was characterized by the economic crisis. The second period, from 2009 to 2013, was characterized by efforts to stabilize the banking system. By the end of 2013, however, the system had entered a recessionary phase due to insufficient attention to structural and institutional changes in the banking system in the previous phase. This led to a decline in capital adequacy and bank efficiency (Figure 1).

Figure 1 outlines the competitive strategies within the banking industry, bifurcated into non-price and price competition. The non-price competition encompasses efforts to bolster brand reputation, personalize services to individual client demands, broaden service networks, integrate advanced technology, and enhance the qualifications of banking personnel. Conversely, price competition splits into open and closed approaches; open price competition is characterized by transparent pricing strategies, such as offering lower loan rates, higher rates on deposits, or decreased service fees. Closed price competition, on the other hand, involves targeted, often covert, discounting and promotional deals aimed at specific customer niches. Banks typically employ a combination of
these strategies to distinguish their services, cater to diverse customer needs, and sustain a competitive stance in the dynamic financial marketplace.

When looking at the relationship between the concepts of “financial stability” and “financial soundness”, it is clear from the academic opinion that the former encompasses changes in the underlying parameters of the banking system over a longer period compared to financial soundness. This raises questions about the interpretation of short-term assessments of financial stability. An example of this approach is analytical studies, in which the level of the financial soundness of the banking system is assessed and analyzed annually.

Consideration of the time element allows a comprehensive understanding of the relationship between the types of financial soundness described above and provides a logical basis for their correlation. Both concepts relate to the ability of the banking system to perform its functions, to withstand shocks, to recover from imbalances, and to return to a state of equilibrium. In terms of the distinction between financial resilience and financial sustainability, several conclusions can be drawn. First, in the short run (looking at data for a given year), the financial soundness of the banking system is determined by its level of financial sustainability. Second, the assessment of financial sustainability, in the long run, involves considering the states of financial sustainability over specific periods with a focus on the dynamic nature of financial sustainability in the functioning and development of the banking system.

The different approaches to measuring financial stability in the banking system can also be categorized depending on how the results of the assessment are interpreted, with the views of scholars differing depending on whether short-term or long-term periods are considered. This study recognizes the complexity of quantifying the state of the banking system and emphasizes that a single indicator cannot capture all changes. The presence of chain reaction effects and nonlinear relationships between different elements of the financial system further complicates the prediction of financial crises. The study concludes that a comprehensive assessment of
financial system stability requires a systemic approach and a global perspective.

The purpose and function of a system are critical to its identification. Therefore, it is necessary to analyze the tools for assessing the financial stability of a banking system based on identifying factors such as the structure of elements, linkages, environment, and function. Data aggregation is proposed as a criterion for differentiating existing approaches, as looking at individual indicators may be less informative. Regarding the assessment of the financial soundness of a banking system, the methodology commonly used is that of the International Monetary Fund, which includes indicators related to capital adequacy, asset quality, profitability, liquidity and sensitivity to market risk. Other approaches may choose assessment parameters based on a synthesis of the academic literature or the researchers’ considerations.

In addition, it should be noted that only some of the approaches discussed include data aggregation. For example, one of the proposed approaches classifies the levels of the aggregate indicator of financial stability of the banking system (AIFS) as follows: critical level (AIFS<0.2), unstable level (0.2<AIFS<0.4), satisfactory with high-risk level (0.4<AIFS<0.6), moderate level (0.6<AIFS<0.8), and stable level (0.8<AIFS<1).

This estimation scale was developed based on the division of indicators into four equal groups ranked in descending order of weight: 0.000-0.121 – the unstable condition of the banking system; 0.122-0.378 – a threat to stability; 0.379-0.667 – the average condition of stability; 0.668-1 corresponds to the stable condition of the banking system. According to the methodology, an aggregate value of the indicator below unity indicates instability of monetary policy, while a value above unity indicates positive trends. An interval scale has been set to determine the qualitative levels of the financial stability indicator by the Golden Ratio method: range (0; 0.382] – low stability; (0.382; 0.618] – medium stability; (0.618; 1] – high stability.

It is important to note, however, that none of the approaches discussed cover all aspects of the functioning of the banking system as a complex systemic entity. For example, the analytical tools used to assess financial soundness cover exclusively internal aspects of the state of the system. The indicators suggested by researchers are universal and applicable to evaluating both overall systemic soundness and individual banks. Consequently, the use of analytical support developed based on their proposals does not provide a comprehensive view of the level of systemic destabilization (Figure 2).

![Figure 2: Peculiarities of bank competition](source: compiled by the authors.)
Figure 2 illustrates the multifaceted nature of banking competition, highlighting the diverse roles banks fulfill across different economic sectors. Banks not only provide essential services to businesses, such as loans and cash management but also serve as intermediaries in consumer transactions, playing a pivotal role in payment processing and financial advising. Their involvement extends to financial markets through investment banking and asset management and to real estate through financing and mortgage offerings.

It is important to note that there are two main types of bank competition: perfect competition and imperfect competition. Perfect competition is a theoretical model where all market participants have perfect information, and there are no barriers to entry or exit. On the other hand, imperfect competition characterizes the real-world banking industry, where factors such as market power, asymmetric information, and behavioral biases exist, leading to non-competitive outcomes. E.A. Ghossoub (2023) provided two opposing views on the relationship between bank competition and financial stability, with some arguing that higher competition leads to lower markups and encourages bank risk-taking, while others believe that banking market concentration contributes to greater financial stability. The threat of entry and exit determines the behavior of banks in contestable markets, and banks are pressured to behave competitively in an industry with low barriers to entry and exit. Measuring and assessing bank competition is essential for ensuring the efficiency, stability, and maximization of social welfare in the banking sector.

From the systematic approach to assessing economic phenomena, the research developments are of practical interest. The researchers' consideration of individual indicators of financial vulnerability and economic climate allows them to draw separate conclusions regarding the internal environment of the banking system, its functional load, and its relationship with the external environment (in particular, Kazakhstan's main counterparties). However, the indicators of the latter group are more suitable precisely for predicting crisis trends (precautionary indicators of the possible onset of a crisis) than their presence. Approaches that discuss the relationship between financial stability and financial sustainability are pertinent. By comparing the various proposals for assessment indicators, commonalities and significant differences can be identified. The two approaches presented offer a comprehensive set of indicators for assessing the performance of the banking system, both at the macroeconomic level and in its domestic environment. Notably, the methodology for assessing financial soundness includes indicators related to bank refinancing, reflecting internal linkages within the banking system. The level of bank refinancing provided by the National Bank of Kazakhstan (NBK) serves as an important determinant of the financial stability of the banking system, as excessive growth indicates potential liquidity problems.

To summarize the analysis of approaches to assessing the financial soundness of the banking system, certain criteria for stability are considered. Methodologies and other academic developments in this area have some limitations, however. A notable shortcoming is the lack of indicators of credit and financial relations in the interbank market that could be grouped with indicators determining levels and conditions of bank refinancing. The inclusion of such indicators is justified, as they characterize the financial environment and are part of the system of macroprudential indicators developed by the European Central Bank (ECB). Another implication of the analysis is that one approach does not fully consider the complex relationships between the elements, internal organization, position in the national economy, and core functions of the banking system. These systemic properties, including integrity, hierarchy, and purposefulness, along with the concept of "emergent" (emergency), are crucial for assessing and monitoring the financial soundness of a banking system. Consideration of emergence, which refers to a system possessing characteristics not found in its components, has important practical relevance.

The concept of emergence and its application to economic systems have been widely studied, but its specific implications in the banking sector have not been sufficiently explored. Therefore, assessing the financial stability of the banking system, considering the intensity of credit and financial interactions in the interbank market, the functional role of the banking system in macroeconomic development, and the impact of
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structural changes and financial imbalances, is proposed. Incorporating the concept of emergency, this approach comprehensively considers important factors that characterize the banking system as a complex structure. This approach considers the diverse nature of financial processes within the system, including the presence of profitable and loss-making banks, fluctuating liquidity levels, differences in capitalization (including public and private, domestic and foreign capital), and much more. The level of financial stability of systemically important banks is a crucial factor, as a decline in stability can lead to destabilizing impulses and crisis trends in the banking sector.

A morphological analysis was carried out to clarify the concept of “banking regulation” and identify its essential features. This analysis involved examining different ways of defining the concept by combining its main structural elements or attributes, leading to the selection of the most complete definition. Based on the analysis of studies by prominent researchers, the multidimensionality, component composition, objectives, and organizational aspects of the emergence of the concept of “banking regulation” were determined. Morphological analysis was aimed at defining the concept of “banking regulation” and studying its key characteristics, including the definition of keywords, target areas, and analysis of similarities and differences. Subsequently, a matrix of key characteristics representing the concept of “banking regulation” was developed, and a list of possible alternatives or essential features of banking regulation was compiled.

The transformation of the NBK in response to changes in the geopolitical and economic landscape, as well as the global financial crisis of 2008-2009, led to a shift in regulatory actions towards ensuring and maintaining financial stability through a combination of monetary, macroprudential, and macroprudential policies. The significant losses suffered by the global economy, along with rising public debt, high unemployment, and prolonged inflationary pressures, have reduced the perception that financial stability can be achieved solely through monetary and stabilization policy instruments aimed at price stability. These trends have underlined the importance of exploring the implementation of financial stability instruments and their relevance for countries undergoing banking system transformation. To ensure the financial stability of a country’s banking system, most international institutions use banking regulation instruments in four main areas:

- the stability of individual banking institutions (micro-prudential policy);
- the stability of the banking system (macroprudential policy);
- the maintenance of price stability and economic activity;
- maintaining financial stability (macroeconomic policy, including monetary and fiscal measures).

This study's proposed methodology improvement entails several key aspects. First, it involves the introduction of a quantitative stability coefficient, calculated as 1 minus the coefficient of variation, which offers an objective and nuanced measure of both short-term and long-term financial stability/sustainability in banks. This coefficient serves as a valuable tool for assessing stability. Additionally, the methodology suggests a categorization framework based on stability coefficient values, allowing banks to be classified into five distinct categories: critical, unstable, satisfactory, high-risk, moderate, or stable. This standardized approach simplifies comparisons.

Furthermore, the study emphasizes the importance of data aggregation, advocating for an aggregated analysis using stability coefficients rather than relying solely on individual metrics, resulting in a more comprehensive assessment. Finally, the methodology adopts a systemic perspective, considering critical system-wide properties such as interconnectivity, hierarchy, and emergence to evaluate the stability of the banking sector holistically. The key improvement lies in the introduction of an integrated approach tailored to the Kazakh banking system, utilizing the stability coefficient and advocating for metric consolidation and a systemic viewpoint.

**DISCUSSION**

The role of financial sustainability (considering existing climate risks) has been assessed by L. Sun et al. (2022). In their view, shareholders and investment firms should assess more frequently how dependent they are on climate factors and shape their future operations on this basis. And
while national banks in many countries are working to formulate policies to address these factors, there are significant challenges: macroeconomic and financial risk analysis methodologies are currently inadequate for assessing climate risk. Z. Zheng and Y. Huang (2022) selected 13 Chinese commercial banks as representatives and used their relevant index data as the research object. The study found that the eigenvalues of the first three factors after rotation are 2.453, 2.360, and 1.328, with a cumulative contribution rate of 87.730%. This means that the first three factors can represent most of the data, and the data information they reflect is sufficient to describe the entire data level. The study concurs with previous research findings on the importance of assessing the competitiveness of banking systems, particularly in Kazakhstan, but introduce a novel approach focusing on financial sustainability.

The interaction between financial stability and sustainable development has been studied by Y. Jiang et al. (2019), who found that the monetary and macroprudential policies assessed have similar channels of influence on banks' risk-taking and asset prices. Therefore, to achieve financial stability, they need to be aligned. Counter-cyclical regulation, with simultaneous tightening during economic booms and loosening during depressions, is recommended for bank risk-taking. House prices should be regulated by alternating between tight monetary policy and macroprudential policy. The latter should be the primary defense against equity price bubbles, while monetary policy should be a secondary "line of defense". The authors of this study agree with these conclusions regarding the importance of aligning monetary and macroprudential policies to ensure financial stability. The study by T. Mashamba and C.N. Chikutuma (2023) examined the determinants of bank profitability in Zimbabwe, using a panel data analysis of 11 commercial banks over the period 2011–2020, finding that bank-specific factors such as non-interest income, liquidity, cost efficiency, capital adequacy, and bank stability have a positive and significant impact on bank profitability, while the industry factor bank concentration has a negative and significant impact. These results complement this study by highlighting the importance of factors such as stability and liquidity, which are also crucial in assessing the competitiveness of banks.

A similar study was carried out by P.K. Ozili and P.T. Iorember (2023), who studied the impact of financial stability on sustainable development in 26 countries from 2011 to 2018. The results showed that financial stability is critical for financial institutions to fulfil their role as intermediaries and effectively support sustainable development goals. Based on the analyzed indicators, the researchers formed a water-based financial stability index and examined its impact on the composite sustainability index and its components. Despite differences in scope, both studies underscored the crucial role of stability in ensuring the effective functioning of financial institutions and supporting broader economic goals. A.R. Alshehadeh et al. (2023), in turn, investigated the impact of financial technology on customer behavior in Jordanian commercial banks, employing a descriptive technique and using a random sample of 300 administrative workers in Jordanian commercial banks. The results showed a statistically significant positive effect of financial technology on customer behavior, with financial technology explaining 84.1% of it. Additionally, the study recommended that banks hire people with the required technology skills and provide training on the latest digital developments and potential risks. In general, the study supports the researchers' view while at the same time offering insights into strategies for enhancing sustainability and competitiveness in their respective banking environments.

Financial stability in Asian countries was studied by A.H. Malik et al. (2022), who assessed the relationship between governance quality (GQ), financial inclusion (FI), and financial stability (FS). Their results showed that GQ and FI have a positive impact on FS, but GQ hurts FI. Nevertheless, preventing the increasing role of public administration in finance is not recommended. Instead, policymakers should periodically review regulations and design rules that promote financial activities and facilitate inclusion in the formal financial system. By corroborating the importance of regulatory measures and inclusive financial practices, these studies can collectively inform policymakers on strategies to enhance financial resilience and competitiveness within diverse economic contexts. S.M. Abdulahi et al. (2023) studied the Ethiopian banking sector, finding that the average efficiency scores of banks in constant returns to scale (CRS), variable returns to scale
(VRS), and scale efficiency (SE) models were 95.5%, 99.85%, and 96.95%, respectively. Their study also found that the number of branches, bank size, and credit risk positively influence bank efficiency, while liquidity risk and the log of fixed assets have a negative impact. However, the level of capitalization, log of GDP, and inflation did not significantly affect bank efficiency. Such a comprehensive approach, together with this study's results, can improve the understanding of banking system stability and resilience, offering valuable guidance for the design of policies and interventions aimed at strengthening financial resilience.

The existence of a relationship between a country's level of competitiveness and the development of its financial sector was studied by B. Sundari and P. Alfatihah (2023). Their results showed that all their selected indicators (availability of financial services, level of financing from the local stock market, ease of access to credit, availability of venture capital, reliability of banks, regulation of securities exchanges, and level of legal development) have a significant and simultaneous positive effect on the financial market development variable, which, in turn, has a positive impact on a country's competitiveness. Integrating insights from both studies could provide a comprehensive understanding of the interplay between regulatory measures, financial sector development, and overall competitiveness, enhancing policy formulation and decision-making processes in Kazakhstan's banking sector. The relationship between financial market development and economic development in developed and higher-income countries was examined in a study by M.W. Alomari et al. (2019). Based on the constructed regression model for data from 21 countries from 2009 to 2017, they concluded that the level of financial sector development is positively and significantly related to competitiveness. This study also runs robustness tests, which confirm the validity and reliability of the results. This synergy between the studies underscores the importance of comprehensive approaches to assessing and fostering competitiveness in financial systems, especially in transition economies like Kazakhstan's.

T.T. Yuan et al. (2022) conducted another intriguing study on the competitiveness and sustainability of the financial system using data from the United States of America, concluding that there is an inverted U-shaped relationship between bank competition and stability, with moderate competition being good for stability and excessive competition leading to instability and systemic risks. While this study's approach emphasizes the importance of balanced competitiveness, the above approach suggests being aware of excessive competition to mitigate systemic risks and ensure stability, providing additional insights into the dynamics of banking competitiveness and stability in different contexts. In their study, V. Vjosa Fejza-Ademi et al. (2022) investigated the competition in the banking sector in Kosovo using secondary data from its Central Bank and commercial banks. Their study employed the HHI index and concentration ratio (CR4) to measure the competitiveness of the banking sector for the years 2013-2017. Their findings suggest that competitiveness in 2017 was at a moderate level, while in 2016, it was at a low level, and in previous years, there was no real competition in the banking sector. Their study, and this one, highlights the importance of enhancing competitiveness for a sustainable financial environment, albeit in different regional contexts, suggesting potential avenues for cross-country comparative analysis or policy transfer.

Thus, increasing the competitiveness of the financial and banking systems is one of the most important components in shaping a country's policies. The government can use an array of measures for its part, e.g.: increasing financial stability by creating an enabling environment; ensuring financial market stability and promoting internal stability in banks; implementing structural and institutional changes to increase capital adequacy and overall efficiency in the banking sector; enforcing regulatory requirements to increase capital adequacy; providing banks with a buffer against financial shocks and increase public confidence; promoting profitability and efficiency initiatives such as competition, technological advances and innovation in financial services; establishing mechanisms to ensure sufficient liquidity in the banking sector, including implementing liquidity management rules; and providing support in times of stress, to name a few.

CONCLUSION
This study has achieved its research objectives by comprehensively analyzing macroprudential policies, developing new assessment methods, and integrating the local context with the global literature to assess the competitiveness of the Kazakh banking system and provide policy recommendations to ensure long-term stability. The study makes several key contributions based on its unique approach and integrated perspective on assessing the competitiveness of Kazakhstan's banking system through the lens of financial sustainability. First, the comprehensive analysis of macroprudential policies enriches the understanding of available regulatory tools to maintain stability amidst economic transitions. Second, the proposed methods involving stability coefficients and system-level attributes expand the evaluation approaches for gauging banks' soundness and resilience. Finally, the integration of local context and global academic literature provides balanced, transferable frameworks for financial competitiveness assessment.

Ultimately, ensuring the enduring stability and robustness of the banking sector remains imperative for Kazakhstan's economic welfare. This study's systemic monitoring methodology, underpinned by financial sustainability tenets, provides vital policy insights to address imbalances preemptively. The stability coefficient also offers a quantified, graded technique for classifying and tracking banks' financial health. Kazakhstan is moving towards a competitive market-based economy. Using these different points of view to evaluate a bank's competitiveness can help the country make decisions based on facts, which will strengthen the banking system's ability to keep things in balance and absorb shocks. This can inform both macroprudential policy formulations and bank-level stability interventions to uphold financial soundness.

The material can be used as a theoretical basis for research on banks' competitiveness. Prospects for future research based on the results of this work can be analyzed through the methods used to evaluate the competitiveness of commercial banks through the prism of the method of “informational observation,” the method of bank scoring, CAMELS, and Sheshukoff Bank.

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