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A.T. Idirissova[1*], L.A. Talimova[1],
A.I. Korotkevich[2], Zh.Zh. Yermekova[3]

[1]Karaganda University of Kazpotrebsoyuz, Karaganda, Kazakhstan
[2]Belarusian State University, Minsk, Belarus
[3]Al-Farabi Kazakh National University, Almaty, Kazakhstan
*e-mail: idirissova_a@mail.ru

IMPLEMENTATION OF ESG PRACTICES AND SUSTAINABLE DEVELOPMENT IN THE ACTIVITIES OF SECOND-TIER BANKS IN THE REPUBLIC OF KAZAKHSTAN

Banking institutions are central to the ESG transformation of the global economy, acting as an important benchmark for assessing ESG risks. Their activities, as well as the opportunity to focus on certain sectors of the economy, make it possible to finance projects in the field of the "green" economy, which, in turn, contributes to its development. In many countries, the implementation of ESG principles through financial institutions also determines the responsibility of banks to central banks and financial regulators. This approach promotes the integration of ESG principles at all levels of the banking system, promoting them among the general public.

The concept of sustainable development refers to a medium- and long-term economic strategy that allows modern generations to meet their needs without jeopardizing the opportunities of future generations. In this context, we can note that the ESG agenda, focused on environmental, social and managerial aspects of corporate activities, is becoming the main driver of the concept of sustainable development and is increasingly being applied in both the global and domestic business environment.

The concept of green growth and sustainable development is being transformed into a global ideology that guides changes in national economies. The focus is shifting from quantitative performance indicators to rational choice conditions. Rationality in decision-making is becoming a key factor in achieving sustainable green growth, which may require rethinking existing financial models that support such dynamics. Thus, the most pressing issues related to sustainable growth are the transformation of financial systems and the creation of new financial paradigms based on the principles of responsible investment and corporate social responsibility. The study examines the implementation of ESG practices and the concept of sustainable development in the activities of second-tier banks in the Republic of Kazakhstan.

Keywords: financial market, sustainable development, ESG banking, integration of financial instruments, green financing.

А.Т. Идирисова[1]*, Л.А. Талимова[1],
А.И. Короткевич[2], Ж.Ж. Ермекова[3]

[1]Қазтұтынуодағы Қарағанды Университеті, Қарағанды, Қазақстан
[2]Беларусь Мемлекеттік Университеті, Минск, Беларусь
[3]Әл-Фараби атындағы Қазақ ұлттық университеті, Алматы, Қазақстан
*e-mail: idirissova_a@mail.ru

Қазақстан Республикасының екінші деңгейлі банктер қызметіне ESG тәжірибесін және тұрақты даму принциптерін енгізу

Банк мекемелері ESG тәуекелдерін бағалау үшін маңызды эталон бола отырып, жаһандық экономиканың ESG трансформациясында орталық орын алады. Олардың қызметі, сондай-ақ экономиканың белгілі бір секторларына назар аудару мүмкіндігі "Жасыл" экономика саласындағы жобаларды қаржыландыруға мүмкіндік береді, бұл өз кезегінде оның дамуына ықпал етеді. Көптеген елдерде қаржы институттары арқылы ESG принциптерін енгізу банктердің орталық банктер мен қаржы реттеушілері алдындағы жауапкершілігін де анықтайды. Бұл тәсіл ESG қағидаттарын банк жүйесінің барлық деңгейлерінде біріктіруге ықпал етеді, оларды халықтың кең топтары арасында ілгерілетеді.

Тұрақты даму ұғымы қазіргі ұрпаққа болашақ ұрпақтың мүмкіндіктеріне қауіп төндірмей, өз қажеттіліктерін қанағаттандыруға мүмкіндік беретін орта мерзімді және ұзақ мерзімді экономикалық стратегияны білдіреді. Бұл тұрғыда біз корпоративтік қызметтің экологиялық,

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және басқарушылық аспектілеріне бағытталған ESG күн тәртібі тұрақты даму тұжырымдамасының негізгі драйверіне айналатынын және жаһандық және отандық бизнес ортасында көбірек қолданылатынын атап өтуге болады.

Жасыл өсу және тұрақты даму тұжырымдамасы ұлттық экономикалардағы өзгерістерді басқаратын жаһандық идеологияға айналады. Фокус тиімділіктің сандық көрсеткіштерінен ұтымды таңдау шарттарына ауысады. Шешім қабылдаудағы ұтымдылық тұрақты Жасыл өсуге қол жеткізудің негізгі факторына айналады, бұл осындай динамиканы қолдайтын қолданыстағы қаржылық модельдерді қайта қарауды қажет етуі мүмкін. Осылайша, тұрақты өсуге байланысты ең өзекті мәселелер – жүйелерін трансформациялау және жауапты инвестициялау және корпоративтік әлеуметтік жауапкершілік қағидаттарына негізделген жаңа қаржылық парадигмаларды құру болып табылады. Зерттеу ESG практикасын және орнықты даму тұжырымдамасын Қазақстан Республикасының екінші деңгейдегі банктерінің қызметіне енгізуді қарастырады.

Түйін сөздер: қаржы нарығы, тұрақты даму, ESG-банкинг, қаржы құралдарын интеграциялау, жасыл қаржыландыру.

А.Т. Идирисова[1*], Л.А. Талимова[1],
А.И. Короткевич[2], Ж.Ж. Ермекова[3]

[1]Карагандинский университет Казпотребсоюза, Караганда, Казахстан
[2]Белорусский государственный университет, Минск, Беларусь
[3]Казахский национальный университет им. аль-Фараби, Алматы, Казахстан
*e-mail: idirissova_a@mail.ru

Внедрение ESG-практики и принципов устойчивого развития в деятельность банков второго уровня Республики Казахстан

Банковские учреждения занимают центральное место в ESG-трансформации глобальной экономики, выступая важным ориентиром для оценки ESG-рисков. Их деятельность, а также возможность сосредотачиваться на определенных секторах экономики, позволяют финансировать проекты в области «зеленой» экономики, что, в свою очередь, содействует её развитию. Во множестве стран внедрение принципов ESG через финансовые учреждения также предопределяет ответственность банков перед центральными банками и финансовыми регуляторами. Данный подход способствует интеграции ESG-принципов на всех уровнях банковской системы, продвигая их среди широких слоев населения.

Под понятием устойчивого развития подразумевается среднесрочная и долгосрочная экономическая стратегия, которая позволяет современным поколениям удовлетворять свои потребности, при этом, не ставя под угрозу возможности будущих поколений. В этом контексте мы можем отметить, что ESG-повестка, ориентированная на экологические, социальные и управленческие аспекты корпоративной деятельности, становится основным драйвером концепции устойчивого развития и находит всё большее применение как в глобальной, так и в отечественной бизнес-среде.

Концепция зеленого роста и устойчивого развития трансформируется в глобальную идеологию, направляющую изменения в национальных экономиках. Фокус смещается с количественных показателей эффективности на условия рационального выбора. Рациональность в принятии решений становится ключевым фактором для достижения устойчивого зеленого роста, что может потребовать переосмысления существующих финансовых моделей, поддерживающих такую динамику. Таким образом, наиболее актуальными вопросами, связанными с устойчивым ростом, являются трансформация финансовых систем и создание новых финансовых парадигм, основанных на принципах ответственного инвестирования и корпоративной социальной ответственности. Исследование рассматривает внедрение практик ESG и концепции устойчивого развития в деятельность банков второго уровня Республики Казахстан.

Ключевые слова: финансовый рынок, устойчивое развитие, ESG-банкинг, интеграция финансовых инструментов, зеленое финансирование.

Introduction

In the context of the actualization of the ESG transformation of the financial sector in Kazakhstan, there is considerable attention to the introduction of new requirements that create serious expectations for financial market participants comparable to trends in the most developed international markets. The Roadmap adopted in 2023 regarding the integration of ESG principles into the regulatory practice of the Kazakh financial market provides for a phased change in the status of non-financial reporting disclosure from voluntary to mandatory for financial sector participants. This will lead to the

formulation of stricter regulatory conditions regarding risk management in the banking system, which implies the introduction of mandatory requirements for risk management systems taking into account ESG factors.

The purpose of this analysis is to study the key directions and mechanisms that determine the process of ESG transformation of the banking sector in Kazakhstan, as well as to assess their impact on the stability and competitiveness of the financial market.

Environmental risk analysis is becoming an integral part of banks' strategy, which contributes to the accelerated ESG transformation of the sector and the activation of the concept of ESG banking, a sustainability-oriented approach that takes into account environmental, social and managerial aspects. The main purpose of ESG banking is to support projects that have a positive impact on society and the environment, which in turn can contribute to sustainable economic growth.

The presented analysis makes it possible to systematize the current state and regulatory prospects of ESG transformation, which can serve as a basis for the development of effective business strategies by commercial banks and informed decision-making by the regulator.

Commercial banks in Kazakhstan occupy a significant position in the context of responsible investment and make a significant contribution to the country's financial system. Within the framework of the green banking business, the focus on green lending and ESG-oriented investment is becoming a key function of second-tier banks. When implementing the ESG concept, banks realize that it is an effective tool for increasing customer and strategic loyalty, attracting investors and business partners, and minimizing credit and operational risks.

Thus, the integration of ESG principles into banking not only meets the modern challenges of global sustainable development trends, but also becomes an important factor for adapting business strategies to new economic realities, opening up opportunities for innovative growth and development in the financial sector of Kazakhstan.

Literature review

In modern conditions of global transformations of economic and social systems, the concept of sustainable development, focused on the balanced interaction of environmental, social and managerial (ESG – Environmental, Social, Governance) factors, is of particular importance. In the banking sector, the implementation of ESG principles is becoming a key element of strategic planning and risk management, contributing not only to increasing the investment attractiveness of financial institutions, but also to ensuring long-term financial stability.

According to a number of international studies (OECD, World Bank, UN PRI), the practice of ESG integration into the banking sector contributes to increased transparency of corporate governance, reduction of environmental risks, as well as the formation of business social responsibility. Such approaches are becoming relevant for second–tier banks in the Republic of Kazakhstan, especially in the context of the implementation of the state strategy "Kazakhstan – 2050" and the United Nations Sustainable Development Program until 2030.

The sustainable functioning of commercial banks has a direct impact on macroeconomic stability, the investment climate and the development of financial intermediation. In the context of the transformation of the regulatory environment and increasing demands from international investors, these banks face the need to adapt to ESG standards.

Kazakhstan is characterized by the stage of initial implementation of ESG approaches in the banking system, which is due to both external and internal factors. On the one hand, there is increasing pressure from international creditors, rating agencies, and institutional investors who insist on transparency, environmental responsibility, and social inclusion. On the other hand, there are a number of internal constraints, including a low level of financial literacy, limited competencies in the field of sustainable finance, as well as insufficient regulation in the field of ESG reporting.

Methodology

As part of the methodological basis of the study, dialectical and systematic approaches were used, which made it possible to comprehensively analyze the problem under study, taking into account its dynamics, interrelationships and interdependencies. In the course of the work, general scientific methods were used, such as analysis, synthesis, scientific abstraction, comparison and grouping of data. It is assumed that the applied approaches will become the basis for further development, including the national financial system. The crisis phenomena in the socio-economic system have contributed to the active introduction of innovative forms and methods, which, in turn, is a prerequisite for the formation of

a sustainable financial market in the context of the ESG transformation of the banking sector.

To develop a model of sustainable development, a set of methods was used, including:

- System analysis for structuring a model of sustainable development of the financial market.
- Content analysis of the regulatory framework and strategic documents of the Republic of Kazakhstan.
- Comparative analysis of the international and Kazakh experience of ESG integration.
- A factorial approach to identify and assess institutional barriers and risks of digitalization.
- A case analysis (its elements) to study successful international ESG tools and determine their applicability in Kazakhstan.

The use of such approaches will make it possible to adapt financial mechanisms to modern requirements of sustainable development and social responsibility.

Results and discussion

Financing low-carbon and environmentally sustainable projects has become an important driver for the transformation of the banking business, opening up new opportunities for financial institutions. In recent years, there has been a growing interest in financial instruments such as loans for renewable energy projects, energy-efficient technologies, and sustainable agriculture. This is in line with global trends aimed at combating climate change and reducing the carbon footprint. In this context, the banking sector acts not only as a provider of capital, but also as a driver of sustainable development, encouraging customers and borrowers to reduce negative environmental impacts and maintain the ecosystem.

Since 2020, 28 issues of ESG bonds, totaling more than KZT 645 billion, have been placed on the Kazakhstan Stock Exchange (KASE) and the Astana International Exchange (AIX) within the framework of the AIFC. The funds raised from the placement of ESG bonds were used to implement projects that contribute to the creation of sustainable infrastructure and the development of environmentally friendly technologies, increase gender equality, the introduction of environmentally friendly transport and renewable energy projects. These initiatives reflect the country's commitment to integrate into global supply chains of sustainable and low-carbon finance (Sustainable financing analytics, 2024).

In Kazakhstan, internal financial mechanisms are proving effective: it is estimated that 40% to 50% of loans in non-energy sectors requiring environmental transformation are provided through the National Management Holding Company Baiterek. By the end of 2021, this organization has implemented many projects in the field of "green" energy with a total amount of financing of more than 337 billion tenge. Among the funded initiatives are the construction of hydroelectric power plants, solar and wind power plants. The holding's subsidiaries provide a variety of financial support tools, including loans, equity and leasing financing, as well as subsidies and guarantees.

As a result of the assessment of the environmental impact of the implementation of "green" projects in 2021, it turned out that 534 million kWh of electricity was produced with the support of organizations such as JSC Development Bank of Kazakhstan, JSC Kazyna Capital Management and JSC FRP Damu. This confirms that financing sustainable projects can indeed have a significant positive effect on the environmental situation and contributes to the transition to a low-carbon model of the economy (Tanasheva, 2024).

Current trends in sustainable finance in Kazakhstan also highlight the growing interest of financial institutions and the private sector in the ecosystem of sustainable financial instruments (Sustainable financing analytics, 2024). Figure 1 shows data on the volume of sustainable financing in Kazakhstan for 2020-2023.

It is important to note that in order to fully study the degree of readiness of the financial market for the implementation of ESG practices, an analysis of current approaches and practices among the banking sector was conducted. An assessment of the maturity, engagement, and intentions of financial institutions regarding the further integration of the ESG paradigm into their operations has become a key element of this study (Issledovanie korporativnyh ESG-praktik v Kazakhstane (2022).

The benchmarking methodology covered a wide range of topics, including corporate governance with an emphasis on ESG factors, risk management in the context of sustainable finance, climate strategies, as well as social responsibility, reporting and data collection. The study identified and analyzed the existing barriers that make it difficult to integrate ESG practices into the financial services sector (Figure 2).

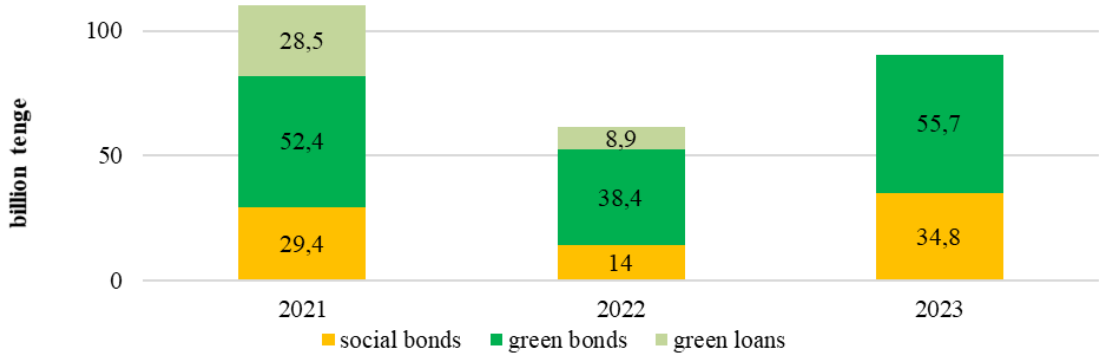

Figure 1 – The volume of sustainable financing in Kazakhstan for the period 2021-2023, in billion tenge.
Note – The result is based on data from the GFC sustainable finance analytics

Among such barriers, there is a lack of information and transparency on environmental, social and management risks. Many financial institutions have difficulty evaluating and measuring the results of implementing sustainable projects, which in turn makes it difficult to make informed investment decisions. Against the background of uncertainty about the impact of sustainable investments on financial results, there may be distrust on the part of both investors and potential borrowers, which requires further efforts to develop a culture of sustainable financing (Townsend, 2020:11).

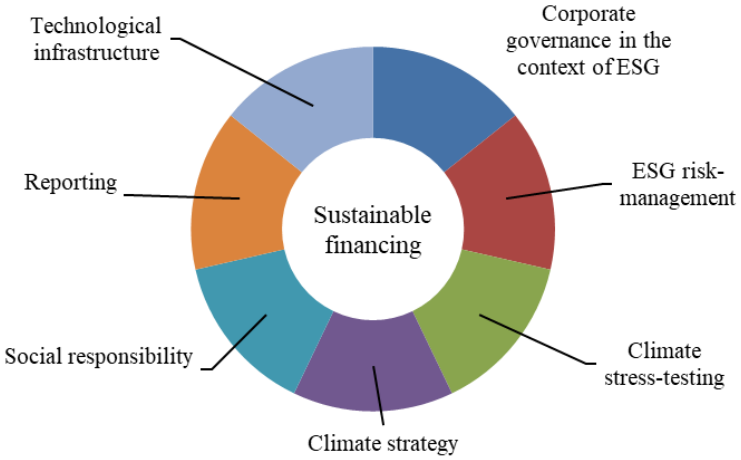

Figure 2 – Benchmarking the integration of ESG practices of banks in Kazakhstan
Note – The result is based on data from the GFC sustainable finance analytics

In modern conditions, financial markets demonstrate a diverse degree of readiness for new environmental, social responsibility and corporate governance (ESG) requirements put forward by regulators. It is important to note that, despite active efforts, a significant number of banks in Kazakhstan still have great potential for improvement in this area. At the same time, there are clear leaders among financial institutions that successfully integrate advanced ESG practices and whose maturity can be compared with large international banks such as Bank CenterCredit, Halyk Bank and Freedom Holding.

An example of successful implementation of ESG standards is the Bank CenterCredit, which received a high rating from the S&P Global Corpo-

rate Sustainability Assessment in September 2024, scoring 61 points. This result placed the bank in the top 10% among international financial institutions, which indicates its high level of sustainable development. This success not only highlights the outstanding achievements of Bank CenterCredit compared to other Kazakhstani banks, but also puts it above such major international players as BNP Paribas and Citigroup. Nevertheless, there are a significant number of financial institutions that are still far from implementing advanced ESG practices and do not meet the current requirements of regulatory authorities (Decree of the President of the Republic of Kazakhstan, 2023).

In the context of globalization and the increasing climate agenda, sustainable development issues are becoming key in shaping modern economic strategies. The integration of ESG factors (environmental, social and managerial) into financial and credit relations between the subjects of the national economy of Kazakhstan is of particular importance. Sustainable development is inextricably linked to ensuring macroeconomic stability, stimulating inclusive growth, and transforming traditional financial institutions towards responsible financing.

Financial and credit institutions, primarily second-tier banks, play a system-forming role in the country's economy. They act as a transmission mechanism for the redistribution of financial resources and, accordingly, can become a catalyst for sustainable transformation. In recent years, there has been a progressive implementation of ESG standards in the strategic and operational management of banking activities. These processes are driven by both internal imperatives to increase investment attractiveness and external pressure from international financial organizations, shareholders, and consumers of financial services.

Despite the positive dynamics in the field of ESG transformation of individual banks in Kazakhstan, the development of ESG banking as a full-fledged segment of the financial market faces a number of institutional, methodological and regulatory barriers. In particular, there is a pronounced asymmetry in the level of methodological preparation of banks for ESG risk management. The lack of a unified methodology for the identification, assessment and monitoring of risks associated with ESG factors creates problems in the quantitative and qualitative assessment of the sustainability of financial transactions (Luo, 2017:27).

The key problem is the lack of a standardized non-financial risk management system that would integrate into the overall risk management system of credit institutions. As a result, financial institutions find it difficult to account for potential losses resulting from climate disasters, changes in the regulatory environment, or social protests caused by unethical corporate practices. Thus, ESG risks become systemic in nature, affecting both the cost of capital and the liquidity and reputational positions of banks.

An additional constraint is the lack of a clear correlation between financial and non-financial reporting by banks. Without the integration of ESG indicators into traditional financial metrics, it becomes impossible to objectively determine the impact of ESG initiatives on profitability, profitability and sustainability of financial institutions. The lack of end-to-end analytics on ESG indicators hinders the formation of a transparent information environment necessary for investment analysis and strategic planning.

It should be noted that banks currently use disparate approaches to assessing sustainable development. The multiplicity of techniques based on internal regulations and standards hinders the unification of practices and makes benchmarking difficult between different market participants. In addition, a significant obstacle to the development of ESG banking is the insufficient regulatory framework. At the macro level, there is no comprehensive government regulation aimed at integrating ESG factors into corporate governance and strategic planning of the banking sector. Government policy does not yet provide for systemic incentives (including fiscal and prudential ones) to introduce sustainability principles into financial and credit practice. This situation reduces the motivation of banks to move from a traditional risk management model to an integrated sustainability management model (Chebunin, 2018:56).

In international practice, ESG financing is becoming an important element of sustainable economic growth. Instruments such as "green" and "sustainable" bonds, special credit lines focused on environmental projects, as well as climate-oriented investment funds are being actively introduced into the architecture of financial systems in developed and developing countries. Kazakhstan, being at the initial stage of ESG transformation, has significant potential for the implementation of such tools, taking into account national specifics and with the support of international partners.

To eliminate current barriers and ensure the transition to a sustainable financing model, it is necessary to develop a unified strategy for the develop-

ment of ESG banking at the national level. Such a strategy should include the development of national standards for ESG assessment, unified reporting forms, as well as system performance indicators for ESG activities. An important area is the creation of a regulatory framework that requires disclosure of non-financial information and the implementation of ESG criteria in the credit scoring process.

An equally important task is the development of human capital in the field of ESG financing. In conditions of high uncertainty and a rapidly changing regulatory environment, the qualifications of specialists are of key importance. It is necessary to form an educational ecosystem that includes specialized training and advanced training programs for bank employees, corporate trainings and intersectoral conferences. Partnership with international organizations and leading educational institutions can facilitate the transfer of knowledge and best practices in the field of ESG banking.

Special attention should be paid to the formation of an institutional infrastructure to support ESG projects. This includes the creation of specialized analytical centers, ESG assessment agencies, and registers of sustainable projects. The introduction of subsidies, tax incentives, and guarantees for loans aimed at implementing ESG initiatives can also be an effective tool for stimulating sustainable financing.

Thus, the development of ESG banking in Kazakhstan requires an integrated, intersectoral approach based on the interaction of the state, the financial sector and civil society. Only with concerted efforts is it possible to achieve sustainable growth that can take into account the environmental, social and managerial challenges of the XXIst century (Chang, 2021).

Investors, acting proactively, seek to disclose information and key indicators of the impact on the environment and society even before it becomes mandatory in accordance with regulatory standards. Financial institutions are forced to adapt to these changes, including stress testing in their practices aimed at assessing environmental and social risks. This requirement is becoming increasingly relevant amid the attention of global regulators such as the Bank of England, the European Central Bank and the Bank of Canada, which are integrating stress tests into their procedures to assess the potential impact of various climate and social risks.

Despite the growing recognition of the importance of ESG factors, accurate modeling of environmental and social risks, together with an understanding of the distribution of risks across economic sectors and regions, remains a major challenge. Many financial institutions face a lack of predictive and detailed information about climate risks in their risk management processes. Addressing data gaps related to greenhouse gas emissions and customers' adaptation strategies to climate change is an important aspect. This is necessary to fully understand the vulnerability to climate risks and their potential impact on the bank's financial performance and sustainability.

One of the main obstacles to the development and verification of climate risk models is the uncertainties that relate to the timing of these risks, as well as the limited availability of historical data. New regulatory requirements oblige banks to assess the exposure of their assets to climate change risks, regardless of zero balance targets. These requirements point to important deficiencies in information related to climate change, which banks must address through the implementation of stress tests.

Financial institutions acting as intermediaries largely use their clients' funds to carry out financial transactions. Therefore, it is critically important that banks analyze in detail the ratio of risks and benefits, directing their efforts to protect customer assets. Efficient use of resources allocated by clients is a primary condition for ensuring the long-term sustainability and competitiveness of financial institutions. In this context, the integration of ESG measures is becoming important, although there is still a lack of research in this area on measuring the impact of ESG initiatives on financial efficiency and profitability of banks. As a result, the impact of the implementation of ESG strategies on the cost and efficiency of the bank's operations remains uncertain (Centr zelenogo finansirovaniya GFC. Analitika ustojchivogo finansirovaniya).

The trend towards sustainable development requires not only the integration of environmental and social factors into the financial architecture of banking institutions, but also the need to form investment decisions that take into account long-term goals. An important step towards achieving a balance between ESG principles and profitability is the concept of the "golden balance" proposed by the United Nations Environment Programme. This concept suggests that financial intermediaries should strive to maximize short-term profits in their daily activities, while taking into account the long-term goals of environmental sustainability and social responsibility (Khudyakova, 2018:40).

The golden balance concept implies that financial institutions can achieve synergy between assets

and liabilities, providing stable income in the present without compromising long-term environmental goals. It provides banks with the opportunity to seek compromises between short-term financial results and sustainable development, which, in turn, can lead to an improvement in the bank's reputation, increased consumer confidence and attract new investors interested in sustainable development.

To assess the impact of environmental, social and managerial factors (ESG) on the stability of financial institutions, it is advisable to use the Analytical Hierarchy Process (AHP) method. This method, as a useful tool for multi-criteria assessment, allows you to take into account qualitative aspects such as social, environmental and managerial characteristics, which are often difficult to quantify. The use of AHP in this context allows experts to effectively integrate their professional experience with quantitative assessments to obtain a balanced opinion on the impact of ESG factors on financial stability.

The AHP method is based on a hierarchical structure where a complex problem is broken down into simpler components – criteria and sub-criteria, which are then analyzed in the context of their interrelationships. This approach helps to create a structured model that reflects the multiple aspects that influence the decisions being made. At the first stage, a hierarchy is formed: the upper level represents the overall purpose of the study, the middle level includes the main criteria related to ESG factors, and the lower level contains specific indicators for evaluating these criteria.

At the next stage, the elements at each level of the hierarchy are compared in pairs. Experts compare the importance of two factors in each pair through judgments and form an appropriate matrix of judgments. In this case, a 9-point scale is used, where 1 indicates equal importance, and 9 indicates a significantly higher importance of one factor compared to another. This method allows you to focus on the relative importance of criteria in relation to a specific assessment task.

After forming the matrix of judgments, the eigenvalues of the matrices and the corresponding orthogonal feature vectors are developed to assess the importance of the factors. Calculating the maximum eigenvalue of the matrix allows us to obtain the coefficients reflecting the relative importance of each of the factors under consideration (A1, A2, ..., An). The effectiveness of these factors in the stability system of financial institutions is assessed through the calculation of weights and subsequent aggregation of the results (Kuanova, 2024:25).

The mathematical matrix AHP can be represented as follows:

$$A = (a_{ij} \cdots a_{ni} \ \vdots \ddots \vdots \ a_{1n} \cdots a_{nn}) \qquad (1)$$

where:

aij and aji – are the elements of matrix A;

i – the row of matrix A;

j – the column of matrix A.

As a result of the AHP application, it is possible to obtain clear and rigorous quantitative estimates for each factor, which contributes to a better understanding of exactly how ESG factors affect financial stability. This approach is especially important in the context of growing attention to sustainable development and business responsibility, as it allows you to carefully understand complex relationships and find the best solution to improve the sustainability of financial institutions.

The AHP method, being a universal assessment tool, can be applied both at the micro and macro levels. It allows not only to evaluate individual financial institutions, but also to conduct sectoral or even regional analyses of the impact of ESG factors on the financial system as a whole. Thus, AHP is becoming an important method in modern financial analysis, contributing to the improvement of strategic management and informed decision-making, taking into account sustainable development. It is important to note that the successful application of AHP requires sufficient information and expert opinions, which emphasizes the role of qualitative assessment in the context of quantitative data (Kuanova, 2024:28).

Thus, the application of the AHP method to assess the impact of ESG factors on the stability of financial institutions is an urgent and promising area of research that allows taking into account not only quantitative but also qualitative aspects, which makes the conclusions more complete and reasonable.

In the context of the formation of a sustainable financial architecture, the task of quantifying the importance of sustainable development factors (ESG) for ensuring the long-term financial stability of the banking sector is of particular relevance. The Hierarchy Analysis (AHP) method makes it possible to determine the relative importance of criteria based on expert judgments. The use of AHP in the field of ESG analytics contributes to a more accurate calibration of priorities in the process of strategic planning and risk management of financial organizations. Figure 3 shows the factors and criteria for the AHP matrix.

Figure 3 – Factors and criteria for the AHP matrix in banking
Note – The result is based factors and criteria for the AHP matrix

The eigenvalues of the matrix, in particular the dominant eigenvalue, provide verification of the consistency of expert judgments, which is critically important when using the AHP methodology. In a broader economic and mathematical context, eigenvalues and eigenvectors play the role of sustainability indicators in dynamic models.: They determine the amplitude-frequency characteristics of oscillatory processes, similar to how in finance they characterize the sensitivity of the banking system to ESG impacts (Litvinenko, 2022:21).

To build a hierarchical structure of criteria, input and output indicators characterizing the environmental, social and managerial aspects of financial organizations were used. One of the key tools for assessing the impact of projects on sustainable development is electronic screening, which is considered as an exogenous variable in the investment decision-making model. Electronic screening is a process of preliminary analysis of projects for their compliance with environmental standards, including identification of potential external effects and assessment of the degree of their negative impact on the environment. With increasing environmental awareness and increasing regulatory pressure, e-screening is becoming an essential element of the sustainable financing ecosystem, minimizing environmental and reputational risks.

The integration of environmental analysis tools into banks' corporate strategy has a positive impact on the perception of the organization by key stakeholders, including investors, customers, and regulators. This, in turn, helps to strengthen trust, reduce the cost of capital and increase competitiveness in the financial market. The formation of a positive ESG profile is a significant sustainability factor that determines the possibility of attracting green financing and entering international markets for sustainable investments.

Thus, the application of the AHP methodology in assessing ESG factors allows banking institutions to prioritize areas of sustainable development, reasonably reallocate resources and increase overall adaptability to external ESG challenges. The inclusion of environmental and social aspects into the corporate governance system through e-screening and sustainable financing procedures forms the prerequisites for the transformation of the traditional banking model towards inclusive and sustainable financial intermediation (Kuanova, 2024:30).

Disclosure of information about conflicts of interest is important for financial institutions, as it is consistent with their strategy of transparency and ethical behavior. Disclosure of such conflicts helps mitigate situations that could jeopardize the interests of clients. Ethical standards require these institutions to diligently serve the best interests of clients while avoiding conflicts of interest, making disclosure a prerequisite. Banks that demonstrate a transparent policy regarding conflicts of interest build stronger and longer-term relationships with their customers and partners.

Transparency in the work of financial institutions strengthens the trust of customers. A clear understanding of how an institution functions and manages finances helps to develop strong relationships. This transparency also ensures compliance with relevant laws and regulations, mitigating legal challenges and penalties. Transparent reporting makes it possible to better identify and assess potential risks. Investors and partners usually prefer to work with organizations that provide accurate information about their activities, which makes transparency a key factor in deciding on cooperation opportunities. In addition, it can drive innovation in product development by aligning offerings with customer needs and expectations.

It should be noted that at present, clients and investors have begun to take into account the anti-

corruption position when choosing a financial partner. Organizations actively fighting corruption can attract more clients and investors, as they reduce the associated financial risks, such as loss of assets or costs associated with the consequences of corrupt practices.

Thus, all the factors considered are significant as indicators for assessing the state and prospects of implementing ESG principles in the activities of Kazakhstani banks. The AHP method was used to evaluate the effects of ESG criteria in the practice of Kazakhstani banks. The management of the banks, which were taken as experts, determined the index weights of the impact of the factors considered. The results of the expert opinion are presented in Table 1.

Table 1 – Results of expert assessments of the priority of ESG factors in the activities of Kazakhstani banks

Factor	Specific gravity, %	Rating
Electronic screening	22,69	1
Financing of low-carbon and green projects	20,53	2
Climate risk assessment	15,16	3
Staff turnover	10,86	4
Gender pay gap	10,02	5
Employee satisfaction	7,55	6
Disclosure of conflicts of interest	6,49	7
Transparency	4,06	8
Corruption and measures taken	2,63	9
Note – The result is based on data from the Roadmap for the implementation of ESG principles for the financial sector of Kazakhstan (2024)		

As can be seen from the table, the first priority was given to the "Electronic screening" factor with a value of 22.69%, the second priority was Financing low–carbon and green projects (20.53%), the third was Climate risk Assessment (15.16%), the fourth was Staff turnover (10.86%), the fifth priority was the Gender Pay gap (10.02%), the sixth is Employee satisfaction (7.55%), the seventh is Disclosure of information about conflicts of interest (6.49%), the eighth is Transparency (4.06%), the ninth is Corruption and measures taken (2.63%) (Chen, J.,2022).

Banks are experiencing a practical need to integrate ESG factors into their business. However, the speed, sustainability, and depth of the changes taking place will largely depend on the extent to which new regulatory requirements and government support programs create effective economic incentives for ESG transformation.

In order to stimulate sustainable economic development and the transformation of the financial sector towards the integration of ESG principles (ecology, social responsibility and corporate governance), a Roadmap for the implementation of ESG Principles for the financial sector of Kazakhstan was initiated in 2023 in Kazakhstan. This program document is a strategic action plan for the short and medium term (2023-2026), aimed at institutionalizing ESG practices in the banking sector and financial regulation (Roadmap for the implementation of ESG principles for the financial sector of Kazakhstan, 2024)

Among the priorities outlined in this roadmap, the following areas are highlighted:

1. Ensuring transparency by disclosing information about exposure to ESG risks by financial institutions. This involves systematizing non-financial reporting and bringing it in line with international standards such as GRI and TCFD.

2. Identification and management of ESG risks, including quantification of the carbon footprint of the loan portfolio. The integration of these approaches makes it possible to carry out stress testing and take climate risks into account when modeling credit and market risks.

3. Introduction of ESG factors into the risk management system, corporate governance and strategic planning of financial and credit organizations. This ensures the internal transformation of business processes and promotes sustainability in a transformational economy.

4. Creation of supervisory monitoring mechanisms for ESG risks, which implies strengthening the regulatory function of the Central Bank and relevant supervisory authorities in terms of monitoring compliance with sustainable financing standards.

Against the background of the implementation of strategic initiatives, Development Bank of Kazakhstan JSC has become one of the pioneers in the field of issuing sustainable financial instruments by placing green bonds worth 10 billion tenge on the Kazakhstan Stock Exchange (KASE). This tool is designed to attract investments in projects that have a positive environmental impact and meet the criteria of sustainable development. This practice is an example of effective disintermediation, when a state development institution becomes a direct issuer of sustainable debt obligations, bypassing traditional channels of market lending.

Substantial support for sustainable financing is provided by the European Bank for Reconstruction and Development (EBRD), which has allocated $10 million under the GEFF Kazakhstan II program. The funds are aimed at lending to small and medium-sized businesses, as well as individuals implementing projects in the field of energy conservation, green technologies, cyclical economy and the promotion of inclusion, including gender equality. This corresponds to the paradigm of targeted financing, in which capital is directed to priority sectors with high added value in the environmental and social context (Roadmap for the implementation of ESG principles for the financial sector of Kazakhstan, 2024).

One of the key elements of the adaptive model is the digital infrastructure, which facilitates the integration of sustainable finance into the broader financial system. This includes several areas:

- Sustainable Investment platforms: Creation of specialized digital platforms for sustainable investments, where investors can choose green, social or sustainable financial instruments.

- Digital registers of ESG products: To effectively track sustainable assets and ensure transparency, digital registers can be created for all financial instruments that meet ESG criteria.

- Automation of ESG reporting: The introduction of automated reporting systems that will be integrated with financial platforms and will allow companies to easily and quickly provide the necessary sustainability data.

In Kazakhstan, a significant part of capital investments comes from external investors, while the domestic market remains insufficiently active in terms of sustainable investments. In order to encourage domestic investment, the following measures can be proposed::

Tax preferences for individuals and organizations investing in sustainable financial instruments; creation of incentives for long-term investment: introduction of a program to stimulate long-term investments in sustainable assets, for example, through tax incentives for investors buying long-term bonds or participating in other sustainable projects; Subsidy programs: The organization of interest rate subsidy mechanisms for organizations investing in green and social projects, which will reduce their financial burden and provide additional interest in such investments.

To ensure th e transparency and effectiveness of the adaptive model, it is necessary to create a system of independent assessment and ratings of sustainable products. Such a system will include: the development of independent ESG ratings; adaptation of international standards; public reports and monitoring.

The proposed adaptive model for the sustainable development of the financial market of Kazakhstan, which includes an institutional framework, digital infrastructure, educational initiatives, incentives for domestic investors and a monitoring system, is an integrated approach that contributes to the creation of a financial system focused on sustainable development. It is important that clear and understandable strategies are developed at all levels, from government agencies to private companies and investors, aimed at integrating ESG principles into the country's financial system. These recommendations can serve as a basis for the formation of a national strategy for sustainable financing, which will allow Kazakhstan to effectively respond to the challenges of global environmental, social and economic changes.

The formation of an adaptive model for the sustainable development of Kazakhstan's financial market in the context of digitalization and ESG transformation requires a comprehensive interdisciplinary approach. The analysis shows that despite the efforts being made, the country remains at a low level of institutional maturity in the field of sustainable finance, which is reflected in the limited volume of green financial instruments, insufficient involvement of domestic investors and a fragmented regulatory framework (The Center for Green Finance of the GFC Sustainable financing analytics, 2023)

The experience of countries with developed financial infrastructure indicates the need for active government involvement in the process of creating a sustainable financial landscape. This includes cre-

ating clear standards for the disclosure of ESG information, supporting the development of national taxonomies for sustainable activities, as well as encouraging the issuance of green bonds and the introduction of ESG indicators into the financial risk assessment system.

The integration of ESG factors into the risk assessment process allows banks to qualitatively differentiate assets by sustainability, which improves risk profile management and helps reduce the likelihood of credit and operational losses. The use of ESG approaches also generates preferences from institutional investors focused on responsible investments, which increases the attractiveness of banking assets and contributes to the growth of capitalization of financial institutions.

Regulatory pressure on banks to comply with ESG standards is also increasing. In this regard, there is an increasing need for a systemic transformation of the country's financial infrastructure based on international experience. Effective implementation of ESG standards requires interdepartmental coordination, government involvement as an active institutional investor and operator of sustainable instruments, as well as analytical and educational campaigns aimed at improving the financial literacy of business entities and the general public.

The integrated development of the ESG market requires the creation of an institutional framework that includes:

- the development of national sectoral strategies for sustainable development;
- formation of ESG financing committees;
- issue of manuals on green bonds and projects;
- drawing up a list of priority environmental initiatives;
- organization of open information platforms for data exchange;
- support for government issues of green bonds;
- Creation of certification and independent audit services.

Thus, the successful development of ESG financing in Kazakhstan is possible under the condition of a systematic approach, active government involvement, institutional incentives, the introduction of international standards, as well as professional development of all financial market participants. This will ensure sustainable economic growth, contribute to the structural modernization of the economy and the formation of an investment-attractive environment.

Conclusion

In the context of the global transformation of financial markets, one of the most dynamically developing segments is the sustainable finance market, characterized by high investment capacity and virtually unlimited scaling potential. In this paradigm, banks play a key role as systemically important financial intermediaries providing capital allocation and credit support to business entities, which makes them the main agents in the processes of decarbonization and the implementation of the sustainable development agenda.

The fundamental goal of ESG banking is to financially support initiatives and business structures focused on creating a positive socio-environmental impact, which contributes to the formation of an inclusive and sustainable economic model. Second-tier banks in Kazakhstan are gradually adapting their operational and strategic activities to ESG standards, forming the institutional foundations for the transition to a sustainable financial sector model.

An analysis of the current macroeconomic and institutional environment allows us to identify a significant potential for the development of ESG banking in the Republic of Kazakhstan. It is caused by both external factors – the spread of ESG practices by international financial institutions, and internal prerequisites – a weak degree of penetration of ESG financing into the national banking system and the presence of separate economic sectors operating in accordance with the principles of sustainable development. At the microeconomics level, there is a growing demand from corporate and individual borrowers for products that meet sustainability criteria, which opens up opportunities for market segmentation and the development of specialized financial instruments.

The mechanisms for implementing ESG approaches in banking vary depending on the strategic settings of specific institutions: from a conservative approach focused on compliance with basic regulatory requirements for ESG risk management to proactive integration of the ESG agenda into the bank's corporate strategy, including the development of its own standards for sustainable financing and investment activities.

From the perspective of macroeconomic stability, the development of ESG banking contributes to improving the quality of the investment climate by reducing instability and long-term risks associ-

ated with climate and social challenges. Given the volatility of commodity markets and limited access to international sources of capital, the importance of domestic sources of financing is increasing, in particular, the mobilization of national investment capital, strengthening the institutional role of institutional investors and creating a favorable regulatory environment in the national financial market.

The digital transformation of the economy and the growth of technological innovations require the modernization of corporate financial strategies and the introduction of flexible models for managing investment and credit flows. A change in the production paradigm and market behavior of business entities dictates the need to form new organizational and economic mechanisms that ensure resilience and adaptability to external shocks. Effective planning and analysis of cash flows, optimization of the capital structure and systematic control of financial results are becoming integral components of the financial and economic stability of enterprises.

Thus, the banking sector of Kazakhstan is faced with the objective need for institutional integration of ESG factors into its operational activities. Nevertheless, the pace, depth, and sustainability of these transformations largely depend on macroeconomic conditions, the level of the regulatory environment, and the scale of government support. The key role in this process is played by the availability of effective economic incentives and preferential mechanisms that facilitate the involvement of financial institutions in the process of sustainable transformation. The formation of a favorable institutional environment, the development of clear regulations, as well as the development of "green" and social financing tools are necessary conditions for activating the ESG transition in the banking sector of Kazakhstan.

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Information about authors:

Idirissova Ainaziya Tulegenovna – PhD student, Karaganda University of Kazpotrebsoyuz, (Karaganda, Kazakhstan, e-mail: idirissova_a@mail.ru).

Talimova Lyazat Azimovna – Doctor of Economics, Professor of the Department of Finance, Karaganda University of Kazpotrebsoyuz (Karaganda, Kazakhstan, e-mail: laztal@mail.ru).

Korotkevich Alexey Ivanovich – Doctor of Economics, Professor of the Department of Banking and Financial Technologies, Belarusian State University (Minsk, Republic of Belarus, e-mail: Karatkevich@bsu.by).

Ermekova Zhanna Zhandarbekovna – PhD, senior lecturer at the Department of Finance and Accounting, Higher School of Economics and Business, Al-Farabi Kazakh National University, (Almaty, Kazakhstan, e-mail: zhanna.yermekova@kaznu.edu.kz)

Авторлар туралы мәлімет:

Идирисова Айназия Төлегенқызы – докторант, Қазтұтынуодағы Қарағанды университеті, (Қарағанды қ., Қазақстан, e-mail: idirissova_a@mail.ru).

Талимова Ләззат Әзімқызы – экономика ғылымдарының докторы, "Қаржы" кафедрасының профессоры, Қазтұтынуодағы Қарағанды университеті (Қарағанды қ., Қазақстан, e-mail: laztal@mail.ru).

Короткевич Алексей Иванович – экономика ғылымдарының докторы, банк бизнесі және қаржы технологиялары кафедрасының профессоры Беларусь мемлекеттік университеті (Минск қ., Беларусь Республикасы, e-mail: Karatkevich@bsu.by)

Ермекова Жанна Жандарбекқызы – PhD, "Қаржы және есеп" кафедрасының аға оқытушысы, Әл-Фараби атындағы ҚазҰУ Экономика және бизнес Жоғары мектебі. (Алматы қ., Қазақстан, e-mail: zhanna.yermekova@kaznu.edu.kz)

Информация об авторах:

Идирисова Айназия Тулегеновна – докторант, Карагандинский университет Казпотребсоюза (Караганда, Казахстан, e-mail: idirissova_a@mail.ru);

Талимова Лязат Азимовна – доктор экономических наук, профессор кафедры финансов, Карагандинский университет Казпотребсоюза (Караганда, Казахстан, e-mail: laztal@mail.ru);

Короткевич Алексей Иванович – доктор экономических наук, профессор кафедры банковского бизнеса и финансовых технологий, Белорусский государственный университет (Минск, Республика Беларусь, e-mail: Karatkevich@bsu.by);

Ермекова Жанна Жандарбековна – PhD, старший преподаватель кафедры финансов и учета, Высшая школа экономики и бизнеса, Казахский национальный университет им. аль-Фараби (Алматы, Казахстан, e-mail: zhanna.yermekova@kaznu.edu.kz).

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