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## **BANK LENDING IN THE CONTEXT OF SUSTAINABLE DEVELOPMENT OF UKRAINE'S ECONOMY: AN ANALYTICAL ASPECT**

### *Summary*

**Relevance. Problem statement.** Post-war economic recovery in Ukraine requires the efficient coordination of resources, with regional development serving as a key driver of economic growth and innovation. In this context, bank lending plays a crucial role by providing enterprises with financial resources to restore operations and adapt to changing market conditions. Contemporary financing must integrate environmental, social, and governance (ESG) considerations. At the same time, the state of war complicates the practical implementation of these reforms, emphasizing the importance of studying the role of lending as a mechanism for promoting sustainable business practices and a resilient banking system. The purpose of this article is therefore to conduct a comprehensive analysis of the impact of bank lending on Ukraine's economic development, and to determine prospects for improvement and increased effectiveness in ensuring economic sustainability. Objectives include researching lending operation structures during wartime, analysing "green" lending practices, and applying credit risk management methods. **Methodology.** The research employs institutional, functional, and reproductive approaches, classification methods, analytical and graphical techniques, as well as GAP management tools to assess financial risks and asset sensitivity to interest rate fluctuations.

**Results.** The economic essence of bank and "green" credit has been clarified; the classification of credits based on sustainable development criteria has been refined. The state of the banking sector has been analyzed, and an analytical assessment of changes



in the credit portfolio of corporate and individual businesses has been provided, with a focus on the share of non-performing loans. A comprehensive credit policy system has been proposed, taking into account the sensitivity of assets to interest rate fluctuations.

**Practical significance.** The results can be utilized by banks to enhance sustainable financing strategies, manage credit risks, and attract private capital to low-carbon infrastructure. **Future research prospects** will focus on an in-depth study of the features of innovative financial mechanisms (in particular, crowdfunding platforms), monitoring the effectiveness of credit programs, and improving the reporting systems of banks and enterprises in the field of sustainable development up to 2030.

*Keywords:* banking system, credit, bank, sustainable development, green lending, sustainable finance, credit risk, ESG factors, post-war recovery.

*Number of references – 21, number of figures – 4.*

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## **БАНКІВСЬКЕ КРЕДИТУВАННЯ У КОНТЕКСТІ СТАЛОГО РОЗВИТКУ ЕКОНОМІКИ УКРАЇНИ: АНАЛІТИЧНИЙ АСПЕКТ**

### *Анотація*

Повоєнне відновлення економіки України вимагає ефективної координації ресурсів, при цьому розвиток регіонів є ключовим фактором економічного зростання та інноваційного прогресу. У цьому контексті особливе значення має банківське кредитування, яке забезпечує підприємства фінансовими ресурсами для відновлення діяльності й адаптації до змін ринкових умов. Сучасне фінансування повинно враховувати екологічні, соціальні й управлінські (ESG) аспекти. Водночас воєнний стан ускладнює практичну реалізацію цих реформ, що підкреслює актуальність дослідження ролі кредитування як механізму стимулювання стійкого розвитку бізнесу та банківської системи.

Мета дослідження – провести комплексний аналіз впливу банківського кредитування на розвиток економіки України, визначити перспективи його вдосконалення та підвищення ефективності для забезпечення економічної сталості. Завдання включають дослідження структури кредитних операцій у період війни, аналіз практики «зеленого» кредитування та застосування методів управління

кредитними ризиками. У статті використано інституційний, функціональний та відтворювальний підходи, метод класифікації, аналітичні та графічні методи, а також інструменти GAP-менеджменту для оцінки фінансових ризиків і чутливості активів до змін процентних ставок.

Результати: уточнено економічну сутність банківського та «зеленого» кредитів; удосконалено класифікацію кредитів за критерієм сталого розвитку; проаналізовано стан банківського сектору та надано аналітичну оцінку змін кредитного портфеля корпоративного й індивідуального бізнесу з акцентом на частку непрацюючих кредитів. Запропоновано комплексну систему кредитної політики, що враховує чутливість активів до коливань ставок. Результати можуть бути використані банками для вдосконалення стратегій сталого фінансування, управління кредитними ризиками та залучення приватного капіталу у низьковуглецеву інфраструктуру. Перспективи подальших розвідок будуть спрямовані на поглиблене вивчення особливостей інноваційних фінансових механізмів (зокрема краудфандингових платформ), моніторинг ефективності кредитних програм та удосконалення системи звітування банків і підприємств у сфері сталого розвитку до 2030 року.

*Ключові слова:* банківська система, кредит, банк, сталий розвиток, зелений кредит, стале фінансування, кредитний ризик, ESG-фактори, повоєнне відновлення.

*Кількість джерел:* 21; *кількість рисунків:* 4.

**Problem statement.** Post-war reconstruction of the national economy is a systemic, multi-level, and prolonged process that requires coordinated management of financial, material-technical, and human resources to restore the country's economic potential. Regional development plays a decisive role in this process, as it is at the territorial level that the prerequisites for economic growth, expansion of employment, and dissemination of innovative practices are formed. Under such conditions, bank lending acquires strategic importance as a key instrument of financial support for economic entities, enabling them to resume operational activities and adapt to structural changes in the market environment. Consequently, there is an increasing need to develop and implement effective credit support mechanisms capable of providing Ukrainian regions and the national economy with stable and economically justified access to financial resources on competitive terms.

In the current context of Ukraine's economic development, sustainable financing is considered a targeted mechanism for mobilizing financial capital, taking into account environmental, social, and governance (ESG) criteria, which create institutional prerequisites for the implementation of the sustainable development

concept in the business sector. This approach can be interpreted in two methodological dimensions: broadly – as the comprehensive integration of all components of the ESG paradigm into financial decisions; and narrowly – as the application of specialized «green» financial instruments. The practical implementation of sustainable finance principles is reflected in the introduction of targeted credit programs aimed at supporting business entities that invest in projects designed to enhance environmental and social responsibility [1]. Therefore, one of the strategically important tasks for restoring the national economy and increasing the competitiveness of Ukrainian business on the global stage is ensuring sustainable financing of the banking system, organized within the framework of implementing and achieving the Sustainable Development Goals (SDGs).

**Recent studies and publications review.** The issue of bank lending to entrepreneurial activities and individual sectors of the Ukrainian economy remains the subject of active study in the works of domestic scholars such as S.V. Andros [3], Ye. M. Andrushchak [4], A. V. Herasymenko [4], A. V. Hetmantsev [6], B. M. Danylyshyn [8], O. V. Dziubliuk [17], I. O. Dotsenko [9], N. M. Dumenko [10], B. L. Lutsiv [17], P. B. Lutsiv [17], L.V. Melnyk [19], S. S. Skasovska [19], N. M. Tkachuk [10], Ye. Ya. Chaikovskiy [17], Ya. I. Chaikovskiy [17], I. V. Shalyhina [18], A. P. Shcherbyuk [20], Zh. S. Shylo [19], among others. In contemporary research, significant attention is given to analyzing the functioning of bank lending mechanisms under wartime challenges, as well as studying the specifics of financial support aimed at stabilizing and restoring the economic activity of business entities. In particular, the works of I. V. Shalyhina [18] provide a thorough examination of approaches to forming a balanced credit portfolio for Ukrainian banks during martial law, taking into account the necessity of minimizing credit risks and ensuring the financial stability of the banking system. Simultaneously, the studies of H. V. Dolha and S. V. Ryleiev [16] reveal the conceptual foundations of risk management within banking management systems, with a focus on adapting the operations of financial institutions to conditions of heightened market uncertainty. A separate body of research is devoted to fiscal risks arising from the

taxation of banking operations. For example, in the joint studies of K. L. Bahriia and O. V. Malyarchuk [12], a comprehensive analysis of the challenges in tax regulation of banking operations in the stock market is conducted, and directions for improving the effectiveness of tax policy in this financial market segment are substantiated. At the same time, domestic scholars devote considerable attention to assessing the impact of bank lending on ensuring sustainable development of the national economy. Specifically, O. V. Dziubliuk, V. V. Kovalenko, B. L. Lutsiv, B. P. Lutsiv, Ye. Ya. Chaikovskiy, Ya. I. Chaikovskiy, and others [11; 17] convincingly demonstrate the role of green bank lending as an important instrument of environmentally oriented economic transformation. The authors argue that the process of “greening” the global economy involves a large-scale reorientation of financial flows and increased engagement of private capital in investing in the development of low-carbon infrastructure. Nevertheless, despite the existence of a substantial body of scientific publications, the issue of using bank lending as a systemic and effective mechanism for stimulating sustainable development in the entrepreneurial sector remains insufficiently explored. This highlights the relevance of further fundamental and applied research aimed at forming scientifically grounded and practically effective mechanisms for providing credit support to business.

**Formulation of the article’s objectives and justification of the relevance of the research problem.** The purpose of this article is to conduct a comprehensive examination of the role of bank lending in ensuring the sustainable development of Ukraine’s economy, to identify prospects for the transformation of credit relations, and to substantiate ways to enhance the efficiency of credit processes within the context of sustainable financing of the banking system. To achieve this aim, the following tasks are proposed: to investigate the key terminology related to the research topic, namely «bank credit» and «green credit»; to refine the classification of bank credits in the context of implementing the Sustainable Development Goals (SDGs); to conduct an analytical assessment of credit provision to legal entities and individuals for the period 2022–2024, with justification of its impact on the socio-

economic development of Ukraine; to present a comprehensive approach to improving a bank's credit policy, aimed at enhancing the efficiency of credit risk management through early identification and evaluation of risks.

**Highlighting unresolved aspects of the general problem.**

Previous scientific studies have focused on issues of credit support under wartime conditions and on the specifics of bank financing aimed at restoring entrepreneurial activity. At the same time, the role of bank lending as a mechanism for stimulating sustainable business development at both regional and national levels remains insufficiently studied. This underscores the relevance of further research aimed at developing effective models of credit support and adapting them to the conditions of post-conflict sustainable economic recovery in Ukraine.

**Basic material presentation.** In the scientific literature, sustainable financing is considered as the integration of environmental, social, and governance (ESG) factors into financial decision-making processes to ensure long-term economic development. This approach presupposes minimizing the negative impacts of climate change while simultaneously enhancing the adaptive capacity of the economic system amid global transformations. At national and regional levels, environmental factors are considered in a broad sense, including climate-related aspects that directly affect the social sphere and depend on the effectiveness of managerial decisions in economic activities. The interconnection of environmental, social, and governance components is recognized as a necessary condition for achieving balanced and sustainable development [15].

Documents of the European Commission emphasize that a key feature of sustainable financing is the mandatory consideration of ESG factors in shaping financial policies and making managerial decisions. The implementation of this approach contributes to improving the long-term efficiency of investments, ensuring financial stability of individual programs and projects, and creating prerequisites for the sustainable development of the economic system as a whole.

The sustainable development of regions and the national economy of Ukraine is based on a systemic interaction of environmental, social, and economic components, as well as institutional foundations of corporate governance, which collectively form an integrated model of sustainable financing. The environmental component of this model encompasses a set of measures aimed at reducing climate risks, enhancing the adaptive capacity of economic and social systems to climate change, and implementing other strategic priorities in environmental protection. The financial provision of sustainable development processes is carried out through the use of specialized financial instruments, including carbon, ecological, "green," and social-ecological financing, which ensure the integration of environmental and social objectives into the system of economic growth [1].

**Sustainable development** is defined as a prolonged and systemic process of economic growth based on the rational use of natural resources, minimization of depletion risks, and the harmonious integration of economic, social, environmental, and governance interests of society. Its primary goal is to ensure a balance between economic efficiency, social equity, and environmental protection [11]. The concept of a «green» or low-carbon economy envisages an economic model aimed at reducing greenhouse gas emissions, optimizing the use of natural resources, and redirecting economic activities to meet societal needs while considering ecological constraints.

**Bank lending** has traditionally been based on the principles of term, repayment, and cost, and, when necessary, collateralization and targeted use of funds. In the context of digitalization and economic transformation, it is advisable to complement these principles with additional ones, such as autonomy, priority, adherence to sustainable development principles, economic synergy, and information-digital competence. The implementation of these principles enhances the efficiency of banks' operations and generates a comprehensive economic, social, and environmental effect, supporting the sustainable development of the economy [8].

Bank credit should be understood as a system of socio-economic relations between the creditor bank, the borrowing enterprise, and other participants in the process. It arises in the course of achieving the borrower's economic objectives with borrowed capital and functions based on general and specific principles that ensure a balanced consideration of the interests of all parties. Key criteria include the object and subject of lending, form, resource sources, economic interrelations, contractual conditions, and the purpose of the loan. According to «General provisions» section of the Law of Ukraine «On banks and banking activities» (amended on 03.06.2025, No. 4466-IX) [2], bank credit is defined as an «obligation», «guarantee», or «claim to debt», with an emphasis on interest payments and mandatory repayment of the principal specified in the agreement.

For a deeper understanding of the essence of bank lending, scholars Ye. M. Andrushchak and A. V. Herasymenko [5] propose a comprehensive approach combining institutional, functional, and reproductive aspects: the *institutional approach* analyzes the structure of the credit environment, key participants (banks, borrowers), and economic, legal, social, and political interrelations; the *functional approach* considers lending as a set of relationships in which the interaction of participants facilitates the execution of joint functions and the achievement of economic results; the *reproductive approach* focuses on the redistribution of financial resources between creditors and borrowers, ensuring the continuity of economic reproduction and the stability of the financial system.

Such an integrated approach allows for a systematic assessment of the role of bank lending in economic development and in creating conditions for sustainable development. Credit operations are a fundamental element of banking activities, as they ensure the efficient allocation of financial resources within the national economy. Theoretical analysis involves systematizing and refining classifications of different types of bank credits. Key classification criteria include: loan terms and repayment periods, amount of funds, currency, purpose, presence or absence of collateral, repayment mechanism, credit risk level, borrower category, form and procedure of credit provision, as well as the number of participants in the process.

It is advisable to classify bank credits considering economic, organizational, and social aspects of credit relations to ensure their alignment with the principles of sustainable financing of the national economy. Methodologically, it is justified to differentiate bank credits depending on the level of actual integration of sustainable development principles into enterprise activities. Accordingly, it is reasonable to distinguish: financing for companies whose activities fully comply with environmental, social, and governance sustainability standards; lending to business entities whose current business models do not yet implement comprehensive sustainable development principles; provision of credit resources to enterprises undergoing transformation toward a sustainable operational model.

**Environmentally oriented financing** has emerged as an objective response to the growing need to integrate economic development with environmental preservation and the rational use of natural resources. In the contemporary theoretical and applied context, this approach is viewed as a conceptual foundation for creating a model of responsible, inclusive, and long-term sustainable economic growth, within which financial flows are purposefully directed to support projects that generate positive environmental impacts. Under this framework, environmental financing and green lending can be interpreted as interconnected components of a unified mechanism for implementing sustainable development principles, aimed at reducing anthropogenic pressure on the natural environment. At the same time, green credit serves as one of the key financial instruments for providing resources for ecological modernization of economic activities and enhancing the long-term resilience of economic systems.

Theoretical and applied aspects of green bank lending as a tool for ecological modernization of the economy have been thoroughly examined in the works of O. V. Dziubliuk, Ye. Ya. Chaikovskiy, Ya. I. Chaikovskiy, B. L. Lutsiv, P. B. Lutsiv, and other researchers. Among the main instruments of bank green lending, these scholars highlight several categories: consumer green loans for individuals, provided to acquire or implement energy-efficient and environmentally safe goods and services; business loans aimed at financing

entrepreneurial projects with an ecological focus; and loans for implementing large-scale green projects, which are characterized by a higher level of risk [17]. In contemporary conditions, the banking sector plays a leading role in implementing these transformations, as financial institutions increasingly integrate sustainable development principles into their strategies and operational models. Growing awareness of climate threats and environmental risks has prompted banks to revise strategic priorities, focusing on ecological performance, risk management, and social responsibility.

Green banking should be viewed as a comprehensive system for managing financial resources, in which environmental factors are considered at all levels of banking operations – from internal organizational and managerial processes to external financial transactions. A key element of this system is green lending, which provides financial resources for the implementation of environmentally safe and climate-oriented projects, particularly in renewable energy, sustainable construction, and circular economy development. This approach enables banks not only to contribute to achieving the Sustainable Development Goals but also to create new sources of economic growth and competitive advantages.

The implementation of sustainable development principles in banking activities entails a systemic transformation of organizational and managerial mechanisms. This involves not only the adoption of corporate social responsibility concepts but also the creation of institutional tools for identifying and assessing environmental risks, the development of professional expertise in green finance, and the reorientation of corporate culture toward ecological responsibility. In this context, green banking emerges as a strategic direction for the development of the financial system, ensuring a synergy of economic efficiency, social relevance, and environmental appropriateness. Its advancement contributes not only to the transformation of financial relations but also to the evolution of the economic model toward sustainable development.

The fundamental distinction between green loans and sustainable development-oriented loans lies in the approach to using the borrowed financial resources. Green loans have a clearly defined

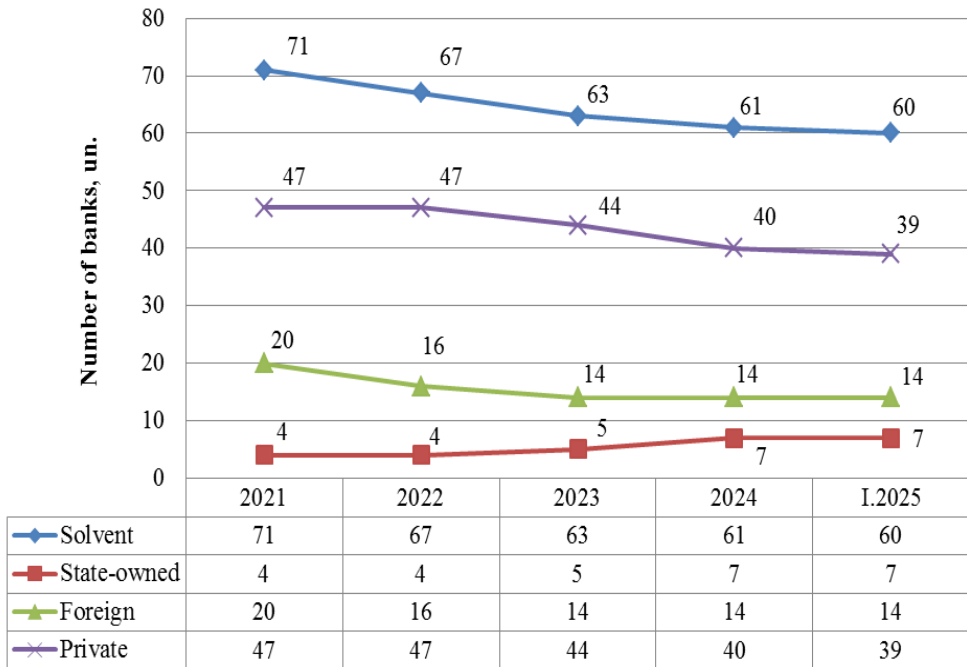
target purpose and are used directly to finance environmental projects, whereas sustainable development loans aim to incentivize borrowers to enhance the efficiency of their operations in accordance with ESG criteria.

**The formation and development of the green economy** requires the creation of modern infrastructure for specialized financial instruments. These include traditional forms such as green loans and green bonds, as well as innovative digital financing tools, including online banking, *blockchain technologies*, and social bonds. Practically, financial instruments are considered «green» if they incentivize economic agents to engage in environmentally responsible behavior and adopt sustainable production practices. In the current context, green lending and financing aimed at achieving the Sustainable Development Goals (SDGs) are gaining increasing significance in the financial market. Despite the relative novelty of this area, the dynamics of related financial operations indicate a gradual transition of the economy toward a more sustainable and responsible development model.

The credit activities of the Ukrainian banking sector demonstrate gradual recovery, which reflects the emergence of signs of financial system stabilization. The first positive changes in lending were observed in the second half of 2023; however, it was during 2024 that the process of credit operations activation became more systematic and pronounced. In particular, the growth rates of net loans in the national currency extended to households nearly doubled the corresponding indicators for the corporate sector [7].

For a substantiated analysis of the current state of bank lending, it is appropriate to consider the dynamics of the number of banking institutions in Ukraine over the period 2021–2024 and compare these figures with those for the first quarter of 2025 (as of the end of the respective periods), as illustrated in Fig.1.

In 2022, the banking system comprised 67 institutions, which was four fewer compared to 2021. In 2023, their number decreased further to 63, continuing the previous downward trend. By the end of 2024, the number of operating banks amounted to 61, indicating a further reduction of two institutions.



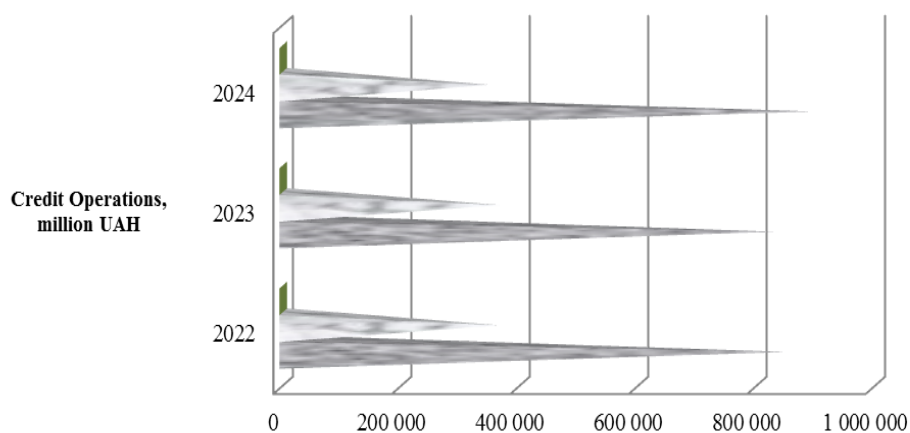
*Fig. 1. Dynamics of the Number of Banks in Ukraine for the period from 2021 to the first quarter of 2025\**

\* Compiled by authors according to data from references [14].

It should be noted that in the first quarter of 2025, the process of reducing the number of banks continued: Portal Bank ceased its operations, with its share of assets accounting for only 0.01% of the total assets of the banking sector, and the decision to exit the market was voluntary. Regarding ownership structure, by the end of 2024, banks with foreign capital nearly doubled the number of state-owned banks. As for private banks, throughout the entire study period (2021–2024), there was a clear trend of gradual reduction; in particular, in 2024 their number decreased by four institutions, totaling 40 banks. According to the National Bank of Ukraine [13], the following changes in lending volumes were observed in 2024: the total amount of loans granted to enterprises increased by 8.5%, while loans provided to households rose by 23.2%; in national currency terms, the corresponding figures were 9.8% and 24.9%, respectively. Net loans to enterprises (after accounting for provisions) grew by

15.3%, and to households – by 39.3%; in hryvnia terms, the growth rates were 20.6% and 39.9%, respectively.

By the end of 2024, the net loan portfolio of the corporate sector reached UAH 891 billion, which is UAH 65 billion more than in the previous year, corresponding to a 21% increase. This growth was driven by both rising demand for credit resources from enterprises and an increased willingness of banks to assume credit risk [50]. As of September 1, 2025, the volume of loans to the corporate sector amounted to UAH 989 billion, to individuals – UAH 350 billion, and interbank loans – UAH 131 billion. The dynamics of the banking system’s loan portfolio in Ukraine over the period 2022–2024 are shown in Figure 2, demonstrating a gradual recovery of credit activity while maintaining structural changes in the sector.



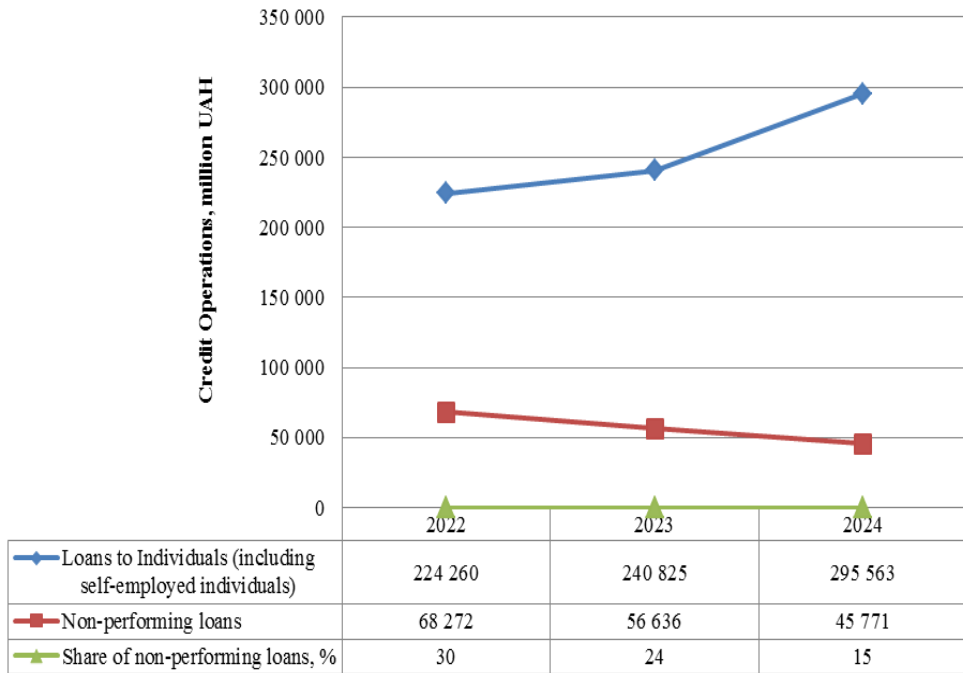
	2022	2023	2024
■ Share of non-performing loans, %	43	44	39
■ Non-performing loans	363 321	365 532	347 379
■ Loans to the corporate sector	847 586	828 444	891 619

*Fig. 2. Dynamics of lending volumes in Ukraine’s corporate sector over the period 2022–2024\**

\* Compiled by authors according to data from references [3; 13; 14].

One of the positive trends in the development of bank lending in Ukraine is the reduction in the share of non-performing loans (NPLs) from 44% in 2023 to 39% in 2024. An analysis of lending to

individuals, including self-employed entrepreneurs (FOPs), demonstrates a steady increase in the volume of loans granted, as illustrated in Fig. 3.



*Fig. 3. Dynamics of lending volumes in Ukraine's corporate sector over the period 2022–2024\**

\* Compiled by authors according to data from references [3; 13; 14].

According to the analysis, in 2023 the total amount of such loans reached UAH 240 billion, exceeding the 2022 level by 7.4%. In 2024, this volume increased by 22.7%, reaching over UAH 295 billion, indicating a significant intensification of household lending.

The dynamics of the banking system's loan portfolio, broken down by ownership type – state-owned, private, and foreign-capital banks – as well as the absolute value of non-performing loans (NPLs) for 2022–2024, are presented in Fig. 4.

Specifically, the absolute amount of non-performing loans (NPLs) decreased from UAH 422 billion in 2023 to UAH 393 billion in 2024. In percentage terms, the share of problem loans fell from 38% in

2022 to 37% in 2023 and further declined to 30% in 2024, indicating an improvement in the quality of the loan portfolio and enhanced risk management efficiency.

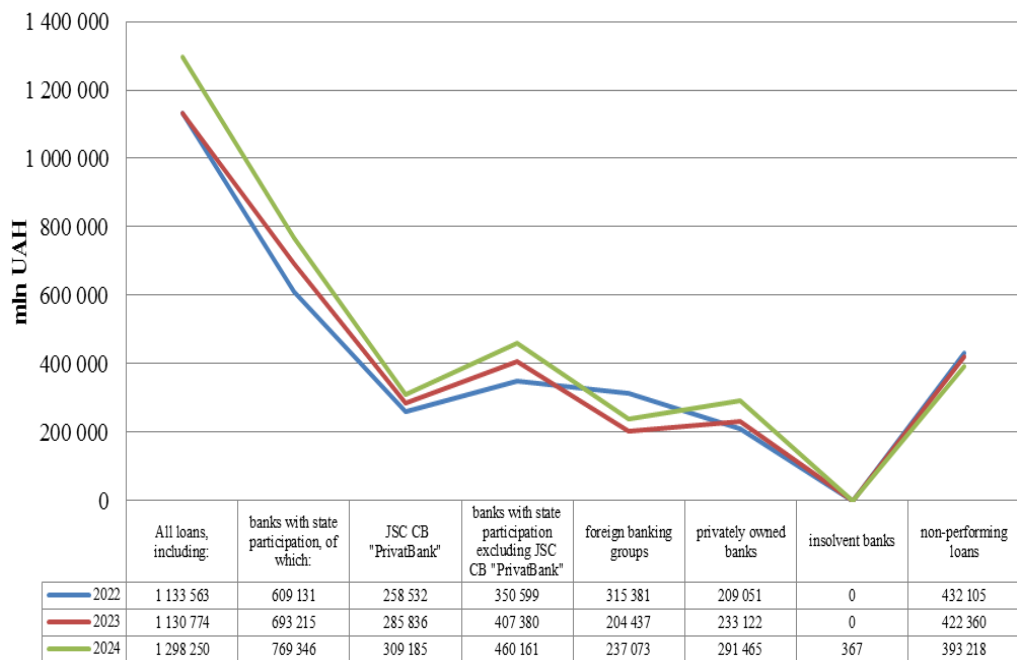


Fig. 4. Structure of the loan portfolio of Ukrainian banks by ownership type over the period 2022–2024

\* Compiled by authors according to data from references [14].

Among the top 10 banks by the 2024 viability ranking, the highest NPL ratio was observed at JSC Oschadbank – 39.9%. However, compared to 2023, this represents a decrease of 8.4%. The high level of problem loans at this institution is due to the combined impact of wartime factors, which significantly worsened the quality of the corporate portfolio and led to increased indebtedness in the small and medium-sized business segment. The accumulation of financial risks prior to the war, combined with new debt-related challenges, continues to leave a noticeable impact on the bank’s portfolio. The leader in terms of the minimal NPL share in 2023–2024 is Citibank, one of the leading American banks.

Despite the positive trend, the scale of credit expansion remains limited due to a low starting base, which reduces the potential impact of lending on macroeconomic recovery. First, the trend of a declining share of loans in GDP persists. The level of credit provision to businesses and households, which began to decrease even before the full-scale war, reached minimal levels after 2022. According to the National Bank of Ukraine, the ratio of gross and net business loans to GDP was as follows: 15.3% / 10.1% in 2022, 11.8% / 7.7% in 2023, and 11% / 7.6% in 2024. This reflects an almost twofold decline over six years, demonstrating a structural weakening of the role of lending in financing economic growth [6].

Second, the retail lending segment shows a more favorable trend. In 2024, the share of household loans in GDP exceeded the previous year's level but remained below the 2022 figures. Specifically, the ratio of gross and net household loans to GDP was 4.5% / 4% in 2022 and 3.6% / 2.9% in 2024.

According to World Bank estimates [21], in 2024 the volume of domestic lending to the private sector in Ukraine amounted to 23.3% of GDP. For comparison: Poland – 34.8%, Hungary – 33%, Lithuania – 35.2%, Czech Republic – 49.8%, Slovakia – 61.8%, Romania – 23%. This discrepancy highlights the underdevelopment of financial intermediation in Ukraine and underscores the urgent need to activate bank lending as a key instrument for economic stabilization, long-term growth, and post-war economic recovery.

The development of the green lending market in Ukraine requires a systematic and comprehensive approach, which involves integrating sustainable development principles into national financial policy, harmonizing the legislative framework with international environmental standards, and creating effective mechanisms to support environmentally oriented investments. International experience demonstrates steady growth in the market for "green" financial products, which is gradually becoming one of the key instruments for implementing sustainable development policies at both the state and corporate levels [6].

Green bank credit represents a specialized financial instrument aimed at financing projects that reduce environmental impact,

improve energy efficiency, and promote the sustainable use of natural resources. The provision of such loans involves strict project selection criteria, requiring compliance with established environmental standards and the Sustainable Development Goals (SDGs). At the same time, the implementation of green credit is accompanied by mandatory reporting, which confirms the achieved environmental outcomes and the effective use of the funds provided.

With the increasing share of renewable energy sources, a growing number of households in Ukraine are switching to “clean” electricity. Loans are provided to households for home insulation, installation of energy-efficient windows, solar collectors, and other technological solutions that reduce energy consumption. Within the framework of green lending, support is also extended to enterprises engaged in waste recycling and the use of renewable energy sources.

However, banks, as key participants in the financial system, constantly operate under various risks inherent in their intermediary function. The rise in volatility in global financial markets has heightened the importance of effective risk management, with particular attention given to interest rate risk. This necessitates the development of comprehensive internal policies, procedures, and mechanisms for managing this risk, as well as the implementation of systems for its continuous assessment and monitoring in accordance with the recommendations of the Basel Committee on Banking Supervision.

Credit risk is defined as the potential or actual threat to a bank’s income and capital in the event that a counterparty fails to fulfill its financial obligations. Effective management of credit risk requires specialized approaches to the organization of banking operations, as monitoring individual loans is critical for maintaining the quality of the loan portfolio. A prudent credit policy contributes to minimizing overall risk levels [9].

To ensure financial stability, banks employ a comprehensive risk management system that enables timely identification, assessment, and control of interest rate risk, taking into account the structure of the institution’s assets and liabilities. Effective management of this risk, which ensures that it remains within acceptable limits, is a key condition for a bank’s reliability and operational stability.

The main methods of interest rate risk management include structural balancing, gap management (GAP management), duration analysis, the use of derivative financial instruments, setting credit limits, forming reserves, portfolio diversification, and asset securitization [10].

Additionally, static and dynamic modeling methods are applied for a detailed assessment of the impact of interest rate fluctuations on a bank's financial performance [9].

The GAP management method is considered one of the most effective approaches. It is based on determining the sensitivity of individual asset and liability items, as well as the overall balance sheet, to interest rate changes in order to assess and control the level of risk. The GAP indicator is calculated taking into account the characteristics of the financial instruments that constitute the bank's assets and liabilities and can be expressed in absolute terms as follows:

$$GAP_i = RSA_i - RSL_i, (1)$$

where  $RSA_i$  (*Rate-sensitive assets*) are assets whose returns fluctuate in response to interest rate changes over a specified time period, and  $RSL_i$  (*Rate-sensitive liabilities*) are liabilities for which servicing costs depend on interest rate movements during the corresponding period.

The GAP management principle is based on aligning the magnitude and direction of this indicator with expected interest rate fluctuations. GAP is calculated as the difference between long and short positions of financial instruments sensitive to rate changes. A zero GAP ensures the stability of the bank's net interest margin and minimizes interest rate risk, but it also limits the potential to earn additional profits from favorable market movements. A positive or negative GAP can enhance the margin, but simultaneously increases financial risk exposure. Under conditions of high uncertainty in interest rate forecasting, it is advisable for banks to adopt a zero GAP strategy, which allows for optimal balancing between income stability and risk minimization [10].

**Conclusions of the study and prospects for further research.** Based on a comprehensive analysis of the role of bank lending in ensuring sustainable development of the Ukrainian economy, several conclusions and recommendations can be drawn. Bank lending serves as one of the key mechanisms of financial relations, whereby a bank provides a borrower with temporary access to funds under conditions of repayment, term, interest, and collateral. This mechanism facilitates the efficient redistribution of financial resources within the economy, stimulates investment and entrepreneurial activity, supports production, and generates added value, thereby creating conditions for economic growth at both regional and national levels. The study of key terminology confirms that bank credit performs not only a financial function but also an economic one. It contributes to the development of production, the introduction of innovations, the enhancement of enterprise competitiveness, and the sustainable development of regions. Today, bank loans represent an important source of financing for small and medium-sized enterprises, infrastructure modernization, energy-efficient projects, and socially significant environmental initiatives.

The study emphasized the approaches of domestic scholars in defining the concept of «bank credit» through the combination of institutional, reproductive, and functional approaches, allowing for a comprehensive coverage of its essential characteristics. It has been substantiated that green bank credit represents a specialized financial mechanism designed for targeted financing of investment projects that reduce environmental impact, enhance energy efficiency, and promote optimal use of natural resources, in line with the principles and goals of sustainable development. Thus, green lending is gradually establishing itself as a key segment of the financial market, combining economic efficiency with environmental responsibility and laying the foundation for long-term sustainable growth of the national economy.

The study of the classification of bank loans within the framework of the «green economy» and the implementation of the Sustainable Development Goals (SDGs) has made it possible to propose directions for its improvement, through the introduction of

an additional classification criterion: «compliance with sustainable development principles and the targeted purpose of green loans» (green consumer loans, green business loans, loans for implementation of green projects, etc.). This will facilitate effective implementation of green credit policy, ensuring financing of environmentally safe projects and improving energy efficiency. Green credit policy promotes the development of a circular economy, supports enterprises with minimal environmental impact, and facilitates the adoption of renewable energy.

The results of the analytical assessment of corporate lending in 2022–2024, based on official data from the National Bank of Ukraine, indicate that in 2024 the net loan portfolio of enterprises amounted to UAH 891 billion, exceeding the previous year's figure by 21%. This growth is explained by increased business demand for borrowed resources and banks' willingness to assume credit risk. Lending to individuals and self-employed entrepreneurs (FOPs) amounted to UAH 240 billion in 2023 (an increase of 7.39% compared to 2022), and exceeded UAH 295 billion in 2024, reflecting a gradual recovery of the consumer lending market. The volume of non-performing loans (NPLs) decreased from UAH 422 billion in 2023 to UAH 393 billion in 2024, while their share in the portfolio fell from 38% in 2022 to 30% in 2024, indicating an improvement in the quality of credit assets and enhanced financial stability of banks.

Key prospects for the transformation of credit relations and for improving the efficiency of credit processes, in the context of sustainable economic development in Ukraine, should focus on:

- increasing demand for green financial products, driven by greater awareness of climate change and the need for a transition to a sustainable economy, which stimulates financing of enterprises with projects that have a positive environmental impact;
- strengthening regulatory influence through the introduction of new rules and policies aimed at supporting green investments and business models, including the EU Sustainable Finance Taxonomy;
- actively expanding ESG investing, where investors consider environmental, social, and governance aspects of activities, which directly affects the demand for green loans and related financial instruments.

A comprehensive approach to improving bank credit policy allows us to assert that effective credit risk management requires banks to actively implement an integrated approach in developing internal credit policies, including assessing the financial reliability of borrowers, monitoring compliance with obligations, and utilizing risk mitigation mechanisms (collateral, guarantees). An important instrument of bank credit policy is *GAP*-management, which includes structural balancing, duration-based approaches, and derivative operations, allowing the assessment of the sensitivity of assets and liabilities to interest rate fluctuations. A zero *GAP* stabilizes margins and minimizes risk, while positive or negative *GAP* may increase profitability but raises potential risks. In unstable conditions, an integrated management system, including *GAP* management, is key to ensuring the financial stability of the bank.

By 2030, the successful implementation of the Sustainable Development Goals (SDGs) in Ukraine will largely depend on the integration of ESG principles into banking practices and state support for green projects. The use of green financial instruments, including eco-loans and green bonds, will promote investment in a *sustainable* economy. Tax incentives, subsidies, and regulatory initiatives play a crucial role in ensuring transparency and market participants' trust. Prospects for further research will focus on a deeper study of innovative financial mechanisms (including crowdfunding platforms), monitoring the effectiveness of credit programs, and implementing consolidated non-financial reporting to enhance transparency of bank operations.

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