Supported by:





on the basis of a decision by the German Bundestag

Promoting Green Deal Readiness in the Eastern Partnership Countries (PROGRESS)

State Organization
«Institute for Economics and Forecasting
of the National Academy of Sciences of Ukraine»

UKRAINE COUNTRY REPORT for Output IV

Green Finance in the Agricultural Sector of Ukraine: PROGRESS Stocktaking for the Country Framework on Financing Climate Change Adaptation and Resilience in the Agricultural

(the study was conducted from April 2024 to December 2024)

KYIV - 2025











The project 'Promoting Green Deal Readiness in the Eastern Partnership Countries' (PROGRESS) is funded by the International Climate Initiative (IKI) of the German Federal Government and is implemented by the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH, as the lead agency, in partnership with the Organisation for Economic Co-operation and Development (OECD), the Regional Environmental Centre for the Caucasus (REC), the European Business Association (EBA) Moldova and the Institute for Economics and Forecasting of the National Academy of Sciences of Ukraine (IEF). The content of this report reflects the views of the experts and authors and does not necessarily represent the official positions of the funding organizations, implementing partners, or any associated entities.

This report has been prepared by the team of the State Organization "Institute for Economics and Forecasting of the National Academy of Sciences of Ukraine" as part of the Regional Project "Promoting Green Deal Readiness in the Eastern Partnership Countries" (PROGRESS):

Yevhen BUBLYK

D.Sc., Key Green Finance Expert

Yuliia SHAPOVAL

PhD, Senior Green Finance Expert

Svitlana BRUS

PhD, Green Finance Expert

Oleksandr DIACHUK

PhD, IEF Team Leader of the PROGRESS Project

With support from:

Valeriy HEYETS

Academician of the National Academy of Sciences of Ukraine, Key Economic Expert

Roman PODOLETS

PhD, Key Macroeconomic Expert

Olena SHUBRAVSKA

D.Sc., Key Agrarian Policy Expert

Olha POPOVA

D.Sc., Senior Agrarian Policy Expert

Kateryna PROKOPENKO

PhD, Agrarian Policy Expert

Tamara OSTASHKO

D.Sc., Key Agrarian Trade Policy Expert

Volodymyr OLEFIR

PhD, Senior Agrarian Trade Policy Expert

Galyna TRYPOLSKA

PhD, Key Gender Policy Expert

Andrii SEMENIUK

Energy Sector Expert

Tetiana SAPRYKINA

Communication Expert

Valuable contributions to this report were made by experts of the Organisation for Economic Co-operation and Development (OECD) and the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH as partners of the PROGRESS project.

Design and printing:

Individual Entrepreneur Dubovyk, Printing «Wolf», 50 copies

CONTENT

SUMMARY
01. INTRODUCTION
02. KEY ECONOMIC AND POLITICAL ASPECTS OF IMPLEMENTING GREEN FINANCE FOR CLIMATE CHANGE ADAPTATION AND MITIGATION IN THE AGRICULTURAL SECTOR
a) Ukraine's agriculture sector and existing targets in climate change adaptation and mitigation
b) Policies and regulation for climate change adaptation and ecology in agricultural sector
03. UKRAINIAN STATE INSTRUMENTS TO PROVIDE GREEN FINANCING IN THE AGRICULTURAL SECTOR
a) Policies and Fiscal instruments
b) State mechanisms and institutions for green finance
c) State Grant Programs for Farmers
04. INTERNATIONAL SUPPORT PROGRAMS
a) Financial organizations
b) Non-financial organizations
05. FINANCIAL INSTRUMENTS FOR AGRICULTURAL SECTOR CLIMATE ADAPTATION
a) Financial market capacity
b) Green bonds
c) Bank loans
d) Non-banking financing
06. CONCLUSIONS AND OPPORTUNITIES FOR FUTURE RESEARCH
07 ANNEXES

LIST OF ABBREVIATIONS – ALPHABETICAL

ASEAN Association of Southeast Asian Nations

BDF Business Development Fund

CMU Cabinet of Ministers of Ukraine

EBRD European Bank for Reconstruction and Development

ECA Export Credit Agency

EIB European Investment Bank

ERA Emergency Relief Arrangement

ESG Environmental, social, and governance

ETS Emissions trading system

ESRM Environmental and social risk management

EU GBS EU Green Bond Standard

GBP Green bond principles
GDP Gross domestic product

IBRD International Bank for Reconstruction and Development

ICMA International Capital Market Association

IFC International Finance Corporation
ILO International Labor Organization

IMF International Monetary Fund

KfW Kreditanstalt für Wiederaufbau (Credit Institute for Reconstruction)

NBU National Bank of Ukraine

NS&I National Savings and Investments

NSSMC National Securities and Stock Market Commission

PCGF Partial Credit Guarantee Fund in Agriculture

RLG Resilience and Livelihoods Guarantee

SBN Sustainable Banking Network
SDGs Sustainable Development Goals

SME Small and Medium Enterprise

TSC Technical Service Criteria

UAH Ukrainian hryvnia

UKEEP Ukrainian Energy Efficiency Program

USAID United States Agency for International Development

SUMMARY

This report provides a comprehensive analysis of Ukraine's green finance market, evaluating the financial sector's institutional capacity and the ability of financial intermediaries to implement green finance in the agricultural industry. It explores the range of financial instruments and mechanisms available in Ukraine, including public financing options, that support the agricultural sector's adaptation to climate change and mitigation. The study examines the institutional framework and key drivers of green finance development in Ukraine, with a particular focus on agriculture. It analyzes existing international and national programs, financial instruments, and policies aimed at promoting sustainable finance and integrating ESG criteria into financial practices. Additionally, it reviews both domestic and international public financing programs for climate adaptation, identifying available funding sources. The report concludes with policy recommendations for the development of green finance in Ukraine.

The development of green finance in Ukraine faces significant challenges. Economic instability caused by the full-scale war has led to increased risk and uncertainty. Additionally, the financial sector remains underdeveloped, with primarily state-owned banks dominating the market, while the insurance and capital markets play only a minor role. Since adopting the Green Bonds Law in 2021, issuance has been limited to only two cases in the energy sector. A key obstacle to further development is the underdeveloped capital market infrastructure, particularly the lack of verifiers and standardized frameworks.

The slow adoption of ESG in the banking sector exacerbates these challenges. Guidelines for ESG disclosure and risk assessment were only introduced between 2022 and 2024. Currently, there is a lack of expertise, limited motivation, and a narrow range of green financial products offered by banks. However, bank leadership is increasingly recognizing the importance of green finance and is taking steps to address these gaps, which necessitates the development of specialized training materials for financial intermediaries.

In Ukraine, commercial banks, including state-owned banks and those with foreign capital, have become the primary drivers of green finance development. Aside from the occasional issuance of green bonds, these institutions are the only type of financial organization that offers financing based on certain environmental criteria. While official statistics on green financing in Ukraine's banking sector are unavailable, it is evident that these products are concentrated in two key sectors: predominantly in energy and, to a lesser extent, in agriculture. The largest share of financing with green requirements is provided through state or international targeted programs, particularly in collaboration with the Business Development Fund.

The report examines over 20 international financing programs and more than 10 state-level initiatives aimed at the agricultural sector, including horticulture. Although not all of these programs can be deemed entirely green, many do feature environmentally friendly elements, especially within the international frameworks. State programs started actively incorporating these elements in 2024, with a significant milestone being the implementation of social and environmental criteria for selecting applications by the Business Development Fund on December 1, 2024.

International financial and technical assistance is vital in advancing green finance in Ukraine. In recent years, the implementation of green finance initiatives has gained significant momentum due to substantial international support. Organizations such as the World Bank, EBRD, EIB, USAID and KfW have been key players in rolling out financial programs for agricultural producers, including those in horticulture. These initiatives often leverage risk-sharing mechanisms and credit facilitation measures that include green components, effectively promoting the adoption of sustainable practices among farmers.

Ukraine's agricultural sector is supported by a variety of state credit and grant programs, many of which are integrated with the 5-7-9% preferential lending program administered by the Business Development Fund. These state support initiatives are comparable in scale to international financing efforts aimed at Ukraine's agribusiness sector. Programs like the 5-7-9% lending initiative often rely on international funding sources, emphasizing the vital role that both state and international efforts play in advancing green finance. By utilizing instruments that mitigate lender risks and reduce borrowing costs, these programs contribute significantly to the growth and sustainability of the agricultural industry.

With the support of external technical expertise, Ukraine has successfully reestablished a set of financial development institutions critical to promoting a more sustainable financial sector within a relatively brief period. Specifically, the focus lies on several key entities, including the Business Development Fund (expected to evolve into the National Development Institution), the Partial Credit Guarantee Fund, the Decarbonization Fund of Ukraine, and the Export Credit Agency, among others. Although many of these institutions have existed for several years, insufficient financial resources have impeded their effective operation. Currently, state-owned banks, including *Oschadbank*, *Ukreximbank*, and *Ukrgasbank*, are establishing themselves as leaders in the domain of green financing. These institutions are positioning themselves to compete effectively with foreign-capital banks such as , *Crédit Agricole*, *OTP Bank* and *Raiffeisen Bank*. These institutions are not only enhancing their offerings but also beginning to integrate green requirements into their partnerships. Furthermore, various programs from microfinance institutions and development agencies are crucial in facilitating this green transition.

The framework for green finance in Ukraine is currently incomplete. One of the significant gaps in the institutional framework is the absence of a legally defined national green taxonomy, which would help establish clear criteria for identifying relevant sectors and types of economic activity. Moreover, there isn't a principal institution solely focused on green finance at this time; however, the National Development Institution has the potential to take on this role in the future. Additionally, the creation of an intergovernmental body to promote the advancement of green finance is essential. The existing information support system for green finance is also underdeveloped, particularly in areas like training programs for financial intermediaries and businesses, as well as digital platforms that assist organizations in crafting investment and business plans and reports. There is a lack of awareness programs among businesses and financial providers. More detailed recommendations can be found in the conclusions and text of the report.



INTRODUCTION:

Agriculture plays a key role in Ukraine's economy. The sector contributes 10-13% to the country's GDP (up to 16% including processing), up to 47% of total exports and ensures national food security. However, the Ukrainian agricultural sector faces significant challenges related to climate change, the EU Green Deal, and Ukraine's corresponding commitments. Climate risks, including rising average annual temperatures, increased frequency of droughts, and extreme weather events, threaten the sector's resilience and productivity. These factors necessitate a transition towards climate-smart agriculture, incorporating precision farming, irrigation systems, and the adoption of climate-resilient crop varieties.

The EU Green Deal sets strict requirements for the agricultural sector, including reducing CO2 and other greenhouse gas emissions, minimizing the use of agrochemicals, and transitioning to organic farming. Compliance with these standards is crucial not only for environmental sustainability but also for maintaining access to European markets. However, adapting to these ecological standards requires significant investments in production modernization, the biological transformation of farming practices, and the adoption of renewable energy sources.

Green finance can play a crucial role in addressing these challenges. It facilitates targeted funding for climate-resilient solutions in agriculture that align with the EU Green Deal, the UN Sustainable Development Goals (SDGs), and the broader transition towards a circular economy. Consequently, expanding green finance in Ukraine is critical both for safeguarding one of the country's key economic sectors and for ensuring its long-term sustainable development. This challenge requires a dual approach: strengthening the institutional capacity of Ukraine's financial sector to offer green finance instruments while also enhancing the ability of businesses and farmers to effectively utilize them.

Based on these considerations, the key research questions of this study include:

- Identifying the current imperatives, institutional frameworks, and regulatory policies for expanding green finance in Ukraine's agricultural sector
- Mapping the key institutions and mechanisms operating in Ukraine's green finance market
- Identifying gaps in the institutional and regulatory landscape that hinder the expansion of green finance
- Analyzing the existing green finance instruments and sources of green capital within the structure of Ukraine's financial sector
- Systematizing international and national support programs for the agricultural sector
- Examining constraints that limit both the demand for green finance from businesses and the supply of green financial instruments by financial intermediaries
- Developing policy recommendations to support the growth of green finance in Ukraine and foster it effectively into the agricultural sector

The findings of this study are intended to serve as an informational resource for government authorities, international partners, and experts in the financial and agricultural sectors, providing insights into the key characteristics, opportunities, and constraints of green finance development. In the long term, these foundational issues can support the formulation of further steps aimed at aligning state support, international environmental initiatives, and financial mechanisms to enhance the role of green finance in ensuring the resilience and competitiveness of Ukraine's agricultural sector within the framework of European integration.

This research is based on official data from Ukrainian government bodies (the State Statistics Service, the National Bank, the Ministry of Finance, the Ministry of Economy, the Ministry of Agrarian Policy, etc.), as well as data from the websites and reports of international and Ukrainian financial institutions, the legislative frameworks of Ukraine and the EU, and other analytical reports and guidelines. In preparing the report, more than 30 interviews were conducted with representatives of agribusiness (SME and large holdings), the financial market (incl. banks, credit unions, *BDF*, *PCGF*), and educational institutions to identify the needs and obstacles to the use of green finance in Ukraine. The analysis and conclusions rely on both quantitative and qualitative methods, supplemented by expert assessments.

This report is one of the results of the *PROGRESS* (Promoting Green Deal Readiness in the EaP countries) – regional project, funded by the Federal Ministry for Environment, Nature Conservation, Nuclear Safety and Consumer Protection (BMUV) through the International Climate Initiative (IKI). In Ukraine, the project is being implemented by a consortium of organizations led by implemented by the Consortium of organizations under the lead of *Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH*, the Organisation for Economic Cooperation and Development (OECD) the State Organization "Institute for Economics and Forecasting of the National Academy of Sciences of Ukraine" (IEF NASU).

The project is focused on preparing the Eastern Partnership countries (including Ukraine) for the European Green Deal and aims to adapt agriculture and other sectors of the economy to climate change, new environmental requirements, and the spread of green finance. All of these efforts will support Ukraine's recovery and long-term sustainable development.



KEY ECONOMIC AND POLITICAL ASPECTS OF IMPLEMENTING GREEN FINANCE FOR CLIMATE CHANGE ADAPTATION AND MITIGATION IN THE AGRICULTURAL SECTOR

In its efforts to fulfill its commitments, particularly in climate change mitigation, first of all Ukraine has been focused on the energy and industrial sectors. In the agricultural sector, efforts to implement measures were initiated only after the beginning of the full-scale war. For the agriculture, activities of government have also included adaptation measures, as climate change risks are among the most significant for this sector. The negative impact of climate change on agriculture is already evident, particularly in horticulture. Although the implementation of green financing in Ukraine's agricultural sector remains at a very early stage of development, there is great potential.

a) Ukraine's agriculture sector and existing targets in climate change adaptation and mitigation

Agriculture has historically been, and continues to be, a cornerstone of Ukraine's economy. It plays a pivotal role in generating revenues for state and local budgets and, as a predominantly export-oriented sector, serves as a major source of foreign exchange earnings for the country.

Agriculture has traditionally played a crucial role in Ukraine's economy, contributing significantly to the country's gross domestic product (GDP) and export revenues. Before the full-scale war, in 2021, the agricultural sector accounted for 12.7% of GDP and over 40% of Ukraine's export revenues. ¹ Agriculture employed over 10% of the workforce accounting for 12.5% of capital investments and making it the second largest sector after industry.²

However, due to the war, the sector suffered severe losses – its share in GDP declined to 9.3% in 2022 and further dropped to 7.4% in 2023. At the same time, in 2023, agricultural exports amounted to EUR 21.66 bn, representing 65% of total export revenues³, underscoring the sector's critical importance to the national economy. Forecasts for 2025 indicate a potential increase in wheat production to 25 mln tons, compared to 22 mln tons in 2024, driven by an expansion of sown areas.⁴

Since the PROGRESS project is focused on horticulture, it is appropriate to note that it is one of the promising segments of Ukrainian agriculture. By the end of 2023, fruit and berry production (including grapes) accounted for 2.0% of the total agricultural output, and 2.5% of crop production. Most of these products consist of apples, making up 56.6% of their total weight. Apple trees dominate and continue to expand. Meanwhile walnut production is growing significantly. Strawberry production has declined. Raspberry and blueberry production remain steady, but small (see Annex I).

The advantages of horticulture are the high demand for exports of its products and the high involvement of small households in horticulture. Despite fluctuations, households have consistently been the dominant producers of fruits and berries, maintaining their share around 80–88% throughout the period. While there was a slight decline in 2010–2021 (reaching 79.23% in 2021), their share rebounded to 82.32% in 2022.

¹ Rykovska, O., Frayer, O., & Mykhailenko, O. (2024). *Analysis of the state of agriculture in Ukraine and the implementation of EU regulatory acts related to agricultural and environmental issues* (M. Bielkin & A. Danyliak, Eds.). Kyiv: NGO "Ecoaction."

² State statistics service of Ukraine. (2022). Statistical publication "Agriculture of Ukraine". Retrieved from https://ukrstat.gov.ua/druk/publicat/kat_u/publ1_u.htm

³ NBU (2024). External Sector Statistics. Retrieved from https://bank.gov.ua/en/statistic/sector-external

⁴ Polityuk, P. (2024, November 19). Exclusive: Ukraine 2025 wheat crop seen rising on larger sowing area, minister says. Reuters. Retrieved from https://www.reuters.com/markets/commodities/ukraine-2025-wheat-crop-seen-rising-larger-sowing-area-minister-says-2024-11-19/?utm_source=chatgpt.com

The share of enterprises engaged in fruit and berry production has steadily declined, falling from 17.91% in 2000 to 10.62% in 2022. Although there was a brief increase between 2010 and 2015, peaking at 15.95%, the overall trend reveals a gradual shift away from large-scale industrial production toward private farmers and households. The most significant trend is the growth of private farms, whose share increased more than 26 times from 0.27% in 2000 to 7.06% in 2022. Thus, statistics confirm that horticulture can be an important area of small business development. From the point of view of reaching the population, disseminating knowledge about the green economy and green finance in this segment seems quite important.

However, unsustainable farming practices, inconsistent property reforms, weak regulatory enforcement, poor cross-sectoral coordination, and slow adoption of European sustainability standards have led to significant land degradation, exacerbated by climate change. Environmentally sound land use is a critical prerequisite for the sustainable development of both the agricultural sector and society at large. Ukraine possesses significant potential for organic farming, supported by its favorable climate and fertile soils, which contribute to high agro-ecological capacity and robust crop yields.

Despite these challenges, Ukraine has advanced international cooperation on climate change, leveraging its agricultural potential to integrate green technologies. Key achievements include improved energy efficiency, regulated fertilizer use, organic farming, agro-climatic optimization, and biodiversity conservation, fostering sustainable agricultural development.⁶

Existing sectoral targets in climate change adaptation and mitigation

Akey aspect of the concept of green environmental development is the use of green finance, which is aimed at combining economic growth, environmental protection measures, and the participation of financial institutions. This is defined as an effective tool for realizing the transition to a green economy.

In 2015, the International Agenda for Sustainable Development was adopted at the international level, which provided for measures and targets until 2030 and included 17 global Sustainable Development Goals (SDGs). Ukraine joined the sustainable development initiative in 2019 with the signing of the Presidential Decree "On the Sustainable Development Goals of Ukraine for the period up to 2030". In 2024, the Verkhovna Rada passed the European integration law "On the basic principles of state climate policy", focusing on climate change mitigation and adaptation. In 2024, the Government of Ukraine approved the "Strategy for the recovery, sustainable development, and digital transformation of small and medium-sized enterprises for 2024-2027". This strategy includes plans to adopt the EU Regulation 2020/852, known as the EU Taxonomy Regulation, which aims to establish a framework that promotes sustainable investment⁸.

Besides this, at the political level, Ukraine expresses its support for the European Green Deal, the main goal of which is to achieve climate neutrality on the European continent by 2050. In March 2021, the Cabinet of Ministers of Ukraine approved the National Economic Strategy for the period up to 2030, according to which the country plans to achieve carbon neutrality no later than 2060 (*Decree of the Cabinet of Ministers of Ukraine of March 3, 2021 # 179*). To achieve this goal, Ukraine plans to attract about EUR 102 bn of capital investments by 2030, including EUR 2.3 bn in agriculture. To

⁵ State statistics service of Ukraine. (2022). Statistical publication "Agriculture of Ukraine". Retrieved from https://ukrstat.gov.ua/druk/publicat/kat_u/publ1_u.htm

⁶ Grabovska, O., Lavrov, V. (2020). System of principles and methods of environmental assessment and directions of ecological and economic support of organic agricultural production. Bila Tserkva: BNAU, 16 p.

⁷ Law of Ukraine "On the basic principles of state climate policy", October 08, 2024. Retrieved from https://zakon.rada.gov.ua/laws/show/3991-20#Text

⁸ Cabinet of Ministers of Ukraine, order no. 821-r, August 30, 2024, "On approval of the Strategy for the recovery, sustainable development and digital transformation of small and medium-sized businesses for the period until 2027 and approval of the operational plan of measures for its implementation in 2024-2027". Retrieved from https://zakon.rada.gov.ua/laws/show/821-2024-%D1%80?fbclid=lwY2xjawJftbdleHRuA2FlbQlxMAABHi2EHCvPOE7aw2W1Ltyl36-imlgoZAEV47m5UM7q79Pe6LsTDVY_fAUR44rN_aem_RIZdlfs_mvpgJgTJhz6Zjg#n343

⁹ Cabinet of Ministers of Ukraine. (2021). Updated nationally determined contribution of Ukraine to the Paris Agreement. Retrieved from: https://unfccc.int/sites/default/files/NDC/2022-06/Ukraine%20NDC July%2031.pdf

¹⁰ Ministry of Environmental Protection and Natural Resources of Ukraine. (2021). *Analytical review of the updated nationally determined contribution of Ukraine to the Paris Agreement*. Retrieved from: https://mepr.gov.ua/wp-content/uploads/2023/07/ANALYT1.pdf

b) Policies and regulation for climate change adaptation and ecology in agricultural sector

An analysis of the current Ukrainian legislation in the field of green finance allows us to summarize the list of key legal acts that regulate this area of activity and determine the specifics of its financing.

The Law of Ukraine "On Environmental Protection" regulates relations in the field of protection, use and reproduction of natural resources, ensuring environmental safety, prevention and elimination of the negative impact of economic and other activities on the environment, conservation of natural resources, genetic stock of wildlife, and landscapes. It has a secondary effect on the company's activities, namely, coordinates such activities in the field of environmental protection.

The Law of Ukraine "On Waste Management" regulates the basic conditions, requirements and rules for environmentally safe waste management and disposal, as well as a system of measures related to organizational and economic incentives for resource conservation. It is important for the company, as enterprises have to plan the expenditure of their financial resources to comply with legal requirements for emissions.

The Subsoil Code of Ukraine is a source of legal information for companies engaged in the extraction of mineral resources in Ukraine. It establishes rights and obligations for such enterprises.

The Forestry Code of Ukraine regulates social relations related to the ownership, use and management of forests and is aimed at ensuring the protection, reproduction and sustainable use of forest resources, considering the environmental, economic, social and other interests of society. It is important for companies that extract raw wood for processing and further sale.

The Water Code of Ukraine regulates legal relations related to the conservation, scientifically based, rational use of water for the needs of the population and economic sectors, reproduction of water resources, protection of water from pollution, contamination and depletion, prevention of harmful effects of water and elimination of their consequences, improvement of the condition of water bodies, as well as protection of the rights of enterprises, institutions, organizations and citizens to water use.

The Law of Ukraine "On the Basic Principles (Strategy) of the State Environmental Policy of Ukraine for the Period up to 2030" defines the main areas of development of environmental protection, including development of economic relations between enterprises in the direction of green finance, involvement of international organizations for greening production, introduction of new rules in production to protect nature.

The Law of Ukraine "On Protection of Atmospheric Air" is the legal framework for enterprises that release air emissions (e.g., carbon monoxide, carbon dioxide) in their operations.

The Law of Ukraine "On the Permitting System in the Field of Economic Activity" establishes general rules for obtaining permits by a business entity, such as licenses for the use of water bodies, timber cutting, and mining. It is important for the company in terms of organizational issues: license terms, time periods lost for obtaining such permits, etc.

The Law of Ukraine "On Environmental Impact Assessment" is one of the laws that established the Unified Environmental Impact Assessment Register. Thus, all business entities that have an impact in their activities as defined by this law must submit certain reports to the register. Such reports are submitted both upon establishment and upon changes in the company. For example, a company has bought an old factory where it intends to produce metal products, and before starting production, the company must register the above change in the register.

The Commercial Code of Ukraine is the main document for the activities of enterprises, which specifies the rights, obligations and responsibilities of private sector entities.

In Ukraine, work on the implementation of green finance began in 2019 with the adoption in the first reading of a draft law introducing the green bond instrument. In 2021, the *National Securities and Stock Market Regulatory Commission (NSSMC)* approved the Recommendations for the implementation or financing of environmental projects through the issuance of green bonds, which contain mandatory conditions for the issuance of green bonds and requirements for projects that can be financed with the funds raised.¹¹ In 2025,

¹¹ Best practices of green finance and post-war green recovery: opportunities for Ukraine. International Renaissance Foundation.Retrieved from http://surl.li/npntd

the *NSSMC* approved the "Sustainable Finance Roadmap for 2025-2030"¹². However, there are still many gaps in the institutional and regulatory framework for green finance in Ukraine compared to the EU that have yet to be filled (Table 1).

Demileted in the Elli	December deticus for Ultraine.
Regulated in the EU:	Recommendations for Ukraine:
Technical support: The European Commission has set up a Technical Expert Group on Sustainable Finance (TEG) and a High-Level Expert Group on Sustainable Finance (HLEG) to assist in the development of a sustainable finance framework	To be done: a special interagency working group and platform for the development of sustainable finance with the participation of relevant authorities and High-Level Expert Groups including IFIs. Add climate risk analysis to the <i>NBU</i> 's prudential policy.
Green Taxonomy: identification of projects and instruments, list of key concepts, classification, measurement — Regulation (EU) 2020/852, Regulation (EU) 2019/2088	<u>It is necessary to develop:</u> implement a national Green Taxonomy harmonized with EU standards
Standardization: Requirements for tools and enhancements to financial market risk management systems (ESRM): Markets in Financial Instruments Directive, or MiFID II - Directive 2014/65/EU	It is necessary to develop: rules for labeling green financial products for investment advisers and investors; an environmental and social risk management system (ESRM)
Requirements for information disclosure and reporting: Corporate Sustainability Reporting Directive (CRSD) - Directive 2022/2464/EU; Non-Financial Reporting Directive (NFRD) - Directive 2014/95/EU; Directive 2013/34/EU - on annual financial statements, consolidated financial statements and related reports; Regulation (EU) 2019/2088 (Sustainable Finance Disclosure Regulation)	ESG factors are mostly implemented in the corporate governance of banks <u>To be done:</u> finalize the implementation of ESG disclosure practices for banks and non-bank financial institutions

Table 1
Matrix of key gaps in the institutional and regulatory framework for green finance in Ukraine compared to the EU

In general, there are significant gaps in Ukraine's regulatory framework that complicate the implementation of green finance in the financial sector. The key gaps are the lack of a special authority body responsible for the development and support of implementing the green finance framework, a nationally adopted Green Taxonomy, standardization and reporting frameworks for investment advisors and investors.

Central bank's initiatives as a driver of private green financing

The *NBU*, serving as the state regulator overseeing Ukrainian banks and non-banks, has taken the following steps to promote green financing. In 2021, the *NBU* approved a Sustainable Finance Development Policy to be implemented by 2025¹³. In 2021 the *NBU* has become a member of the *Sustainable Banking Network (SBN)* ¹⁴ and has engaged in a partnership with the *International Finance Corporation (IFC)* to integrate environmental, social, and governance (ESG) considerations into the regulatory framework of the banking sector.¹⁵

In 2024, the NBU intensified its efforts to engage with Ukrainian banks, enhancing the adoption of sustainable strategies and collecting ESG client questionnaire data. In April 2024 *NBU* emphasized the initial steps being taken. These include reviewing banks' current practices in implementing ESG factors through a comprehensive survey, expanding governance recommendations for banks based on the practices of EU countries, gradually implementing requirements for banks to disclose non-financial information, and conducting full stress testing of banks over the next 3-5 years to assess their vulnerability to climate risks once an approved taxonomy and relevant statistics are in place.

In June 2024, the NBU released the findings of a survey involving 33 banks, revealing

¹² The National securities and stock market commission. Retrieved from https://www.nssmc.gov.ua/wp-content/uploads/2025/03/dorozhnia-karta-staloho-finansuvannia.pdf?fbclid=lwY2xjawJTnDdleHRuA2FlbQlxMAABHXo-y-76eARtpi7fNkxUvXX5cACB2TLG2Ol9Z2WUKLolBqJTCNcjKTveVw_aem_jOaO0uVgCKRhw9ndxcGl_g

¹³ NBU Sustainable Finance Development Policy 2025. November 25, 2021. Retrieved from https://bank.gov.ua/ua/news/all/politika-natsionalnogo-banku-ukrayini-schodo-rozvitku-stalogo-finansuvannya-na-period-do-2025-roku

¹⁴ NBU and IFC to join efforts in developing green finance. April 16, 2021. Retrieved from https://bank.gov.ua/en/news/all/natsionalniy-bank-ta-ifc-spilno-pratsyuvatimut-nad-rozvitkom-zelenogo-finansuvannya

¹⁵ National Banks of Ukraine and Georgia present their vision of green finance development during meeting of Sustainable Banking Network. December 22, 2020. Retrieved from https://bank.gov.ua/en/news/all/natsionalni-banki-ukrayini-ta-gruziyi-prezentuvali-svoye-bachennya-rozvitku-zelenih-finansiv-pid-chas-zustrichi-uchasnikiv-mereji-stalogo-bankingu

that climate risks are not fully integrated into their lending decisions. The survey results underscore the following¹⁶:

- 1. Impact on operations: nearly three-quarters of banks acknowledge that climate change is already influencing their operations, and they expect both physical and transition risks to persist in the medium term, affecting loan portfolio quality and collateral value.
- 2. Demand for financial services: about half of the banks believe that climate risks are influencing the demand for financial services, with transition risks having the most significant impact.
- 3. Business continuity and property: one third of banks reported that climate risks would affect their property and business continuity, primarily through physical risks.
- 4. Progress in climate risk management: around a dozen banks, mostly part of international groups, have made notable progress in managing climate risks, integrating them into credit and operational risk assessments. Two banks consider climate risks as significant, and one third have dedicated units for managing these risks.
- 5. Climate-sustainable lending: approximately 20% of banks have set climate-sustainable lending goals, conducting climate scoring of clients, particularly larger companies with international ties. One third have exclusion lists for harmful activities, such as deforestation, and offer measures to mitigate climate risks for high-risk borrowers.
- 6. Limited integration into lending: despite progress, climate risks are not yet fully integrated into lending decisions, and less than a third of banks offer green financial products. However, half of the respondents see future opportunities in developing such products.
- 7. Operational risk: a quarter of banks assess their carbon footprint, while half are implementing measures to reduce it, such as switching to electric cars and reducing paper use. Climate risks are also considered in operational risk frameworks, with half of the banks incorporating them into business continuity plans and a quarter insuring against physical risks.
- 8. Market risk: climate risks have not yet been integrated into market risk management systems, though some banks anticipate an effect on funding costs and liquidity in the short term.

The roadmap for the implementation of the sustainable financial development policy includes, in particular:

- 1) implementation of ESG factors in the corporate governance system of banks from the beginning of 2022; non-bank financial institutions from the end of 2024;
- 2) environmental and social risk management (ESRM). The environmental and social risk management system should be integrated into the overall risk management system of financial institutions (banks and non-bank financial institutions) by the end of 2024;
- 3) evaluation and selection of projects for financing based on their role in sustainable development. When selecting projects for financing, financial institutions will be required to assess their impact on the environment, sustainability of economic activity, and energy efficiency, as well as disclose information on technical criteria and classifications (taxonomies) of economic activity, ESG indicators, based on which such projects are evaluated and selected using best international practices. The *NBU* should develop recommendations on disclosure of such information for banks and non-bank financial institutions by the end of 2024;
- 4) mandatory disclosure by financial institutions of information on the sustainable nature of their activities. Financial institutions must disclose information about the extent to which their activities are sustainable, their environmental impact, and the reputational and financial risks arising from the environmental impact of their activities.

The *NBU* is to develop recommendations for disclosing such information by the end of 2024. In addition, the regulator will closely monitor compliance with these requirements from the beginning of 2025.

The development of sustainable finance standards and recommendations for integrating environmental, social, and governance standards into the activities of financial institutions will take place within the framework of the Cooperation Agreement between the *NBU* and the *IFC* dated April 16, 2021, for the implementation of the Sustainable Finance

¹⁶ Financial Stability Report, June 2024. 19 June 2024. Retrieved from https://bank.gov.ua/en/news/all/zvit-profinansovu-stabilnist-cherven-2024-roku

Development Project in Ukraine. The joint efforts are part of the *IFC* Green Finance Program and the *IFC* Investment Promotion through Integrated Environmental, Social and Governance Standards in Europe and Central Asia Program, implemented in partnership with the Austrian Federal Ministry of Finance and the Swiss State Secretariat for Economic Affairs (SECO).

Thus, the *NBU* is working on building ESG capacities in the financial sector by promoting ESG principles among market participants, enhancing banks' risk management systems, and increasing transparency in information. Although about three-quarters of banks recognize that climate change affects their loan portfolios and collateral value, and some see potential financial opportunities in green products, only a few have taken substantial steps to integrate climate risks into lending practices, risk assessments, and business strategies. While banks are starting to consider climate risks in business continuity plans, they still lack full integration into market risk and credit risk frameworks.



UKRAINIAN STATE INSTRUMENTS TO PROVIDE GREEN FINANCING IN THE AGRICULTURAL SECTOR

The state plays a significant role in financial support for the agricultural sector, but uses a limited range of instruments. Grants and subsidies are the most widespread. Less common are partial compensation of the loan rate; tax benefits and loan guarantees. In contrast to the practice of developed countries, there is virtually no compensation for losses; reduction of social insurance contributions; activities of specialized development banks; provision of technical and informational assistance.

a) Policies and Fiscal instruments

An important step in the development of green finance in Ukraine was the decision in 2023 to establish the *State Fund for Decarbonization and Energy Efficiency Transformation*, which will serve as a source of funding for cross-sectoral energy efficiency and decarbonization policies, including the implementation of green projects.¹⁷

Environmental taxes are a common financial instrument in EU countries to promote the development of green finance. The Fiscal and Customs Service of the European Commission divides environmental taxes into the following categories: energy taxes (for the use of electricity, fuel, etc.); transport taxes (car excise, mileage tax); fees for the use of natural resources; emission taxes; fees for waste disposal and recycling; and noise taxes.

The introduction of a differentiated taxation system, subsidies and preferential loans based on the "environmental friendliness" of products provide opportunities for enterprises that achieve better environmental performance through modernization and innovation to support sustainable development. In Ukraine, such tools have not yet become widespread.

It should also be noted that, in addition to direct financial support instruments for agribusiness, the state should also pay attention to financing the development of agroinfrastructure: roads, logistics centers, water and electricity supply, and telecommunications. Creating an adequate level of infrastructure requires state participation and financing of infrastructure projects, as agricultural producers do not have enough resources to ensure its development at a high level.

Carbon Tax. Since 2011, Ukraine has implemented a $\rm CO_2$ emissions tax (carbon tax) to incentivize the reduction of greenhouse gas emissions. In 2022, the tax rate was increased from EUR 0.33 to EUR 0.7 per ton of $\rm CO_2$. However, this rate remains approximately 70 times lower than the EU average and does not cover all emission sources. Despite these limitations, the tax generates annual budget revenues of EUR 30–46 mln. This indicates a significant potential for additional fiscal revenues if the carbon tax rate is raised and its scope expanded to include other emission sources.

Revenues from the carbon tax are allocated to a dedicated budget fund, the "State Fund for Decarbonization and Energy Efficiency Transformation", which was established in May 2023 as part of Ukraine's Special State Budget Fund. The accumulated funds, transferred to JSC "Decarbonization Fund of Ukraine", a state-owned financial institution, can be channeled through various instruments to finance green investment projects aimed at reducing CO₂ emissions. "Decarbonization Fund of Ukraine" became operational in January 2024, and in August,2024 officially entered the non-banking financial services market. Its primary mission is to provide financial support for the implementation of state-targeted programs and to establish financial and credit mechanisms aimed at advancing energy efficiency and sustainability initiatives¹⁸.

Thus, the development of the carbon tax supports the expansion of green finance. For instance, by 2024, EUR 17.7 mlns of tax had already been accumulated and EUR 9.3 mil of it allocated to the *Decarbonization Fund of Ukraine*, which has begun reviewing green investment project applications.

¹⁷ On Approval of the Recommendations on Implementation or Financing of Environmental Projects by Issuing Green Bonds: Decision of the NSSMC dated 07.07.2021. No 493. Retrieved from https://www.nssmc.gov.ua

¹⁸ JSC "Decarbonization fund of Ukraine". https://fdu.com.ua/

Capital investments

Between 2014 and 2023, capital investments in environmental protection in Ukraine totaled approximately EUR 2.49 bn.¹⁹ These investments were allocated across various environmental activities as follows:

Air protection and climate change initiatives: EUR 684.9 mln

Other measures: EUR 605.8 mln
 Waste management: EUR 592.9 mln
 Wastewater treatment: EUR 305.5 mln

Protection and rehabilitation of soil, groundwater, and surface water: EUR 305.5 mln

During the same period, enterprises incurred current expenditures on environmental protection amounting to approximately EUR 5.38 bn, distributed as follows:

Wastewater treatment: EUR 2.15 bn
 Waste management: EUR 2.03 bn

• Air protection and climate change initiatives: EUR 516.8 mln

• Other measures: EUR 385.8 mln

 Protection and rehabilitation of soil, groundwater, and surface water: EUR 302.8 mln

Focusing on the agricultural sector (excluding forestry and fisheries), capital investments in environmental protection were relatively modest. At the same time, current expenditures in agriculture for environmental protection (excluding forestry and fisheries) were higher (fig. 1)²⁰.



Fig. 1
Environmental
protection
Investments and
Expenditures in
Agriculture in Ukraine
(2018-2020)

While there has been a notable increase in environmental protection expenditures over the years, the absolute amounts remain relatively low compared to the scale of environmental challenges faced.

b) State mechanisms and institutions for green finance:

There are no special green finance instruments used by the state in Ukraine. At the same time, it is the public sector that is currently implementing financial instruments that are classified as green (green bonds) or could be improved to such instruments (agricultural receipts, targeted loan and grant programs in agricultural sector). In addition, it is in the public sector that institutions have been created, and mechanisms are being developed that can support the introduction of green finance (emissions trading mechanisms using carbon credits, risk-sharing systems, etc.).

¹⁹ State Statistics Service of Ukraine. Retrieved from https://ukrstat.gov.ua/metaopus/2024/3_01_00_03_2024. htm

²⁰ https://stat.gov.ua/uk/explorer?urn=SSSU:DF_COSTS_OF_ENVIRONMENTAL_PROTECTION(5.0.0)

Agricultural Receipts

Due to the low market saturation of green bonds, there is a strong demand for alternative financial instruments. One such instrument, gaining popularity in supporting agricultural producers, is the agricultural receipt. Originating in Brazil and Argentina as an alternative to underdeveloped bank lending, this tool has been introduced in Ukraine through the Law of Ukraine "On Agricultural Receipts. The key feature of agricultural receipts is the unconditional obligation of enterprises to settle payments with their future harvest under contract terms.

Currently, two main types of agricultural receipts are in use:

- Financial receipts: the borrower repays the funds received from the crop sale.
- Commodity receipts: payments are made in the form of agricultural products specified in the contract.

Although the *Law of Ukraine "On Agricultural Receipts"* was adopted in 2012²¹, their first issuances took place only in 2015, with active circulation beginning shortly before 2022. By early 2022, more than 8,000 agricultural receipts had been issued, amounting to over EUR 1.72 bn.

Before the war, the market for agricultural receipts was valued at approximately EUR 544 mln annually. Since the beginning of 2022, by July 1, 2022, another 480 receipts worth EUR 336.4 mln were issued. In total, over 300 lenders have used this instrument, providing loans to more than 3,000 agricultural producers. However, legislative shortcomings currently hinder the full-scale use of agricultural receipts in supporting agribusiness.

Carbon credits

In 2018. In 2018, Ukraine, in line with its commitments to the EU, announced its intention to establish a greenhouse gas emissions trading system (ETS). The introduction of carbon certificates is expected to take place in 2025, and the full functioning of the emissions trading system is expected to be completed by 2026.

The ETS is intended to complement and eventually replace the carbon tax as a mechanism for paying for greenhouse gas emissions, as it allows for a more comprehensive coverage and simultaneous incentives for emission reductions based on a market mechanism.

As of 2024, there are already foreign fintech companies operating in Ukraine that promote the development of carbon farming, providing farmers with the opportunity to receive carbon certificates for the implementation of regenerative methods. The average cost of carbon certificates in Ukraine is EUR 37 per 1tCO2. ²²

Thus, carbon certificates are verified according to international standards and sold on the international carbon market, which creates additional sources of income for farmers and stimulates sustainable agricultural development in Ukraine. It is expected that Ukrainian specialized institutions will introduce mechanisms for issuing these instruments.

²¹ The Law of Ukraine "On Agricultural Receipts" № 5479-VI of 06.11.2012

²² One such company is Danish Agreena, which operates in 19 European countries and implements the AgreenaCarbon program. As part of this program, the company issues carbon certificates after implementing regenerative farming methods instead of traditional ones. Agreena sells carbon certificates on the international voluntary carbon credit market (the approximate market price is EUR 20-30 per certificate or 1 tCO2). The company retains 15% of the certificate price for its verification and issuance. (https://agreena.com/uk-ua/fermeram/)

In addition, Raiffeisen Bank has entered into agreements with Agreena in the field of carbon programs and offers the bank's agricultural clients who implement regenerative farming practices to receive carbon certificates generated by Agreena. https://raiffeisen.ua/news/raiffeisen-bank-uklav-ugodi-z-agreena-u-sferi-vuglecevo-programi-2034

Another company operating in Ukraine is Lithuanian Heavy Finance, which is implementing the international consortium program "Carbon Credit Ukraine" with the support of the European Investment Fund (EIF) in 2022-2024. The company also verifies carbon certificates according to Verra's Verified Carbon Standard methodology by measuring the carbon content of soil, both in laboratories and using satellite data. The cost of such certificates is estimated at EUR 50 per 1 tCO2 certificate. Participants in the program - farmers who use regenerative farming methods - receive these certificates. (https://carboncreditukraine.com/)

State risk-sharing institutions

The Partial Credit Guarantee Fund in Agriculture (PCGF)²³ was established on May 18, 2022 by the Cabinet of Ministers of Ukraine with support of the World Bank and European Union. On February 6, 2023, the PCGF acquired a license from the NBU to provide financial services in the form of guarantees. The issuance of guarantees by the PCGF commenced in 2024. It is a public-private financial institution with a special status that provides support to micro, small and medium-sized enterprises in the agricultural sector by guaranteeing up to 50 percent of the outstanding amount of an individual loan/portfolio of loans. Currently, the sole founder of the PCGF is the state. The Ministry of Agrarian Policy and Food is responsible for managing the state's corporate rights in the authorized capital.

PCGF Program's terms:

- Target audience micro-enterprises, small and medium-sized businesses operating in agriculture and generating at least 75% of their revenue from the sale of agricultural products,
- The average number of employees (for the group of companies) is no more than 250 individuals,
- Land bank up to 500 hectares (land owned/cultivated (per group of companies), including land plots acquired with credit funds),
- Additional eligibility criteria business entity: meets the environmental and social requirements of the current legislation of Ukraine, environmental and social requirements of the World Bank; registered in the State Agrarian Register (SAR); has more than 1 year of business experience,
- Guarantee term up to 3 years for working capital; up to 7 years for investment loans (purchase or repair of fixed assets, including agricultural machinery and commercial premises, including for bringing them in line with modern environmental standards and improving labor and safety conditions); up to 10 years for purchase of land plots (subject to the transfer of such land plots as collateral to the lender),
- Guarantee coverage up to 50% of the outstanding loan amount,
- The maximum loan amount is UAH 30 mln (EUR 0.7 mln),
- Provision and servicing fee in accordance with the selected loan program and an additional 0.5% of the amount of the Fund's guarantee,
- Collateral any acceptable collateral (property, personal obligation, etc.) to cover the part of the principal's debt that is not guaranteed by the Fund,
- Additional costs notarization; insurance (mandatory).²⁴

As of July 2024, the total volume of guarantees amounted to UAH 5.185 bn (EUR 126 mln). *Ukrgasbank* provided guarantees totaling UAH 4.685 bn (EUR 109 mln), while *ProCredit Bank* issued guarantees amounting to UAH 0.5 bn (EUR11 mln)²⁵. Financial support for the Foundation's activities is provided by the *World Bank*.

The *PCGF* does not directly provide loans or other financial assistance to farmers. Instead, bank-partners such as *Ukrgasbank*, *Oschadbank*, and ProCredit Bank give the credits, while the *PCGF* offers partial guarantees (up to 50%) for the credit obligations of the bank's borrower, functioning as a guarantor.

Since April 2024, the *NBU* has incorporated the *PCGF* guarantees as acceptable security for assessing banks' credit risk. A preferential coefficient of 0.85 has been established to incentivize banks to participate as partners in this government initiative²⁶.

In the context of the *PCGF*'s projects, the *PCGF* follows its own Environmental and Social Responsibility Policy (created in collaboration with the *World Bank*). This policy comprises: a) environmental and social responsibility policy, b) procedures for identifying, evaluating, and managing environmental and social risks and impacts of subprojects, c) organizational

²³ The Fund was established on May 18, 2022, pursuant to the Resolution of the Cabinet of Ministers of Ukraine No. 125 dated February 16, 2022. The sole founder of the Fund is currently the state represented by the Cabinet of Ministers of Ukraine. On February 06, 2023, the DGF received a license to provide financial services, namely, to provide guarantees. RETRIEVED FROM: https://pcgf.com.ua/

²⁴ Partial credit guarantee fund in agriculture. Guarantees. https://pcgf.com.ua/page/garantiyi

²⁵ Partial credit guarantee fund in agriculture. Information about the provided guarantees. https://pcgf.com.ua/page/informaciya-pro-nadani-garantiyi

²⁶ On Amendments to Certain Regulatory Legal Acts of the NBU. NBU Resolution No. 39 dated April 06, 2024. RETRIEVED FROM: https://bank.gov.ua/ua/legislation/Resolution 06042024 39

capacity and competence, d) monitoring and reviewing environmental and social risks in subprojects and the portfolio, and e) external communication mechanisms²⁷.

In summary, the *PCGF* represents a significant initiative by the Ukrainian government to bolster the agricultural sector by providing partial guarantees for bank loans. Established in 2022 and operational since early 2024, the *PCGF* adheres to environmental and social responsibility standards.

The Export Credit Agency (ECA) is a private joint stock company established in 2018, the only founder and shareholder is the state represented by the Cabinet of Ministers of Ukraine. *ECA* provides insurance for foreign trade contracts, export and investment credits, direct investments in Ukraine, and bank guarantees of up to EUR 5.12 mln. It offers insurance coverage for up to 85% of the value of a foreign economic agreement.

ECA began its operations in 2021. Due to the outbreak of war in 2022, only one exporter received support, amounting to EUR 0.06 mln. At the same time, *ECA*'s authorized capital was increased to EUR 47.62 mln. Since 2023, the Agency has significantly intensified its activities. It has supported export contracts worth EUR 23.81 mln and foreign economic activity agreements of Ukrainian enterprises totaling EUR 1.52 mln. Consequently, the total volume of supported exports of goods and services reached EUR 186.67 mln. Given that *ECA*'s insurance liabilities amounted to EUR 22.25 mln in 2023, each euro of insurance liability facilitated EUR 0.2 in export revenue. ²⁸

In 2024, *ECA* assumed "the role of one of the key elements of the state system for supporting export-oriented businesses in Ukraine."²⁹ That year, the Agency supported 69 exporters, while the volume of export financing issued by banks under *ECA* insurance amounted to EUR 23.81 mln. The total volume of supported exports of goods and services reached EUR 179.29 mln. As a result, each euro of *ECA* support generated EUR 0.18 in projected export revenue.

ECA 's performance from 2022-2024 includes supporting 125 exporters, with a total supported export volume of EUR 401.7 mln. Additionally, the volume of loans issued with *ECA* 's support for foreign economic contracts amounts to EUR 43.6 mln.³⁰

Supported industries include: a) transport industry, b) paper and cardboard industry, woodworking industry, construction industry, livestock industry, c) manufacture of rubber materials and products, d) textile industry, clothing industry, e) trade industry, wholesale trade, f) toys and games industry, g) machine building industry. Banks that work with ECA under portfolio insurance for export credits are *Ukreximbank*, *Ukrgasbank*, *PrivatBank*, *Oschadbank*, *Kredobank*, *PUMB*, and *Pivdenny Bank*. Banks that work with *ECA* under individual insurance for export credits are *Oschadbank*, *Raiffeisen Bank*, *MTB Bank*, and *Crediwest*³¹. *ECA* guarantees/insurance contracts are eligible collateral for banks with a collateral liquidity ratio of 0.85³². This preferential rate of the credit risk assessment requirement encourages banks to become a partner of this state program.

Accordingly, the ECA could play a more significant role in assisting Ukrainian exporters and promoting foreign trade and investment through substantial insurance coverage and guarantees but its institutional capacity is limited by lack of funding.

State financial support programs for enterprises from the Business Development Fund

The Business Development Fund (BDF) serves as a financial intermediary that facilitates financing enterprises through state programs. BDF, as a development bank, provides financing not directly, but through partner banks. BDF is a state-owned non-banking financial institution in Ukraine that is licensed by the NBU and subject to its regulation and supervision. Initially established in 1996 as a Fund by the NBU in collaboration with

²⁷ Partial credit guarantee fund in agriculture. Guide to the Environmental and Social Management System for partner financial institutions. December 2023. https://pcgf.com.ua/page/posibnik-z-sistemi-ekologichnogo-ta-socialnogo-upravlinnya-dlya-finansovih-ustanov-partneriv

²⁸ Ministry of Economy of Ukraine. Retrieved from https://me.gov.ua/News/Detail/25d39a20-c06c-4f20-a817-a02d7f14fbe0?lang=uk-UA&title=ZroblenoVUkraini-ObsiagPidtrimanogoEkaEksportuZPochatkuRokuNablizhatsiaDo3-MlrdGrn

²⁹ Export Credit Agency. Retrieved from https://www.eca.gov.ua/pidsumky-2024-roku-dlya-eksportno-kredytnogo-agentstva/

³⁰ Export Credit Agency. Retrieved from https://www.eca.gov.ua/pidsumky-2024-roku-dlya-eksportno-kredytnogo-agentstva/

³¹ Export Credit Agency. Retrieved from https://www.eca.gov.ua/pro-eka/

³² Resolution of the NBU Board № 351 30.06.2016.

the German Development Bank (*KfW*) to support lending for micro and small enterprises, *BDF* evolved into the *German-Ukrainian Fund* in 1999. In 2020, the German-Ukrainian Fund became the state-owned *BDF*, with the *NBU* and *KfW* exiting ownership³³. The *BDF* facilitates enterprise financing through partner banks while ensuring environmental and social responsibility.

Starting January 2024, the *BDF* provides financing to beneficiary enterprises through Participating Financial Institutions (PFIs). The *BDF* aims to ensure that PFIs apply its Environmental and Social Management System (ESMS) if they don't have one in place, or align with its principles if an ESMS already exists. The *BDF*'s ESMS complies with the standards of *World Bank* Environmental and Social Standard (ESS) 9 and IFIs for financial intermediary (FI) investments and takes into account the Good International Industry Practices (GIIPs) on E&S risk management for FIs and the *World Bank* Group (WBG) Environmental, Health and Safety Guidelines (EHSGs). The ESMS covers various elements, including: a) environmental and Social (E&S) Policy, b) clearly defined procedures for the identification, assessment and management of the E&S risks and impacts of the business activities of beneficiary enterprises, c) organizational capacity and competency, d) monitoring and review of E&S risks of business activities of beneficiary enterprises, e) External Communications Mechanism (ECM)³⁴.

State lending program "Affordable loans 5-7-9%"

Under the "Affordable Loans 5-7-9%" program, the *Business Development Fund (BDF)* has established collaboration agreements with 46 banks. Since 2024, entrepreneurs have received 16,175 loans totaling approximately EUR 1.41 bn, of which 12,298 loans, totalling approximately EUR 0.74 bn, were issued by state-owned banks. Notably, a significant portion of these loans issued during martial law was allocated to working capital financing, reflecting a focus on supporting businesses in maintaining their day-to-day operations.

The "Affordable Loans 5-7-9" program plays a crucial role in agricultural financing, serving more than just a supplementary function. Launched by the Ministry of Economy of Ukraine in early 2020, the initiative aims to provide preferential financing to agricultural producers.

The share of state-backed loans has been growing. While total lending declined in 2023, state-backed loans remained stable, helping to counter the contraction in private bank credit availability. In 2024, despite an overall rebound in total bank lending to agriculture, "Affordable Loans 5-7-9" continued to make up a significant portion of agricultural financing, demonstrating its long-term importance (Fig. 2).

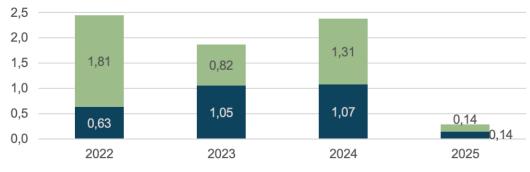


Fig. 2.
Bank lending to
agricultural business
in Ukraine, EUR bn,
2022 – February 2025

Source: Ministry of Agrarian Policy and Food of Ukraine

■ Bank loans to agrisector (w/o Programm)

■ Bank loans to agrisector ("Affordable Loans 5-7-9%" Programm)

Specifically:

- in 2022, the program accounted for 25.8% (EUR 0.63 bn out of EUR 2.44 bn in bank lending to agriculture)
- by 2023, despite an overall decline in bank lending to agriculture, the program's share increased to 56.1% (EUR 1.05 bn out of EUR 1.87 bn in bank lending to agriculture)

³³ Business Development Fund (BDF) of Ukraine Basic Environmental and Social Management System (ESMS). January 2024. https://bdf.gov.ua/wp-content/uploads/2024/03/BDF-ESMS-Manual-EN-2024-Approved-MBoard-Website.pdf

³⁴ Business Development Fund (BDF) of Ukraine Basic Environmental and Social Management System (ESMS). January 2024. https://bdf.gov.ua/wp-content/uploads/2024/03/BDF-ESMS-Manual-EN-2024-Approved-MBoard-Website.pdf

- in 2024, as bank lending to agriculture recovered, the share remained relatively high at 45% (EUR 1.07 bn out of EUR 2.38 bn in bank lending to agriculture)
- trends for 2025 (January-February) indicate that 50% of loans issued (EUR 0.14 bn out of EUR 0.28 bn in bank lending to agriculture) already rely on this state program.

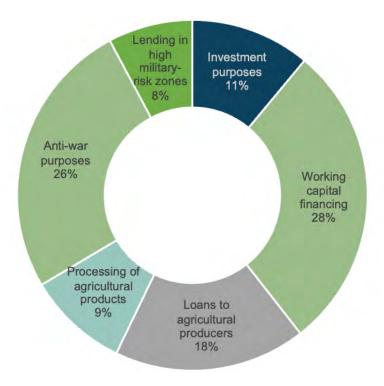
Thus, while the overall bank lending to agricultural volume faces challenges, "Affordable Loans 5-7-9"s share of agricultural financing has remained robust. Despite a decrease in the number of agricultural entities benefiting from the program, it continues to be prominent in the landscape of agricultural finance.

However, the number of agricultural entities benefiting from "Affordable Loans 5-7-9" has decreased. In 2022, 43,648 agricultural entities received bank loans, but by 2024, only 13,088 entities were benefiting from bank lending programs. The number of agricultural entities using the "Affordable Loans 5-7-9" program declined from 10,900 in 2023 to 8,750 in 2024, suggesting that eligibility criteria may have tightened.

During the period of martial law in Ukraine, a total of 60,317 loans valued at approximately EUR 5.55 bn were issued, including 45,332 loans worth about EUR 2.85 bn provided by public sector banks. As of 9 September 2024, the allocation of these loans was as follows (Fig.3)³⁵:







This allocation demonstrates a targeted response to immediate economic challenges and long-term recovery needs, with a specific focus on preserving agricultural productivity, bolstering businesses, and reinforcing anti-war endeavors.

As detailed in Table 2, *PrivatBank* disbursed the highest total loan amounts across various purposes, notably significant sums for working capital and anti-war initiatives. Following closely, *Oschadbank* ranked second in total loan amounts, with substantial allocations toward anti-war efforts and working capital. The primary lenders for agricultural loans included *PrivatBank*, *Ukrgasbank*, *PUMB*, *Oschadbank*, and *Crédit Agricole Bank*. Consequently, a considerable share of loans under the "Affordable Loans 5-7-9%" program is concentrated among a few major banks.

³⁵ Ministry of Finance of Ukraine. During the martial law, entrepreneurs received 60,317 loans worth EUR 5.8 bn under the "5-7-9% Available Loans" program. September 9, 2024. https://mof.gov.ua/uk/news/minfin_za_chas_dii_voiennogo_stanu_pidpriiemtsi_otrimali_60_317_kreditiv_na_2375_mlrd_grn_za_programoiu_dostupni_krediti_5-7-9-4780?fbclid=lwY2xjawFM7vlleHRuA2FlbQlxMAABHdSqvMPMgomcl9C KL2-s8xPbCCVXTiManNZo_CjR-NoYhoAgTlt0ghS9Xg_aem_0axKW6M9RLqVoJwlwUhs2A

Bank	Investment	Refinancing	To agriculture	Anti-war	Working capital	Anti- crisis	Other	Total
PrivatBank	227.3	8.7	267.5	359.6	384.1	163.3	75.9	1 486.4
Oschadbank	153.1	27.5	107.8	236.3	171.9	149.4	98.5	944.5
PUMB (First Ukrainian International Bank)	23.8	100.7	114.6	156.5	144.3	165.5	58.2	763.6
Raiffeisen Bank	9.9	117.5	19.1	149.3	-	296.0	-	591.8
ProCredit Bank	48.4	82.7	82.7	38.2	123.3	92.7	101.2	569.2
Ukrgasbank	101.8	23.3	117.9	84.8	87.5	62.3	92.0	569.6
Ukreximbank	30.7	14.9	55.7	71.8	56.9	85.0	48.7	363.7
Crédit Agricole	11.7	95.7	28.9	35.9	46.7	79.8	41.4	340.1
Kredobank	48.1	33.2	12.9	34.4	111.9	84.5	-	325.0
OTP Bank	14.1	13.2	46.5	20.5	82.4	90.7	46.5	313.9

Table 2.
Volumes of concluded agreements under the State Program "Affordable Loans 5-7-9%" of top 10 banks by lending targets', EUR bn

Source: (Ministry of Finance of Ukraine)³⁶

State program "Affordable Factoring"

Also, at the end of 2023, the *NBU* officially launched the "Affordable Factoring", a new financial instrument under the State Programme "Affordable Loans 5-7-9%" to provide micro, small and medium-sized enterprises with working capital. This process enables businesses to release working capital, as suppliers no longer need to wait for months to get paid. When a supplier delivers goods or services, they can go to a financial institution and present the necessary documents. The financial institution then buys this debt and pays the supplier the agreed-upon amount. This allows the supplier to access the required funds almost immediately, while the financial institution receives the principal from the customer after a deferred payment period. The interest rate for this program is calculated based on the average deposit rate and a risk premium for micro, small, and medium-sized enterprises, currently standing at approximately 29% annually. The *BDF* subsidizes a portion of this rate, around 16% annually. Partner banks include *TASKOMBANK*, *MTB Bank*, *KOMINBANK*, *KB GLOBUS*, *OTP BANK*, *BANK VOSTOK*, *BANK CREDIT DNIPRO*³⁷.

Thus, the BDF, under the supervision of the Ministry of Finance of Ukraine, has played a crucial role in bolstering the Ukrainian economy through initiatives such as the "Affordable Loans 5-7-9%" and the "Affordable Factoring". These programs aim to provide financial assistance to micro, small, and medium-sized enterprises. Notably, state banks such as *PrivatBank* and *Oschadbank* are major contributors to the "Affordable Loans 5-7-9%" initiative, while the "Affordable Factoring" is mainly supported by smaller private banks.

"Affordable Financial Leasing 5-7-9%"

Since 2024, the *BDF* has been implementing the state program "Affordable Financial Leasing 5-7-9%" in partial compensation by the Fund of the remuneration under financial leasing agreements for micro, small, and medium-sized enterprises. The lessor or the bank assesses the creditworthiness of the enterprise and provides financial leasing services under its own rules, procedures and financial products.

Financial leasing agreements are entered into for the following purposes: 1) financing of agricultural producers; 2) entities operating in the processing industry according to all KVED of Section C of the National Classifier of Ukraine; 3) reconstruction of fixed assets of enterprises destroyed as a result of war aggression.

The breakdown of the terms is as follows: a) 5% interest rate applies to micro and small enterprises with annual revenues of less than EUR 10 mln; b) 7% interest rate applies to medium-sized enterprises with annual revenues ranging from EUR 10 mln to EUR 50 mln; c) 9–11% interest rate applies to both micro and small enterprises with annual revenues of less than 10 mln EUR, and medium-sized enterprises with annual revenues ranging

³⁶ Ministry of finance of Ukraine. During the martial law, entrepreneurs received 60,317 loans worth EUR 237.5 bn under the "5-7-9% Available Loans" program. September 9, 2024. https://mof.gov.ua/uk/news/minfin_za_chas_dii_voiennogo_stanu_pidpriiemtsi_otrimali_60_317_kreditiv_na_2375_mlrd_grn_za_programoiu_dostupni_krediti_5-7-9-4780?fbclid=lwY2xjawFM7vlleHRuA2FlbQlxMAABHdSqvMPMgomcl9C KL2-s8xPbCCVXTiManNZo_CjR-NoYhoAgTlt0ghS9Xg_aem_0axKW6M9RLqVoJwlwUhs2A

³⁷ Entrepreneurship Development Fund. Program of financial state support of business entities under factoring contracts "Affordable Factoring". https://bdf.gov.ua/programs/prohrama-finansovoi-derzhavnoi-pidtrymky-sub-iektiv-pidpryjemnytstva-za-dohovoramy-faktorynhu-dostupnyy-faktorynh/

from EUR 10 mln to EUR 50 mln. The maximum amount of existing financial leasing agreements or available credit limits under loan agreements concluded under the program does not exceed EUR 1.4 mln, for agricultural producers – EUR 2.1 mln. The maximum term of a financial leasing agreement does not exceed 60 months.

Partners of the program are: OTP Leasing, ULF-Finance, Best Leasing, PUMB, PrivatBank, Ukreximbank", Kredobank, FC Atom Finance, Globus, Tekom-Leasing, Bank Credit Dnipro, Tascombank, Eximleasing, Kredoleasing, Ukragroleasing, MTB Bank, Unex Bank³⁸.

So, since 2024, the "Affordable Financial Leasing 5-7-9%" program has been providing support to micro, small, and medium enterprises, particularly those in agriculture, manufacturing, and post-war reconstruction.

Hence, the BDF is a crucial financial intermediary in Ukraine, facilitating enterprise financing through state programs via partner banks. Originally established in 1996 and evolving into its current state-owned form in 2020, the BDF supports micro, small, and medium-sized enterprises by enforcing an Environmental and Social Management System (ESMS) in line with international standards.

c) State Grant Programs for Farmers

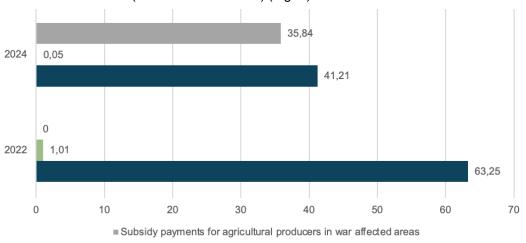
Given the significant role of agriculture in the Ukrainian economy, the government places considerable emphasis on supporting it. This includes support through legislative initiatives, economic and special policies, and financing mechanisms. Financial support programs for agribusiness in various forms have always been available in Ukraine. Grant-based forms of public financing in Ukraine are generally not green finance products. However, it is appropriate to describe them, as they play a significant role in the financial support of the agricultural sector and have the potential to be transformed into green loans.

In 2024, the support for agricultural producers significantly increased to EUR 0.063 bn compared to EUR 0.041 bn in 2022. While overall support has risen, the amount of direct financial support for agricultural producers (including, partial compensation for the cost of domestically produced agricultural machinery and equipment) is still relatively modest - EUR 1.01 mln in 2024 (2022 - EUR 0.05 mln) (Fig. 4).



State Treasury Service of Ukraine

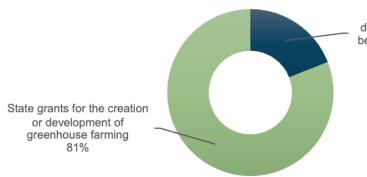
Source.



- Financial support for agricultural producers
- Support for farms and other agricultural producers

Since July 2022, the initiatives "State grants for the development of horticulture, berry growing, and viticulture" and "State grants for the creation or development of greenhouse farming" have been in place as part of the "eWork" government support framework. As of March 2025, these two programs have a combined funding total of EUR 12.63 mln. The government has allocated more than four times the amount to greenhouse farming, highlighting a clear strategic emphasis on controlled-environment agriculture. Greenhouse farming has received EUR 10.23 mln, which represents 81% of the overall state support. In contrast, horticulture, berry growing, and viticulture have been awarded EUR 2.40 mln, making up the remaining 19% of the total funding (Fig 5).

³⁸ Entrepreneurship Development Fund. 'Affordable Financial Leasing 5-7-9%' program. https://bdf.gov.ua/programs/prohrama-dostupnyy-finansovyy-lizynh-5-7-9/



State grants for the development of horticulture, berry growing, and viticulture 19%

Fig.5.
State grant funding for creating agricultural business in Ukraine, %, as of March 13, 2025

Source: Ministry of Agrarian Policy and Food of Ukraine

Compensation for the cost of agricultural machinery produced in Ukraine is the largest program for agribusiness. Farmers can receive 25% compensation for the cost of purchased agricultural machinery from 44 Ukrainian manufacturers. The localization of production of such machinery or equipment must exceed 60%. The list of machinery and equipment under this program approved by the Ministry of Economy of Ukraine includes 2,289 product items. They include tractors for agriculture and forestry, tillage systems, machines for applying mineral fertilizers, sprayers for chemical protection, machinery and equipment for horticulture and berry growing. To receive 25% compensation for the cost of purchased machinery or equipment, an agricultural producer must choose a supplier from the list of the Ministry of Economy of Ukraine, purchase the necessary equipment, and submit an application and supporting documents to an authorized bank.³⁹

Grants for the creation of a garden, berry growing and viticulture; creation or development of a greenhouse. OF Grants are provided in the amount of up to 70% of the project cost, but not more than EUR 0.23 mln for a garden and EUR 0.16 mln for a greenhouse. The applicant must finance at least 30% of the project cost with their own or credit funds. A prerequisite is the employment of the required number of employees. For gardens, from 5 to 10 permanent and 125 to 425 seasonal employees, depending on the type of planting. For greenhouses - at least 4 permanent and 10 seasonal employees per hectare of modular greenhouse area. In 2024, 58 gardening farms and 21 greenhouse farms received EUR 7.53 mln in grants.

These grants for a garden or greenhouse are provided under the government's eRobota grant program, which has been operating since July 1, 2022, with support from the *World Bank* under the ARISE Emergency Project for Inclusive Support for the Recovery of Agriculture in Ukraine. "eRobota provides support for small and medium-sized businesses in the areas of "Your Business", "Your Garden", "Your Greenhouse", and "New Level". During the period of the eRobota program, 293 orders for grants were issued for the development of horticulture, berry and viticulture (EUR 18.91 mln) and greenhouse farming (EUR 6.69 mln). Overall, the program is aimed at creating more than 27 thousand jobs.

On May 1, the State Agrarian Register started submitting applications for a separate budget subsidy for cultivated land for farmers from the de-occupied territories and territories where military operations have ended. Funds in the amount of EUR 0.19 mln per 1 hectare will be provided to agricultural producers who own or use up to 120 hectares of agricultural land. Small farmers who cultivate up to 120 hectares can receive EUR 0.09 mln of non-refundable aid per 1 hectare (through the State Agrarian Register). If farmers work in the de-occupied territories, they can receive up to EUR 0.19 mln per hectare.

In addition to the above program, in September 2024, a *grant of funds provided for in the state budget for state support of agricultural producers* per unit of cultivated land was introduced⁴¹ – EUR 23 per hectare in the territory of possible hostilities and EUR 46 per hectare in the territory of active hostilities⁴².

³⁹ Programs for business "Made in Ukraine". Ministry of Economy. RETRIEVED FROM: https://me.gov.ua/Documents/Detail?lang=uk-UA&id=2ed8e355-81de-49ea-9bdd-ba28db7e0710&title=ZroblenoVUkraini

⁴⁰ CMU Resolution No. 738 of June 21, 2022 "Some Issues of Providing Grants to Businesses" as amended on August 02, 2024 to the Procedure for Providing Grants for the Establishment of Horticulture, Berry and Viticulture and to the Procedure for Providing Grants for the Establishment or Development of Greenhouse Farms.

⁴¹ "Procedure for the use of funds provided in the state budget for state support of agricultural producers through the allocation of budget subsidies per unit of cultivated land", approved by the Resolution of the Cabinet of Ministers of Ukraine of August 11, 2021 No. 886.

⁴² Ministry of Agrarian Policy and Food of Ukraine. RETRIEVED FROM: https://minagro.gov.ua/news/za-pershudobu-ahrarii-podaly-314-zaiavok-na-otrymannia-koshtiv-za-prohramoiu-derzhpidtrymky

A grant program for female and male veterans and their spouses. Veterans and their spouses can receive a grant of up to EUR 0.23 mln or up to EUR 0.12 mln, respectively, to start or develop a business. The program's terms also include the creation of new jobs.

The Ukrainian State Farm Support Fund implements the budget program "Provision of loans to farms" (according to the Resolution of the Cabinet of Ministers of Ukraine No. 1102 dated August 25, 2004, as amended by the Resolution of the Cabinet of Ministers of Ukraine No. 349 dated March 1, 2007) - EUR 0.23 mln with a refund for the purchase of up to 20 hectares, to a farm (if the farmer is under 35 years old, the decision is made by the Commission).

State funding also includes a grant program for processing enterprises up to EUR 0.187 mln for development; a microgrant program for starting or expanding a new business.

For 2024, the budget provides for the following funding for these and other programs.

Through the Ministry of Agrarian Policy of Ukraine:

- 1) Subsidies and grants in the amount of EUR 4.77 mln to support agricultural producers, in particular:
 - EUR 4.65 mln to support agricultural producers using reclaimed land;
 - EUR 0.12 mln to compensate family farmers for the unified social tax paid;
 - EUR 0.19 mln to provide loans to farmers;
- 2) Subsidies and grants in the amount of EUR 18.55 mln (with the prospect of increasing by EUR 43.04 mln from the *World Bank*) to support farms and other agricultural producers, in particular
 - subsidy per head of cattle up to EUR 162 per head, but not more than 100 heads;
 - subsidy per head of cattle (sheep, goats) up to EUR 46 per head, but not more than 500 heads;
 - subsidy per 1 hectare EUR 93, but not more than 120 hectares;
 - EUR 8.7 mln from the PGF

Through the Ministry of Economy of Ukraine:

- 1) EUR 23.26 mln to compensate 25% of the cost of domestically produced agricultural machinery and equipment;
- 2) EUR 69.77 mln to compensate for the costs of humanitarian demining of agricultural land;
- 3) EUR 31.91 mln to provide grants for business creation or development, in particular:
 - EUR 8.92 mln to provide grants for the establishment or development of horticulture, berry growing, and viticulture;
 - EUR 2.23 mln to provide grants for the creation or development of greenhouse facilities;
 - EUR 20.74 mln grants for the creation or development of processing enterprises;
- 1) The 5-7-9 Program (total resource of EUR 418.6 mln, minus EUR 160.47 mln of debt for 2023);
- 2) EUR 23.26 mln for the creation of industrial parks;
- 3) EUR 69.77 mln to support domestic demand for domestic goods and services

To sum up, the Ukrainian government's initiatives to support the agricultural and enterprise sectors through financial mechanisms demonstrate a strong commitment to fostering economic growth and sustainability. Since 2017, there have been changes in the main areas of state financial support. The government began allocating a substantial portion of resources to the development of small farms. In 2017–2023, funding primarily targeted large agricultural producers, livestock farming, and agricultural machinery manufacturers.

However, in recent years, the volume of financial resources allocated to the agricultural sector has increased substantially, reflecting the state's growing interest in fostering the sector's growth and development. Notably, the share of grant-based financial support has also risen.

Key state support initiatives in the agricultural sector include the activities of the *Partial Loan Guarantee Fund in Agriculture, the Decarbonization Fund of Ukraine, the Export Credit Agency*, and the state financial support programs managed by the *BDF*. The *BDF* plays a vital role in providing essential financial assistance to micro, small, and medium-sized enterprises through programs such as "Affordable Loans 5-7-9%," "Affordable Financial Leasing 5-7-9%", and "Affordable Factoring". These efforts are complemented by the ECA, which contributes to boosting Ukrainian exports.

In addition to direct initiatives, several government programs indirectly promote the adoption of green technologies in the agricultural sector, particularly through energy efficiency programs, which have been actively developing in Ukraine.

In terms of strengthening climate resilient agriculture in Ukraine, it is advisable to:

- a) carefully combine existing state support programs with adaptation and mitigation practices and requirements
- b) re-format state grant programs into the format of cheap green loans.

This will provide a financial incentive for the implementation of climate-resilient practices and will help to combine public funding with private funding in the form of green finance.



INTERNATIONAL SUPPORT PROGRAMS

International financing and technical support programs play a leading role in promoting green finance practices in Ukraine's economy. The most significant contributions come from institutions such as the *EBRD*, *EIB*, *IBRD*, *IFC*, and *USAID*. However, the *USAID* 's programs were discontinued in 2025.

Historically, the majority of green finance initiatives have been concentrated in the energy **sector**, focusing on renewable energy, energy efficiency, and infrastructure modernization. In recent years, however, there has been a notable expansion into agribusiness, supporting climate-smart agriculture, sustainable supply chains, and environmentally friendly farming practices. In addition, programs aimed at SME development, regional growth, and energy projects can also be leveraged by farmers.

While these initiatives have proven effective in fostering sustainability, programs in the agricultural sector do not contribute much because of small amount and their long-term impact depends on consistent policy support, private sector participation, and financial accessibility. Below is a list of green projects that have been financed in Ukraine with the financial support of international financial institutions.

a) Financial organizations

EBRD

Guarantees to banks from the EBRD in Ukraine. The EBRD guarantee covers up to 50% of a bank's credit risk on new sub-loans totaling EUR 120 mln to private companies operating in Ukraine. This credit support mechanism facilitates financing in key sectors such as agriculture, manufacturing, transport, and logistics, enabling businesses to sustain operations and maintain access to critical goods. Since the start of Russia's full-scale war against Ukraine, the total amount of new financing supported by EBRD guarantees has reached approximately EUR 900 mln as of the end of 2023.

The *EBRD* guarantee is backed by first-loss coverage provided by the United States through the *EBRD*'s Special Crisis Response Fund (SCRF), as part of the Bank's Resilience Package. Other contributors to the SCRF include France, Canada, Italy, Japan, Norway, Switzerland, the United Kingdom, Germany, the Netherlands, and Denmark.

A key component of the *EBRD*'s cooperation with Ukrainian banks is the implementation of a program to enhance the competitiveness of micro, small, and medium-sized enterprises (MSMEs) in the EU's Eastern Partnership countries. Under this initiative, up to 15% of loans covered by the guarantee are allocated to support long-term investments by MSMEs in green technologies that comply with EU standards. These investments aim to enhance the competitiveness of MSMEs in both domestic and international markets. Upon completing their investment projects, eligible sub-borrowers receive investment incentives and technical assistance funded by the European Union under the EU4Business initiative.

The *EBRD* also collaborates with Ukrainian banks through the *EU4Business* Credit Line program. This program enables farmers to lease equipment worth up to EUR 300,000 (and, under specific conditions, up to EUR 1 mln) with a 10–15% discount. For 50% of such transactions, credit risk is guaranteed by an international insurance fund. Additionally, 15% of transactions must involve the purchase of green technologies that meet EU standards. Entrepreneurs completing such transactions are eligible for investment preferences and technical assistance under the EU4Business initiative.

The procedure for receiving compensation under this program includes:

- Selection of equipment from the list of eligible technologies on the Initiative's website.⁴³ If the selected facility is not on the list of eligible technologies, a certificate of conformity must also be attached to the package of documents. *EBRD* consultants will check the possibility of adding the facility to the list.
- Agree on the cost and characteristics of the object with a financial intermediary (bank or leasing company).

⁴³ List of eligible technologies EY4BUSINESS EBRD Credit line. RETRIEVED FROM: https://www.list-of-eligible-technologies.com/let/

- Fill out and submit an application for participation in the program.
- The EBRD consultant will check the possibility of participating in the program, and the financial intermediary will simultaneously verify the documents and make a preliminary decision on the provision of financing.
- After signing an agreement with a financial intermediary, the purchase of equipment is carried out
- After the purchase and transfer of the facility, the cashback is paid to the borrower/ lessee.

The EBRD's Resilience and Livelihoods Guarantee (RLG) covers up to 50% of credit risk, enabling new loans totaling EUR 70 mln to private enterprises operating in critical sectors, including agriculture, manufacturing, energy security, pharmaceuticals and logistics, enabling businesses to continue operations and secure livelihoods essential for Ukraine's economic resilience and post-war recovery.

Up to 15% of the loans covered by the guarantee are to be used to support long-term investments by small and medium-sized enterprises (SMEs) in green technologies that meet EU standards and will help to increase the competitiveness of these companies in domestic and foreign markets. This component is funded by the EU through the EU4Business initiative.

Eligible borrowers may receive technical assistance and grant incentives upon completion of their investment projects. The *EBRD* guarantee is accompanied by first loss coverage funded by the United States through the *EBRD*'s Special Crisis Response Fund as part of its Resilience Package. In addition to supporting the private sector, the Bank's strategic priorities in Ukraine include energy security, critical infrastructure, food security and trade.

Financing terms:

- The amount is up to EUR 3 mln in equivalent,
- Purposes and terms purchase of fixed assets up to 66 months, working capital financing up to 30 months, payment guarantees, aval bills up to 30 months,
- Currency UAH, EUR, USD,
- Collateral flexible approach, 50% of the standard requirements are covered by a guarantee.

Other EBRD financing programs related to the Green Deal should be highlighted:

- A project to improve the safety of nuclear power plants. An analysis was carried out at 15 reactors and a list of necessary measures was identified, for which the EBRD, together with Euratom, allocated EUR 600 mln;
- Financing the construction of the Rivne-Kyiv transmission line. The goal is to connect the central regions with the western regions, where there are excess generating capacities:
- A loan to promote better postal logistics infrastructure for Nova Poshta LLC. The loan
 is for 7 years with funding of EUR 9.5 mln. The purpose of the loan is to promote the
 development of new technologies and, as a result, reduce CO2 emissions by 1,570
 tons;
- Energy efficiency program "Climate Innovation Vouchers". A grant project that finances
 green and sustainable business innovations in Ukraine. So far, 26 companies have
 received support for a total of EUR 1.3 mln. The program supports companies in the
 sustainable mobility and sustainable transport segment, renewable energy, ventilation
 and air conditioning, smart home, and agribusiness;
- Additional funding of EUR 200 mln for the development of renewable energy sources.
 Financing of private renewable energy projects under the current feed-in tariff system.
 To maintain momentum during the transition from the existing feed-in tariff mechanism to an auction-based support system;
- For "Mist Express" Company. A loan to implement software that allows optimizing the degree of congestion of heavy transport. Thanks to this software product, the company reduced about 3 thousand tons of CO2. The second area of this program was the introduction of certain tools that allowed the company to abandon consumable

packaging. The company developed its own containers, which also led to a reduction in emissions by hundreds of tons of CO2 per year. The third area is warehouse optimization. The company now has energy-saving warehouses that use daylight and allow loading and unloading trucks in a closed space, meaning that it does not waste energy on heating or lighting, which also reduces significant CO2 emissions. Other measures include a waste management policy, the use of recycled materials, and the optimization of internal energy systems in both offices and warehouses.

EIB

European Investment Bank project in support of the Deep and Comprehensive Free Trade Area between Ukraine and the EU.

On December 19, 2016, the Public Joint Stock Company "The State Export-Import Bank of Ukraine" and the European Investment Bank (*EIB*) signed a EUR 260 mln financing agreement to support the private sector in the implementation of the principles set out in the Association Agreement and the Deep and Comprehensive Free Trade Area (DCFTA) between Ukraine and the European Union (EU). The medium- and long-term loan funds of the Project are aimed at financing business development in Ukraine, strengthening the position of Ukrainian enterprises in international trade, energy efficiency and renewable energy, and environmental protection.

The following types of sub-borrowers may participate in the Project:

- small and medium-sized enterprises (SMEs) with up to 250 employees;
- medium-capitalization companies (MCCs) with the number of employees from 250 to 3000:
- private sector enterprises (not SMEs or CMCs) with more than 3000 employees.

Loan conditions:

- SMEs, CSCs no more than EUR 25 mln (*EIB* financing up to 100% of the project cost, but no more than EUR 12.5 mln),
- CFC EUR 25-50 mln (*EIB* financing up to 50% of the project cost, but not more than EUR 25 mln),
- Private sector enterprises from EUR 40 000 to EUR 50 mln (*EIB* financing up to 50% of the project cost, but not more than equivalent to EUR 25 mln).

A requirement for financing under the Project is that the sub-borrowers comply with the requirements of compliance with the legislation of Ukraine and the European Union on environmental protection, published on the *EIB* website.⁴⁴

IBRD

- Credit line in the amount of USD 200. For Ukreximbank to improve the energy
 efficiency of industrial enterprises and commercial companies, municipalities,
 municipal enterprises and ESCO companies.
- Program to accelerate private investment in agriculture. The loan will be used to create and make publicly available the State Agrarian Register, to inventory stateowned land and enter information about it into the State Land Cadaster, to create a methodology for developing land use plans for united territorial communities, and more. The project is worth USD 200 mln (EUR 185 mln). The project is being implemented as part of the Strategy for Promoting Private Investment in Agriculture until 2023.

IFC

- Project "Energy Efficiency in the Residential Sector of Ukraine". Interaction with
 the Government of Ukraine to improve the legislation governing energy efficiency,
 inform the public and businesses about the benefits of energy efficiency, and
 develop loan products for apartment buildings;
- The Ukrainian Cities Program. A programmatic approach that is applied before
 investments are made in the sector. It combines advisory assistance and
 commercial investment. This project is important for Ukraine, as the financing gap
 for urban infrastructure in Ukraine is estimated at about USD 35 bn (EUR 32 bn).
- A loan of USD 50 mln (EUR 46 mln) to OTP Leasing. To increase investments in sustainable energy (mainly for SMEs).

⁴⁴ https://www.eib.org/attachments/strategies/eib statement esps en.pdf

 The first eco-project of JSC Ukrgasbank under the agreement with IFC to simplify the process of financing companies seeking to implement energy-saving technologies. The first loan was granted by the bank to an Odesa entrepreneur for the purchase of agricultural equipment based on innovative technologies. This equipment will increase the efficiency of harvesting by 46.7% and reduce fuel consumption by 33.3%.

b) Non-financial organizations

In addition to development banks and international financial institutions, non-financial development and aid organizations also play a role in promoting green finance. In this regard, *USAID* stands out, as its programs are among the most focused on advancing green finance in the agribusiness sector.

USAID

Funding programs from U.S. Agency for International Development – USAID AGRO:

- Commodity lending programs (purchase of necessary plant protection products, seeds and fertilizers):
 - ADAMA Ukraine's Credit Corridor PPPs, micronutrient fertilizers and basic fertilizers on deferred payment terms for grain and oilseed producers.
 - Assistance in the purchase of inputs from UKRAVIT installment plan for the purchase of UKRAVIT plant protection products, micro fertilizers and growth stimulants, as well as inoculants; agro loan without collateral, interest rate 0.01% per annum for the first six months, up to EUR 0.07 mln. Eligibility: owner of a land bank of 200 to 10,000 hectares.
 - "Farmer, Loan for you" from Agro-Arena a program to support micro, small and medium-sized agricultural producers through the provision of commodity credit for a full package of products from sowing to harvesting. List of groups of goods that participate in the commodity lending program⁴⁵: seeds, crop protection products, micro fertilizers, fertilizers and/or fuel.
 - Crop Credit from Khimagromarket plant protection products, microfertilizers, biological products and adjuvants with deferred payment for micro, small and medium-sized producers that will meet the necessary needs during the agricultural production process.
 - AGRORESURS FINANCE with Agroresurs-A comprehensive commodity lending for agricultural machinery, spare parts, seeds, fertilizers, plant protection products, fuels and lubricants, professional equipment and equipment warranty service. The loan programs also include additional services: agronomy, digital maps, GPS monitoring, water and soil analysis, etc.
 - Makosh is a commodity loan program for the purchase of plant protection products and mineral fertilizers.
 - Zakhid Agribusiness installment program for the purchase of plant protection products, microfertilizers and high-quality seeds from the largest multinational companies.
- The AGRO program promotes access to credit for agricultural MSMEs through nonbank financing instruments:
 - WEAGRO, an installment program for agribusinesses, in conjunction with Activitis, based on the BNPL concept of "buy now, pay later". Key parameters of WEAGRO:
 - Users MSMEs, land bank up to 1000 hectares, the maximum amount of purchase in installments - UAH 2 mln, installment period - up to 180 calendar days, no payment, online registration.
 - Digital leasing platform jointly with ESKA Capital. Agro-SMEs from the regions bordering the combat zone can receive funds or equipment on lease for up to 1 to 5 years.

⁴⁵ These products comply with the environmental protection requirements of USAID and do not contain prohibited substances (a detailed list of compliance with the requirements of the current Report on the assessment of pesticides and the action plan for their safe use is attached), in terms of the permitted active substances of PPT

- Fintech platforms to improve access to finance for agro-MMEs:
 - AgriAnalytica (the platform allows farmers to apply for financing, state or grant support, as well as improve the financial aspects of the farm: accounting, business plans;
 - AgroApp (allows you to apply for funding only using the EDRPOU code on the website or through a bot in Telegram. AgroApp receives other data about the farm from more than 70 open registers and automatically generates an application);
 - Uteka.Agribusiness (a single platform for analyzing financial statements, drawing up a business plan, applying for financing through automated services, and getting advice for agribusiness). With the support of the *USAID* AGRO Program, the project provides compensation of up to 80% of the cost of services for enterprises that apply for services to the Outsourcing Center.

DFC

The U.S. Corporation for International Development (DFC), with technical support from USAID, has provided a 50% or 80% credit risk coverage guarantee that will allow the Bank to provide loans to support and develop the business of small and medium-sized enterprises primarily operating in the agriculture and agro-processing sectors, with relaxed collateral requirements. Private companies that meet two of the following criteria are eligible for funding:

- Annual revenue up to EUR 14.49 mln,
- Assets up to EUR 14.49 mln,
- Number of employees up to 300.

Loan terms:

- Amount up to EUR 966,040,
- · Term from 6 to 72 months,
- · Loan currency UAH, EUR, USD,
- Financing purposes: fixed assets, working capital replenishment,
- Collateral flexible approach, 50% or 80% of the standard requirements are covered by a guarantee.

To sum up, international institutions' programs utilizing green finance in Ukraine are very limited in their focus on the agribusiness sector. Although USAID programs had a direct focus, they were relatively small in scale. Programs from other institutions are mostly not directly aimed at adapting the agricultural sector to climate risks or mitigation efforts. However, existing programs for business development, energy efficiency, and related areas can also be utilized by agribusinesses. Overall, international programs play a crucial role in advancing green finance, as they help financial intermediaries adapt to the implementation of green requirements.

FINANCIAL INSTRUMENTS FOR AGRICULTURAL SECTOR CLIMATE ADAPTATION



The main area for the spread of green finance should be private financial intermediation. However, this very segment in Ukraine is in a difficult situation. Although Ukraine's financial sector has a diverse structure, consisting of various types of financial intermediaries, it is currently facing significant challenges due to the war and financial crises. Its institutional capacity is significantly constrained by high levels of risk and prolonged stagnation. Consequently, the range of attractive financial instruments and their consumers is concentrated only on the most profitable ones. This imposes corresponding limitations on the future spread of green finance, particularly in the agricultural sector.

Agricultural enterprises in Ukraine have access to a wide range of traditional financial instruments to meet their financial needs. These include self-financing (including quasi-debt financing), microfinance (short-term, often unsecured lending from banks, credit unions, financial companies, or shadow banking), bank loans, leasing, debt securities, business and financial risk insurance, loan guarantees, factoring, and forward contracts. While these instruments are represented to varying extents in Ukraine's regulatory framework and financial practices, a long-term strategy to promote green finance in the agricultural sector should involve incorporating green requirements into all these instruments.

Currently, the primary sources of financing for the agricultural sector in Ukraine are enterprises' own capital, bank loans, and specialized state and international financial programs. Leasing companies also play a role, offering leasing programs for agricultural machinery. However, credit unions remain minor players in this market. Similarly, insurance companies provide traditional agribusiness insurance but have been slow to adopt products aligned with green requirements.

The role of other financial companies in agribusiness financing is less clear. Official statistics suggest limited involvement of these companies in agricultural financing. However, a significant portion of enterprises reportedly rely on quasi-debt instruments, likely sourced from shadow financial intermediaries. A survey conducted in 2017 revealed that approximately 58% of enterprises prefer self-financing over loans to secure sufficient financial resources, indicating a strong reliance on internal funding and an aversion to traditional credit mechanisms⁴⁶.

a) Financial market capacity

The structure of Ukraine's financial market exhibits a distinctive feature that shapes its functional potential: it is predominantly bank-oriented, with commercial banks serving as the primary providers of financial services. In this respect, Ukraine's financial market aligns with the EU's bank-based model. However, a notable difference lies in the significantly higher share of state-owned banks in Ukraine. More than 50% of the banking market's assets are state-owned, represented by the *Cabinet of Ministers of Ukraine (CMU)* and the *Ministry of Finance*.

Banks have consistently held the largest share of institutions and total assets, underscoring their dominance in Ukraine's financial landscape (Table 3). In contrast, the number of nonbank financial institutions has steadily declined, shrinking to nearly a third of their 2017 levels, reflecting a trend of consolidation within the sector. As of August 2024, 62 banks are operating in Ukraine, with total net assets amounting to EUR 74.4 mln. State-owned banks account for 53.3% of these net assets, further emphasizing their critical role in the country's financial system⁴⁷.

⁴⁶ Shkolnyk, I. O., & Kryvozub, V. (2019). The current state of financial support for enterprises in the agrarian sector of Ukraine. Bulletin of Sumy State University. Series "Economics", No. 4.

⁴⁷ NBU. Financial Sector Statistics. https://bank.gov.ua/en/statistic/sector-financial

Table 3.
Number and asset structure of Ukraine's financial sector, 2017–2024

Source: NBU

		Banks	Insurers	Credit unions	Finance companies
2017	Number	82	294	378	677
	Assets, EUR mln	40	1.7	0.06	3.3
	Share of assets of financial sector, %	88.6	3.8	0.1	7.1
2018	Number	77	281	358	940
	Assets, EUR mln	43.5	2.0	0.06	4.0
	Share of assets of financial sector, %	87.5	4.1	0.1	8.1
	Number	75	233	337	986
2019	Assets, EUR mln	56.5	2.4	0.1	6.1
	Share of assets of financial sector, %	86.5	3.7	0.1	9.4
	Number	73	210	322	960
2020	Assets, EUR mln	52.7	1.9	0.06	5.4
	Share of assets of financial sector, %	87.6	3.1	0.1	9.0
	Number	71	155	278	922
2021	Assets, EUR mln	66.7	2.1	0.06	7.0
	Share of assets of financial sector, %	87.7	2.8	0.1	9.2
2022	Number	67	128	162	760
	Assets, EUR mln	60.3	1.8	0.03	6.3
	Share of assets of financial sector, %	88.0	2.6	0.1	9.1
	Number	63	101	133	559
2023	Assets, EUR mln	71.4	1.8	0.02	6.1
	Share of assets of financial sector, %	89.9	2.3	0.04	7.7
	Number	61	65	104	479
2024	Assets, EUR mln	79.6	1.7	0.03	7.2
	Share of assets of financial sector, %	89.9	1.9	0.03	8.1

Amid the ongoing war, the Ukrainian stock market has experienced a significant decline in its ability to attract financial resources. According to the National Securities and Stock Market Commission (*NSSMC*), the market's capitalization has not exceeded 1% of the GDP since 2017. The primary instrument in the stock market remains domestic government bonds, which serve as a critical source of financing for the state budget.

The dominance of banking institutions in Ukraine has contributed to imbalances in the total assets of the financial sector and the sources of investment resources within the economy. With over 50% of banking services provided by state-owned banks and an increasing role of the *NBU* in redistributing financial resources, the state plays a predominant role in Ukraine's financial sector.

Under the conditions of full-scale war, Ukraine has received a substantial amount of international financial aid. This money, provided by international partners, was transferred to the bank accounts of legal entities and individuals through budgetary expenditures. Overall, during 2022–2024, the increase in available liquidity in Ukraine's financial sector amounted to EUR 109.5 bn. Of this amount, at least EUR 35.7 bn passed through the banking system.⁴⁸ For the most part, these funds turned into free liquidity in the banking system.

Despite the monopoly of banking institutions in Ukraine's financial markets, their relative performance indicates weak "inclusiveness" within the sector. Banks are constrained in lending to the real economy and show limited efforts to mobilize idle resources from the population. The ratio of bank loans to GDP has steadily declined from 78% at the end of 2008 to 14.0% at the beginning of 2024 marking a level three times lower than in other Eastern European countries. Similarly, the ratio of deposits to GDP illustrates this disparity: in developing countries, the ratio stands at 40%, while in the Eurozone it exceeds 100%. In Ukraine, however, it is only 17% as of early 2024.

Incorporating ESG into the banking sector. Ukrainian banks are prioritizing energy efficiency in their lending activities as part of broader green financing initiatives. In June 2024, 20 banks, collectively representing over 85% of the banking sector's net assets, signed a Memorandum of Understanding to support financing for energy recovery

⁴⁸ Bublyk, Ye. O. (2024). Monetary policy and credit support of the economy in conditions of war and global instability. *Economy of Ukraine*, (10), 27-44.

initiatives. According to a survey conducted by the *National Bank of Ukraine* (, these banks received 1,975 loan applications from businesses for energy infrastructure rehabilitation projects between June 1 and September 1, 2024, totaling EUR 1.1 bn. As of August 2024, loan applications amounting to EUR 140.1 mln have been approved, including agreements already signed and those in preparation for signing. The gross portfolio of loans specifically related to the energy needs of legal entities stood at EUR 23.6 mln as of August 2024⁴⁹.

The integration of ESG principles in Ukraine remains in its early stages but holds significant potential due to concerted efforts by the government, international organizations, and banking institutions. Nonetheless, several challenges persist, including a shortage of skilled professionals, low levels of client awareness, and the adverse effects of the ongoing war. On a more optimistic note, evolving corporate culture, partnerships with international entities, and the drive to align with European standards foster a favorable environment for progress in ESG adoption.

The implementation status of ESG in Ukrainian financial institutions is characterized by the following:

1) Corporate governance as a foundation: Effective ESG integration requires foundational changes in corporate culture. The *NBU* has played a pivotal role in strengthening corporate governance within banks, laying the groundwork for the adoption of ESG principles. Key milestones include:

2021 Initiatives:

- a. Approval of the Policy of Sustainable Financial Development (2021–2025), outlining strategic goals for ESG integration.
- b. Membership in the Sustainable Banking Network, aligning Ukraine with global sustainable finance standards.
- c. Collaboration with the International Finance Corporation (*IFC*) to promote green financing initiatives in Ukraine.

2024 Advancements:

- a. Signing of a Memorandum of Understanding with the European Bank for Reconstruction and Development (*EBRD*) to support financial inclusion and the reintegration of war veterans.
- b. Approval of Methodological Recommendations for Inclusive Financial Services, aimed at enhancing accessibility within Ukrainian financial institutions.
- 2) Initial development of ESG practices: Ukrainian state institutions supporting entrepreneurship and both foreign- and state-owned banks are emerging as key ESG ambassadors. Notable examples include:

Oschadbank:

- a. In 2023, began integrating ESG principles into SME service departments through collaboration with Sparkassenstiftung.
- b. In 2024, ESG assessments were incorporated into document collection and credit monitoring processes in projects involving Sparkassenstiftung, *EBRD*, *EIB*, and the Business Development Fund.

Ukrgasbank:

- a. Signed an agreement with the *IFC* in 2016 to advance Ukraine's green economic potential.
- b. Adopted an Environmental and Social Responsibility Policy in 2018.

Raiffeisen Bank in Ukraine: since 2023, has collected ESG data from questionnaires and external sources to inform creditworthiness and investment risk assessments.

OTP Bank in Ukraine: implemented an ESG management system in 2021, aligning with the broader OTP Group strategy.

Partial Credit Guarantee Fund in Agriculture: operates under its established Environmental and Social Responsibility Policy for partner financial institutions.

⁴⁹ NBU. Banks approved EUR 140 mln worth of loan applications for energy infrastructure restoration projects in three months - bank survey results. September 6, 2024. https://bank.gov.ua/ua/news/all/banki-za-tri-misyatsi-shvalili-zayavki-na-kredituvannya-proyektiv-iz-vidnovlennya-energetichnoyi-infrastrukturi-na-58-mlrd-grn-rezultati-opituvannya-bankiv

Business Development Fund: applies an Environmental and Social Management System to its operations.

- 3) Shortage of ESG experts: the lack of qualified ESG specialists highlights the need for dedicated training, certification programs, and the formation of a professional community to support ESG integration.
- 4) Challenges arising from war: the war has introduced new ESG priorities, such as reintegrating veterans. For instance, *Oschadbank* has launched a business development program for veterans and restructured its branches to accommodate their specific needs.
- 5) Support from international donors and partners: international organizations play a critical role in advancing ESG initiatives through risk-sharing programs and affordable credit lines.
- 6) Growing role of audit companies in ESG incorporation:

KPMG in Ukraine: launched ESG express diagnostic services.

Deloitte: initiated the Chapter Zero Ukraine & Caucasus project to address climate change management.

EY: provides services in ESG risk assessment, decarbonization strategies, and non-financial reporting.

Rising Demand for ESG Financial Products: companies adopting ESG principles often benefit from financial incentives, such as reduced loan rates. However, many banking clients remain unaware of the potential advantages of these standards.

8) EU Regulatory influence: the EU regulatory landscape is shaping Ukraine's framework for non-financial reporting, driven by key directives and regulations such as the Non-Financial Reporting Directive, Sustainable Finance Disclosure Regulation, EU Taxonomy Regulation, Corporate Sustainability Reporting Directive, Corporate Sustainability Due Diligence Directive, EU Green Bond Standard, and the Regulation on ESG Rating Activities.

In general, the existing challenges in incorporating ESG in Ukraine are as follows:

- 1) Methodology: state leadership and support from international financial institutions are essential to the incorporation of ESG into the financial sector;
- 2) Partnerships: financial institutions should integrate ESG into their own operations before implementing them with their partners and clients.

The general scheme for incorporating ESG in Ukrainian financial institutions looks as follows:

- 1) consultations with international financial organizations and Ukrainian business partners: this provides access to best practices for ESG risk assessment;
- 2) incorporating ESG into internal methodologies and developing borrower questionnaires: this creates an adapted methodology for ESG risk assessment;
- 3) ESG integration into credit scoring and auditing compliance with ESG.

Overall, to implement effective ESG practices in Ukraine, it's essential to create a collaboration among public, private, and international organizations, alongside comprehensive educational initiatives designed to promote a culture of sustainable development. The sooner banks and businesses adopt ESG principles, the greater their chances of gaining a competitive edge in the global market, attracting investments, and playing a vital role in Ukraine's sustainable economic recovery.

b) Green bonds

Green bonds are intended to become a key instrument of green finance on a global scale. Green bonds annual issuance in the EU has surpassed EUR 200 bn since 2021. As of 2023, the total volume of outstanding green bonds reached EUR 781 bn (green loans – EUR 908 bn).⁵⁰

In Ukraine, however, the green bond market is currently at the stage of its initial development. In particular, in July 2021, the Law of Ukraine "On Capital Markets and Organized Commodity Markets" came into force, which defines the introduction of green bonds as a separate category of securities and sets rules for market participants. According

⁵⁰ Platform on sustainable finance (2025). Financing a Clean and Competitive Transition. Monitoring Capital Flows to Sustainable Investments. Retrieved from https://finance.ec.europa.eu/document/download/87c48ab4-34d2-4cd7-997e-efc1310e62c5_en?filename=250311-sustainable-finance-platform-report-capital-flows_en.pdf

to Article 18 of this Law, green bonds are bonds whose issue and terms of placement provide for the use of the funds raised exclusively to finance environmental programs or a separate stage thereof.⁵¹

Green bond legislation in Ukraine exhibits several differences from the frameworks adopted in the EU (Annex II). In February 2022, the Concept for the Introduction and Development of the Green Bond Market in Ukraine was approved, followed by an action plan to align the Ukrainian green bond market with international standards. The Law of Ukraine "On Amendments to Certain Legislative Acts of Ukraine to Facilitate Investment Attraction and Implementation of New Financial Instruments", adopted on June 19, 2020, was pivotal in regulating this market.

The NCSSM has played a central role in fostering the green bond market. It approved an annex to the Corporate Governance Code and issued recommendations for implementing or financing environmental projects through green bond issuance. The NCSSM's guidelines for environmental impact reporting on green bonds are based on a comprehensive set of legislative and international standards, including: 1) Laws of Ukraine "On Capital Markets and Organized Commodity Markets", "On Impact Assessment on the environment", "About waste", "About waste management"; 2) Recommendations of the NCSSM regarding the implementation or financing of environmental projects through the issuance of green bonds; 3) UN climate documents; 4) The European Union documents (European green bond standard, Strategy for financing the transition to a sustainable economy, Energy efficiency directive); 5) ICMA, Harmonized Framework for Impact Reporting (June 2023); 6) *IFC* Green Bond Framework; 7) IBRD documents on Green Bonds⁵².

It should be noted that the Concept for the Introduction and Development of the Green Bond Market in Ukraine is not designed as a comprehensive financing instrument for the green transition of the entire economy. Instead, its primary focus is on the issuance of green bonds to address the energy intensity of the national economy. Nonetheless, the Concept outlines key measures to establish a green bond market, including:

- a. developing a taxonomy, incorporating metrics for environmental projects in line with international criteria and standards;
- b. introducing national regulations and rules for green bond issuers, including disclosure requirements and reporting standards;
- c. establishing an accreditation regime for external verifiers and certifiers of green bonds;
- d. creating incentives for the development of the green bond market and, where necessary, drafting a corresponding legal framework.

Currently, these measures have not been fully implemented; preparations are ongoing to align them with existing EU green legislation. This adaptation requires adherence to four fundamental principles of green bonds, ensuring their consistency with international best practices and fostering the development of a robust green finance ecosystem in Ukraine (Table 4).

⁵¹ The Climate Bonds Initiative. Retrieved from https://www.climatebonds.net

⁵² The National Commission on Securities and Stock Market. Presentation "We report on the environmental impact of green bond projects". NCSSM - IFC webinar. April 25, 2024. https://www.nssmc.gov.ua/document/?id=20943446

Table 4. Key principles of green bonds and their characteristics

Source: from ^{53,54}

Principle	What it involves
Use of funds	 The funds are used exclusively for the implementation of green projects. It must be proven that the project or part of it will have environmental benefits. Project evaluation should be qualitative and, if possible, quantitative in nature. The areas of implementation should be fully described in the documentation on the issue of green bonds
Project evaluation and selection	 The investor must be provided with information on Positive environmental impact of the project. Procedures for determining a project as environmentally friendly. Identification of potential environmental and social risks and procedures for managing them. Conduct an independent external evaluation of the project.
Cash managemen	 The funds received from the placement of green bonds are accounted for separately by the issuer (separate accounts, etc.). The method of separate accounting shall be fixed in the issuer's internal documents. The issuer must inform the investor about the planned instruments for the temporary placement of unused funds. Involvement of an auditor or other independent person to verify the methods of tracking and using the funds received from the issuance of green bonds.
Reporting	 Issuers annually prepare reports with up-to-date information on the use of funds and redemption of bonds. The report includes a list of projects to which the funds were allocated and their amounts; a brief description of the projects and the expected impact of their implementation. If there is a commercial secret, information on projects should be provided in a generalized form or on the basis of the entire portfolio (e.g., as a percentage of the main portfolio). It is recommended to disclose qualitative and quantitative indicators of the project, as well as the main methodologies for tracking the quantitative effect. Voluntary application of standards aimed at establishing unified reporting principles.

In addition to the EU's green bond standards, the International Capital Market Association (ICMA), the Association of Southeast Asian Nations (ASEAN), China and the United Kingdom have such standards, respectively.

International Capital Market Association (ICMA) Green Bond Standards. These standards were updated in 2021. In particular, they expanded the requirements for transparency of information disclosure. It is determined that external audits should be conducted in accordance with ICMA recommendations and be available not only to investors but also to all interested parties. The principles of the ICMA Standards do not define the concept of green bonds, but have a list of a wide range of applications, including energy, construction; transportation; water resources; wastewater and emissions control; land and forest resources; agriculture; industry; information technology, etc.

In the UK, the government developed the Concept of Environmentally Friendly Financing in 2021 and is also working on the UK Taxonomy. The UK intends to issue green government securities and retail green savings bonds to finance green projects. The practice of issuing such securities has already taken place. In October 2021, the issuer of these securities was the UK government retail savings organization National Savings and Investments (NS&I).

In general, the standards applied in China, the United Kingdom, ACEAN and other national jurisdictions are consistent with those of ICMA (International Capital Market Association). It should be noted that the standards of the International Capital Markets Association are recommended and not binding. Whereas national standards have stricter requirements.

The creation of regulatory and legal prerequisites for the formation of a green bond market in Ukraine will allow it to achieve several competitive advantages in the global financial market and declare its position on environmental finance. In addition, green bonds can become one of the sources of assistance in the reconstruction of cities after the war, playing a significant role in this reconstruction through a multiplier effect.

Despite this legislative progress, there have been no green bonds issued in practice that meet international standards within Ukraine. The only instances of Ukrainian green bonds being issued have been in the international market: in 2021, DTEK Renewables issued

⁵³ Dubko S. (2020). Report on Methodological framework for assessing compliance with green bonds criteria.

⁵⁴ Green Loan Principles. Supporting environmentally sustainable economic activity (2021).

325 mln EUR for 5 years with a yield of 8.5% on the Irish Stock Exchange, while NPC Ukrenergo placed green bonds for 825 mln USD for 5 years with a yield of 8.5% on the German Stock Exchange and 825 mln USD for 5 years with a yield of 6.9%⁵⁵.

Thus, the NCSSM has made significant strides in establishing a framework for sustainability-linked bonds; however, no green bonds meeting international standards have yet been issued on Ukrainian stock exchanges. This is primarily attributed to the lack of accredited external verifiers for the issuance of green bonds.

The main obstacles hindering the active spread of green bonds in Ukraine include, in particular insufficient level of investor awareness of the benefits of green bonds and the existing international practice of using this financial instrument; high transaction costs for complying with the requirements of a green bond (verification of the green bond status and monitoring of the use of profits by issuers for green purposes are mainly carried out by second opinion providers or third parties; in some markets, the relatively high cost of obtaining a second opinion or third party guarantee is a barrier for small issuers); Difficulties for international investors to enter local markets (one of the problems is the difference in the definitions of green bonds and disclosure requirements in certain markets; this difference may lead to increased transaction costs, as bonds recognized as green in one market may not be automatically recognized as green by a leading foreign investor); small number of institutional green investors (in some local or regional markets, green bonds are invested mainly by domestic investors).

c) Bank loans

Ukrainian banks' lending to the agricultural sector face various risks stemming from the security situation, macroeconomic instability, and limited implementation of ESG. Implementing ESG in agricultural lending is essential for Ukrainian farmers seeking to access the European market. However, these standards can reduce production profitability, potentially necessitating additional state subsidies for farmers to comply with ESG guidelines. Given that European agribusiness thrives on subsidies⁵⁶, the lack of similar support mechanisms in Ukraine could place Ukrainian farmers at a competitive disadvantage.

Ukrainian farmers' primary request is for loans designated for working capital. However, with the rising key rate, most agricultural enterprises find bank interest rates prohibitive. The state program "Affordable loans 5-7-9" remains the only effective solution. Simultaneously, the program's five-year duration imposes limitations on long-term lending opportunities.

While Ukrainian banks are currently emphasizing the financing of energy projects as their primary focus for green financial activities, they are also directing their green bank financing toward agricultural bank lending, encompassing organic production, sustainable irrigation of land, and biodiversity initiatives. When discussing agricultural enterprises, it's important to note that the *NBU* categorizes borrowers into different enterprise groups in its statistics on the lending activities of financial institutions, dividing enterprises into large, medium-sized, small (except for micro enterprises) and micro enterprises (a) annual income from EUR 0.5 mln to EUR 2 mln, b) annual income from EUR 0.05 mln. to EUR 0.5 mln, c) annual income up to EUR 0.05 mln)⁵⁷. The *NBU* categorizes enterprises according to the economic entity segmentation outlined in the Economic Code of Ukraine, which classifies economic entities based on their number of employees and their annual income from any business activities⁵⁸.

As of August 1, 2024, the total loan portfolio of banks to non-financial corporations amounted to EUR 18.7 bn, including EUR 2.8 bn. to borrowers operating in agriculture, forestry, and fisheries.⁵⁹ Thus, it is possible to state that the share of the loan portfolio of banks granted to agricultural producers is 15.2% of the loan portfolio of the banking system. Accordingly, it is possible to state that the industry ranks 3rd among the leaders of the credit market after wholesale and retail trade (37.9% of the loan portfolio) and the processing industry (16.9%).

⁵⁵ The National Commission on Securities and Stock Market. https://www.nssmc.gov.ua/

⁵⁶ Passaro, F., Pulido, M., Coppenolle, M. (2024). Repurposing EU Subsidies for an Effective Agrifood System Transition to Net Zero. Climate Bonds Initiative policy paper. Retrieved from https://www.climatebonds.net/files/reports/cbi_eu_subsides_2024.pdf

⁵⁷ NBU. Financial Sector Statistics. https://bank.gov.ua/en/statistic/sector-financial

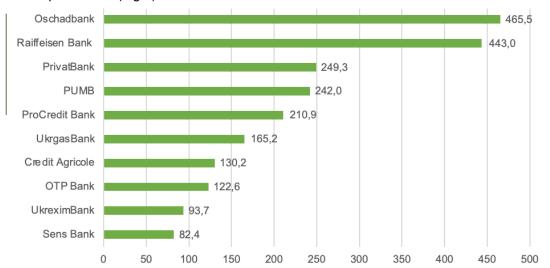
⁵⁸ Economic Code of Ukraine. the Art. 55. https://zakon.rada.gov.ua/laws/show/436-15#Text

⁵⁹ Loans granted by depository corporations (other than the NBU). 3.3.4.5. Loans to nonfinancial corporations by type of economic activity, currency, and maturity RETRIEVED FROM: https://bank.gov.ua/ua/statistic/sector-financial

As for lending to the agricultural sector, this area is very profitable and at the same time highly concentrated - more than 80% of loans to the agricultural sector is accounted for by the top 10 banks (Fig.6)

Fig. 6. Top 10 banks-creditors of agricultural business in Ukraine, in 2024 (EUR mln)

Source: National Bank of Ukraine



As it can be seen – TOP-10 agricultural creditors consist of 5 state-owned banks, 4 foreign banks and only one private Ukrainian bank.

In addition to loans, banks currently offer a wide range of partnership programs for the purchase of new machinery, such as combines, tractors, trailed units, or grain carriers. Banks work closely with suppliers of seed and crop protection products, and together they conclude agreements that allow farmers and other agricultural producers to receive deferred payments. Outside of the programs, the banks' market rates are 15-25%, and the down payment for the purchase of machinery is 25-30%.

Overall, the Ukrainian banking sector comprises seven leading institutions that, according to expert assessments, can be classified as green banks. These include JSC *Ukreximbank*, JSC ProCredit Bank, JSB *Ukrgasbank*, JSC *Raiffeisen Bank*, JSC *Oschadbank*, JSC JSCB Lviv, and JSC CB *PrivatBank*.

PJSC JSB "Ukrgasbank"

State JSB "*Ukrgasbank*" positions itself as a green bank and provides financing for projects in the field of clean energy generation, energy efficiency and energy supply, and reduction of greenhouse gas emissions. Having become a driver of green financing and development of environmental awareness in Ukraine, JSB "*Ukrgasbank*" formed 35% of the loan portfolio with eco-projects aimed at energy recovery and energy-efficient modernization. In 2023, JSB "*Ukrgasbank*" sustainable development project portfolio increased by EUR 11.6 mln. In total, since 2016, ⁶⁰ the bank has implemented more than 900 large-scale sustainable development projects. This bank is one of the first financial institutions in Ukraine to implement international standards in the field of ecology, social responsibility and corporate governance (ESG), and follows the eco-strategy, which proves the success, popularity and efficiency of green banking in Ukraine.

The program "Financing of agricultural producers with guarantees on a portfolio basis of the Fund for Partial Guarantee of Loans in Agriculture".

- Borrowers micro, small and medium-sized enterprises, individual entrepreneurs
 engaged in the production of agricultural products and meeting the definition of micro,
 small and medium-sized enterprises in accordance with the Law of Ukraine "On
 Accounting and Financial Reporting in Ukraine", owning and/or using agricultural land
 plots with an area not exceeding 500 hectares (per group of related counterparties),
 including land plots acquired with funds received on credit, registered in the
- The purpose of the loan is to replenish working capital, investment purposes (purchase
 or repair of fixed assets, including agricultural machinery and commercial premises,
 to bring them in line with modern environmental standards and improve working and
 safety conditions), purchase of land plots (if the loan is granted to purchase agricultural
 land, the Fund provides guarantees only if such land plots are pledged to the lender),

⁶⁰ Ukrgasbank. Sustainable Development Report. Official site. Retrived from: https://www.ukrgasbank.com/upload/file/ugb_annualreport_2023.pdf

- Loan term up to 3 years for working capital, up to 7 years for investment loans, up to 10 years for the purchase of agricultural land,
- Loan amount up to EUR 0.7 mln (for a business entity and a group of related companies (GRC)),
- Interest rate from 3% per annum depending on the selected loan program,
- Provision and servicing fee in accordance with the selected loan program and an additional 0.5% of the amount of the Fund's guarantee,
- Loan collateral any acceptable collateral (property, personal obligation, etc.) that will
 cover the part of the principal's debt that is not guaranteed by the Fund. The Fund's
 partial guarantee will cover 50% of the principal obligations under the loans.

Loans for the purchase of solar power plants and heat pumps - for the purchase and installation of a solar power plant (SPP), heat pumps (HP), wind power plant (WPP), combined wind-solar generating systems (CWGS). The loan covers both a full-fledged project (development of project documentation, purchase of equipment/materials, installation of SPP/WPP/CHP/CSP, etc.) and the purchase of equipment/materials that are pledged separately.

- Loan amount for the purchase of a solar power plant/wind farm/combined heat and power plant - from EUR 24.3 to EUR 24,300; for the purchase of a heating oil tank from EUR 24.3 to EUR 6,065,
- *Interest rate* Eco Energy Program (standard conditions) 23.5% per annum, Eco Energy Simple Program up to 20.99% per annum,
- Minimum down payment 15% of the cost of purchasing and installing a SPP/TH (including VAT), 25% of the cost of purchasing and installing a KVSS (including VAT), 30% of the cost of purchasing and installing a WPP (including VAT),
- Repayment of the loan and interest in equal installments (monthly equal amounts),
- Collateral pledge of equipment/materials of the SPP/WPP/TN/CVSS,
- Payments for additional and/or related services provided by the Bank entering information on encumbrances on movable property in the State Register of Movable Property - EUR 17.6 (including VAT); transfer of loan funds (one-time) - 4.5% of the transfer amount (loan amount),
- One-time fee 0.5% of the loan amount,
- *Property insurance* in insurance companies accredited by the bank, the approximate amount of the insurance tariff is 2.36% of the property value.

Loan for SMEs for the construction of solar power plants (SPP)

- The *purpose* of the loan is the construction of solar power plants with a capacity of up to 150 kW for self-consumption,
- The loan sum is up to EUR 0.85 mln,
- Interest rate within the framework of the state program "Affordable Loans 5-7-9%",
- Term up to 4 years,
- Own contribution from 30% of the cost of the solar power plant,
- Partnership lending only in cooperation with accredited partners.

JSC "PrivatBank"

Credit line "Agroseason".

- Type of loan revolving credit line/term loan,
- Term until March 2025,
- Amount from EUR 4,700,
- Rate Subject to participation in the program "Affordable Loans 5-7-9%" standard conditions, 13% per annum, except for 3% per annum for businesses operating in the high military risk zone, for clients with revenues up to EUR 0.73 mln: UIRD 3m +

6%, for clients with revenues from EUR 0.73 mln to EUR 7.3 mln: UIRD 3m + 5%, for clients with revenues over EUR 7.3 mln: UIRD 3m + 3%,

- Commission up to 1.5% for loans without hard collateral,
- Collateral the loan is partially secured by a guarantee,
- Additional collateral 50% guarantee + 50% covered by hard collateral with a coverage ratio of 1.5, unsecured loan is possible (without hard collateral with partial coverage by guarantees): 50% or 80% covered by guarantees; owner's guarantee,
- Insurance for the term of the loan according to the tariffs of an insurance company accredited by the bank.

Loan for the purchase of fixed assets for agribusiness.

- Amount from EUR 0.1 mln to EUR 15 mln,
- The term is up to 5 years,
- The rate under the terms of the program "Affordable Loans 5-7-9%" for clients with annual revenues up to EUR 10 mln (in equivalent): 7% p.a. with a possibility of reduction to 5% p.a. subject to creation of new jobs, for customers with annual revenue over EUR 10 mln (in equivalent) 9% p.a. with a possibility of reduction to 7% p.a. subject to creation of new jobs,
- Standard rate for clients with revenues up to EUR 0.73 mln: UIRD 3m + 6%, for clients with revenues from EUR 0.73 mln to EUR 7.3 mln: UIRD 3m + 5%, for clients with revenues over EUR 7.3 mln: UIRD 3m + 3%.
- Down payment from 20% of the purchase price.

Loan for energy independence - additional funds for the purchase of power generation systems, financing for entrepreneurs and legal entities to purchase equipment to ensure the uninterrupted operation of the power system: power generators, uninterruptible power supplies, solar and gas piston power plants, solid fuel boilers, etc.

Microbusiness, small business

- The amount up to EUR 0.024 mln,
- Term from 12 to 24 months,
- Rate "Affordable loans 5-7-9%": micro and small business 7%,
- Down payment from 10% of the cost of equipment,
- Commission 0,
- Collateral no collateral.

Micro, small, medium and corporate

- Amount EUR 0.024-0.24 mln,
- Term up to 60 months,
- Rate "Affordable loans 5-7-9%": micro and small business 7%, medium and corporate business - 9%,
- Down payment from 20% of the cost of equipment,
- Commission 0,
- Collateral purchased equipment.

JSC "Ukreximbank".

European Investment Bank Project in support of the Deep and Comprehensive Free Trade Area between Ukraine and the EU.

On December 19, 2016, the Public Joint Stock Company "The State Export-Import Bank of Ukraine" and the European Investment Bank (*EIB*) signed a EUR 260 mln financing agreement to support the private sector in the implementation of the principles set out in the Association Agreement and the Deep and Comprehensive Free Trade Area (DCFTA) between Ukraine and the European Union (EU). The medium- and long-term loan funds

of the Project are aimed at financing business development in Ukraine, strengthening the position of Ukrainian enterprises in international trade, energy efficiency and renewable energy, and environmental protection.

The following types of sub-borrowers are eligible to participate in the Project:

- Small and medium-sized enterprises (SMEs) with up to 250 employees;
- medium-capitalization companies (MCCs) with the number of employees from 250 to 3000 people;
- private sector enterprises (not SMEs or MCCs) with more than 3000 employees.
- Loan conditions:
- SMEs, CSCs no more than EUR 25 mln (EIB financing up to 100% of the project cost, but no more than EUR 12.5 mln),
- CFCs EUR 25-50 mln (EIB financing up to 50% of the project cost, but not more than EUR 25 mln),
- Private sector enterprises from EUR 40 000 to EUR 50 mln (*EIB* financing up to 50% of the project cost, but not more than equivalent to EUR 25 mln).

A condition of financing under the Project is that the sub-borrowers comply with the requirements of compliance with the environmental legislation of Ukraine and the European Union, published on the *EIB* website.⁶¹

Ukreximbank is one of the five most active lending banks in terms of lending to the agricultural sector. Given the prospects for the development of the agricultural sector in general, as well as the fact that small and medium-sized businesses are the basis for the development of this segment of the economy and have the greatest development prospects, the bank offers several banking products to business entities in the agricultural sector, in particular, the "Investment" agro loan, "Agricultural machinery" agro-loan, and "Revolving" agro-loan.

Agricultural loan "Investment".

- The purpose of the loan is to finance fixed assets to be used in business activities. Real estate: agro-industrial complexes, service buildings and structures, elevators (equipment for storing or drying agricultural products), including land plots on which they are located; land plots (non-agricultural) for the construction of agro-industrial complexes, service buildings and structures. Livestock: animals that will be accounted for on fixed assets accounts during the loan term. Crop production / horticulture: perennial plantations that will be accounted for on fixed assets accounts during the loan term. Corporate rights,
- Term real estate, corporate rights up to 60 months; other investment purposes up to 36 months.
- Down payment from 30%,
- Loan collateral liquid property.

Agricultural loan "Silhosptekhnika".

- The purpose of the loan is to purchase agricultural machinery and equipment to be
 used in business activities: new agricultural machinery; used agricultural machinery
 manufactured in Ukraine and/or CIS countries with a service life of less than 3 years
 as of the date of the loan agreement; agricultural machinery manufactured in other
 countries with a service life of less than 5 years,
- Term in case of financing: new agricultural machinery of foreign origin up to 7 years (except for agricultural machinery of CIS countries); other agricultural machinery - up to 5 years,
- Down payment 15% or more for new agricultural machinery; 20% or more for other agricultural machinery,
- Loan collateral liquid property.

⁶¹ https://www.eib.org/attachments/strategies/eib statement esps en.pdf

Agrocredit "Oborotnyi".

- The purpose of the loan is to cover expenses related to economic activities (sowing, planting, purchase of materials, biological assets, raw materials, fuel and lubricants, repair work, harvesting, sales, labor costs, and other current expenses): for the development of crop production; for the development of livestock,
- The term up to 12 months. When financing crop production, the term can be extended to 18 months,
- No down payment is required,
- Loan secured by liquid property.

JSC "Raiffeisen Bank"

Since June 2024, unsecured green loans have been launched for small businesses interested in building solar power plants, acquiring electric vehicles, or installing charging stations. Both individual entrepreneurs and legal entities are eligible for funding of up to 80% of the equipment and installation expenses. The terms of the loans are as follows (as of August 2024): a) the loan amount can reach up to EUR 0.2 mln, b) the repayment period ranges from 24 months, c) the interest rate is fixed at 17-19% per annum, d) there are no supplementary charges⁶².

As of the end of 2023, the green loan portfolio at *Raiffeisen Bank* has already reached 3% of the loan portfolio for corporate business. It encompasses financing renewable energy projects, agreements related to biodiversity, support for organic production, green construction, and social projects⁶³. As of May 2024, the bank has allocated EUR 36 mln in green business loans, thus offering support to a variety of initiatives, including the development of solar power plants, manufacturing of solar panels, establishment of biogas and biomethane plants, biofuel boiler facilities, and implementation of energy-efficient projects⁶⁴. Since 2023, the *Raiffeisen Bank* has been closely collaborating with clients to collect non-financial data while evaluating clients' creditworthiness and investment risks. The bank compiles ESG data utilizing customer questionnaires and external sources such as clients' sustainable development reports, environmental audits, and analytical platforms⁶⁵.

JSC "Credit Agricole Bank"

In July 2023, *Credit Agricole Bank* participated in the Net-Zero project to develop a methodology to measure its carbon footprint. In 2024, the bank has devised an internal strategy for sustainable development and aims to integrate ESG standards into its risk management framework⁶⁶. The bank participates in the Agroexpedition project, wherein representatives, in collaboration with Latifundist Media⁶⁷, visit Ukrainian agricultural enterprises during active fieldwork and the pre-sowing season⁶⁸. The bank offers financing to its customers for plant protection products, fertilizers, and agricultural machinery through partnership programs, thereby providing a comprehensive service cycle for agricultural clients. It offers nearly 60 such programs. Although working capital loans were the most favored over the past two years, the purchase of machinery, equipment, and solar panels joined these trends in 2024⁶⁹.

⁶² Raiffeisen Bank Aval. Raif supports the energy independence of businesses with loans for SPPs and electric cars. May 28, 2014. https://raiffeisen.ua/news/.

⁶³ Raiffeisen Bank Aval. Management Report 2023. https://raiffeisen.ua/storage/files/raiffeisen-bank-consolidated-23fsu-isa-with-signatures.pdf

⁶⁴ Raiffeisen Bank Aval. Raif supports the energy independence of businesses with loans for SPPs and electric cars. May 28, 2014. https://raiffeisen.ua/news/.

⁶⁵ Olena Mykhailychenko, head of the sustainable development department of *Raiffeisen Bank* Ukraine. The evolution of transparency: how ESG data is changing business. August 15 2024. Ligazakon. https://biz.ligazakon.net/analitycs/229864_evolyutsya-prozorost-yak-esg-dan-zmnyuyut-bznes

⁶⁶ Credit Agricole Bank. Sustainable development strategy. https://credit-agricole.ua/en/o-banke/klimatychna-stratehiya

⁶⁷ Latifundist Media is a Ukrainian media group specializing in agricultural topics.

⁶⁸ Credit Agricole Ukraine. Credit Agricole is a traditional partner of the crop tour of Ukrainian fields AgroExpedition Sowing 2024. 23 July 2024. https://credit-agricole.ua/o-banke/pres-centr/novini/kredi-agrikol-tradicijnij-partner-krop-turu-ukrayinskimi-pol-1661

⁶⁹ Latifundist.com Facebook. Commentary by Oksana Oliynyk, Head of SME Banking, Credit Agricole Bank, within the framework of AgroExpedition from 29 July to 4 August 2024. 31 July 2024.

JSC "OTP BANK"

OTP Bank has integrated social, environmental, and economic considerations into its financing strategies. In June 2021, the international OTP Group introduced an ESG Risk Management Framework. The bank's ESG strategy encompasses various aspects, such as implementing a comprehensive social and environmental management system, integrating environmental and social risk management into lending processes and operational risk management, developing green products and a dedicated green portfolio based on specific sustainability criteria, inventorying greenhouse gas emissions, and implementing measures to reduce its carbon footprint. Additionally, OTP Bank is committed to enhancing its ESG and sustainability training programs for all employees while undertaking other initiatives related to environmental protection and social responsibility⁷⁰. OTP Bank utilizes the sectoral ESG Risk Heat Map to pinpoint and classify ESG risks. This map contains data on the levels of ESG risks associated with each type of economic activity⁷¹.

As of September 2024, the list of 'green' and sustainable products of OTP Bank includes:72

- 1) Small business financing (with annual revenues up to EUR 50 mln) under a joint program with *USAID*:
- a) Opening a revolving credit line with partial compensation of a part of the interest rate for working capital replenishment.
- b) Term 36 months.
- c) Collateral up to EUR 0.12 mln: state guarantee/IFI guarantee, suretyship of business owners with a share of 50% or more; over EUR 0.12 mln collateral like real estate, transport, equipment, etc. and state guarantee/IFI guarantee, suretyship of business owner; amount up to EUR 0.47 mln.
- d) Interest rate: 9.9% p.a. in the first year of financing; UIRD (3 months) +5% p.a. in the second and third years of financing or market rate.
- 2) Factoring financing for small businesses (with annual revenues of up to EUR 50 mln) under a joint program with *USAID*:
- a) Advance financing of supplies with partial compensation of the interest rate to replenish working capital.
- b) Term 36 months (subject to an annual review of the borrower's financial position).
- c) Interest rate: 9.9% p.a. in the first year of financing; UIRD (3 months) +5% p.a. in the second and third years of financing or market rate.
- d) Collateral owners' guarantee and IFI guarantee: financing amount up to EUR 0.5 mln; maximum financing limit up to 90% of the delivery amount; early repayment without penalties.
- 3) Financing of enterprises with a predominant share of women in the ownership structure:
- a) Opening of a revolving credit line for working capital with partial compensation of the interest rate.
- b) To support small and medium-sized enterprises with a predominant share of women in their ownership structure and with revenues of no more than EUR 50 mln in the last year.
- c) Amount up to EUR 0.5 mln.
- d) Term 36 months (subject to an annual review of the borrower's financial condition).
- e) Interest rate: 9.9% p.a. in the first year of financing; UIRD (3 months) + 5% p.a. in the second and third years of financing.
- 4) Financing of small agricultural enterprises under the joint program with USAID:
- a) Opening of a revolving credit line with partial interest rate compensation for working capital replenishment.
- b) To support small agricultural enterprises that cultivate from 200 to 10,000 hectares and have annual revenues of up to EUR 50 mln.
- c) Amount up to EUR 0.5 mln.

 $^{^{70}\} OTP\ Bank.\ ESG\ Strategy.\ https://www.otpbank.com.ua/about/sustainability/esg-strategy/$

⁷¹ OTP Bank. ESG risk management. https://www.otpbank.com.ua/about/sustainability/esg-risk-management/

 $^{^{72}}$ OTP Bank. Financing green and social solutions. https://www.otpbank.com.ua/about/sustainability/green-and-social-products/

- d) Term: 36 months (subject to an annual review of the borrower's financial position).
- e) Collateral: EUR 0.07 mln pledge of a state guarantee or *EBRD* guarantee + surety of the business owner; from EUR 0.07 to EUR 0.5 mln pledge of financial agricultural receipts, state guarantee or *EBRD* guarantee, surety of the business owner.
- f) Interest rate: 9.9% p.a. in the first year of financing; UIRD (3 months) +8% p.a. in the second and third years of financing or market rate.
- g) Subject to purchase of products from the bank's partner companies: 0.1% per annum in the first year of the loan agreement; UIRD (3 months) +8%-7% p.a. in the second and third years of financing.
- 5) Joint program with the *EBRD* to support sustainable investments in energy-saving technologies for agricultural producers:
- a) To support sustainable investments in energy-saving technologies by enterprises, especially to meet the needs of local agricultural producers in updating agricultural machinery with modern products of global brands.
- b) Requirements for borrowers: number of employees up to 249 full-time employees in the last year of operation; annual income no more than EUR 50 mln; company's market experience from 3 years; other criteria established by the *EBRD*, including positive credit history.
- c) Interest rate: 5%-7%-9% set under the program or market rate; market rate in UAH: 5%-7%-9% / base rate from 16%.
- d) Cashback amount: up to EUR 300 000 (limits of all creditors of the program participants are taken into account).
- e) Term: minimum 24 months, maximum 60 months.
- f) Collateral: machinery and equipment purchased with credit funds, additional types of collateral, including financial guarantee of the owners.
- g) Compensation of a part of the loan: depending on the purchased equipment, up to 15% of its cost, excluding VAT. It is paid in the equivalent of EUR.
- h) The list of machinery and equipment to be purchased must be acceptable to the *EBRD* and technical consultants.

Thus, OTP Bank actively integrates environmental and social risk management into its lending processes through its ESG Risk Management Framework and green products. By using tools like the sectoral ESG Risk Heat Map, OTP Bank can effectively identify and manage ESG risks, striking a balance between profitability and sustainability in its operations. Additionally, OTP Bank's collaboration with USAID and the EBRD, particularly in supporting small businesses, women-led enterprises, and sustainable agriculture, demonstrates its commitment to promoting economic resilience and sustainability.

Digital technologies application among Ukrainian farmers. In a survey of 50 Ukrainian innovative agricultural enterprises conducted in August 2024⁷³, the following digital technologies were found to be the most popular among Ukrainian farmers: 1) autopilots are used by 80% of these enterprises; 2) 79% of these enterprises utilize digital technologies for applying dry fertilizers during sowing; 3) sectional shutdown of nozzles when applying crop protection products is employed by 78% of these enterprises; 4) telematics, which involves monitoring fuel levels and refueling, as well as tracking location and current status, is used by 70% of these enterprises. Out of 181 Ukrainian innovative agricultural enterprises surveyed:

- 14% used online banking platforms such as Raiffeisen Bank, Oschadbank, and PrivatBank;
- 4% utilized online instant instalment services offered by the non-bank financial institution WEAGRO;

⁷³ Digital agro. Aggeek. August 2024. https://www.aggeekaggency.com/digitalagro?fbclid=lwY2xjawFH1LNleHRuA2FlbQlxMAABHWxTQVsUFPWGII7iDI_mcxj4UeosMgpf0IoZfJsKNV4EqoZqQ7WHqqCYAA_aem_kbp1Mw1Fpa_uUcMwEctkDA

⁷⁴ State Agrarian Register. https://www.dar.gov.ua/about-dar

- 4% utilized the AgroApp online platform (connects farmers, banks and suppliers), provided by the start-up company Fintech.Pro⁷⁵;
- 19% utilized other methods;
- 15% obtained loans through alternative channels;
- 34% did not take out any loans.

Hence, Ukrainian agricultural businesses are increasingly turning to digital technologies to improve their overall efficiency. While these innovative enterprises are adopting advanced technologies for field operations, the use of digital financial services and support platforms remains relatively limited. This indicates the potential for further development in integrating digital financial services into Ukraine's agricultural sector.

Cases of digital banking lending platforms available to Ukrainian agricultural enterprises are:

- 1) Raiffeisen Bank Raiffeisen business online allows agricultural exporters to quickly convert their export proceeds within 30 seconds, track their outgoing foreign currency payments online, etc.⁷⁶
- 2) *PrivatBank* AgroKUB (Country of Successful Business) offers a quick lending program for entrepreneurs at a preferential rate and without any collateral. Businesses with at least 1 year of operation can secure a loan of up to EUR 0.24 mln, with a portion of the interest rate being subsidized by the state⁷⁷.

In general, lending to the agricultural sector is a rather risky activity for banks, which limits their ability to do so under the current regulatory requirements of the *NBU*. In many cases, enterprises do not have a good credit history or have a low score. Therefore, banks lend more to large agricultural enterprises, as they are more diversified and not dependent on a particular type of activity, have a higher degree of reliability compared to small farms, their financial statements are much more compliant with the requirements of banks and allow the latter to comply with the standards set by the *NBU* and do not force banks to form significant provisions.

At the same time, the potential for further expansion of banks' lending activities aimed at financing agricultural producers remains significant due to the strong export potential of the industry and the specific nature of the constant demand for agricultural products.

In conclusion, Ukrainian banks are increasingly acknowledging the impact of climate risks on their operations, yet their efforts to manage these risks remain limited. While some banks in Ukraine have implemented sustainable development strategies and disclose non-financial indicators in their annual or sustainability reports, such initiatives are not widespread. Those banks that collaborate with foreign parent companies are better positioned to adopt leading ESG practices. Additionally, international rating agencies are more proactive, requiring enterprises to disclose these risks. One reason for the limited focus on green financing is the lack of incentives from the central bank, which has taken an observing role in incorporating ESG principles into banking practices. To further promote bank green financing, dedicated loyalty programs that encourage agricultural clients to transition to more sustainable production methods should be introduced.

d) Non-banking financing

The non-banking financial services market in Ukraine is regulated by the same authority as the banking sector – the *NBU*. In 2023, over 320 non-bank institutions, primarily financial companies and pawnshops, exited the financial market (Annex IV).

Small agricultural enterprises often turn to non-bank financial institutions for assistance, as they may struggle to meet the stringent creditworthiness requirements of banks, primarily due to insufficient credit history or lack of adequate collateral. While non-bank financial institutions provide a viable alternative, their services are typically associated with higher risks or elevated costs compared to traditional banks.

⁷⁵ AgroApp. https://agroapp.com.ua/uk/#!services/1272

⁷⁶ Raiffeisen Bank Aval. Oleksandra Prokhorchuk, director of attracting and developing relationships with medium-sized business clients at *Raiffeisen Bank* Aval, during the presentation of the Aggeek research "Digital Agro". August 2024.

⁷⁷ PrivatBank. KUB. https://kub.pb.ua/

Leasing

Financial leasing remains not very widespread in Ukraine. As of Q2 2024, financial leasing services were provided by a total of 21 banks. The leading institutions in terms of new transactions in 2023 were Taskombank (25.6% of total new transactions), *PUMB* (23.1%), and *PrivatBank* (21.4%). As of Q2 2024, legal entities accounted for 93.3% of new leasing agreements with banks, while the remaining 6.7% involved retail individuals. In terms of leasing portfolios, legal entities held 91.5% of the total, with 8.5% attributed to individuals⁷⁸.

In 2021, the primary focus of financial leasing was on agricultural equipment and machinery, closely followed by passenger cars and commercial motor vehicles. In 2022, there was a shift, with commercial motor vehicles taking the lead in financial leasing, although agricultural equipment and passenger cars continued to be significant. Moving into 2023, financial leasing for passenger cars took precedence in the market, with commercial motor vehicles following closely behind, and agricultural equipment coming in third. The share of leasing of construction equipment, other machinery, and buildings continued to show a decline (Annex III).

Case of leasing program for farmers. OTP Leasing is a prominent leasing company offering financial, operational, and reverse leasing services for a wide range of assets, including agricultural machinery, vehicles, wagons, and other equipment. The terms for the agricultural machinery leasing program are as follows: a minimum 20% advance payment, an annual interest rate starting from 23 UAH, 7.5% USD or 6.5% EUR, and a lease term of up to 5 years⁷⁹.

In the leasing services sector of Ukraine, green financing is not present as a systemic phenomenon. However, close ownership ties with banking structures provide leasing companies with a competitive advantage. They participate in international financing programs that include climate-related requirements and leverage the institutional capabilities of their parent banking structures.

One example of such a program is the collaboration of several leading leasing companies, such as *Crédit Agricole Leasing*, *OTP Leasing*, and *Raiffeisen Leasing*, with the *EBRD* under the *EU4Business-EBRD Credit Line* program. This initiative provided grants in the form of cashback of up to 10% (up to 15% for green technologies) of the financing amount for equipment and machinery purchased through leasing. The program also included specific climate-related requirements, incorporating a certified list of eligible equipment and machinery.

This initiative, implemented in cooperation with the EU, is aimed at supporting small and medium-sized enterprises (SMEs) in Ukraine by enabling them to finance investments in equipment modernization and production capacity upgrades.

Thus, thanks to these advantages, leasing companies in Ukraine rank second after banks in terms of the availability of green financial products.

Insurance

The insurance market in Ukraine is consolidating around motor insurance. Motor insurance has exhibited increasing dominance. After 2023, the market changes strengthened the trend to increase the share of motor insurance. In turn, personal, property and financial insurance premiums experienced notable declines in 2022, reflecting broader economic adversities (Annex IV).

In 2024, the insurance market in Ukraine is under significant updates in compliance with the newly enacted "On Insurance" Law of Ukraine, resulting in a reduction in the number of insurance companies. The most chosen insurance types include comprehensive and collision car insurance, compulsory motor third-party liability insurance, Green Card, voluntary health insurance, and accumulative life insurance. In 2023, the peak of the heightened popularity of Green Card insurance, attributed to the compelled emigration of Ukrainians, had already passed.

At the same time, the advancement of green finance in Ukraine's insurance market remains largely superficial. The implementation of sustainable approaches in Ukraine's insurance

⁷⁸ Association "Ukrainian Association of Lessors". Volumes of leasing provided by banks grow in sync with the non-banking segment - results of the 2nd quarter of 2024. August 20, 2024. https://uul.com.ua/2024/obsyagy-lizyngu-shho-nadayetsya-bankamy-zrostayut-synhronno-z-nebankivskym-segmentom-pidsumky-2-kvartalu-2024-r/

⁷⁹ OTP Leasing. https://otpleasing.com.ua/agricultural-machinery/

market has been delayed due to the challenges posed by the war and regulatory reforms. Insurance companies are slow to integrate environmental risks into their underwriting policies and investment strategies, with only a small share of firms making progress in this area. Additionally, there are virtually no cooperation programs between Ukrainian insurers and international green initiatives. Such collaboration is not even institutionally established yet, as Ukrainian insurers do not participate in global platforms like *Principles for Sustainable Insurance (PSI)*.

As a result, there is also a lack of insurance products tailored to support environmentally sustainable projects, such as climate risk insurance or insurance for green investments. At the same time, demand for such products is growing. This is driven by the expansion of wind and solar power projects, as well as the increasing impact of droughts and other weather-related risks on agricultural production.

Thus, green finance in Ukraine's insurance market remains largely undeveloped. However, it is expected that the process of European integration and global trends will encourage the introduction of new insurance products aimed at climate change adaptation and mitigation.

Credit Unions

Hence, credit unions, representing a minimal share of the financial sector, have faced significant declines in business, real estate, and consumer loans since 2020 due to regulatory changes and rising NPLs. In addition, the *NBU* recommended a credit union council to incorporate the environmental and social risk management system into the comprehensive risk management framework⁸⁰. These changes are designed to bolster non-bank green financing, but they also pose challenges for credit unions in navigating the changing regulatory environment.

Credit unions in Ukraine (Annex V) do not yet use green financial instruments. However, in collaboration with international development institutions, particularly Sparkassenstiftung für internationale Kooperation, they are starting to implement ESG approaches in their activities.

Financial companies

The list of financial companies is quite diverse. In particular, it includes *Ukrfinzhytlo*, which accounts for a significant share of the total assets of financial companies that provide loans. At the same time, in fact, *Ukrfinzhytlo*, leasing and factoring companies provide 90% of financial services (Annex VI).

Financial companies, as part of the non-bank financial institution sector, also play a role in providing funding to farmers. But again, international organizations play a significant role. *The case of digital non-bank service for farmers* can be considered as an example. Financial company "Activitis" offers a digital service – the WEAGRO platform, designed for legal entities and individual entrepreneurs in the agricultural sector. The WEAGRO platform provides agricultural producers and their suppliers with the opportunity to conclude a variety of transactions safely and conveniently through the following IT services:

- online offices for suppliers, agricultural producers and a financial company that provides agro-installment services
- online statuses that display the stages of installment processing, helping the parties to the transaction to track progress;
- data protection during authorization (3D Secure);
- a service for the use and reading of digital signatures (QES);
- document storage service, including purchase and sale agreements; expense invoices; certificates of completion, etc;
- internal online chat and a system of SMS and email notifications of important events and updates.

This platform enables farmers and suppliers to enter deferred payment purchase agreements, with each agreement allowing an instalment of up to EUR 46 500 81.

⁸⁰ Regulations on the requirements for the credit union management system. Resolution No. 15 of February 02, 2024.https://zakon.rada.gov.ua/laws/show/en/v0015500-24?lang=uk#Text

⁸¹ WEAGRO. https://weagro.com.ua/

WEAGRO was launched in 2024, but now, due to *USAID* activity cancelation, the fate of the program is indefinite.

In conclusion, the non-banking financial services sector in Ukraine faced significant changes and challenges, primarily due to increased regulatory pressures. Non-banking institutions encountered difficulties in integrating environmental and social risk management, while financial companies actively embraced the implementation of digital services.

CONCLUSIONS AND OPPORTUNITIES FOR FUTURE RESEARCH



Proposals for the development of green finance in the field of climate adaptation, greening and decarbonization of agriculture

In recent years, with significant international technical and financial support, the implementation of green finance in Ukraine has significantly accelerated. In particular, with external technical assistance, in a short period, the country managed to recreate a whole system of financial development institutions, in particular the Entrepreneurship Development Fund (*National Development Institution*); Partial Loan Guarantee Fund; Decarbonization Fund of Ukraine; Export Credit Agency, and others. Although most of these institutions had existed for many years, the lack of adequate financial support made it impossible for them to operate effectively. It is these institutions that can act at the moment and are already partially acting as leaders of the Green Deal in Ukraine, as they begin to quickly implement green requirements for cooperation with them. Along with them, several programs of IFIs and development institutions also play an important role.

At the same time, Ukraine's green finance framework remains incomplete in terms of the presence of a responsible interagency body, supported by technical assistance from IFIs and expert feedback from self-regulatory organizations – representatives of market participants. For example, in the EU, this function is performed by the Technical Expert Group on Sustainable Finance and the High-Level Expert Group on Sustainable Finance, established by the European Commission, which provide support and technical assistance in the development of a sustainable finance system.

Green Finance Roadmap

The Green Finance Roadmap for Ukraine (visually presented in Annex VII) includes a series of interconnected steps that can be broadly categorized into two groups: *identification and response*. With certain clear exceptions, the implementation of these steps within these groups should proceed in parallel.

A *preliminary step* in the roadmap should involve *research and analysis* of market participants' needs, imperatives, and barriers to utilizing green finance, as well as identifying current and prospective sources of green finance funding. This research and analysis should take the form of permanent monitoring of these components.

The key market participants include entrepreneurs, financial intermediaries, and public institutions, whose needs can be more effectively met through green financial instruments. The study has revealed that in the Ukrainian market, entrepreneurs are primarily interested in green financial instruments due to their potential for greater accessibility, lower borrowing costs, and access to technologies for adapting to climate risks. For financial intermediaries, the interest in green finance arises from broader access to credit resources, improved profitability, reputational benefits, and adaptation to new regulatory requirements. Meanwhile, for public institutions, the interest in expanding green finance is driven by the need to mitigate the risk of reduced agricultural production, secure access to international funds, fulfill international obligations, and support the transition to a green economy.

A common barrier to the expansion of green finance, as identified in the research, is the low level of awareness among all key market participants regarding green finance opportunities. This results in the slow implementation of regulatory norms, the absence of green financial instruments, and the lack of forward-looking institutions in the market. In Ukraine, one of the most significant barriers is the absence of a national

Green Taxonomy, which complicates the process of labeling green finance and reporting-key components that distinguish green finance from conventional finance.

Another major barrier is the *lack of a designated authoritative body* whose mission is to promote green finance in the market, develop an institutional environment, and interact with international sustainable finance mechanisms. To overcome this barrier, it is critically important to establish a dedicated *Interagency Working Group* as a Governmental task force that would include representatives from relevant government agencies with the authority to develop regulatory acts. Initially, this working group should bring together key state institutions, including the Ministry of Environment of Ukraine, Ministry of Agrarian Policy of Ukraine, Ministry of Economy of Ukraine, Ministry of Finance, National Bank of Ukraine, and the National Securities and Stock Market Commission. Over time, this group should be supported by representatives of international development institutions and domestic financial intermediaries.

For the intensive use of green finance for climate risk adaptation and mitigation, it is essential to *identify the potential sources and volume of financial resources* that can be utilized for green financing. Research indicates that Ukraine currently has substantial unused capital in the banking system, as well as significant potential for replenishing specialized budgetary funds (e.g., the Decarbonization Fund of Ukraine). These sources should be complemented by access to international sustainable finance funds, incentives for private investment, and funding from municipal and local communities.

The **response** to the identified factors influencing green finance development can be divided into three key areas:

- 1. Strengthening the institutional capacity of market participants
- 2. Developing a supervisory methodology
- 3. Enhancing the institutional environment

Strengthening institutional capacity should primarily focus on developing a regulatory framework supported by strategic and programmatic documents. This set of measures should also include the implementation of the *Green Taxonomy and green criteria for investment projects, as well as the official establishment of an approved list of green technologies*. The adopted regulatory and policy frameworks should, among other things, enable the development of green financial instruments and support programs, introduce incentives and bonuses for market participants.

An essential element in the institutional framework for the effective use of green finance should be the creation of a *prudential supervision system* to ensure that funded projects comply with established green criteria. The methodology should include a data collection and reporting system, feedback mechanisms, ongoing monitoring of results, and clear accountability for compliance with environmental standards.

In the long term, measures to support green finance adoption should focus on: improving financial literacy among market participants, developing an expert environment, creating professional training programs, introducing digital solutions in the field of green finance, establishing a system for scaling up successful practices.

The implementation of these steps will create a solid foundation for the formation of an effective green finance system in Ukraine, supporting sustainable economic development and attracting international investment to enhance the agricultural sector's readiness for the EU Green Deal.

The most critical gap in the institutional field of green finance in Ukraine is created by the lack of a legally regulated national green taxonomy, which would simplify the identification of relevant assets and financial instruments. There is also a lack of a leading institution specializing in green finance (in the future, such an institution may become NUR), as well as information support systems for the dissemination of green finance (from training programs for financial intermediaries and businesses, to digital platforms to assist businesses in building investment and business plans, as well as reporting).

: To promptly address the identified gaps in the institutional framework for the advancement of green finance in the agricultural sector of Ukraine, the following areas should be prioritized:

- It is recommended to create a special governmental task force (GTF) and platform for the development of green finance with the participation of relevant authorities. Such a GTF would ensure the development of a green taxonomy, synchronize technical assistance in the implementation of green finance by market participants.
- It is necessary to develop and implement a national green taxonomy, harmonized with EU norms. The GTF can act as the main leader of such an initiative. In the field of agriculture, it is advisable to start with the formation of criteria for green agribusiness, as a preliminary component of the national green taxonomy.
- Implement rules for labeling green financial products for investment advisors and investors. In this direction, an important stage should be the legislative regulation of a specialized "green loan", which would embody a universal comprehensive instrument for cheaper financing of farmers. The credit resource of this instrument can be funds from international development institutions under relevant programs, funds from the Decarbonization Fund of Ukraine, bank capital, special refinancing programs, and securitization instruments. The advantage of the "green loan" for consumers should be the transparency of claims and a preferential rate, and for lenders the support of partner programs for risk distribution and insurance and interest rate compensation.

Prospective Scheme of the "Green Loan" Financial Product

The research has revealed that Ukraine's financial sector currently lacks an instrument to support farmers and agricultural producers in transitioning to green practices. Based on an analysis of market conditions and interviews with industry representatives, government agencies, and institutions, a **prospective** scheme for the "Green Loan" financial product has been developed. This product considers the key needs of market participants and holds promising potential in the green finance market (visually presented in Annex VIII).

Conceptually, this financial instrument aims to address bottlenecks in the institutional environment and meet the core interests of the agricultural sector actors. For farmers and agricultural producers, the "Green Loan" offers affordable financing to support the transition to climate-oriented farming. For financial intermediaries, it provides a lower-risk asset with enhanced profitability. For government institutions, it serves as a mechanism to incentivize the adoption of green practices and technologies in the agricultural sector.

The essential components of the "Green Loan":

- interest rate subsidies under a special government program (e.g., BDF, etc.)
- credit risk-sharing guarantees provided through public institutions (e.g., PCGF, ECA) or IFI's international programs
- a clearly defined set of green eligibility criteria for borrowers, based on an approved list of eligible technologies and practices, official green criteria in agriculture, and Ukraine's national Green Taxonomy

This last component should also include simple and transparent reporting requirements for borrowers on adaptation and mitigation measures

Funding Sources for the "Green Loan" may include:

- bank capital (Ukraine's banking system currently has significant excess liquidity).
- funds from budget programs (state, municipal and local)
- public funds, such as the Decarbonization Fund of Ukraine.
- international funding, via development programs and green transition funds.
- private investments, mobilized by the government and financial intermediaries through green bonds.
- securitization of issued green loans, which would further support the expansion of green finance.

To further **lower the cost** of the "Green Loan," several additional mechanisms can be employed:

- preferential regulatory requirements by the NBU for risk assessment and provisioning.
- tax incentives and subsidized insurance for borrowers (covering financial and professional risks)
- comprehensive technical support, including information campaigns, capacity-building, financial literacy programs, loan application procedures support.

Advantages and Market Potential. The proposed product has several potential advantages that make its implementation promising. One of its key features is its similarity to a conventional loan for borrowers, with the only difference being the requirement to comply with clearly formalized green criteria. At the same time, the product incorporates a comprehensive scheme that ensures a low interest rate, reduced risk, and, at the same time, increased profitability for intermediaries. The scheme can also include a grant component for financing and discounts through partner programs.

In the long term, if successful, this product could be expanded to other sectors of the economy and serve as a foundational instrument for developing Ukraine's secondary green finance market.

• To increase the effectiveness of state programs for the adaptation of the agricultural sector to climate change and environmental protection, it is necessary: to implement ESG requirements in the existing state programs "Affordable Loans 5-7-9%", "Affordable Financial Leasing 5-7-9%", "Affordable Factoring"; to expand their budget at the expense of private and international capital; as well as to structurally coordinate the variety of programs in areas (replenishment of working capital, purchase of fixed assets) and instruments (compensation rates, grants, guarantees). It is advisable to coordinate the variety of programs and their information support on a special digital platform.

In the medium term, at the national level, to accelerate the implementation of green financing mechanisms, attention should be paid to:

- Development of national legislation in the direction of harmonization of the system
 of requirements and establishment of quantitative criteria (indicators) that should be
 subject to regular monitoring and be mandatory for implementation. Their list may
 include, in particular:
- capital investments and current expenditures for environmental protection at the expense of the State Budget of Ukraine (absolute and relative indicators);
- distribution of capital investments by types of environmental activities, % of the total volume of capital investments;
- distribution of current expenditures by types of environmental activities (absolute and relative indicators);
- the volume of budget expenditures on scientific research and innovation in "green" areas (absolute and relative indicators);
- structure of state expenditures on scientific research in the areas of "green" research

- (absolute and relative indicators);
- structure of state expenditures on innovations in "green" areas (absolute and relative indicators).
- To strengthen the institutional capacity of state policy and adequate expert assessment, the system of state statistics should be improved, which would reflect the above and other necessary indicators.

Measures in the financial sector:

- Taking into account the dominant role of the banking sector in the structure of the financial market of Ukraine, it is obvious that banking institutions as key elements of the "circulatory system" of the economy should become catalysts for "green" transformations by redistributing financial resources on the principles of socioeconomic responsibility.
- The basis for the implementation of ESG requirements in the banking sector of Ukraine
 can be the Principles for Responsible Banking, aimed at greening the operations and
 services of the banking industry in accordance with the green expectations and needs
 of the global community. In this direction, efforts should be made to:
- integrate the objectives of the SDGs, the Paris Agreement and other relevant national, regional or international rules into banks' business strategy, including decisions on the allocation of capital flows;
- introduce a public valuation where a bank's loan portfolio creates or is likely to create the most significant positive and negative environmental, social and economic impacts;
- use the objectives of the SDGs, the Paris Agreement and other national, regional
 or international agreements to identify, assess and be transparent about significant
 (potential) positive and negative impacts arising from the bank's capital allocation
 decisions and the provision of products/services;
- add climate risk analysis to the NBU's prudential policy
- to introduce a system for managing environmental and social risks;
- to complete the implementation of the practice of disclosing ESG aspects of activities for banks and non-bank financial institutions;
- identify key performance indicators (KPIs) to eliminate, reduce and mitigate significant negative impacts and realize opportunities for continuous expansion and increase of positive impact;
- conduct a forward-looking assessment of risks and opportunities associated with sustainability at the transactional, portfolio and strategic levels, as well as risk management and mitigation;
- identify where the bank can support its customers in reducing their negative impact and increasing their positive impact by applying new technologies, business models and practices, and where the bank can encourage and support sustainable behavior and consumption choices among its customers:
- develop strategies and identify activities for activities such as the development of new goods and services or incentives related to climate change adaptation in the agricultural sector;
- to provide assistance so that clients have the knowledge and ability to effectively manage their finances in view of climate change adaptation in the agricultural sector, for example through financial literacy programs.
- To accelerate the spread of green bonds in Ukraine, it is advisable to support at the
 level of the NSSMC the registration of potential issuers in the Ukrainian bond market,
 which introduce effective management of ESG and green bond verifiers, as well as
 to regulate the classification of financial instruments at the legislative level, thereby
 creating preconditions for their further possible securitization.
- In the financial sector (banking and non-banking), it is expedient, with the use of
 international technical assistance, to stimulate the development and implementation
 of a standard customer questionnaire, which would make it possible to reflect key
 indicators of compliance with green criteria in the relevant areas of activity. In the field
 of agriculture, such indicators would meet the criteria of green agribusiness, which
 need to be developed.



ANNEXES

Annex 1.

Structure of gross harvest of fruits and herries 2000–2022 %

berries, 2000–2022, % (of tons)

Source: (State statistics service of Ukraine)⁸²

Structure and trends in horticulture in Ukraine

Fruits and berries	2000	2005	2010	2015	2019	2020	2021	2022
Apple trees	44.62	42.59	51.36	54.79	54.46	55.07	57.22	56.60
Walnut	3.44	5.38	5.00	5.35	5.94	5.60	5.16	5.40
Strawberry	2.21	2.73	3.28	2.97	2.95	2.73	2.79	2.72
Raspberry and blackberry	1.36	1.69	1.47	1.41	1.68	1.74	1.62	1.68

The structure of the gross harvest of fruits and berries from 2000 to 2022 reveals several key trends:

- 1. Dominance and growth of apple production. Apple trees consistently hold the largest share of total fruit and berry production, increasing from 44.62% in 2000 to 56.60% in 2022. The most significant growth occurred between 2005 and 2010, when the share rose from 42.59% to 51.36%. The share continued to increase steadily, peaking at 57.22% in 2021 before slightly declining to 56.60% in 2022.
- 2. Moderate but stable share of walnuts. Walnut production almost doubled from 3.44% in 2000 to 5.94% in 2019, reflecting growing interest in nut farming. However, after 2019, the share fluctuated slightly, decreasing to 5.16% in 2021 before recovering to 5.40% in 2022.
- 3. Relatively stable strawberry production. Strawberry's share of total fruit and berry production gradually increased from 2.21% in 2000 to 3.28% in 2010 but then declined slightly, stabilizing around 2.7–2.9% after 2015.
- 4. Raspberry and blackberry production: fluctuations with an upward trend. The share of raspberries and blackberries fluctuated between 1.36% in 2000 and 1.74% in 2020 before stabilizing at 1.68% in 2022. This category did not experience sustained growth, unlike apples and walnuts, suggesting that berry farming is more volatile.

⁸² State statistics service of Ukraine. (2023). Statistical publication "Agriculture of Ukraine".

Annex 2.

Legislative regulation of green bonds circulation and gaps under European legislation

What is in the Law (the Law "On Capital Markets and Organized Commodity Markets")	What needs to be finalized (according to the EU standard for green bonds "EuGB Regulation")					
	Green bond principles (GBP):					
Definition of green bonds.	- Use of proceeds: to finance and/or refinance, in whole or in part, eligible green projects.					
These are bonds whose prospectus (the decision to issue, and for Ukrainian government	- Evaluation and selection of projects: depends on the individual nature of the projects and selection criteria.					
bonds - the terms of placement) provides for the use of the funds raised exclusively to finance an	- Management of proceeds: in some cases, separated into separate accounts.					
environmental project or a separate stage of it.	- Reporting: with the involvement of an external third-party verifier or may be self-reported and published at least once a year (e.g., on the issuer's website).					
	Compliance of the green project with environmental objectives					
	Must meet at least one of the definitions contained in the EU Taxonomy (environmental objectives):					
	- climate change mitigation;					
	- adaptation to climate change;					
	- sustainable use and protection of water and marine resources;					
Directing the issuance of green bonds.	- transition to a circular (closed-loop) economy;					
Green bonds may be issued only to finance and	- prevention and control of pollution:					
refinance an environmental project	- protection and restoration of biodiversity and ecosystems; not causing significant harm to any other environmental objective;					
	Must be carried out in compliance with minimum safeguards, which include compliance with the OECD Guidelines on the Activities of Multinational Enterprises and the UN Guiding Principles on Business and Human Rights, including the International Labor Organization (ILO) Declaration on Fundamental Rights and Principles at Work, the eight ILO Conventions, the International Bill of Human Rights and stricter EU legislation; and must be carried out in compliance with the Technical Service Criteria (TSC).					
Definition of the concept of an environmental project.						
This is a project in the field of alternative energy, energy efficiency, minimization of waste generation, utilization and recycling, introduction	A list of the environmental objectives of the EU green bonds and how the issuer's strategy is aligned with such objectives, as well as the reasons for issuing green bonds.					
of environmentally friendly transport, organic farming, conservation of flora and fauna, water and land resources, adaptation to climate change, as well as other projects aimed at protecting the environment, implementing environmental standards, and reducing	The process by which the issuer decides how green projects comply with the EU taxonomy, as well as with the technical conformity assessment criteria (TSC), if applicable, and minimum safeguards, with the support of a qualified verifier. Issuers must also make public any green standards or certifications used to select projects.					
emissions into the environment.						
Determination of the person who can finance an environmental project.						
- specialized financial institution established	Definition of a qualified verifier.					
by the Cabinet of Ministers of Ukraine or other specially authorized body; - in cases and under the procedure	A verifier is an officially accredited entity selected by the issuer of green bonds to protect the interests of investors by conducting independent external control (verification) for compliance with the requirements of the issuer's green bond policy; selection of projects for full or partial financing and/or refinancing with funds raised from the placement of green bonds; targeted use					
established by the law that determines its legal status;	of funds raised from the placement of green bonds and reporting.					
- a legal entity of private law, in particular a bank or other financial institution;	Proceeds from the issuance of EU green bonds are used exclusively for the financing or refinancing of green projects, subject to confirmation from a qualified verifier.					
- international financial organization.						
Additional requirements for annual information on the issuer of green bonds.						
The requirements include information on the current state of implementation of an environmental project, as well as the amount of funds raised through the issuance of green bonds and the amount of funds used to implement or finance an environmental project.	Reporting on compliance with the EU Green Bond Standard. There are two types of reporting under the EU Green Bond Standard (EU GBS): Reporting on the distribution of proceeds and reporting on the environmental impact of the project.					

Source: 83,84

⁸³ Law of Ukraine "On Capital Markets and Organized Commodity Markets" № 3480-IV of 27.04.2024 p. https://zakon.rada.gov.ua/laws/show/3480-15?find=1&text=%D0%B7%D0%B5%D0%BB%D0%B5%D0%BD#w1_3

⁸⁴ Regulation (EU) 2023/2631 of the European Parliament and of the Council of 22 November 2023 on European Green Bonds and optional disclosures for bonds marketed as environmentally sustainable and for sustainability-linked bonds (Text with EEA relevance) https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex:32023R2631

Annex 3.

Volumes of financial leasing agreements by type of equipment, 2021–2023, EUR bn

Note: as of end of the year.

Source: (NBU, Non-bank Financial Sector Reviews)⁸⁵

Type of equipment	2021	2022	2023
Construction equipment and machinery	0.08	0.08	0.005
Agricultural equipment and machinery (except transport)	0.48	0.48	0.13
Other equipment	0.06	0.06	0.006
Passenger cars	0.44	0.44	0.23
Commercial motor vehicles	0.30	0.30	0.16
Other vehicles	0.07	0.07	0.013
Buildings and structures	0.01	0.01	0.00008

The financial leasing market has undergone a shift, with passenger cars becoming the dominant asset in 2023, followed by commercial vehicles and agricultural equipment. Legal entities continue to hold the majority of leasing agreements

Annex 4.

Structure of insurance premiums by major types of insurance, 2021–2023, EUR bn

Note: as of the end of the year

Source: (NBU, Non-bank Financial Sector Reviews)⁸⁶

Type of insurance	2021	2022	2023
Motor ((comprehensive and collision car insurance, MTPL (compulsory motor third party liability insurance), Green Card (International Motor Insurance Card))	0.63	0.62	0,63
Personal (health insurance, life insurance)	0.5	0.37	0,32
Property and fire risks	0.19	0.09	0,09
Financial exposure	0.09	0.03	0,03
Liability	0.08	0.05	0,05
Cargo and luggage	0.06	0.03	0,03
Accident insurance	0.05	0.05	0,04
Other	0.06	0.04	0,03

In 2024, the insurance market in Ukraine is under significant updates in compliance with the newly enacted "On Insurance" Law of Ukraine, resulting in a reduction in the number of insurance companies. The most chosen insurance types include comprehensive and collision car insurance, compulsory motor third-party liability insurance, Green Card, voluntary health insurance, and accumulative life insurance.

Annex 5.

Structure of the principal amount of the share of credit unions' members debt on loans, 2016–2023

as of the end of the year

Source: (NBU, Non-bank Financial Sector Reviews)⁸⁷

Loans	2016	2017	2018	2019	2020	2021	2022	2023
Business loans, EUR bn	13.38	13.81	16.66	25.08	20.29	12.02	7.65	7.66
Loans for the purchase, construction, repair of real estate, EUR bn	13.33	12.44	13.08	16.24	16.86	17.90	6.46	5.82
Consumer loans, EUR bn	37.97	31.54	34.61	45.32	31.82	36.41	17.91	15.45
NPL, %	18.1	15.8	14.8	12.3	27.5	16.0	32.5	26.0

⁸⁵ NBU. Non-bank Financial Sector Review, March 2024. https://bank.gov.ua/en/news/all/oglyad-nebankivskogo-finansovogo-sektoru-berezen-2024-roku. Non-bank Financial Sector Review, April 2021. https://bank.gov.ua/en/news/all/oglyad-nebankivskogo-finansovogo-sektoru-kviten-2021-roku.

bank.gov.ua/en/news/all/oglyad-nebankivskogo-finansovogo-sektoru-kviten-2021-roku

⁸⁶ NBU. Non-bank Financial Sector Review, March 2024. https://bank.gov.ua/en/news/all/oglyad-nebankivskogo-finansovogo-sektoru-berezen-2024-roku. Non-bank Financial Sector Review, April 2021. https://bank.gov.ua/en/news/all/oglyad-nebankivskogo-finansovogo-sektoru-berezen-2024-roku. Non-bank Financial Sector Review, April 2021. https://bank.gov.ua/en/news/all/oglyad-nebankivskogo-finansovogo-sektoru-berezen-2024-roku.

bank.gov.ua/en/news/all/oglyad-nebankivskogo-finansovogo-sektoru-kviten-2021-roku

87 NBU. Non-bank Financial Sector Review, March 2024. https://bank.gov.ua/en/news/all/oglyad-nebankivskogo-finansovogo-sektoru-berezen-2024-roku. Non-bank Financial Sector Review, April 2021. https://

Although the assets of insurance companies have increased, their number and share of total financial assets have declined. Credit unions and finance companies have experienced a more pronounced reduction in numbers, largely due to heightened regulatory pressures. In 2023, several legislative changes were implemented in the microlending sector. The maximum interest rate on microloans was capped at 1% per day, and the NBU, as the regulator, was granted the authority to establish criteria for evaluating borrower creditworthiness. Furthermore, from mid-2024 onward, the scope of participants in the Credit Register will expand to include not only banks and the Deposit Guarantee Fund but also finance companies and credit unions88.

In 2021, business loans experienced a sharp decline of nearly 50%, primarily due to the exit of companies from the market, both voluntarily and involuntarily, amid regulatory changes aimed at enhancing oversight. Loans for real estate purchases, construction, and repairs followed a similar trajectory, with steady growth until 2021, after which they declined significantly in 2022-2023. This trend suggests a slowdown in real estate investment, likely driven by the ongoing war. Consumer loans, on the other hand, grew consistently from 2016 to 2019 but began to decline in 2020 as lending rates increased. Credit unions also faced challenges related to asset quality. Many exceeded the limits on unproductive assets, and non-performing loans (NPLs) have been a persistent issue. While NPL levels improved in 2021, they increased again in 2022 before showing a modest decline in 2023, underscoring ongoing financial instability.

In 2024, smaller credit unions are considering ceasing operations due to new regulatory requirements, while larger credit unions are exploring opportunities to expand their scope. This shift stems from the revised edition of the "On Credit Unions" Law of Ukraine, which came into effect at the beginning of 2024. Key changes introduced by the law include89:

- a) broadening the eligibility criteria for credit union membership to encompass legal entities such as farming businesses, apartment building co-owners associations, cooperatives, and microbusinesses;
- b) revising requirements for the capital structure of credit unions;
- c) strengthening governance and management systems within credit unions;
- d) introducing new licensing procedures and operational opportunities; and
- e) permitting the outsourcing of certain functions.

These reforms aim to modernize the sector and increase its capacity to serve a wider range of clients, although they also present significant challenges for smaller institutions struggling to meet the enhanced regulatory standards.

Annex 6.

Financial service	2018	2019	2020	2021	2022	2023
Fund raising	0.0	0.1	0.1	0.2	0.03	0.01
Guarantees and sureties	0.3	0.1	0.1	1.0	0.04	0.02
Loans	1.5	3.0	2.6	4.3	1.6	2.7
Factoring	1.5	2.1	2.5	2.4	1.2	1.6
Leasing (legal entities-lessors and finance companies)	0.7	1.0	0.8	1.3	0.3	0.5

Volume of financial services provided by finance companies, by type of service, 2018-2023, EUR bn

Note: as of end of the year

(NBU, Non-bank Financial Sector

⁸⁸ NBU. Non-bank Financial Sector Review, March 2024. https://bank.gov.ua/en/news/all/oglyadnebankivskogo-finansovogo-sektoru-berezen-2024-roku

⁸⁹ NBU. New Law to Make Credit Unions More Resilient and Widen the Range of Financial Services They Provide. 14 July 2023. https://bank.gov.ua/en/news/all/za-novim-zakonom-kreditni-spilki-stanut-stiykishimi-tazmojut-nadavati-bilshe-finansovih-poslug

⁹⁰ NBU. Non-bank Financial Sector Review, March 2024. https://bank.gov.ua/en/news/all/oglyadnebankivskogo-finansovogo-sektoru-berezen-2024-roku. Non-bank Financial Sector Review, April 2021. https:// bank.gov.ua/en/news/all/oglyad-nebankivskogo-finansovogo-sektoru-kviten-2021-roku

From 2018 to 2023, the financial companies' segment exhibited overall growth until 2021, followed by declines across most services in 2022 (Table 5). Fundraising activities gained momentum in the earlier years, but economic and financial challenges in 2022 and 2023 led to a marked contraction. The volume of guarantees and sureties showed an initial decline in 2019, a brief recovery in 2021, and a sharp reduction again in 2022 and 2023. These fluctuations likely reflect uncertainty in the market and evolving risk management practices. Loans provided by financial companies displayed a consistent upward trend, indicating their central role despite some volatility. Factoring services experienced steady growth from 2018 to 2020, a decline in 2022, and a significant recovery in 2023. Similarly, leasing activities increased from 2018 to 2021, followed by a sharp decline in 2022 and a modest rebound in 2023. By 2023, there were signs of recovery in services such as loans, factoring, and leasing, although the pace of recovery varied across these segments. However, fundraising and guarantees/sureties remained significantly weaker compared to previous years, reflecting lingering challenges in these areas.

Finance companies primarily generate profits through investments in domestic government debt securities, as opposed to traditional lending practices commonly associated with banks. In 2023, three-quarters of finance companies reported profitability, with total profits amounting to UAH 8.5 bn (EUR 202 mln). Over half of these profits were attributed to *Ukrfinzhytlo*, the state-owned operator of the *eOselia* program. *Ukrfinzhytlo's* primary source of income stems from interest payments on domestic government debt securities held within its capital⁹¹. This highlights that financial companies are becoming increasingly reliant on government-backed securities for revenue, particularly in state-led initiatives.

⁹¹ NBU. Non-bank Financial Sector Review, March 2024. https://bank.gov.ua/en/news/all/oglyad-nebankivskogo-finansovogo-sektoru-berezen-2024-roku

Prospective Scheme of the "Green Loan" Financial Product

>

Market participant needs & imperatives

Institutional gaps & obstacles

Financial sources

Businesses

Intermediaries

State authorities

Climate risks & regulation requirements

Regulation

Taxonomy

Institutions

Instruments

Lack of knowledge

Public (state/local)

Domestic banks, enterprises, investors

IFIs, international development institutions, private funds

INTERAGENCY WORKING GROUP

Green Taxonomy development & regulatory support for green finance:
Ministry of Environment, Ministry of Agrarian Policy, Ministry of Economy,
Ministry of Finance, NBU, NSSMC...

Digitalization

Financial literacy

Professional development programs

Expert environment

Scaling up successful practices

Data & reporting system incorporation

Feedback collecting

Monitoring gaps

Define responsibility

Policies & regulations

Green requirements

Tools & Programs development

List of eligible technologies

Incentives & stimuli

Capacity strengthening

Prudential methodology

Capacity building

Annex 8.

Green Finance Roadmap

