

## CHAPTER 7. ENVIRONMENTALIZATION AND THE GREEN ECONOMY IN THE PERSPECTIVE OF FUTURE GENERATIONS

### «GREEN» BANKING AS A TOOL FOR IMPLEMENTING THE MODEL OF A SOCIALLY RESPONSIBLE BANKING INSTITUTION

Tetiana Gavrillo<sup>1</sup>

Lesya Pobochenko<sup>2</sup>

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**Abstract.** The article studies the essence, evolution and features of “green” banking as a way to implement the activities of a banking institution in the format of environmental, social and corporate responsibility. The documentary base for ensuring sustainable development of “green” financial institutions is analyzed. The factors to be used to specify ESG-criteria in the implementation of green finance projects have been proposed. The ways of greening and socialization of financing mechanisms in the leading countries of the world are considered. Analyzed the activities of domestic banks in terms of eco-banking and justified the role of “green” banks in the provision of environmentally-oriented financing projects. The place of “green” banking in the implementation of the model of a socially responsible banking institution was determined. The conditions for the further development of “green banking” in Ukraine were substantiated.

**Keywords:** “Green” banking, “green” financing, a socially responsible banking institution, Equator Principles, principles for responsible banking, sustainable development goals.

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<sup>1</sup> Ph.D., Associate Professor,  
Associate Professor at the Department of Finance, Accounting and Taxation,  
National Aviation University

<sup>2</sup> Ph.D., Associate Professor,  
Associate Professor at the Department of International Economic Relations and Business,  
National Aviation University

**Introduction.** The development of a green economy is seen by many nations of the world as an opportunity to balance economic activity and environmental priorities through increased financial and economic support for environmentally-oriented initiatives and projects.

One of the promising practices of implementing the concept of “green economy” is the introduction of “green banking”, which involves the organization of banking activities in the format of environmental orientation on the basis of strengthening the basic assumptions of corporate social responsibility.

“Green” banking is considered as an innovative banking strategy, the essence of which is the environmental orientation of the implemented technologies and banking products that are favorable for sustainable development of banking institutions and obtaining environmental benefits for the country and people by improving the environment.

The distinctive features of banks directed to “green” banking are the following:

- prioritizing investments in environmentally oriented projects that preserve and improve the environment;
- creating and providing clients with “green” banking products;
- formation of an internal mechanism for managing socially responsible banking, providing for the subordination of current business processes to the objectives of reducing the harmful impact on the environment (internal “green banking”).

Analysis of global environmental trends confirmed the increasing involvement of commercial banks in the process of “green” transformation, which forms the awareness of the need to strengthen the activities of Ukrainian banks in the field of social and environmental responsibility for the implementation of further needs of the development of the domestic economy.

### **1. The evolution and characteristics of green banking**

At present, the Ukrainian banking sector does not consider the “green” topic to be a dominant one, which can be explained by the lack of public awareness of the significance of the problems in the focus of environmental activities.

In foreign practice, the phenomenon of “green banking” is associated with the emergence of the “Equator Principles”, published in 2003 and

signed by ten financial institutions. The Equator Principles apply voluntarily and are prescribed for projects worth at least 10 million US dollars. The Equator Principles are a system of rules developed and adopted by banks to assess environmental and social risks that may arise during project financing. The main concept of the Equator Principles are environmental and social standards used by the International Finance Corporation (IFC), a member of the World Bank Group [1].

In subsequent periods, the IFC has revised its standards, resulting in some adjustments to the Equator Principles; most recently in November 2019, and as of October 1, 2020, this is the version of the Principles that financial institutions use.

In 2010 was founded the Equator Principles Association, which defined the effective cooperation between organizations using these Principles as its main goal.

Where a financial institution has adopted the Equator Principles as the basis of its operations, it will refuse to finance projects of those borrowers who do not guarantee (due to lack of intention or capacity) their compliance with environmental and social policies based on the Principles. The most well-known international financial institutions using the Equator Principles are ABN AMRO BANK, BNP Paribas, Barclays, Bank of America, Citigroup, Credit Suisse, Societe Generale, Unicredit, European Bank for Reconstruction and Development and others.

It is useful to analyze the essence of the Equator Principles, which regulate the activities of 118 financial institutions in 37 countries.

1. The principle associated with the consideration and categorization of projects. It is envisaged that in order to make a decision on the financing of a particular categorization project categorized as “A”, “B”, “C” is analyzed. If the project is categorized as “A”, it means that it is associated with the possibility of environmental and social risks of a high level and (or) adverse effects that may be irreversible; category “B” refers to projects with a limited level of risk and (or) adverse effects that are not irreversible; for category “C” is characterized by the presence of potential social and environmental risks of the lowest level, adverse effects may be minor or not occur at all.

2. The principles of social and environmental assessment. The social and environmental assessment procedure is mandatory for Category “A” projects and, if applicable, is also conducted for Category “B” projects, as

it allows to identify measures to control risks that can minimize or offset adverse effects.

3. The principle of applicable social and environmental standards. It defines financing conditions for countries with high social and environmental standards and those with low standards. The ISC Standards for Social and Environmental Sustainability and the relevant World Bank Group Guidelines on Environment, Health and Safety should be used as further guidance in project implementation.

4. The principle of an action plan and management system. Defines the need for the borrower, if the project is Category “A” and “B”, to have a risk action plan and control the risk management system in accordance with this plan.

5. The principle defining the order of interaction with stakeholders. The principle provides for ongoing contact on Category A and B projects with groups of people or employees who have an interest in the implementation of these projects.

6. The principle defining the grievance mechanism. It determines the need for a grievance mechanism in cases of high-risk projects.

7. The principle of independent expertise. It provides for the involvement of independent experts to analyze documents on projects with a high level of risk.

8. Principle related to covenants. It defines the extent of a borrower’s liability to a financial institution with respect to high-risk projects and the corresponding actions of the financial institution if the borrower violates its covenants.

9. Principle of independent monitoring and reporting. The financial institution is authorized to appoint an independent expert or impose similar requirements on the borrower to verify the results of monitoring of Category “A” projects and certain Category “B” projects.

10. The principle of accountability and transparency, which applies to financial institutions using the Equator Principles. It is mandatory for each institution implementing the Equator Principles to report annually on the results of its activities, namely on the environmental and social impact of the project.

In addition to the Equator Principles, green banking institutions use a number of documents that enable them to identify the right vector of behaviour when evaluating projects with environmental, social, and governance risks (Table 1).

**Key documents related to the sustainability  
of green financial institutions**

<b>№</b>	<b>Document name</b>	<b>Essence of main provisions of a document</b>
<b>1</b>	<b>2</b>	<b>3</b>
1	UN Principles for Responsible Investment, 2006, [2]	Adherence to these principles provides for the reflection of environmental and social orientation and corporate governance (ESG) in investment processes, asset ownership practices, interaction with the subjects of the investment community.
2	UN Environment Program (UNEP, date of creation – 1972), [3]	Defines the goal of green finance as increasing financial flows for the implementation of sustainable development priorities. The public, private and non-profit sectors are considered as the source of these flows. Financial flows are understood as banking, microcredit, insurance and investment flows.
3	UNEP Guide to Banking and Sustainability, 2011, [4]	Makes recommendations on the activities of banking institutions to ensure their sustainable development.
4	Report of the Intergovernmental Committee of Experts on Sustainable Development Financing, 2014, [5]	The concepts of financing sustainable development on the basis of a strategic approach with the allocation of categories of resource mobilization: domestic public and domestic private; international public and international private; mixed (domestic and external) are formulated.
5	Green finances for developing countries: needs, problems and innovations, UNEP, 2016, [6]	Interpreted green finance as a financial sector strategy implemented to achieve sustainable development goals. Problems for developing countries and especially for countries with underdeveloped financial system are identified; opportunities of green investments for implementation of national development priorities are revealed.
6	EU Report “Defining “green” in the context of green finance”, 2017, [7]	The essence of approaches to the requirements for green finance tools is disclosed. Attention is paid to the need for a comprehensive assessment of the effectiveness of projects, taking into account not only the environmental component, but also the social and managerial.
7	Commission’s action plan for financing of sustainable growth, 2018, [8]	Identified the main objectives for the implementation of financing for sustainable development: reorienting capital flows towards sustainable investments; controlling financial risks associated with climate change, environmental degradation and social problems.

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(End of Table 1)

1	2	3
8	EU Resolution for Creating Foundations of Promoting Sustainable Investments and Amendments in Legislation, 2020, [9]	Considers the issues of taxonomy as a system of classification of types of economic activities. Provides criteria for classifying an economic activity as environmentally sustainable, based on the level of achievement of six specific environmental goals (if at least one is achieved and there is no conflict with others).

*Source: built by the authors based on [1–9]*

Despite the fact that in both foreign and domestic legislation there is no definition of the term “green banking”, in scientific circles recently there has been a growing interest in the study of this phenomenon and its characteristics. Veklych O. has considered the essence, mechanism and tools of “green” banking implementation [10]; Tkachenko Ya. has analyzed the approaches of domestic banking institutions to “green” banking implementation [11]; Alekleev I., Mazur A., Guryk K. define the conditions of further development of “green” banking [12].

The studies of foreign scientists in this field are very diverse, but they are based on the understanding of the most important role of banking institutions in the economic growth of countries. A. Luzgina identified the features of sustainable finance with a focus on the analysis of “green” banking and proposed ways of its development in the Republic of Belarus [13]. Shershniova Ye.G., Kondiukova Ye.S., Dzhafarli L.Ya., Nobrega M.A. consider an environmentally responsible (“green”) banking activity as the format of sustainable development in terms of transition of most countries of the world to the “green” economy model [14].

Foreign scientists (including both developed and developing countries – India, Brazil, etc.), understanding “green” banking as a form of activity of banking institutions, based on awareness of the needs of society in improving the environment, associate this activity with the introduction of environmental technologies in the banking activity both within it and in relation to the subjects of the external environment.

The names given to banking institutions by various scholars studying green banking vary: “socially responsible”, “green”, “ethical”, but the predominant concept regarding the essence of the activity itself is the

understanding of the need to integrate environmental, social and government priorities [15].

These three categories, the so-called ESG-criteria (from the English Environmental, Social, Governance) orient banking institutions to make decisions in the field of “green” banking taking into account the emergence of risks in the long term, which will help to improve their reliability and creditworthiness.

In its current form, the ESG criteria were first proposed by former UN Secretary General Kofi Annan as a suggestion for the top management of major global companies to adjust development strategies to address environmental issues and, above all, climate change.

Focusing on ESG criteria is not limited to the interests of the individual organization, but follows the requirement of the state and society as a whole. If a company is interested in receiving investments, its activities must be socially responsible, and it is banking institutions that are given the role of driving environmental and social change to achieve sustainable development goals.

The use of ESG criteria, with appropriate specification of the factors for each of the criteria, is a condition for responsible investing based on sustainable customer relationships, which ensures a return on investment and creates opportunities for effective risk management (Table 2).

The year 2020 has become crucial in shaping a new approach to green finance. According to representatives of one of the largest international investment companies BlackRock, the current state of the environment and, above all, the threatening climate change require a more balanced approach to risky financing, highlighting as a priority projects with moderate risks; sustainability should be considered as the main condition for effective financing [16].

The increased public attention to the state of the environment, as noted by the World Economic Forum, is evidenced by the classification of environmental risks as one of the top five most significant, which makes it necessary to create a sustainable infrastructure.

Indicative is the experience of establishing “green” investment banks in such countries as the USA, UK, Japan, Australia, which are public institutions and are engaged in attracting private capital to invest in “green” projects that implement common social goals, as well as to restore and

**Factors determining the ESG criteria**

№	Criteria	Factors
1	2	3
1	Environmental	Level of “carbon footprint” resulting from activities (greenhouse gas emissions) Impact on climate and decarbonization measures Availability and use of waste treatment technologies Ensuring biodiversity Balanced use of natural resources Maintaining ecosystem integrity
2	Social	Meeting human rights obligations Compliance with the provisions of the Code of Ethics Attitudes toward employees, suppliers, business partners, customers Working Conditions, Health & Safety Respect for gender balance Education and financial literacy regarding sustainability standards Participation in charitable actions and foundations
3	Governmental	Availability of corporate strategy focused on integration of ESG capabilities and minimization of related risks Compliance of business processes with ESG-orientation Transparency of reporting Efficiency of anti-corruption measures Effective personnel management aimed at building innovation consciousness and professional competencies of employees Reputation in business circles

*Source: built by the authors*

further preserve the state of the climate. A prerequisite for green investment banks in some countries, such as the UK, is a focus on the profitability of the implemented investment projects.

A number of banks around the world follow the path of greening and socialization of financing mechanisms, changing the traditional banking paradigm to the modern one – banks in Indonesia, Bangladesh, Kenya, Peru, Turkey, Vietnam. The practice of revising issued loans to those borrowers who are unable to meet the requirements of modern standards has become widespread.

The processes of ecological civilization based on a coordinated approach to the activities of all actors in the financial system – regulators, banking



institutions, insurance companies and other stakeholders – are inherent in China, whose environmental policy is focused on the active use of environmental standards. The establishment in 2015 of the Green Finance Committee of the China Banking and Finance Association, led by the Central Bank of China, has made significant strides toward environmental transformation throughout the financial system, especially in the banking sector.

In 2016, new principles for building a green financial system were formed, which brought together, in addition to the Central Bank of China, financial supervisory authorities, ministries of finance, environment and planning. The application of these guidelines contributes to the improvement of the green finance mechanism, especially in the provision of green credit through the issuance of green bonds.

The National Bank of Ukraine together with IFC (International Finance Corporation) signed an agreement on cooperation on implementation of “green” standards and standards of sustainable financing in our country. One of the key provisions of this project is the introduction of ESG in the practice of domestic banking institutions, including standards for information disclosure in this area, as well as the creation of a set of requirements for the risk management system.

The expressed will of Ukraine to join the “green European course” proclaimed by the European Committee, which was confirmed in the position paper sent to the EU by the Ukrainian government, also binds to the implementation of these ESG-objectives. The implementation of the “Green Agreement” will allow the modernization of national economies and the social sphere and turn Europe into a “climate friendly” space by 2050.

## **2. Directions for the implementation of the concept of “green” banking**

The Sustainable Development Goals (SDGs) are among the key objectives of modern banking institutions and are manifested in the implementation of a wide range of projects within the framework of “green” banking, aimed both at environmental conservation and creation of renewable energy facilities, as well as social development.

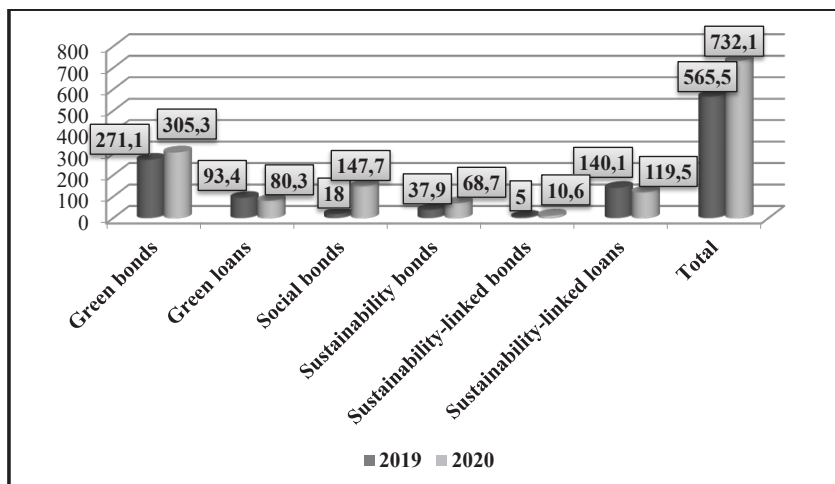
The global market for SDG-oriented borrowing shows a steady upward trend, reaching \$732.1 billion in 2020 (2019 – \$565.5 billion), up \$166.6 billion

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from the previous year. Significant growth is inherent in financial instruments such as green bonds to US \$305.3 billion (2019 – US \$271.1 billion), up 12.6% from the previous period; sustainable development bonds to US \$68.7 billion (2019 – US \$37.9 billion), up 81.1%; SDG-oriented bonds to US \$119.5 billion (2019 – US \$140.1 billion), up 14.7% [17].

The largest growth is in the social bonds category, up to \$147.7 billion (2019 – \$18 billion), an increase of 720.3%. Lending declines relate to SDC-oriented loans, up to \$119.5 billion in 2020 (up 14.7%), up \$140.1 billion in 2019, and green loans, down to \$80.3 billion in 2020 (down 14%), up to \$93.4 billion in 2019 (Figure 1).

As can be seen, the global borrowing market is mainly represented by green loans and SDG-oriented loans, which are linked to ESG-rated borrowers. The key concepts defining the features of these financial instruments include the 2018 Green Loan Principles and the 2019 Sustainability Loan Principles, which were adopted by the Loan Market Association, whose members are from the banking sector. Most green loans have been used for renewable energy projects, SDG loans have been used for a more diversified list of industries.



**Figure 1. World borrowing market, 2019 to 2020, billion \$**

Source: built by the authors based on [17]

Ukraine is on its way to realizing its green finance goals. The current year is extremely difficult for Ukraine due to the negative impact of the pandemic on the global economy, the decline in economic activity in Ukraine, which coincided with the financial crisis in the “green” energy sector.

Does this mean, as some skeptics believe, the abandonment of the concept of “green” financing or the termination of its implementation indefinitely? Advanced scientific circles are of the opinion that, on the contrary, the issues of greening society have become more urgent and impose higher requirements on Ukrainian businesses to upgrade production to achieve the declared European Green Deal Goals, providing for climate neutrality until 2050. Lack of funds for long-term investment in the implementation of environmental projects, first of all, should be solved by “green” banks by providing access to capital and creating more loyal lending conditions.

The National Bank of Ukraine demonstrates its readiness to fulfill the terms of the Cooperation Agreement with IFC, a member of the World Bank Group, signed by the Chairman of the NBU and IFC Regional Manager for Ukraine, Belarus and Moldova Jason Pellmar, which provides for cooperation on two programs: “Green Finance” and “Integrated Environmental, Social and Governance Practices Program to Promote Investment in Europe and Central Asia” (“ESG Program”).

According to them, the NBU is developing a green and sustainable financing strategy, which will be presented jointly with IFC in the near future. According to the NBU decision ESG-criteria will be reflected in the Main directions of monetary policy in 2022, and since the beginning of 2023 domestic banks will have to take into account ESG-risk in decision-making on financing projects of potential clients. Experts also predict that in the near future there may be new regulations on the share of “green” loans in the portfolio of each bank.

According to the chairman of the NBU, if banks follow ESG disclosure standards, it will allow a reliable assessment of the environmental ratings of banking institutions, which is important both for companies and for the public.

Promising is the cooperation of “green” banks with energy service companies (ESCOs), which can be implemented in different ways. One way – the initiative to find an efficient energy product belongs to ESCOs (while they

reserve the right to decide on risk issues, make and implement technological solutions), and then this project is transferred to the banking institution for financing. The second way – if the bank has clients with promising projects, but there is no possibility to provide whole pledges, the bank can involve ESCOs as owners of equipment, which will be provided as collateral.

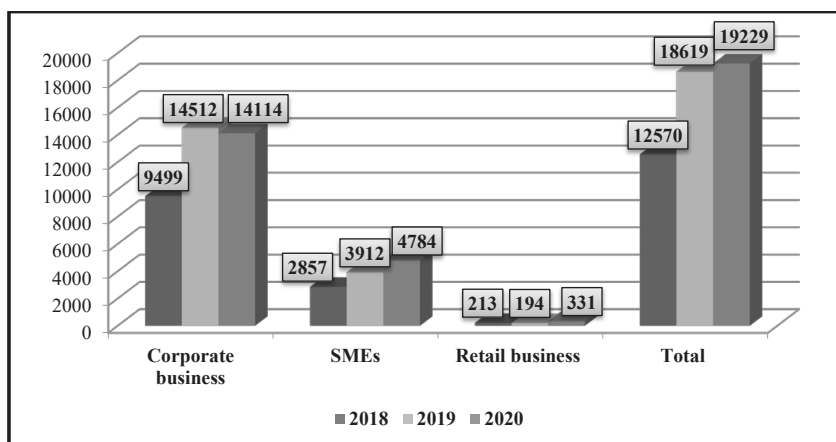
To date, the number of “green” banks in Ukraine is not large enough. The leading banking institution in the field of “green” financing is JSB Ukrgasbank, which in 2015 embarked on the path of investing in sustainable development projects, such as energy-efficient business modernization, “green” energy, environmental protection (eco-banking).

The bank set up an environmental and social risk department to evaluate projects and the risks associated with their implementation. The bank’s official policy on environmental and social responsibility stipulates that it does not finance the most hazardous activities: production and trade of alcohol, pesticides, coal mining.

For the bank, “green” activities are inherent not only in terms of natural environmental resources; green standards have also been applied to greening and reducing energy consumption in the bank’s internal environment: a modern lighting system, a system of automatic monitoring of the operation of computer, ventilation and air conditioning equipment. The Bank’s employees use electric and hybrid cars, for this purpose 18 charging stations were installed on the territories of the Bank’s branches. All these measures allowed us to reduce the cost of maintaining the offices to 2 million UAH, of which 1.6 million UAH – at the expense of energy savings.

JSB “Ukrgasbank” occupies one of the leading positions in lending to “green” energy in Eastern Europe – since 2016 the volume of financed alternative energy projects amounted to almost 20 billion UAH, the share of repaid loans – 40%. The share of green energy loans reached 36% of the bank’s loan portfolio. The bank’s loan portfolio for green products covers three categories of customers: corporate business, small and medium business, retail business and demonstrates a steady upward trend (Figure 2).

According to the loan agreement between the Ministry of Finance of Ukraine, International Finance Corporation and the Bank, in March 2021, JSB “Ukrgasbank” received a EUR 30 million loan, which was granted for a five-year period and is designed to finance projects in areas such as energy efficiency and renewable energy.



**Figure 2. Loan portfolio of ecoproducts JSB “UkrGasbank”, million UAH**

*Source: built by the authors based on [18; 19]*

Despite the forced refusal of the Bank to finance projects related to the “green” tariff (it covers all sectors of “green” energy), its management has declared its readiness to finance a number of other “green” projects. First of all, we are talking about projects in the field of RES (renewable energy), as evidenced by the fact that the bank is a member of the new EBRD program, whose priority is the use of instruments to stimulate renewable energy facilities. Renewable energy projects can be of the following types: those intended to compensate their own consumption and those involving direct sale of “green” energy.

JSB “UkrGasbank” policy coincides with the “Statistical Review of World Energy 2021”, provided by the International Energy Agency on October 13, 2021, according to its conclusions both Ukraine and other countries should stop investing in fossil fuels, which will reduce global warming to 1,5°C; at the same time, by 2030 global investment in renewable energy sources should be tripled, and by 2035 electricity of developed countries should be fully decarbonized [20].

Experts believe that countries, including Ukraine, which previously used these annual statistical reviews and had a reason to invest in dirty

energy, will not be able to ignore the new designations of the International Energy Agency, especially if you consider their coincidence with the Paris Agreement on the use of the 1,5°C.

Given that the cost of electricity in the EU has been tripled in 2021, and gas prices have increased by 250%, the EU decided to increase renewable energy from a previously defined level of 32% to 40% in 2030. The main attention will be paid to the sectors where renewable energy is consumed more slowly than in others – transport, industry, construction [21]. European Commissioner for Energy Kadri Simson made a statement about the need to increase energy efficiency and reduce energy consumption by 9% compared to the current plan, based on the fact that renewable energy is among the cheapest sources of electricity.

The role of “green banking” increases in conditions of green hydrogen production using renewable energy sources; currently, the Ministry of Energy of Ukraine is working on a strategy for hydrogen energy development in Ukraine until 2030, which will be published in spring 2020. There are plans to launch a pilot project for green hydrogen production worth 500 million euros, initiated by NJSC “Naftogaz of Ukraine” together with RWE Supply & Trading (Germany).

In addition to JSB “UkrGasbank”, JSC “ProCreditBank” also works in “green” financing, providing “green” credits to projects related to renewable energy (equipment for solar power plants, biogas plants, biomass energy production), use of energy efficient technologies (highly efficient machinery and equipment, agricultural machinery, irrigation systems, heating, lighting systems, etc.), environmental protection (equipment for water and environmental treatment, recycling and waste disposal, organic farming).

According to the results of 2020, the share of “green” loans in the loan portfolio of JSC “ProCreditBank” was 18.5%. Despite the fact that their number slightly decreased compared to 2019 (from 728 for 2019 to 703 in 2020), in value terms there is a growth – from 3 billion UAH in 2019 to 3.7 billion UAH in 2020 [22].

According to the bank’s management, a balance will be maintained between the various categories of green loans, with the expectation of the highest percentage of investments in energy-efficient technologies while maintaining overall growth in the green loan portfolio as one of the key positions in implementing a strategy to promote sustainable financing.

The National Bank of Ukraine approved the acquisition by the Nordic Environment Finance Corporation (Nefco) of a 13.94% stake in the authorized capital of the JSCB Lviv Bank. The activity of Nefco, an international financial institution, is aimed at supporting “green” transformation processes in Western Ukraine. Nefco has been cooperating with the bank for more than ten years, thanks to which it is able to provide “green” loans both to business structures and retail clients.

The bank also began cooperation with the Green for Growth Fund (GGF), which provided 5 million euros in hryvnia equivalent, which will contribute to enhanced business support in agriculture and agricultural production. GGF invests in renewable energy projects in 19 markets spanning Southeast Europe, the Caucasus, Ukraine, Moldova, the Middle East and North Africa. Hryvnia investments, made possible through the European Committee’s assistance under the EU4Energy initiative, create access to green credit while protecting against the impact of currency fluctuations.

“Green” initiatives belong to JSC “Credit Agricole Bank”, which in line with sustainable development within the International Group, being socially responsible, implements the Climate Strategy and aims to become one of the top three domestic “green” banks. Green” lending services are provided by the bank for investments in the purchase of solar power plants, electric cars, implementation of energy efficient technologies.

The Credit Agricole Group belongs to the developers of the Equator Principles and is one of the co-authors of green bonds, and has been using effective financial instruments to attract consumers of banking products to renewable energy and energy-saving technologies for ten years. The Group applies ESG criteria to its activities and generates and analyzes ERC and other non-financial reporting.

Summarizing the above, we can define the place of “green” banking, as well as its role in implementing the system of goals that characterize the activities of the banking institution as a socially responsible subject of financial relations (Figure 3).

The issue of further development of “green” banking in Ukraine should be addressed comprehensively, taking into account modern requirements for sustainable development, corporate and social responsibility. In this regard, there is an expediency in:

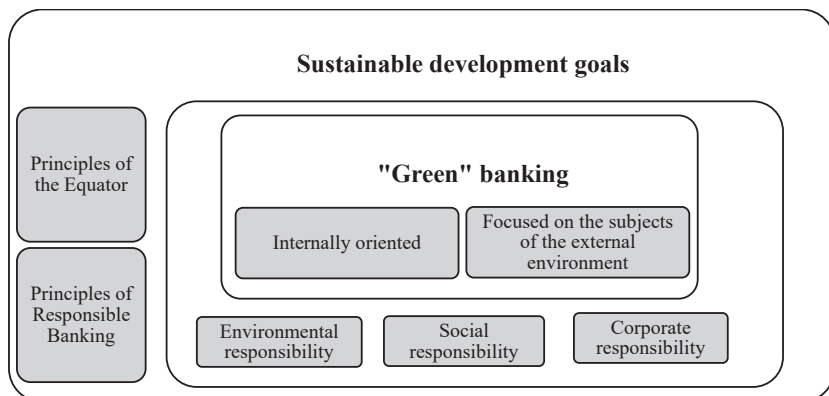
1. Involvement of domestic banking institutions in the processes of integrating ESG criteria into their activities with the active promotion of ESG transformations by the general regulator and the state.

2. Banking institutions should be guided in their activities by the Equator Principles for Responsible Banking, published by the United Nations Environment Program in 2019, which define the role and responsibilities of banks based on sustainable development goals.

3. Development of partnership of Ukrainian banks with international organizations and financial institutions, which are supporters of the idea of sustainable development in the financial sector, as well as participation in international programs that promote the implementation of the Green Loan Principles.

4. Demonstration of the best practices of “green” banking, both foreign and domestic, in the banking sector of Ukraine to improve the organization of risk management processes in terms of “green” financing.

5. Development of a domestic system of classification of investment projects, which could fully reflect the peculiarities of “green” investment processes, including “green” banking, in the national context of implementing the concept of sustainable development.



**Figure 3. The place of “green” banking in the implementation of the socially responsible banking model**

*Source: built by the authors*



In addition, there is a need to solve a number of problems in the field of green banking at the international level:

- the necessity in clear formulation of term “green” banking;
- the creation of a single international platform for exchange of experience existing in “green” banking area;
- the availability of generalized taxonomy specified in relation to the banking sector;
- the development of common methodical approaches to harmonization of financial and non-financial reporting of banking institutions and creation of efficient risk management system in conditions of ESG-banking application.

**Conclusions.** “Green banking” acts as an effective level of environmental protection, increasing the efficiency of used resources, which contributes to the implementation of sustainable development goals of both individual industries and the economy as a whole in the long term. “Green banking” reflects the management philosophy of the banking institution, focused on following “green” criteria not only in relation to the subjects of the environment, but also on their application in carrying out activities in their own environment, which corresponds to the essence of the socially responsible banking institution model.

Application of ESG-criteria in the system of standards of companies’ activities allows banking institutions, when selecting investment projects, to give preference to those companies that not only pursue environmental goals, but are also able to organize their activities in accordance with a high level of social and corporate responsibility.

The development of “green banking” in Ukraine should be based on the creation of an environment conducive to uninterrupted access to information on environmental, social and governance performance of entities operating in the “green” market, which will help avoid the phenomenon of “green” camouflage – when companies provide false information about their activities.

It is necessary to improve the risk management systems of banking institutions with the priority of achieving the goals of sustainable development through the use of effective tools for identifying, assessing and monitoring risks, including in the field of “green” banking.

Significant is the activity of the National Bank of Ukraine in the field of “green” and sustainable financing, taking into account the experience of international associations such as Sustainable Banking Network supported by IFC, Network of Central Banks and Supervisors for “Greening” the Financial System, OECD Center on “Green” Finance and Investment and others.

### References:

1. The Equator principles (2020). Available at: <https://equator-principles.com/about/> (accessed 14 October 2021).
2. Principles for Responsible Investment (PRI) (2020). Available at: <https://sustainable-infrastructure-tools.org/tools/principles-for-responsible-investment-rpi/> (accessed 15 October 2021).
3. United Nations Environment Program: Ministry of Environment and Natural Resources (2017). Available at: <https://mepr.gov.ua/content/programa-oon-z-navkolishnogo-seredovishcha-yunep.html> (accessed 15 October 2021).
4. UNEP FI Guide to Banking and Sustainability (2011). Available at: <https://www.greengrowthknowledge.org/research/unesp-fi-guide-banking-and-sustainability> (accessed 15 October 2021).
5. Report of the Intergovernmental Committee of Experts on Sustainable Development Financing. Available at: <http://www.un.org/> (accessed 16 October 2021).
6. Green Finance and Developing Countries: Needs, Concerns and Innovations (2016). Available at: <https://www.greengrowthknowledge.org/research/green-finance-and-developing-countries-needs-concerns-and-innovations> (accessed 16 October 2021).
7. Defining “green” in the context of green finance: European Commission (2017). Available at: [https://ec.europa.eu/environment/enveco/sustainable\\_finance/pdf/studies/Defining%20Green%20in%20green%20finance%20%20final%20report%20published%20on%20eu%20website.pdf](https://ec.europa.eu/environment/enveco/sustainable_finance/pdf/studies/Defining%20Green%20in%20green%20finance%20%20final%20report%20published%20on%20eu%20website.pdf) (accessed 18 October 2021).
8. The European Commission’s Action Plan on Financing Sustainable Growth (2018). Available at: <https://www.greenfinanceplatform.org/policies-and-regulations/european-commissions-action-plan-financing-sustainable-growth> (accessed 19 October 2021).
9. Regulation (EU) 2020/852 on the establishment of a framework to facilitate sustainable investment (Taxonomy Regulation) (2021). Available at: <https://www.greenfinanceplatform.org/policies-and-regulations/regulation-eu-2020852-establishment-framework-facilitate-sustainable> (accessed 20 October 2021).
10. Veklich O. (2019) «Zelenyy» bankinh: sutnist’, mekhanizm ta instrumenty realizatsiyi [“Green” banking: the essence, mechanism and tools of implementation]. «Zeleni» investytsiyi u stalomu rozvytku: svitovyy dosvid ta ukrayins’kyy kontekst: analitychna dopovid’ [“Green” investments in sustainable development:

world experience and the Ukrainian context: an analytical report]. Kyiv: Will, pp. 236–251.

11. Tkachenko Ya. (2017) Rozvytok zelenoho bankinhu v Ukraini [Development of green banking in Ukraine]. *Bulletin of the APSVT*, no. 2, pp. 90–92.

12. Alekseev I., Mazur A., Gurin K. (2021) Finansovi instrumenty pidvyshchennya sotsial'no-ekolohichnoyi vidpovidal'nosti: mizhnarodna praktyka ta perspektyvy realizatsiyi v Ukraini [Financial instruments for increasing social and environmental responsibility: international practice and prospects for implementation in Ukraine]. *Economic analysis*, vol. 31, no. 2, pp. 7–13.

13. Luzgina A. (2021) Zelenyy banking: sushchnost', instrumenty i perspektivy razvitiya [Green banking: essence, tools and development prospects]. Available at: <https://www.beroc.org/upload/iblock/429/429cf0127f7cc881bb4bf2f7284e1a09.pdf> (accessed 21 October 2021).

14. Shershneva E.G., Kondyukova E.S., Jafarli L.Ya., Nobrega M.A. (2018) «Zelenyy» banking kak format sotsial'noy otvetstvennosti v ekologo oriyentirovannoy ekonomike [“Green” banking as a format of social responsibility in an environmentally oriented economy]. Available at: <https://journalaer.ru/ru/arkhiv/journal/98/article/1139/> (accessed 22 October 2021).

15. Sharma M., Choubey A. Green banking initiatives: a qualitative study on Indian banking sector (2021). Available at: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8088406/> (accessed 24 October 2021).

16. Panchenko V., Reznikova N. (2021) Novi realiyi rynku hlobal'nykh investytsiy.

17. New realities of the global investment market. Available at: <https://pvg.in.ua/2021/09/11/novi-realiyi-rynku-globalnyh-investytsij/> (accessed 27 October 2021).

18. Bloomberg Green (2021). Available at: <https://www.bloomberg.com/news/articles/2021-01-14/the-sustainable-debt-market-is-all-grown-up> (accessed 28 October 2021).

19. Report of the Management Board of JSB «Ukrgasbank» for 2019 (2020). Available at: [https://www.ukrgasbank.com/upload/file/zvit\\_prav1\\_2019.pdf](https://www.ukrgasbank.com/upload/file/zvit_prav1_2019.pdf) (accessed 30 October 2021).

20. Report of the Management Board of JSB “Ukrgasbank” for 2020 (2021). Available at: [https://www.ukrgasbank.com/upload/file/zvt\\_pravlin\\_2020.pdf](https://www.ukrgasbank.com/upload/file/zvt_pravlin_2020.pdf) (accessed 30 October 2021).

21. Goncharenko L. (2021) Ukraina i svit mayut' pryynyty finansuvannya proyektiv v oblasti vykopnoho palyva [Ukraine and the world must stop funding fossil fuel projects – research]. Available at: <https://ecopolitic.com.ua/ua/news/ukraina-i-svit-majut-pripyniti-finansuvannya-proyektiv-v-oblasti-vikopnogo-palyva-doslidzhennya/> (accessed 31 October 2021).

22. Worford D. (2021) EU Vows to Accelerate Renewable Energy as Electricity Costs Soar. Available at: <https://www.environmentalleader.com/2021/09/eu-vows-to-accelerate-renewable-energy-as-electricity-costs-soar/> (accessed 01 November 2021).

23. JSC «ProCreditBank»: Management Report (Management Report) for 2020 (2021). Available at: <https://www.procreditbank.com.ua/assets/Uploads/Managementreportukr2020> (accessed 01 November 2021).