

ФІНАНСИ І БУХГАЛТЕРСЬКИЙ ОБЛІК

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## RATIONALES FOR EFFICIENT AND EFFECTIVE GREEN FINANCING UNDER EMERGENCY RULES

The article is devoted to the current topic of environmental protection through the joint efforts of government and business with the help of innovative schemes for attracting investments in ecological developments. Based on data from international organizations, a thorough study of global trends in the use of green bonds as a financing tool for environmentally important projects has been conducted. The changing climate of our planet requires the adaptation of sustainable development goals to the challenges of our time. And such an effective mechanism is green financing.

Green bonds are considered as an impact investing mechanism. The participants in the initiation of the standardization process of green bonds and the parameters for obtaining the status of green securities have been determined. Using a number of literary sources, the authors substantiated the strengths and weaknesses of the green bond market. The regional aspect of green bond issuance is reinforced by the examples of leading issuing countries. The position of the European continent as a leader in issuing green bonds has been argued. The annual value of green bonds and directions for using the proceeds have been analyzed. The development trends and global potential of the green bond market have been substantiated. The authors have indicated the directions of green investment in unstable market conditions and summarized the common features of green financing. The ETF's place in the chain of attracting investors to the green bond market has been determined.

The article illustrates the dynamics of the main green bonds indices with an explanation of their selection criteria. It has been emphasized that modern society purposefully begins to use climate finance markets more effectively for a step-by-step transition to a green economy. Obstacles on the way to the expansion of operations on the green bond market have been specified. The prospects for the further development of the green financing market have been outlined to strengthen the synergy of ecology and finance.

**Key words:** *sustainable development, green economy, green bonds, green bond market, environmental projects, climate-related investment, financing, financial analysis*

**JEL classification:** *E22, F21, F64, G12, O13, Q55*

Стаття присвячена актуальній темі збереження довкілля спільними зусиллями влади та бізнесу через використання інноваційних схем залучення інвестицій у екологічні розробки. На основі даних міжнародних організацій проводиться ретельне дослідження світових тенденцій використання зелених облігацій як інструмента фінансування екологічно важливих проєктів. Зміна клімату нашої планети вимагає адаптації цілей сталого розвитку до сучасних викликів часу. І таким дієвим механізмом є зелене фінансування.

Зелені облігації розглядаються як механізм імпаکت-інвестування. Визначено учасників за початкування процесу стандартизації зелених облігацій і параметри отримання статусу зелених цінних паперів. Використовуючи низку літературних джерел, авторами обґрунтовано сильні та слабкі сторони ринку зелених облігацій. Регіональний аспект випуску зелених облігацій підкріплюється прикладами провідних країн-емітентів. Аргументована позиція Європейського континенту як лідера з випуску зелених облігацій. Проаналізовано річні вартісні обсяги зелених облігацій і сфери використання отриманих доходів. Обґрунтовано тенденції розвитку та глобальний потенціал ринку зелених облігацій. Наведено напрями зеленого інвестування в нестабільних ринкових умовах, узагальнено загальні риси зеленого фінансування. Визначено місце ETF у ланцюжку залучення інвесторів на ринок зелених облігацій.

У статті проілюстровано динаміку основних індексів зелених облігацій із поясненням критеріїв їх відбору. Наголошено, що сучасне суспільство цілеспрямовано починає ефективніше використовувати ринки кліматичного фінансування для поетапного переходу до зеленої економіки. Узагальнено перешкоди на шляху до розширення операцій на ринку зелених облігацій. Окреслено перспективи подальшого розвитку ринку зеленого фінансування для посилення синергії екології та фінансів.

**Ключові слова:** *сталий розвиток, зелена економіка, зелені облігації, ринок зелених облігацій, екологічні проєкти, кліматичні інвестиції, фінансування, фінансовий аналіз*

**JEL classification:** *E22, F21, F64, G12, O13, Q55*

**Introduction.** Climate change is the consequence of decades of inefficient land use, energy production and consumption running contrary to the principles of sustainable development. Climate change mitigation and adaptation to the Sustainable Development Goals (SDGs) require significant investment in productive capacity. The international community has recognized the lack of climate finance as a critical issue that society must address in order to face global challenges in the future.

International investment in SDGs declined significantly in the first year of the COVID-19 pandemic. And the result of 2021 was comforting, when the figure increased by 70%. However, the bulk of investment growth was observed in energy efficiency and renewable energy, with project costs more than tripling to pandemic levels. Last year, the volume of announced agreements on international project financing reached a record level - 1262 projects [1].

Inevitable climate change and a time gap require an urgent transition of society towards a green and low-carbon economy. One

option is to leverage the potential of financial markets to finance climate projects. Green bonds are an important tool for measuring the impact of climate change on the financial system in general and financial markets in particular. Green bonds help different types of issuers mobilize regular debt investments in climate-friendly programs to offset the effects of climate change on organizations, countries and the world at all.

**The purpose of the article** is to substantiate the needs for the expansion of green financing in the conditions of external economic and political risks.

**Literature review.** The concept of sustainable development and natural resource management in the world economy is under the scrutiny of many scientists. Close attention is paid to new trends in the formation of a “green” economy and “greening” of the international financial system and the mechanisms for the application of various financial and digital instruments.

S. Fatica and R. Panzica [2] consider green bonds as a cheaper instrument for financing sustainable investments compared

to others, and emphasize that a reduction in the cost of capital for green bond issuers will be facilitated by an improvement in credit quality. A.-B. Alonso-Conde and J. Rojo-Suarez [3] analyze the presence of additional financial incentives for issuing green bonds, in contrast to bank loans, and show the prospects for an increase in the internal rate of return when shareholders issue green bonds to finance capital investments. F. Baldi and A. Pandimiglio [4] investigate the factors that most affect the profitability on government and corporate green bonds. Predecessors of this kind of research are several authors who in 2020 assessed the consequences of issuing corporate green bonds using financial control for various indicators of profitability and yield [2; 5]. Thus, the issuance of green bonds by corporate companies confirms their commitment to a clean environment.

Some papers examine the green bonds potential to finance climate projects for developing countries [6], for Sweden as a case study [7], for the USA green infrastructure projects [8], for the supply of Italian ESG bonds [9]. T. Bieliński and M. Mosionek-Schweda summarize the examples of leading countries in issuing “green” bonds to use the potential of a growing market [10]. C. Giuseppe and I.-C. Panetta conduct an extensive review of the literature on the environmental bond market [11].

Studies [12; 13] address the “greenium” effect, i.e. the difference between the yields on ordinary bonds and green bonds, *ceteris paribus*. And borrowing cost advantage affects the uneven distribution of green capital among large investment-grade issuers. Investors, companies and politicians are provided with guidance on how to overcome the risks of green laundering, and use the wide potential of green bonds in financing SDGs [4; 14; 15].

Green bonds need to be further explored as a key financial instrument for channeling financial resources into environmental, sustainable and social projects in an unstable political and economic environment.

**Research results.** The green bonds are part of an expanding market for responsible investment. These instruments have been put into circulation to accumulate resources

in climate and environmental projects, and allow receiving a fixed income on the terms of placement. The growth of their issuance has become a global trend of the last decade. Raising funds using sustainable investment standards (ESG Principles), as well as issuing bonds in line with the 17 SDGs, are becoming increasingly popular, as they will allow issuers to quickly raise additional capital.

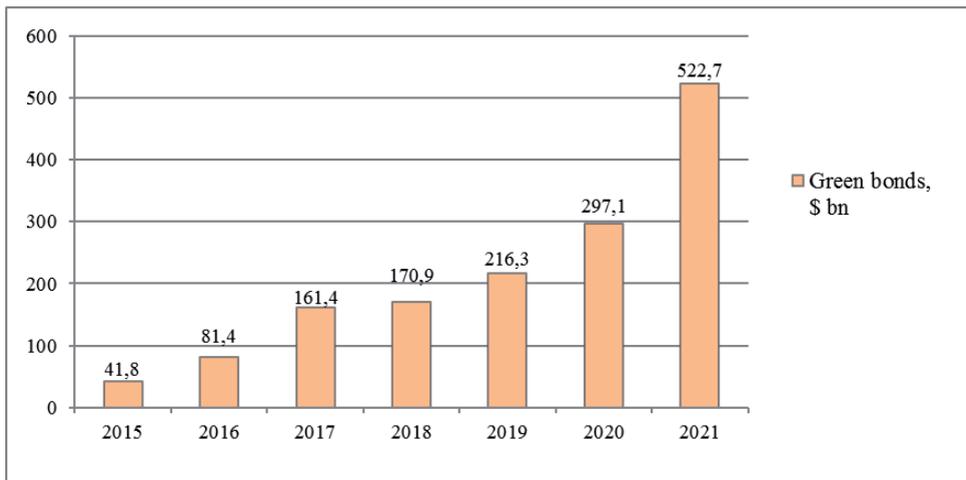
Investments in energy, construction, transport require debt financing until 2035 to meet recovery goals. The annual volume of green investments should reach \$9 tn to bring the economy to net-zero by 2050 [16]. The IFC estimates the potential for attracting green finance to Ukraine by 2030 at \$73 bn [17].

Annual green bond issuance in 2021 was \$522.7 billion and has increased significantly since 2020 (Fig. 1). This lifted the cumulative total to \$ 1.6 trillion. Green bond issuance is expected to expand as the UN Principles for Responsible Investment have resonated with investors and they will more widely implement environmental, social and governance (ESG) goals.

In today’s conditions, the progress of the market is enormous, but green bond issuance accounts for less than 1% of the total bond issues. Therefore, there are opportunities for further expansion of activity [18].

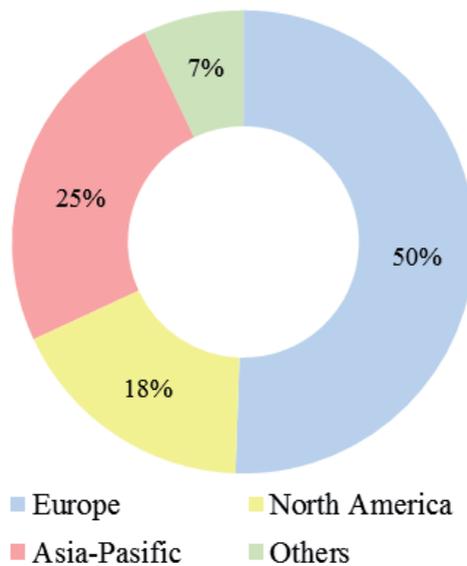
Further market acceleration requires the cooperation of many interested parties. The question is whether green bonds really attract additional investment, or whether they simply rename regular bond issues. However, this does not eliminate the need to “green” the ordinary bond market, and also leaves environmental issues as a priority. During 2020-2030, the EU plans to attract €350 bn annually in additional investments to reduce harmful emissions, plus €130 bn for other environmental areas [15]. After Russia attacked on Ukraine, Germany is pushing for a transition to renewable energy sources and wresting independence from aggressor’s fossil fuels. So, green bond issuance could top \$1 tn in 2022 as debt financing needs to address climate change risks grow.

Europe secured its place as the world leader in issuing green bonds in 2021. European developed countries together contributed \$265 bn (50%) to the total (Fig. 2).



**Fig. 1. Annual green bond issuance in the world (\$ bn)**

Source: developed by the authors on the basis [19]



**Fig. 2. Annual green bond volumes, per region, 2021 (%)**

Source: developed by the authors on the basis [19]

Asia-Pacific became the second best performing region for green bonds (25%), although it demonstrated the fastest annual growth (129%). 70% of the \$129.5 bn was generated by three countries in the region: China, Japan and Singapore. As part of the green bond theme, North America ranked third with \$92 bn in 2021, up 55% from the previous year [19]. Issuers from other regions (Latin America and the Caribbean, Africa) and Supranational entered the

market, providing a total issue volume of \$36.2 bn.

In 2021 there were identified 839 issuers of green bonds from 58 countries. Let's consider individual countries in the green bond market. In 2021, the leadership of the source country of green bonds was retained by the United States, the volume of which increased by 63% and amounted to \$81.9 billion. And China came in third with \$68.1 bn in green bonds (Fig. 3).

By cumulative balance, the US total is \$304 bn, 52% more than China, which is the second largest country in terms of green bonds value (\$199 bn). European green bond issuance grew to \$265 bn in 2021 from \$156 bn in 2020. The annual volume of German green bonds for the year increased by 49% to \$63.2 bn. This is due to the significant growth of financial corporates. Total French-flagged issuance remained flat at \$36 billion in 2020, up from \$37 billion in 2020.

Looking at the share of categories in attracting green investment for 2021, renewable energy had the largest share (35%), closely followed by investment in low-carbon buildings (30%), followed by investment in transport (Fig. 4).

All areas of proceeds use showed growth compared to 2020, settling down from 820% in Industry to 30% in Transport.

Green bonds are a powerful financial instrument providing investors with seed

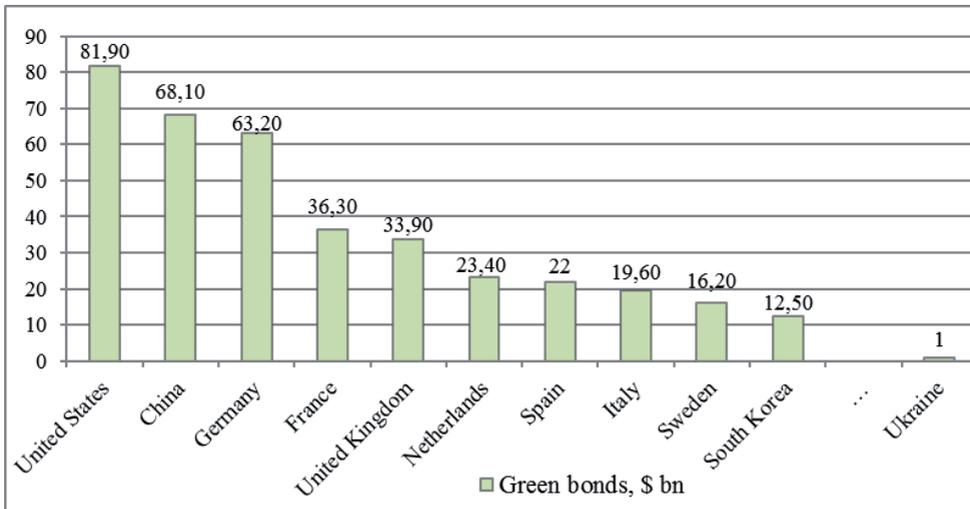


Fig. 3. Value of green bonds issued in leading world countries, 2021 (\$ bn)  
Source: developed by the authors on the basis of [20]

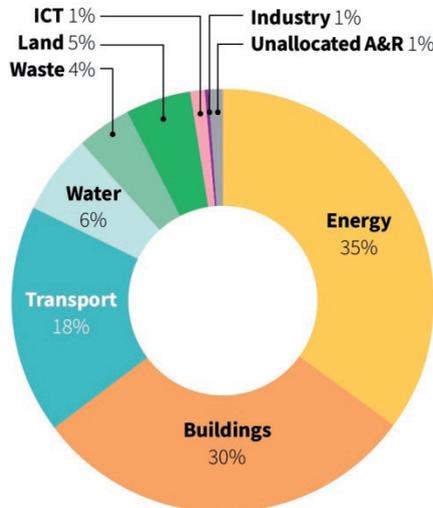


Fig. 4. Use of proceeds in the world, 2021  
Source: [19]

capital for environmental shifts. Let's note that "green" bonds are particularly suited to meet the needs of institutional investors by providing them with appropriate investment vehicles to leverage their significant capital on a large scale. Increasing institutional and regulatory pressure on large investors accelerates the adoption of climate-sensitive investment strategies. At the same time, green bonds also create new risks for the financial sector in order to safely prioritize "green" areas for sectoral and socially responsible investment.

The top 10 certified climate bond issuers include two companies from China: China Development Bank and Industrial and Commercial Bank of China (ICBC). In Table 1, they took first and third places, respectively.

Green bonds are attractive to institutional investors and stakeholders for many reasons, and can also offer an access to low-carbon investments too through a wide range of channels [21].

The first climate bonds were issued in 2007, which marked the beginning of the formation of this type of asset. In the same year, the European Investment Bank issued bonds worth 600 million euros, which were listed on the Luxembourg Stock Exchange. A characteristic feature of the first issue was the absence of an independent certification confirming the climate orientation of the bonds, as well as the absence of a

special reporting mechanism on the use of funds raised. This is explained by the fact that in 2007 the climate bond market was just beginning to take shape and was institutionally underdeveloped.

In 2008, the World Bank, represented by the International Bank for Reconstruction and Development (IBRD), entered this market. This issue in 2008 was the first issue of green bonds, since the bonds of the European Investment Bank, issued in 2007, were called not green, but climate bonds (Climate Awareness Bond). The issuance of these bonds by the World Bank was prompted by demand from Scandinavian pension funds interested in investing in instruments of the highest credit quality. Thus, institutional investors accepted the first issue of the World Bank's "green" bonds in the amount of 2.85 billion Swedish kronor. Proceeds from this issue went to finance projects that help minimize carbon dioxide emissions into the atmosphere. The projects were checked according to the criteria developed by the World Bank experts. The "sustainability" of these criteria is confirmed by the conclusion of an independent third party - the International Center for Climate and Environmental Research (University of Oslo). There was a need to develop protocols as a guide for investors and issuers.

For this purpose, in 2009 the non-profit international organization "Climate Bond Initiative" (CBI) was created, which today

Table 1

#### Leading climate bonds certified issuers, 2021

Name	Country	Certified, \$ bn
China Development Bank	China	7.4
Société du Grand Paris	France	5.8
ICBC	China	4.2
Queensland Treasury Corp	Australia	2.2
ABN AMRO Bank NV	Netherlands	2.2
DNB ASA	Norway	1.8
Republic of Chile	Chile	1.2
Westpac	Australia	1.2
FS Italiane	Italy	1.2
Renew Power	India	1.0

Source: developed by the authors on the basis of [19]

works exclusively to mobilize the bond market to find solutions to combat climate change. The standards developed by the CBI are voluntary. In 2012-2015 four sectoral (industry) standards were developed and approved. They do not oblige issuers to certify bonds planned for issuance; the presence or absence of a certificate of compliance with “climatic” or “green” labeling does not yet formally affect the ratings of such bonds.

For the first time the issue of balancing the interests of participants in the green bond market were officially raised in November 2013 at a symposium organized by the IBRD. As a result of the discussion, the Green Bond Principles were published in January 2014. And the International Capital Markets Association gradually expanded its remit to include a set of green lending principles. In 2018, in addition to the GBP, the Green Credit Principles (GLP) were published.

At the end of 2018, climate bond classification standards (Climate Bond Taxonomy) were published. They were

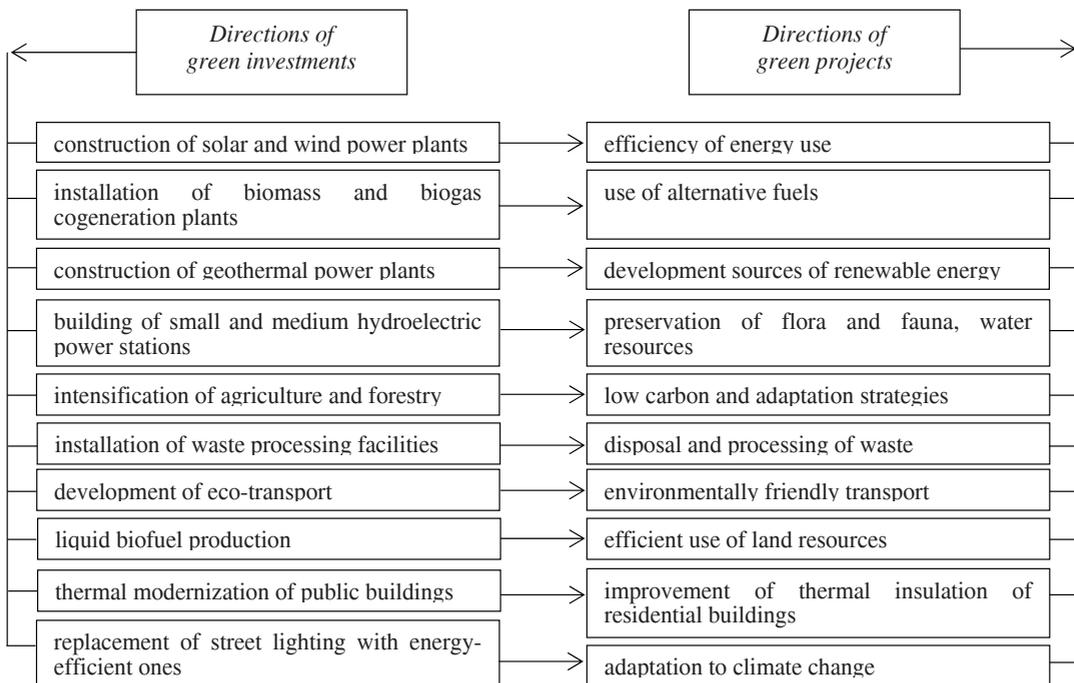
developed by a group of EU technical experts following the signing of the Paris Agreement in 2015, in which 196 countries agreed to limit global temperature rise to 2°C above pre-industrial levels.

In world practice today, many countries use green bonds as a tool to attract investments in environmentally friendly projects. Let us consider the main areas of modernization of the green economy (Fig. 5).

The increase in the attractiveness of green bonds is explained by their admissibility as an investment asset for joint investment institutions and for non-state pension funds.

There is an attractive mechanism for protecting investors – the issuer of environmental investment bonds does not have the right to take actions that may result in early termination or loss of rights to a green investment project. For banking operations with green bonds, they are included in the list of securities accepted as collateral for refinancing loans.

The common features of green financing are:



**Fig. 5. The main directions of green economy modernization**

Source: developed by authors

- an increased level of initial capital investments;
- a longer period of depreciation of assets and return on investments compared to ordinary investments;
- maturities mismatch – mismatch between depreciation of green assets and maturity of liabilities;
- benchmark-eligible – including the green bonds to benchmark indices, which is a relative indicator of the effectiveness of green bonds and their comparison with other assets;
- possible greenwashing – intentionally misleading of investors and state authorities regarding the directions of funds using received from the green bonds issue, compliance with the principles of environmental efficiency.

In the financial market, investors use stock information to compare the effectiveness of different types of investments and predict possible price fluctuations. Since the advent of the green bond market, green bond indices (GBIs) have been developed for benchmarking and liquidity analysis. It is important to develop the issues of optimizing the indicators of the information security system in the context of dynamic confrontation [22]. Green bond indices are also a protective mechanism in the market, reflecting the reaction of participants to the reputation of a green bond issuer.

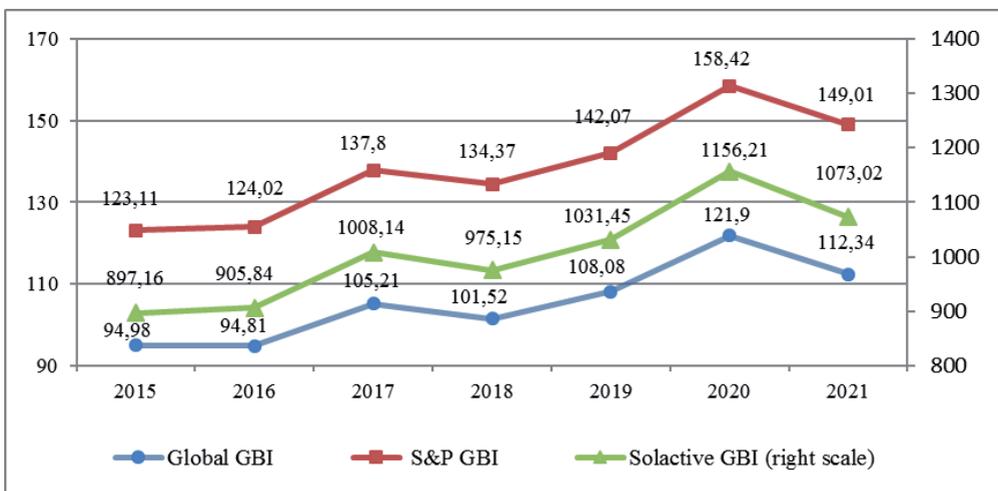
There are four rules-based famous indices [19]:

- Bloomberg Barclays MSCI Global GBI;
- Bank of America Merrill Lynch GBI;
- Standard & Poor’s GBI;
- Solactive GBI.

It is worth noting that these indices have different criteria for including bonds in their list, and this can be used by investors to choose an easier way of indexing.

It is worth noting that these indexes have different criteria for including bonds in their list, and this can be used by investors to choose a simpler indexation method.

Let us consider the available statistics for the three indices. In the year prior to the entry into force of the Paris Climate Agreement, the Bloomberg Barclays MSCI Global Green Bond Index (2014) was used as a navigator in the green bond market. During the analyzed period 2015-2021, this index showed growth dynamics with a maximum value of 121.90 index points in 2020. However, by the end of 2021, the indicator fell to 112.34. The S&P GBI shows a similar trend (Figure 6). The Solactive GBI is shown on the right side of the graph as it is calculated in USD. Despite differences in calculations, the graphical representation of the Index confirms the overall vector of green bond indices.



**Fig. 6. Dynamics of the green bond indices**  
 Source: developed by the authors on the basis [23; 24; 25]

– Bloomberg Barclays MSCI GBI is available for analysis, which offers investors a reliable and fair picture of fixed income debt financing for green projects. To obtain the status of green bonds, securities are evaluated according to four parameters [23]:

- declared use of proceeds;
- sequence of assessment and selection of environmental projects;
- revenue management process;
- obligation to constantly report on the environmental indicators of the use of benefits.

Worth mentioning are non-standardized indices, such as the J.P. Morgan Green Bond index, which is not identical to the J.P. Morgan ESG GBI. This is an index of market capitalization with the added change in the weight of green bonds according to the ESG ratings. In fact, the leading underwriter of green bonds in 2021 was the American J.P. Morgan (Fig. 7). The company has pledged \$2.5 tn over the next decade to fight climate change. Among the 15 largest underwriters half are represented by European banks. While US banks covered about 20% of green deals, which is a tenfold increase compared to 2019.

As we can see in Fig. 7, the BlackRock was the largest owner of green bonds, holding about \$14.5 bn. The corporation increased its market share from 2 to 7%. BlackRock's green bond portfolio is highly diversified: from corporate green bonds of Apple and

banks of Sweden to government green bonds of Chile and Japan. Vanguard Group was second with a market share of 4.7%.

Modern society purposefully begins to effectively use climate finance markets for a step-by-step transition to a green economy.

The expected effects of the green bond market' wider introduction will be:

- reducing the consumption of fuel and energy resources and reducing greenhouse gas emissions;
- the multiplier effect of attracting investments in the main sectors of the world economy;
- strengthening the energy independence of countries and the implementation of national strategic objectives;
- development of the securities market;
- improvement of investment attractiveness, business climate and competitiveness of countries;
- integration of technical aspects into national strategies aimed at consolidation of the financial market with the expected results of sustainability;
- promoting the involvement of interested parties and the empowerment of local communities;
- formation of environmental and social results in the real sector of the economy using a set of response channels, as well as political, regulatory measures and international cooperation;

Table B Global Green Bonds Corporate & Government

Manager	Rank	Vol (MM USD)	Table Share(%)	Issues Show (%)
J.P. Morgan	1	26,479.93	6.20	171/173
Credit Agricole CIB	2	22,294.65	5.22	116/125
BNP Paribas	3	21,844.50	5.11	129/143
Citi	4	21,343.10	5.00	149/154
Deutsche Bank	5	19,937.79	4.67	109/108
BofA Securities	6	19,689.29	4.61	126/132
HSBC	7	17,569.36	4.11	125/132
Barclays	8	11,302.71	2.65	78/81
Morgan Stanley	9	10,071.15	2.36	102/114
TD Securities	10	10,032.52	2.35	57/75
NatWest Markets	11	10,021.69	2.35	41/44
Danske Bank	12	9,884.85	2.31	97/95
Goldman Sachs	13	9,392.13	2.20	74/78
Banco Santander	14	8,752.44	2.05	56/61
Nomura	15	7,759.92	1.82	48/50

Top Green Bond Holders

Managing Firm Name	Held Amount (M)	% of Tot
1 BLACKROCK	14,420,203.19	6.95
2 VANGUARD GROUP	9,699,977.07	4.67
3 ALLIANZ SE	9,340,872.16	4.50
4 GOVINT PENSION INVEST FUND JAPAN	6,782,370.58	3.27
5 CREDIT AGRICOLE GROUPE	5,986,692.66	2.83
6 BNP PARIBAS	4,798,142.19	2.31
7 SWENSKA HANDELSBANKEN	4,763,679.60	2.29
8 SWEDBANK AB	4,344,926.70	2.09
9 NORDEA BANK APB	4,308,693.00	2.08
10 INTESA SANPAOLO SPA	4,145,833.29	2.00
11 DEUTSCHE BANK AG	3,862,500.73	1.86
12 TIAA-CREF	3,618,547.35	1.74
13 RW GROUP NV	3,185,460.92	1.53
14 UBS	2,448,012.20	1.28
15 UNION INVESTMENT	2,592,584.41	1.25

Fig. 7. Top green bond holders and underwriters, 2021

Source: [23]

– providing technical assistance to countries with developing markets and transition economies, facilitating the exchange of experience through existing international platforms;

– increasing productivity and quality of production due to the use of energy-efficient technologies, creating a new source of income.

In the financial sector of many countries various additional opportunities have emerged over the past decade from private and public players to support the development of green financing. But there are following obstacles to expand of the green bond market:

– external verification procedures seem to be complicated and expensive;

– some issuers find it difficult to predict the economic profits of green bonds as the internal costs associated with additional management efforts are significant compared to conventional bonds;

– disputable situations when labeling bonds as “green”;

– strengthening reporting requirements for climate projects within use the proceeds;

– price advantages from the issuance of “green” bonds are seen as unstable and unordered;

– uncertainty about the list of assets and costs allowed to be financed by green bonds, which causes confusion when design environmental agreements.

A promising form of attracting funds from small investors to own green bonds is the so-called Exchange Traded Funds (ETFs). These funds form their assets by investing in financial instruments traded on stock exchanges, and also raise funds from small depositors by placing their shares with a small nominal value among them.

In order to facilitate the research on sustainable fixed-income products, here is a list of 5 green bonds ETFs that have successfully attracted investors in 2021 [26]:

1. Xtrackers EUR Corporate Green Bond UCITS ETF, +\$ 145 million.

2. iShares Global Green Bond ETF, +\$ 124 million.

3. Xtrackers USD Corporate Green Bond UCITS ETF, +\$ 122 million.

4. Lyxor Green Bond UCITS ETF, +\$ 75 million.

5. Franklin Liberty Euro Green Bond UCITS ETF, +\$ 66 million.

So, ETFs can offer investors a convenient solution for adding a sustainable dimension to their fixed income portfolios and give them many benefits such as quick diversification, low costs, and easy trading.

**Conclusions.** With the issuance of green bonds, funds are attracted to environmentally efficient activities. Investments are allocated and used only to finance and/or refinance projects that will contribute to positive climate change and preservation of our planet.

As a debt instrument, a green bond is a fixed income security for its holder. Capital is raised from investors for an agreed amount within a set period of time, with coupon payment at the end of the term. A feature of green investment is the procedure for labeling a bond when it meets environmental criteria.

To expand the financial system’s ability to mobilize resources when issuing green bonds, it is advisable to pay attention to the following:

1. Launching a new highly efficient and liquid asset on the market, which will allow a wide range of investors to gain access to green investments.

2. Giving the regulatory bodies’ access to a wider range of investors.

3. Stimulating the green bond market by regulating the institution of independent appraisers and verifiers of securities.

4. Diversification by investors of their environmental investment portfolios through high-value liquid assets.

5. Confirmation of issuers’ commitment to sustainable financing.

The creation of a green bond market is an important step for Ukraine on the way to implementation European standards for the development of a green economy and environmental protection. A promising financial instrument that meets the requirements of the global capital market will allow to accumulate and concentrate financial flows for the development and resource provision of domestic projects for environmental post-war reconstruction.

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## **RATIONALES FOR EFFICIENT AND EFFECTIVE GREEN FINANCING UNDER EMERGENCY RULES**

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The article is devoted to the current topic of environmental protection through the joint efforts of government and business with the help of innovative schemes for attracting investments in ecological developments. Based on data from international organizations, a thorough study of global trends in the use of green bonds as a financing tool for environmentally important projects has been conducted. The changing climate of our planet requires the adaptation of sustainable development goals to the challenges of our time. And such an effective mechanism is green financing.

Green bonds are considered as an impact investing mechanism. The participants in the initiation of the standardization process of green bonds and the parameters for obtaining the status of green securities have been determined. Using a number of literary sources, the authors substantiated the strengths and weaknesses of the green bond market. The regional aspect of green bond issuance is reinforced by the examples of leading issuing countries. The position of the European continent as

a leader in issuing green bonds has been argued. The annual value of green bonds and directions for using the proceeds have been analyzed. The development trends and global potential of the green bond market have been substantiated. The authors have indicated the directions of green investment in unstable market conditions and summarized the common features of green financing. The ETF's place in the chain of attracting investors to the green bond market has been determined.

The article illustrates the dynamics of the main green bonds indices with an explanation of their selection criteria. It has been emphasized that modern society purposefully begins to use climate finance markets more effectively for a step-by-step transition to a green economy. Obstacles on the way to the expansion of operations on the green bond market have been specified. The prospects for the further development of the green financing market have been outlined to strengthen the synergy of ecology and finance.

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