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Green Financing in Kazakhstan: Current State and Prospects

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Abstract

The purpose of this article is to assess the current state of green finance in Kazakhstan and build proposals for further development. The methodological basis of the scientific article was the general scientific methods of systematization of theoretical data, methods of scientific observation of economic processes, structural-logical and system analysis. Based on the study of the theoretical aspects of green financing and the analysis of structural programs and the legislative framework, the conceptual features of the Kazakh model of green financing were identified. The analysis tool was a statistical study of the financial market of Kazakhstan. A comparative analysis of the state of the green bond market was carried out on the basis of two parameters of the Climate Bond Initiative (CBI) database: the Green bond database of the Climate Bond Initiative (GBDB), the database of social bonds and sustainable development bonds (SSBD). The CBI statistical data formed on the basis of the study due to the fact that this organization determines the rating of green securities and makes a listing of issuers, and is also the main source of collecting and distributing information about green financial instruments on a global scale, especially about green bonds and certification. Statistical data were selected for 2021, as the issue of green securities in Kazakhstan began that year, and the country entered the world system as an accredited member and prospective partner of the global green bond market. The main result is the identification of current global trends in the development of green finance in Kazakhstan. Conclusions were drawn that the study and implementation of best practices in the field of green finance in the republic has been developed thanks to strong state support. The research proposed in the article can assist researchers in formulating research problems related to green finance.

Keywords: Sustainable Innovation Strategy, Green Economy, Green Financing, Green Bonds, Sustainable Development Goals

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Қазақстандағы жасыл қаржыландыру: ағымдағы жағдайы мен болашағы

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Түйін

Мақаланың басты мақсаты - Қазақстандағы жасыл қаржыландырудың ағымдағы жай-күйін бағалау және одан әрі дамыту ұсыныстарын әзірлеу. Ғылыми мақаланың әдіснамалық негізі теориялық деректерді жүйелеудің жалпы ғылыми әдістері, экономикалық процестерді ғылыми бақылау әдістері, құрылымдық-логикалық және жүйелік талдау болды. Жасыл қаржыландырудың теориялық аспектілерін зерделеу және құрылымдық бағдарламалар мен заңнамалық негізді талдау негізінде жасыл қаржыландырудың қазақстандық моделінің тұжырымдамалық негіздері мен ерекшелігі белгіленді. Талдау құралы ретінде қаржы нарығын статистикалық зерттеу алынды. Жасыл облигациялар нарығының жай-күйін салыстырмалы талдау Climate Bond Initiative дерекқорының (СВІ) екі параметрі негізінде жүргізілді: Климаттық облигациялар бастамасының жасыл облигациялар дерекқоры (GBDB), әлеуметтік облигациялар және тұрақты даму облигациялары дерекқоры (SSBD). СВІ статистикасы зерттеудің негізін қалады, өйткені бұл ұйым әлемдік масштабтағы жасыл қаржы құралдары туралы, сонымен қатар, жасыл облигациялар туралы ақпаратты жинау мен таратудың негізгі көзі, сондай ақ, сертификаттауды жүргізеді, жасыл бағалы қағаздардың рейтингін анықтайды, эмитенттердің листингін жасайды. Статистикалық деректер 2021 жылы тандалды, өйткені Қазақстанда жасыл бағалы қағаздар шығару осы жылдан бастап жүзеге асырыла бастады және ел әлемдік жүйеге жаһандық жасыл облигациялар нарығының аккредиттелген мүшесі және перспективалы серіктесі ретінде енді. Негізгі нәтиже еліміздегі жасыл қаржыландырудың заманауи жаһандық даму тенденцияларын анықтау. Республикада жасыл қаржыландыру саласындағы үздік тәжірибелерді зерделеу және енгізу қуатты мемлекеттік қолдаудың арқасында дамыды деген қорытындылар жасалды. Мақалада ұсынылған зерттеу бағдарламасы зерттеушілерге жасыл қаржыға қатысты зерттеу мәселелерін тұжырымдауға ықпал етуі мүмкін.

Түйін сөздер: тұрақты инновациялар стратегиясы, жасыл экономика, жасыл қаржыландыру, жасыл облигациялар, тұрақты даму мақсаттары.

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Мүдделер қақтығысы: авторлар мүдделер қақтығысының жоқтығын мәлімдейді.

Қаржыландыру. Жарияланымға арналған деректер жас ғалымдарға арналған ғылыми және (немесе) ғылыми-техникалық жобалар бойынша ғылыми зерттеулерді гранттық қаржыландыру, АР08053346 «Тұрақты даму инновациясын олардың экономикалық мақсаттылығы тұрғысынан зерттеу және Қазақстан Республикасында кәсіпорынды тиімді басқаруды құру» ғылыми жобасының қаржылық қолдауымен жүзеге асырылды.

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Зеленое финансирование в Казахстане: текущее состояние и перспективы

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Аннотация

Цель данной статьи – оценка текущего состояния зеленого финансирования в Казахстане и разработка предложений для дальнейшего развития. Методологической основой данного исследования послужили общенаучные методы систематизации теоретических данных, методы научного наблюдения экономических процессов, структурно-логический и системный анализ. На основе изучения теоретических аспектов зеленого финансирования и анализа структурных программ и законодательной базы были обозначены концептуальные особенности Казахстанской модели зеленого финансирования. Инструментарным методом анализа явилось статистическое исследование финансового рынка Казахстана. Сравнительный анализ состояния рынка зеленых облигаций был проведен на основе двух параметров базы данных Climate Bond Initiative (СБИ): базы данных зеленых облигаций Инициативы по климатическим облигациям (GBDB), базы данных социальных облигаций и облигаций устойчивого развития (SSBD). Статистические данные СБИ легли в основу исследования в связи с тем что, данная организация определяет рейтинг зеленых ценных бумаг и составляет листинг эмитентов, а также является основным источником сбора и распространения информации о зеленых финансовых инструментах в мировом масштабе, в особенности о зеленых облигациях и сертификации. Статистические данные были выбраны за 2021 год, так как выпуск зеленых ценных бумаг в Казахстане начал осуществляться с этого года, и страна вошла в мировую систему в качестве аккредитованного члена и перспективного партнера глобального рынка зеленых облигаций. Основным результатом является выявление современных глобальных тенденций развития зеленого финансирования в Казахстане. Были сделаны выводы о том, что изучение и внедрение лучших практик в области зеленого финансирования в республике получило развитие благодаря мощной государственной поддержке. Программа исследований, предложенная в статье, может способствовать исследователям в формулировании исследовательских проблем, связанных с зелеными финансами.

Ключевые слова: стратегия устойчивых инноваций, зеленая экономика, зеленое финансирование, зеленые облигации, цели устойчивого развития

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Introduction

Recently, the topic of “green financing” and “green bonds” has been actively discussed both at the state level and among private issuers and investors. Sustainability accounting is a practice fundamentally influenced by views of stakeholders, including investors, regulators, and customers (Gray, 2010). Sustainable investment has emerged as a potential solution to social and ecological issues by rendering the financial markets more accountable for such impacts (Richardson, 2013). Sustainable investment refers to the integration of environmental, social, and governance factors in investment decision-making (Global Sustainable Investment Alliance, 2020). Debt instruments remain important factors in making financial decisions. Such advantages include the possibility of a flexible payment schedule, various methods of increasing creditworthiness, long-term project schedules, options for using borrowed funds and other advantages that ultimately reduce financial costs (Curley, 2014). The International Capital Markets Association defines green bonds as “any type of bond instrument whose funds will be used exclusively to finance or refinance, in part or in full, new and/or existing eligible green projects.” In this regard, institutional and socially responsible investors are interested in it (Clapp C. S. et al., 2015).

The concept of green development was proposed by the World Bank (World bank, 2021), the Organization for Economic Cooperation and Development (OECD 2011), Climate Bond Initiative (CBI, 2022), Global Green Growth Institute (GGGI 2019), The Economic and Social Commission for Asia and the Pacific, (ESCAP, 2022). Summarizing the main provisions of these documents, the following criteria of the green economy concept can be made: Green development is inevitable and this is the only way to preserve not only the environment, but also sustainable development in all directions. Green development will teach producers and consumers to respect the environment and adjust the goals of their activities taking into account the needs of sustainable development.

“Green bonds”, as well as green financing, became known in the world of Kazakhstani business relatively recently, when the role of the E-factor in ESG and the ESG principles themselves (Environmental, Social, Governance) has sharply increased. The environmental agenda has penetrated the stock market. Now investors want not only to multiply their wealth, but also to take care of the world around them (Miralles-

Quiros et al., 2017). If the following conditions are met, Green bonds will contribute to both environmental and financial performance: green bonds should be made tax-exempt, or at least with lower taxes than conventional bonds; policy-makers should invest in environmentally responsible education, providing proper information and elicitation of consumers’ green preferences, so as to affect consumers-investors’ demand and increase investors’ green mandate; transparency should be increased on green projects, so as to improve the issuer’s creditworthiness; the cost of obtaining and monitoring the green label should be reduced. These measures could be especially necessary in the case of developing economies, where the debt markets have not matured enough to be able to properly leverage this innovative instrument (Agliardi & Agliardi, 2019).

The issue of “green” bonds is an important milestone for the further development of the financial system of Kazakhstan. Considering the expected external conditions for the development of Kazakhstan’s economy under the baseline scenario (the world oil price is 60 US dollars/barrel) and the forecast of macroeconomic indicators for 2022-2024, state budget revenues (excluding transfers) are projected to grow from 12,626.0 billion tenge in 2022 to 14,639.4 billion tenge in 2024 (Official Information Source of the Prime Minister of the Republic of Kazakhstan, 2021). An important precedent and a convenient tool for attracting financial resources have been created: many large companies in Kazakhstan will be able to follow this example, as they understand that it is impossible to stay away from the development of a “green” economy (Salapayeva, 2020).

Kazakhstan entered the Global Green Finance Index (GFI) for the first time recently and immediately took the first place in the region of Eastern Europe and Central Asia. The green bond market appeared in the country less than a year ago (Richardson, 2013).

At the same time, the threat posed by climate change challenges Kazakhstan’s economy with high energy intensity and emission intensity. Currently, Kazakhstan consumes two to three times more energy per unit of GDP than the average for OECD countries. It is also the largest source of greenhouse gas emissions in Central Asia, with per capita emissions among the highest in the world. Kazakhstan is already experiencing the effects of climate change, including drought, desertification, and agricultural degradation. In addition, global progress

towards a low-carbon future, encompassing market shifts towards renewable energy sources and policy frameworks limiting greenhouse gas emissions, may limit future demand for fossil fuels, which poses risks to the economy of Kazakhstan and may lead to the “depletion” of fossil fuel reserves. The COVID-19 pandemic has had a significant impact on the economies of countries. Quarantine measures and related restrictive measures, on the one hand, made it possible to contain the spread of COVID-19, but at the same time significantly limited economic activity. In this regard, to mitigate the consequences of the COVID pandemic and post-crisis recovery, many Governments are reviewing national development plans and strategies. It is very important that at this stage in the post-crisis agenda, the transition to a “green” economy is of priority importance, which, in turn, will not only contribute to economic diversification, create new jobs, improve the environmental situation and overall improve the quality of life of the population, but also allow Kazakhstan to fulfil its international obligations under the Paris Agreement and the global Agenda for Sustainable Development until 2030 (Bekmagambetova, 2022).

The authors of this article assess the spread of new type of finance in our country in the financial services sector, the potential impact of the green finance segment on market players and identify its drivers. In addition, the authors highlight the SDGs and green finance tools in Kazakhstan.

Materials and methods

The methodological basis of the research is the fundamental research of foreign and Kazakhstani authors in the field of green finance, digitalization of the financial sector and the development of financial innovations affecting the development of green finance.

The purpose of this article is to assess the current state of green finance in Kazakhstan and develop proposals for further development. Based on the study of the theoretical aspects of green financing and the analysis of structural programs and the legislative framework, the conceptual foundations and features of the Kazakh model of green financing were identified. The methodological basis of the scientific article was the general scientific methods of systematization of theoretical data, methods of scientific observation of economic processes, structural-logical and system analysis. A comparative analysis of the state of the green

bond market was carried out on the basis of two parameters of the Climate Bond Initiative (CBI) database: the Green bond database of the Climate Bond Initiative (GBDB), the database of social bonds and sustainable development bonds (SSBD). The CBI statistical data formed the basis of the study due to the fact that this organization is the main source of collecting and distributing information about green financial instruments on a global scale, especially about green bonds, and conducts certification, determines the rating of green securities, and makes a listing of issuers. Statistical data were selected for 2021, as the issue of green securities in Kazakhstan began that year, and since the country entered the world system as an accredited member and prospective partner of the global green bond market.

The main result of the research paper is the identification of modern global drivers of the development of green finance in the country. It is based on the general scientific method of systematization of theoretical data, as well as on the method of comparative and statistical analysis.

While some studies have focused only on species descriptions, other works have focused on how the current state-of-the-art fractional environment technologies have evolved and their feasibility. Innovation is the driving force of economic development and contributes to industrial changes and structural changes in the field of green finance.

After a thorough analysis of various academic sources, a list of the most valuable for a particular study was compiled. The reports of the NBK and the AIFC on green bond system and database of Climate Bonds Initiative, Sustainable Stock Exchanges Initiative have practical meaning, interest, and relevance for research. The results of the study can be used in perfect combination with other studies to harmonize or even contrast modern views on the management and economics of green finance. This publication focuses on key issues. The data of the research of the AIFC and the states programs where the impact of green finance on the economy has been reflected in digital format, so that we can talk about sufficient influence and significant changes in the financial market.

Results and discussion

The SDGs represent ambitious and transformational plans. Companies that play a leading role in this process and position the SDGs as a prism through which strategies will

be developed will eventually have much more advantageous positions to use market opportunities, manage emerging risks and maintain a long-term license to operate in this direction until 2030. The time has come for all of us, as individuals, institutions, and industry representatives, to look at what we need to do to accelerate the pace and scale up our activities, and to help develop business solutions for the implementation of this crucial global action plan. Peter Bakker, President, and CEO of WBCSD (World Business Council for Sustainable Development).

The SDGs offer the foundations for such a transformation. The 17 goals adopted in 2015, and related tasks success indicators help organizations navigate the current environmental, social, and economic problems of the modern world. In terms of business opportunities, the SDGs have the potential to generate trillions of dollars in revenue and cost savings, as well as create hundreds of millions of new jobs.

When considering these indicators, 15 of the 17 goals are directly related to the “green” economy, that is, almost the entire Development Agenda until 2030 is focused on the transition of humanity to a “green” economy. Just like in other countries, the process of implementing the Sustainable Development Goals in Kazakhstan began with the nationalization of tasks and their integration into state development programs. The guidelines of the Agenda until 2030 almost completely coincide with the priorities and tasks of the country outlined in the key strategic documents of the country – the Strategy Kazakhstan-2050, the National Plan – 100 concrete steps to implement five institutional reforms, the Concept of Family and Gender Policy until 2030 and the Strategic Development Plan of Kazakhstan until 2025 have already been developed in such a way, that they contain most of the SDGs. The creation of a system for monitoring the Sustainable Development Goals and reporting is one of the tools to ensure the effectiveness of their implementation (Khmelev, 2022).

Kazakhstani policy on Green Financing.

Kazakhstan is actively working on the nationalization of SDG indicators, the creation of a statistical database on SDGs, the identification of sources, data, and methodology for calculation. In the country, the functions of collecting, processing, and distributing data on the SDGs are assigned to the Statistics Committee of the Ministry of National Economy. Being on the 14th place in terms of greenhouse gas emissions, Kazakhstan has committed to reduce its carbon

footprint by 15% below the level of greenhouse gas emissions in 1992 by 2025. This reduction amounts to 58 million tons of CO₂ equivalent in accordance with the country’s nationally determined contribution to the Paris Climate Agreement. The energy sector is certainly the industry with the highest emissions: an estimated 215 million tons of CO₂ equivalent (Rakhimbekova, 2022).

The topic of “green” finance, as can be expected, will soon become widespread in the domestic legal science, which is predetermined by a common interest in the problems of sustainable development and the implementation of ESG principles (Nurgisayeva & Tamenova, 2020).

Kazakhstan has achieved a favourable business climate, conducted large-scale improvements in additional services and implemented a program of structural economic reforms. This contributed to a significant inflow of foreign direct investment and contributed to a gradual increase in competitive ability.

The transition to a “green” economy and “green” financing is an important part of the development strategy of the Republic Kazakhstan. Kazakhstan became the first state in Central Asia to create an organizational and legal basis for the transition to “green growth” through the adoption of several legislative documents. These include:

- The Law on Support for the Use of Renewable Energy Sources (RES) (2009);
- The Environmental Code of 2007, updated in 2021;
- The Concept of transition to a “green” economy (2013), which includes two phases (the first – 2013-2020, the second – 2021-2030).

In December 2020, at the “Summit of Climate Ambitions”, the head of state K.-Zh. Tokayev announced that Kazakhstan is committed to achieving carbon neutrality by 2060. Kazakhstan takes an active part in international cooperation in the interests of sustainable development, within the framework of the Green Bridge Partnership Program (GBPP), the most important component of which is the ideology of support Eurasian multilateral cooperation in the field of ecology.

The adopted Strategy “Kazakhstan-2050: a new political course of an established state” sets clear guidelines for building a sustainable and effective model of the economy based on green financial instruments. To achieve these goals, the Astana International Financial Centre e (AIFC) was established by the Decree of the President of the Republic of Kazakhstan No.

24 dated May 19, 2015. The initiative to create and develop the AIFC is a timely and reasonable step aimed at diversifying the national economy and modernizing the financial system. The AIFC is the key to creating a well-functioning capital market, thanks to which a freer and cheaper distribution of resources vital for economic growth becomes possible.

Considering the favourable conditions created, as well as taking into account the geographical location of Kazakhstan, the AIFC should become a regional hub of green finance, contributing to the development and management of green finance instruments in the Central Asian and Eastern European region, linking the best world practices of the West and the East on its site.

Many objective factors confirm that the AIFC has a unique opportunity to become a regional leader in the field of green finance. The functioning of the AIFC should be based on a long-term strategy for building the potential of Kazakhstan and the Central Asian region using innovative approaches and best international practices for the transition to a green economy. Based on the documents of the joint project of the AIFC and the European Bank for Reconstruction and Development to develop a draft Concept for the development of the green financial system of Kazakhstan, own analysis and research within the framework of the project, as well as a survey conducted among experts in the field of green finance, the following four strategic directions for the development of the AIFC in the field of green finance were identified:

1. Formation of a green finance hub based on the AIFC.
2. Formation of the market of green financial instruments.
3. Development of competencies in the field of green economy.
4. Improving the image of the AIFC as a hub of green finance at the regional and global level. The selected strategic directions include goals, objectives and activities, the implementation of which will allow the AIFC to take a leading position on the global map of green financial centres.

Green financial instruments are a component of the capital market, it is an expansion of the range of financial instruments, and, accordingly, opportunities for investors, mostly foreign, since the green theme is well developed in Western Europe, North America, and is already actively developing in Southeast Asia. Therefore, the AIFC keeps up with the times and pays attention to the development of green finance on its site.

The AIFC Green Finance Centre e was established on June 1, 2018, to develop and promote green finance in Kazakhstan and the Central Asian region. The Centre provides first aid to potential issuers, investors and market players on the issue of preparing for the issue of green bonds on the AIFC Exchange (Teltaeva, 2021).

The purpose of this direction will be to prepare for the formation of a regional green finance hub on the basis of the AIFC and to create comfortable working conditions in it for AIFC participants and organizations operating in the field of green finance on the AIFC platform. To achieve this goal, two tasks are defined, described below.

Task 1. Creating a favourable legal and economic environment for AIFC participants and organizations operating in the field of green finance on the AIFC platform and/or implementing green projects.

To implement this task, the following activities are expected to be carried out:

- development of a mechanism for subsidizing second opinion on green securities on the AIFC exchange (for 5-10 pilot issues of green securities);
- formation of proposals on benefits for consulting, educational, etc. services.

In order to stimulate the development of the green finance market on the AIFC exchange and attract participants who will be engaged in green finance, it is necessary to develop a mechanism for subsidizing second opinion when assessing risks and obtaining the most reliable information by exchange participants.

An Advisory Council on Green Finance has been established at the AIFC. The tasks of the Council are:

1. Advising the Governor, Administration and bodies of the AIFC on the policy and strategy of development and promotion of the AIFC as a regional hub of green finance in Central Asia and Eastern Europe;
2. Providing expert opinion on documents developed by the Administration and the AIFC bodies in the field of green finance development;
3. Involvement of leading international organizations in the field of green finance and sustainable development to promote the AIFC as a hub of green finance;
4. Participation in the selection and approval of the list of nominees for the annual AIFC Green Finance Award.

A focus group of the Council was created with the participation of representatives of industries to hold consultations on draft documents, amendments to acts developed by the AIFC Green Finance Centre e, discuss measures to support green projects, as well as develop new financial mechanisms for them.

In particular, focus groups have been created in the following areas:

1. Regulation of the AIFC in the field of green finance;
2. Legislation of the Republic of Kazakhstan in the field of green financing;
3. Investment solutions for green projects (green bonds);
4. Green projects and expertise;
5. Technical support and new financial instruments for green projects.

The President last year announced Kazakhstan’s intention to achieve carbon neutrality by 2060. At the beginning of 2021, a new environmental code was approved, which significantly increased responsibility for environmental pollution on the principle of “the polluter pays”. This year, it is also planned to develop by-laws within the framework of the implementation of the new environmental code and approve the Concept of low-carbon Development until 2050 with the inclusion of measures for “green” growth and deep decarbonization of the economy.

Table 1 below summarizes the main stages of issuing green bonds on the stock exchange in the capital.

Table 1. Stages of issuing green bonds according to Astana International Financial Centre

Stages	Name of the Stages	Description
STAGE 1.	Preliminary check	Preliminary consulting of companies that have shown interest in attracting financing through the issue of green bonds on the Exchange of the Astana International Financial Centre (hereinafter – AIX), employees of the Centre for Green Finance of the Astana International Financial Centre (hereinafter – CGF) for compliance of projects with the requirements of the Rules for the issue of green bonds on AIX and/or international standards (Principles of green bonds of the International Association of Capital Markets (ICMA Green Bond Principles), Standards of Climate Bonds Climate Bonds Initiative (CBI Climate Bonds Standards))
STAGE 2.	External overview	Development by the issuer of the procedure and principles for the placement of funds raised within the framework of the Green Bond issue (Green Bond Framework). 2. Determination of the method of independent evaluation: one of four types (second opinion, verification, certification, rating). The difference lies in the degree of verification of the issuer’s documents by the verifier and the investor’s requirements for the issuer. Preparation of an external review takes from two weeks to 50 working days (depending on the type of review)
STAGE 3.	Preparation for listing and admission to trading	1) Preparation of the issue prospectus in accordance with the requirements of AIX. In the case of a closed placement, it is possible to provide a simplified prospectus of the issue. 2) Preparation of listing documents and admission to trading in accordance with AIX requirements; 3) Review and approval of the prospectus and documents by the AIFC Exchange; 4) Receipt of the ISIN code through the Central Securities Depository of Kazakhstan
STAGE 4.	Crediting of bonds	Crediting of bonds to investors’ accounts and receipt of funds by the issuer

Source: Compiled by the authors on the basis of AIFC (AIFC, 2022)

One of the discussed goals of the Concept is to bring the share of alternative and renewable sources in the country’s energy balance to 50% from the current level of about 1.3%.

In addition, by July 1, 2021, it is planned to approve a new national project aimed at achieving the Sustainable Development Goals - “Zhasyl Kazakhstan”.

Current situation of green bond issuance.

If to conduct a comparative analysis of the state of the green bond market around the world, on the basis of two parameters of the Climate Bonds Initiative Green Bond Database (GBDB), Social and Sustainability Bond Database (CBDB), then we witness the share of Kazakhstan is very small in ESG sector as it shown in the Figure 1.

Annual green bond issuance broke through the half trillion for the first time in 2021, sum up

with USD 522,7 billion dollars of USA, increased on 75 present in 2020. The USA maintained its leading position as a source of green bonds, with share 16%, amounted 90 billion USD. China located as second largest country with the amount of 72,2 billion USD, positioned 12%. Other countries as Germany (67,1 billion USD), France (43,6 billion USD), Uk (34,8 billion USD), Netherlands (25,5 billion USD), Spain (22,3 billion USD), Italy (67,1 billion USD) also are best contributors in green bonds development.

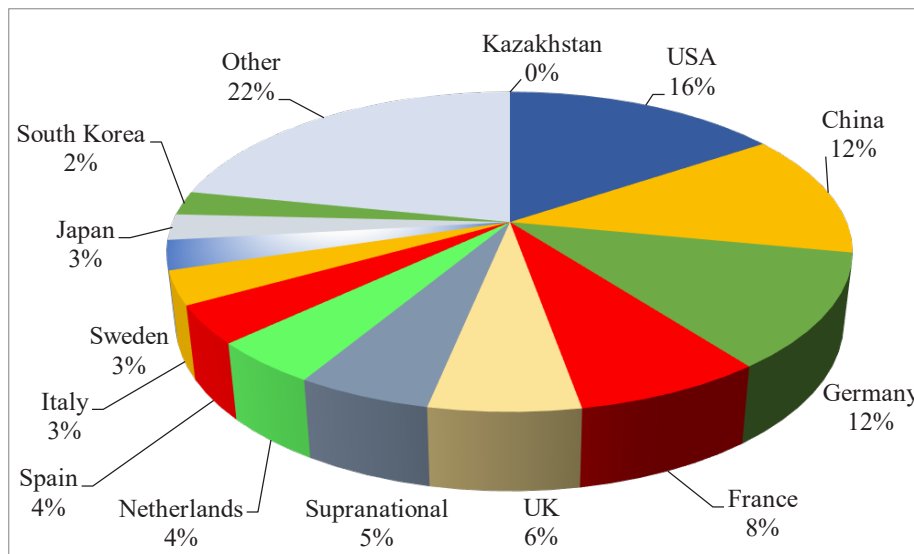


Figure 1 - Annual green bond issuance amount, 2021.
 Compiled by authors according to the data on Climate Bonds Initiative (CBI, 2022)

In Kazakhstan AIFC and the Damu Fund in collaboration, issued a debut «green bonds» in the amount of 0.5 million US dollars for the construction of a solar power plant. This pilot project was followed by the placement of bonds of the Asian and Eurasian Development Banks in the ESG segment. As well projects are being promoted in the field of energy efficiency and renewable energy development, which has an elements of the ESG and SDGs. For now, thirty-seven projects in the field of renewable energy in the amount of 5.5 billion tenge have been supported as part of the implementation of new “green” financing instruments. The results of one year activity on Green insurance, the number of total green bond deals in Kazakhstan amounted 10. As it shown in the Figure 2, the share of Kazakhstan in the total number on a global scale is small, but we are confident that this indicator will grow every next reporting year.

In November 2020, the Asian Development Bank (ADB) attracted almost 14 billion tenge when placing the first issue of green bonds in the history of KASE. Prior to that, in August, the debut issue of green bonds of the DAMU Fund in the amount of 200 million tenge was placed on the AIX (Astana International Exchange) site (Table 2).

Currently, the volume of social bonds issued has reached 29.4 billion tenge. Thus, the overall market of sustainable finance in Kazakhstan is more than 110.4 billion tenge. According to the Doctrine of achieving carbon Neutrality of the Spacecraft- Kazakhstan until 2060, in addition to the introduction of «green» technologies, net additional investments to achieve carbon neutrality are estimated at approximately 660 billion US dollars from 2021 to 2060.

In the following Figure 3, we can see the breakdown by issuers. USA and China remain in leading position in this direction. Kazakhstan offers 5 out of 998 emitters.

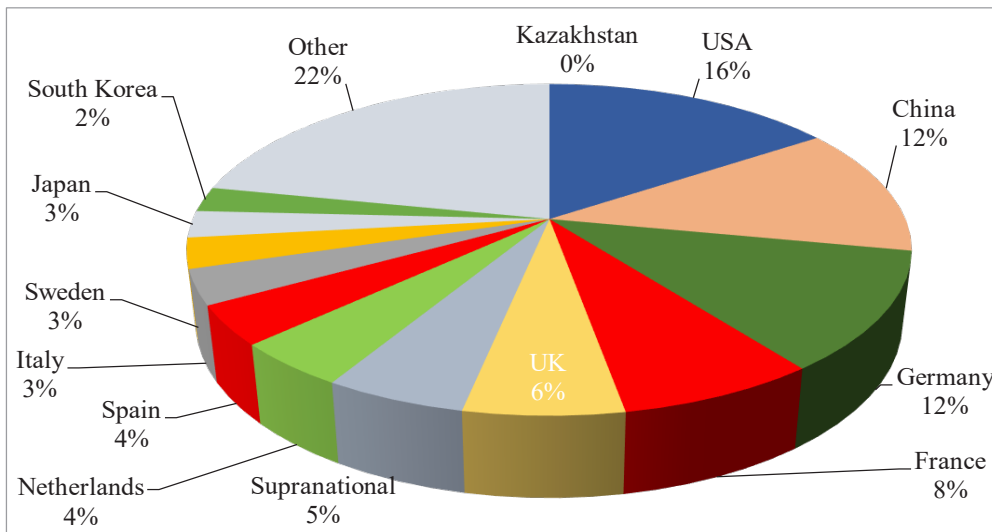


Figure 2 - Annual Number of green insurance deals, %.
 Compiled by author according to the data Climate Bonds Initiative (CBI, 2022)

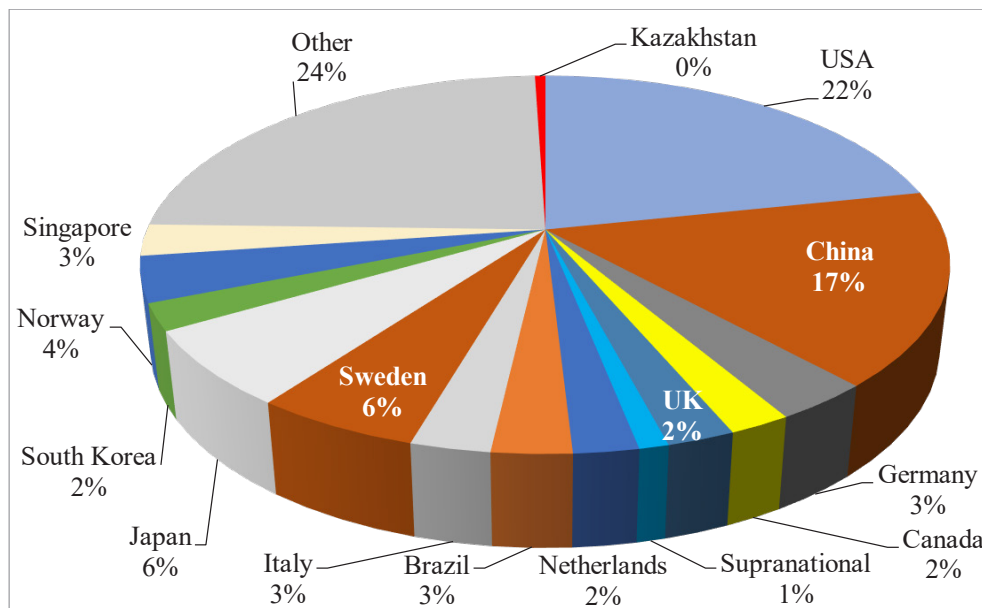


Figure 3 - Annual Number of Issuers of Green bonds, %.
 Compiled by authors according to the data on Climate Bonds Initiative (CBI, 2022)

In the following Table 2 we can see more detailed the data on Sustainable Finance market in Kazakhstan. All the issues attracted great interest from the investment community. In 2020, about \$530 billion of bonds with sustainable development characteristics were issued, which exceeded the level of 2019 by 63% (AIFC, 2022). The funds raised will be directed to second-tier banks and microfinance organizations for lending

to small and medium-sized businesses implementing small-scale renewable energy projects.

One of the largest projects of the Center is the verification of the green loan of Halyk Bank in the amount of 7.9 billion tenge. It was directed to construction of a 5 MW power plant in the city Zhezkazgan.

Table 2 - Sustainable Finance market in Kazakhstan

Issuer/Lender	Category	Volume, thousands KZT	Release date	Maturity date	Coupon, %
Samruk Energy	Green bonds	18 400 000	25.11.21	25.05.28	11,4
Eurasian Development Bank	Social bonds	20 000 000	05.11.21	05.11.24	10,6
Eurasian Development Bank	Green bonds	20 000 000	21.11.21	04.10.24	10,5
Damu Entrepreneurship Development Fund	Social bonds	1 000 000	15.09.21	15.09.26	11,9
Asian Development Bank	Social bonds	8 400 000	15.09.21	17.12.30	10,15
Asian Development Bank	Green bonds	3 875 505	19.11.21	22.10.22	10,12
Asian Development Bank	Green bonds	10 097 018	19.11.21	22.01.23	10,1
Damu Entrepreneurship Development Fund	Green bonds	200 000	10.08.20	11.08.23	11,75

Source: compiled by the authors on the basis of AIFC data (AIFC, 2022)

The Center for Green Finance of the AIFC has been providing services for the external evaluation of sustainable bonds and loans since 2020. To develop this direction, the IFC actively cooperates with international development institutions (EBRD, EDB and ADB). The AIFC conducts a lot of work in the field of “green” finance with the collaboration of Eurasian Development Bank (EDB), which is a co-shareholder of the CSF. According to the approved EDB Strategy for 2022-2026, the EDB, as a multilateral development bank, will expand

its presence in the field of “green” financing. In Table 3 it is given the information about green loans of Kazakhstan. In September 2021, the Eurasian Development Bank approved the first “green” loan in Kazakhstan with full support from the CSF, which developed internal documents of Batys Transit JSC, including a policy in the field of “green” financing. The funds raised under the signed loan agreement will be directed by the borrower to finance the project “Construction and operation of street lighting networks in the city of Atyrau”.

Table 3 - Green loan market in Kazakhstan

Issuer/Lender	Category	Volume, thousands KZT	Release date	Green Loan Recipient	Purpose
Halyk Bank	Green loan	7 900 000	30.11.21	JSC “Kaz Green Energy”	Construction of a 5 MW power plant in the Karaganda region, Zhezkazgan
Development Bank of Kazakhstan	Green loan	16 950 000	22.11.21-22.11.35	Data not available	Data not available
Eurasian Development Bank	Green loan	3 600 000	20.09.21	JSC “Batys Transit”	Construction and operation of street lighting networks in Atyrau

Source: compiled by the authors on the basis of AIFC data (AIFC, 2022)

In the Asia-Pacific region, the volume of social bond issuance exceeded the volume of green bond issuance for the first time, as the governments and banks of the region financed a large number of programs aimed at health issues, job security and other socially significant issues.

All these measures will encourage enterprises in Kazakhstan to reduce carbon dioxide emissions, introduce energy-saving technologies, handle waste responsibly, and carry out activities aimed at preserving the country's biodiversity.

KASE introduced mandatory requirements for issuers of securities last year regarding the publication of non-financial statements. A separate exchange segment dedicated to green instruments was created on AIX.

An important step towards the development of green financing mechanisms in Kazakhstan is the work on the project of creating a national taxonomy of green projects, which is entrusted to the Astana International Financial Centre (AIFC) and which is expected to.

The approval of the national taxonomy will lay the foundations of the green bond market, enable the development of mechanisms for state subsidization of green instruments, and serve as a driver for attracting investors.

Depending on this, issuers of securities with the characteristics of sustainable development in Kazakhstan will be able to attract not only investors in the local market, but also in international capital markets, for which the requirements for sustainable development become an integral part of investment strategies (Nurgisayeva & Tamenova, 2020).

Thus, the market of "green" finance in Kazakhstan is still at the beginning of the road, and the need for them is quite large and it is growing every day, because the need for this direction is justified by the vital necessity for the whole planet. The development of this direction requires large monetary investments and legislative support from the state as the main source of support.

Conclusion

«Green» finance is a trend in the development of socio-economic development around the world. Green loans are part of the ESG sustainable development concept (environmental, social, governance – the impact of companies on the environment, their social responsibility, the quality of corporate governance). Globally, ESG financing sources are showing significant growth. ESG factors will increasingly influence

the creditworthiness of issuers around the world. Regulation of ESG factors in Kazakhstan, as in most emerging economies, lags behind advanced countries in this regard, such as the countries of the European Union, USA, China.

At the same time, we see that awareness of ESG risks is increasing both at the level of the Government of Kazakhstan and regulatory authorities, as well as at the level of individual companies and financial institutions. The key structures in Kazakhstan's ESG agenda include the Ministry of Ecology, Geology and Natural Resources, the Astana International Financial Centre.

Green finance of Kazakhstan has huge government support. AIX and IC Green Finance Centre are the leading driving forces contributing to the development of green finance. The volume of investments include only large financial organizations.

Summing up the brief results, in order to stimulate the development of "green" financing in Kazakhstan, in our opinion, it is necessary to implement a set of measures:

1. Development of a regulatory framework governing the implementation of "green" financing;
2. Further study of the best practices of leading countries in the implementation of green instruments in the economy USA, China and European Union countries. Based on the best concepts and practices, it is necessary to design a roadmap for the development of "green" financing;
3. State stimulation of small and medium-sized businesses of green initiatives. Formation of a market of "green" bonds for the purpose of financing environmental projects;
4. Information coverage of the population about the instruments of green financing and sustainable development, in order to attract private financial resources for the implementation of sustainable development goals and green investments;
5. Training of the population and entrepreneurs in green financing tools to launch other forms of green financing (green loans, tax incentives, preferences, subsidies, etc.) along with green bonds issuance.

In conclusion, we can summarize the mechanism of "green financing" in Kazakhstan now at the initial stage of its formation. Today, the level of "green" investments in our country is insufficient to ensure sustainable "green" development. For the further development of "green" financing in Kazakhstan, it is necessary

set an appropriate regulatory framework, apply stimulation methods, actively financing the new tools for “green” projects.

References

- Gray, R. (2010). Is accounting for sustainability actually accounting for sustainability and how would we know? An exploration of narratives of organisations and the planet. *Accounting, organizations and society*, 35(1), 47-62. <https://doi.org/10.1016/j.aos.2009.04.006>
- Richardson, B.J. (2013). Socially responsible investing for sustainability: overcoming its incomplete and conflicting rationales. *Transnational Environmental Law*, 2(2), 311-338. <https://doi.org/10.1017/S2047102513000150>
- Global Sustainable Investment Review. Global Sustainable Investment Alliance (2020) [cited May 21, 2022]. Available: <http://www.gsi-alliance.org/wp-content/uploads/2021/08/GSIR-20201.pdf>
- Global Green Growth Institute (GGGI) (2019). [cited September 20, 2022]. Available: https://ggi.org/wp-content/uploads/2019/12/Strategy-2030-EXTERNAL-191212_FINAL.pdf
- Curley, M. (2014). *Finance policy for renewable energy and a sustainable environment*. Crc Press.
- Clapp, C S., Alfsen, K.H., Torvanger, A., & Lund, H.F. (2015). Influence of climate science on financial decisions. *Nature Climate Change*, 5(2), 84-85.
- Miralles-Quiros, M.D. M., Miralles-Quiros, J.L., & Arraiano, I.G. (2017). Are firms that contribute to sustainable development valued by investors?. *Corporate Social Responsibility and Environmental Management*, 24(1), 71-84. <https://doi.org/10.1002/csr.1392>
- Agliardi, E., & Agliardi, R. (2019). Financing environmentally-sustainable projects with green bonds. *Environment and development economics*, 24(6), 608-623. <https://doi.org/10.1017/S1355770X19000020>
- Forecast of socio-economic development of the Republic of Kazakhstan for 2022-2026. Official Information Source of the Prime Minister of the Republic of Kazakhstan, (2021), [cited May 25, 2022]. Available: <https://primeminister.kz/en>
- Salapayeva, U. (2020). Why Kazakhstan needs “green” bonds? [cited May 21, 2022]. Available: https://forbes.kz/process/ecobusiness/zachem_kazahstanu_nujnyi_zelenyie_obligatsii?ysclid=14ea17ql0239367179
- AIFC (2022). Astana International Financial Centre [cited May 25, 2022]. Available: <https://www.aifc.kz/en>
- Bekmagambetova, D. (2022). How ESG bonds are issued in Kazakhstan and why they are needed [cited May 27, 2022]. Available: kz.kursiv.media/2021-05-25/kak-proiskhodit-vypusk-esg-obligatsiy-v-kazahstane/
- Khmelev, O. (2022). International Technical Advisor for joint projects of the United Nations Development Program, the Global Environment Facility and the Government of the Republic of Kazakhstan [cited July 27, 2022]. Available: <https://forbes.kz/process/ecobusiness>
- Rakhimbekova, S. (2022). Effective implementation of the SDGs in Kazakhstan – becoming one of the 30 most competitive countries in the world [cited July 27, 2022]. Available: <https://greenkaz.org/>
- Nurgisayeva, A., & Tamenova, S. (2020). Conceptual foundations of the “green” economy. *Economics: the Strategy and Practice*, 15(3), 183-194.
- Teltaeva D. (2021). Is the placement of sustainable development bonds a random event or a new trend in Kazakhstan? [cited May 25, 2022]. Available: https://forbes.kz/finances/exchange/razmeschenie_obligatsiy_ustoychivogo_razvitiya_sluchaynoe_sobyitie_ili_novyy_trend_v_kazahstane/
- AIFC (2022) Astana International Financial Centre [cited May 25, 2022]. Available: <https://gfc.aifc.kz/ru/>
- Sustainable Stock Exchanges Initiative, 2022, [updated April 10, 2022; cited May 25, 2022]. Available: <https://sseinitiative.org/stock-exchange/nasdaq-2/>
- CBI (2022), Climate Bonds Initiative, [cited May 25, 2022]. Available: https://www.climatebonds.net/resources/2022?field_report_type_tid=1154&field_report_language_tid=590
- UNESCUP (2022). Reclaiming our future a common agenda to advance sustainable development in Asia and the Pacific. [cited May 25, 2022]. Available: <https://www.unescap.org/sites/default/d8files/knowledge-products/.pdf>

Список литературы (транслитерация)

- Gray, R. (2010). Is accounting for sustainability actually accounting for sustainability and how would we know? An exploration of narratives of organisations and the planet. *Accounting, organizations and society*, 35(1), 47-62. <https://doi.org/10.1016/j.aos.2009.04.006>
- Richardson, B.J. (2013). Socially responsible investing for sustainability: overcoming its incomplete and conflicting rationales. *Transnational Environmental Law*, 2(2), 311-338. <https://doi.org/10.1017/S2047102513000150>
- Global Sustainable Investment Review. Global Sustainable Investment Alliance (2020) [cited May 21, 2022]. Available: <http://www.gsi-alliance.org/wp-content/uploads/2021/08/GSIR-20201.pdf>
- Global Green Growth Institute (GGGI) (2019) (2019). [cited September 20, 2022]. Available:

https://ggi.org/wp-content/uploads/2019/12/Strategy-2030-EXTERNAL-191212_FINAL.pdf

5. Curley, M. (2014). *Finance policy for renewable energy and a sustainable environment*. Crc Press
6. Clapp, C. S., Alfsen, K. H., Torvanger, A., & Lund, H. F. (2015). Influence of climate science on financial decisions. *Nature Climate Change*, 5(2), 84-85.
7. Miralles-Quiros, M.D. M., Miralles-Quiros, J.L., & Arraiano, I.G. (2017). Are firms that contribute to sustainable development valued by investors?. *Corporate Social Responsibility and Environmental Management*, 24(1), 71-84. <https://doi.org/10.1002/csr.1392>
8. Agliardi, E., & Agliardi, R. (2019). Financing environmentally-sustainable projects with green bonds. *Environment and development economics*, 24(6), 608-623. <https://doi.org/10.1017/S1355770X19000020>
9. Forecast of socio-economic development of the Republic of Kazakhstan for 2022-2026. Official Information Source of the Prime Minister of the Republic of Kazakhstan, (2021), [cited May 25, 2022]. Available: <https://primeminister.kz/en>
10. Salapayeva, U. (2020). Why Kazakhstan needs “green” bonds [Pochemu Kazahstanu nuzhny “zelenye” obligacii] [updated June 19, 2020; cited May 21, 2022]. Available: https://forbes.kz/process/ecobusiness/zachem_kazahstanu_nuzhny_zelenye_obligatsii?ysclid=l4ea17ql0239367179 (In Russ.)
11. AIFC (2022). Astana International Financial Centre [cited May 25, 2022]. Available: <https://www.aifc.kz/en>
12. Bekmagambetova, D. (2022). How ESG bonds are issued in Kazakhstan and why they are needed [Kak vypuskayutsya obligacii ESG v Kazahstane i zachem oni nuzhny] [cited May 27, 2022]. Available: <https://kz.kursiv.media/2021-05-25/kak-proiskhodit-vypusk-esg-obligaciy-v-kazahstane/> (In Russ.)
13. Khmelev O. (2022). International Technical Advisor for joint projects of the United Nations Development Program, the Global Environment Facility and the Government of the Republic of Kazakhstan [Mezhdunarodnyj tekhnicheskij sovetnik po sovmetnym proektam Programmy razvitiya Organizacii Ob’edinennyh Nacij, Global’no-go ekologicheskogo fonda i Pravitel’sstva Respubliki Kazahstan] [cited July 27, 2022]. Available: <https://forbes.kz/process/ecobusiness> (In Russ.)
14. Rakhimbekova, S. (2022). Effective implementation of the SDGs in Kazakhstan – becoming one of the 30 most competitive countries in the world [Effektivnaya realizaciya CUR v Kazahstane – vhozhdenie v chislo 30 naibolee konkurentosposobnyh stran mira] [cited July 27, 2022]. Available: <https://greenkaz.org/> (In Russ.)
15. Nurgisayeva, A., & Tamenova, S. (2020). Conceptual foundations of the “green” economy. *Economics: the Strategy and Practice*, 15(3), 183-194.
16. Teltaeva D. (2021). Is the placement of sustainable development bonds a random event or a new trend in Kazakhstan? [YAvlyaetsya li razmeshchenie obligacij ustojchivogo razvitiya sluchajnym sobytiem ili novoj tendenciej v Kazahstane?] [cited May 25, 2022]. Available: https://forbes.kz/finances/exchange/razmeschenie_obligatsiy-ustoychivogo_razvitiya_sluchaynoe_sobyitie_ili_novyiy_trend_v_kazahstane/<https://kz.kursiv.media/2021-05-25/kak-proiskhodit-vypusk-esg-obligaciy-v-kazahstane/> (In Russ.)
17. AIFC (2022) Astana International Financial Centre [Mezhdunarodnyj finansovyj centr Astany] [cited May 25, 2022]. Available: <https://gfc.aifc.kz/ru/> (In Russ.)
18. Sustainable Stock Exchanges Initiative (2022), [cited May 25, 2022]. Available: <https://sseinitiative.org/stock-exchange/nasdaq-2/>
19. CBI (2022), *Climate Bonds Initiative*. Available: https://www.climatebonds.net/resources/2022?field_report_type_tid=1154&field_report_language_tid=590
20. UNESCU (2022). Reclaiming our future a common agenda to advance sustainable development in Asia and the Pacific. [cited May 25, 2022]. Available: <https://www.unescap.org/sites/default/d8files/knowledge-products/.pdf>

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