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Analytical Review of Experience in the Development of Sustainable Finance and Prospects for Implementation in Kazakhstan

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ABSTRACT

The development of "sustainable" finance, that is, financial instruments operating in the context of the implementation by companies of a set of environmental, social and governance principles (ESG principles), is gaining momentum in the main world markets. According to the Global Alliance for Sustainable Investments, these strategies already account for 35.9% of the total amount of invested assets. This trend is driven by a new global reality since the long-term development of the country and the company cannot be possible without resolving deepening environmental and social contradictions. In this regard, the purpose of this article is to develop recommendations acceptable to the practice of Kazakhstan based on the generalization of contemporary international experience in the development of various instruments of sustainable finance, as well as on studying institutional support measures for this process at the macroeconomic level.A review of the experience of several countries leading in the field of environmentally and socially responsible investment demonstrates both general and specific features that can be successfully implemented in Kazakhstan, which is at the initial stage of this process. The research methodology is based on a comparative analysis of public policy, regulatory framework, and national specifics of the models of the six selected countries and regions. The obtained results have corresponding practical implications in terms of sustainable finance and ESG criteria-based investing regulation advancement in Kazakhstan by foreign practices adaptation.

KEYWORDS: Sustainable Finance, Environmental, Socially Responsible Investments, Sustainable Investment Funds, Public Policy, Cross-Country Comparative Analysis

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Тұрақты қаржыны дамытудың халықаралық тәжірибесіне және Қазақстанда енгізу перспективаларына аналитикалық шолу

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ТҮЙІН

"Тұрақты" қаржыны, яғни компаниялардың экологиялық, әлеуметтік және басқару қағидаттарының (ESG) жиынтығын енгізуі тұрғысынан әрекет ететін қаржы құралдарын дамыту негізгі әлемдік нарықтарда қарқын алуда. Тұрақты инвестициялар жөніндегі жаһандық альянстың мәліметі бойынша, осы стратегиялар қазірдің өзінде инвестицияланған активтердің жалпы көлемінің 35.9% құрайды. Бұл үрдіс жаңа жаһандық шындыққа негізделген, себебі тереңдетілген экологиялық және әлеуметтік қайшылықтар шешілмей, ел мен компанияның ұзақ мерзімді дамуы мүмкін емес. Осыған орай, мақаланың мақсаты тұрақты қаржының құралдарын әзірлеудің заманауи халықаралық тәжірибесін жинақтау, сондай-ақ макроэкономикалық деңгейде осы процесті институционалдық қолдау шараларын зерделеу және Қазақстан практикасы үшін қолайлы ұсынымдарды әзірлеу болып табылады. Экологиялық және әлеуметтік жауапты инвестициялар саласындағы жетекші елдердің тәжірибесіне шолу арқылы жалпы және ерекше белгілер анықталды. Өз кезегінде аталған процестің бастапқы сатысында тұрған Қазақстанда тұрақты қаржы дамуын жетекші елдердің тәжірибесіне негіздеп сәтті іске асыруға болады. Зерттеу әдістемесі мемлекеттік саясатты, нормативтік-құқықтық базаны, сондай-ақ таңдалған алты ел мен аймақ модельдерінің ұлттық ерекшелігін салыстырмалы талдауға негізделген. Алынған нәтижелер шетелдік тәжірибені бейімдеу арқылы Қазақстандағы ESG критерийлері негізінде инвестицияны және тұрақты қаржыны реттеу тұрғысынан тиісті практикалық салдарға ие.

ТҮЙІН СӨЗДЕР: тұрақты қаржы, экология, әлеуметтік жауапты инвестициялар, тұрақты инвестициялау қорлары, мемлекеттік саясат, еларалық салыстырмалы талдау

МҮДДЕЛЕР ҚАҚТЫҒЫСЫ: авторлар мүдделер қақтығысының жоқтығын мәлімдейді.

ҚАРЖЫЛАНДЫРУ. Мақала Қазақстан Республикасы Ғылым және жоғары білім министрлігінің Ғылым комитетінің гранттық қаржыландыру жобасы аясында дайындалды («Макроэкономикалық, саяси және цифрлық процестердің Қазақстанның қаржылық тұрақтылығына әсерін зерттеу» ЖТН AP19674948).

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Аналитический обзор международного опыта развития устойчивых финансов и перспективы внедрения в Казахстане

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АБСТРАКТ

Развитие “устойчивых” финансов и финансовых инструментов, работающих в контексте реализации компаниями комплекса экологических, социальных и управленческих принципов (ESG-принципов), набирает обороты на основных мировых рынках. По данным Глобального альянса устойчивых инвестиций, на данные стратегии уже приходится 35,9% от общего объема инвестированных активов. Данный тренд обусловлен новой глобальной реальностью, поскольку долгосрочное развитие любой страны и любой компании невозможно без разрешения углубляющихся экологических и социальных противоречий. В связи с этим целью данной статьи является разработка приемлемых для практики Казахстана рекомендаций на основе обобщения современного международного опыта в развитии разнообразных инструментов устойчивых финансов, а также на основе изучения мер институциональной поддержки данного процесса на макроэкономическом уровне. Обзор опыта ряда лидирующих в сфере экологически и социально ответственного инвестирования стран демонстрирует, как общие, так и специфические черты, которые могут быть успешно имплементированы в Казахстане, находящемуся на начальном этапе данного процесса. Методология исследования основана на сравнительном анализе государственной политики, нормативно-правовой базы, а также национальной специфики моделей шести выбранных стран и регионов. Полученные результаты имеют соответствующие практическое применение с точки зрения развития устойчивых финансов и регулирования инвестиций на основе критериев ESG в Казахстане путем адаптации зарубежной практики.

КЛЮЧЕВЫЕ СЛОВА: устойчивые финансы, экология, социально ответственные инвестиции, фонды устойчивого инвестирования, государственная политика, межстрановой сравнительный анализ

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Introduction

In recent decades, the transformation of the strategic goals of States seeking not only to stimulate economic growth to strengthen their positions on the world stage but also interested in the sustainable development of their national economies to solve environmental and social problems that worsen from year to year. One of the critical roles in this trend is played by the financial system, whose institutions have realized the impact of their decisions on sustainable development and, following this, reformat their activities to responsible financial management. As a result, new business lines have emerged, such as climate finance, socially responsible investments and "sustainable" finance. (Zhang & Weber, 2022). They provide financial support for projects that contribute to sustainable development and create opportunities for investors to align financial goals with values (Khoruzhy et al., 2022). In general, such an approach, known as sustainable finance, is aimed at reducing the negative environmental and social consequences of companies' economic activities and stimulating "green" projects. By integrating ESG criteria into financial decisions, corporations and financial institutions consider the economic implications of the investments and the environmental and social impacts.

The implementation of sustainable investment strategies and ESG (environmental, social, and governance) is becoming increasingly widespread in the world's largest markets. According to the Climate Bonds Initiative, the market for sustainable financing was equal to 1 trillion US dollars in 2020, and by 2025, ESG assets will reach 53 trillion dollars or one-third of global assets under management. Among the significant global trends in the spread of sustainable finance, it should be noted that the Nasdaq Future Global Leader Sustainability Leaders appeared on the Nasdaq exchange. It is noteworthy that European exchange-traded investment funds (ETFs) adhering to the principles of "responsible investment" in 2021 attracted more funds than traditional ETFs (GISA, 2021).

For Kazakhstan, as a full member of the UN, which committed itself in 2015 to follow the Sustainable Development Goals (SDGs) and included the principles of a sustainable and green economy in the list of national priorities of the Strategy-2050, the task of adequate implementation of the best foreign experience for the development and dissemination of sustainable finance is actualized. Considering the continuing raw materials orientation of the Kazakh economy and the deepening of environmental and social challenges, the article's authors set a goal to identify the best practices implemented in the leading countries for implementing ESG principles both at the macroeconomic level and at the level of individual companies. Following this goal, the following tasks were formulated:

- study of literature sources related to sustainable finance and the application of ESG principles, as well as identification of gaps in research in this area;
- generalization of progressive international practice and models of application of ESG principles;
- analysis of the current state of the sustainable finance application in Kazakhstan;
- clarification of the prospects for the ESG principles implementation in Kazakhstan based on the adaptation of the best international practices.

The paper is structured as follows: the literature review section explores the primary studies in sustainable finance and the ESG field and illustrates the central gap as well as future research directions. The methodology section presents the implemented methods of the study for obtaining the results of the following discussion section. The "discussions and results" section offers multi-national models for the development of sustainable finance, as well as analyzes the current state of their distribution in Kazakhstan. The final section concludes the main findings and comments on practical recommendations for Kazakhstan based on international experience.

Literature review

"Sustainable" finance has emerged as a crucial aspect of investment strategies for foundations and asset managers (Wiener, 2021). While there is no universally agreed-upon definition of sustainable investments, they are generally characterized as investment strategies that aim to address social or environmental concerns and generate financial profits simultaneously. Sustainable financial investments have gained momentum, and evolution of sustainable finance has been driven by a growing awareness of the social, environmental, and ethical consequences of business practices and their financial impact. Investors increasingly demand assets that generate financial returns and address pressing social and environmental challenges such as poverty, malnutrition, financial exclusion, and climate change (Chiappini et al., 2021). In response to the demand, the financial industry has developed investment strategies based on extra-financial criteria, leading to sustainable investments in different classes of creation and diverse financial products.

ESG factors, as a part of sustainable investing development for corporations and financial institutions, have emerged as a new paradigm that on the one hand, promotes sustainable development, and plays a significant role in ensuring financial stability on the other hand. ESG, which stands for Environmental, Social, and Governance, is a framework that focuses on sustainable and harmonious development. ESG is an investment philosophy that pursues long-term value growth by considering the economic benefits from the environmental, social, and governance factors (Lee & Kim, 2022). ESG is a set of criteria that socially conscious investors use to screen potential investments.

Regulators across the world are developing various forms of metrics and regulation standards for ESG principles. The main goal of the considering regulations is to provide sort of instructions on ESG principles implementation and reporting of the footprint of their environmental and social effects. The first objective of this research is to review the central studies in the field of sustainable investing and ESG principles.

Many industries, including small and medium-sized enterprises, incorporate ESG factors into their daily operations (Egorov, 2023). According to estimates, the number of organizations that published non-financial disclosures has increased dramatically from 35% in 2010 to 86% in 2021 (Mandas et al., 2023). One of the reasons for the widespread adoption is that integrating ESG factors contribute to the company's long-term sustainability. From an economic perspective, ESG is a responsible business practice and a profitable strategy in both the short and long term. According to Friede et al., adopting ESG principles has positively correlated with financial performance. Their review of over 2,000 empirical studies found strong support for the link between ESG strategies and positive financial performance. This indicates that incorporating ESG factors into business practices can lead to monetary returns and contribute to the overall the company's financial stability.

Some papers investigated the systematic literature review and identified gaps in the existing research on ESG risk integration, management, and reporting in the banking sector, particularly in emerging markets and some developed countries. There is a need for further investigation into ESG issues and policy action to address the challenges and opportunities associated with ESG risks in financial institutions, and the importance of focusing on the scope, scale, and magnitude of ESG challenges and opportunities. It must be noted that there is a gap in the research of the significance of considering various aspects of ESG risks, including strategy, governance, assessment, measurement, management, monitoring, reporting, culture, and data and technology (Misorimaligayo et al., 2023).

It has been found that ESG performance has a significant impact on the stock prices of financial institutions in some countries (Zhu, 2022). Better ESG performance leads to higher stock prices, and the attention of newspapers, magazines, online media, and the number of shareholders positively influence this relationship. However, there are limitations to the reasonable reach of investor action in addressing environmental and social issues. Factors such as varying end-investor preferences, availability of reliable ESG data, and non-consistent frameworks for corporate sustainability disclosures hinder effective investor engagement (Balp & Strampelli, 2022). It must be noted that financial institutions play a crucial role in financing the transition to sustainable business models. However, their impact varies depending on the business sector and the model of the financial system (Ziolo et al., 2023). The adoption of the ESG policy brings economic benefits to the stakeholders of corporations and financial institutions: employees are willing to give up wages, and customers are willing to pay higher management fees (Stolbov & Shchepeleva, 2022).

The study by Gai et al. 2023, published in "Finance Research Letters,", aims to apply an original methodology for aggregating indicators in a new ESG scoring model to assess the level of banks' ESG disclosure. The methodology allows for the calculation of the best GI score (the banks' environmental, social, governance, and indirect impacts score) and its comparison with mathematical and geometric means. It also mentions the need for more significant regulatory pressure on disclosure, particularly on social issues, and the pilot application of the BESGI model to discover banks' green-washing practices.

As seen from the previous study, there is a limited amount of research on the ESG experience analysis of international and local organizations. Most of the research on ESG principles has been written recently and provides restricted content on ESG and financial stability. The leading information about ESG investing development is presented in the reports of the international alliances.

Methodology

Comprehensive case studies have been conducted to gain deeper insights into sustainable finance development in various foreign countries. These studies focused on analyzing the regulatory framework, financial products, and market players involved in these countries. By studying successful strategies and taking note of valuable lessons learned from these case studies, the authors explored the evolution of sustainable finance across different contexts (Ya, 2018; Cheba & Bąk, 2019; Guo et al., 2020).

The method of policy analysis used to evaluate the regulatory and policy structures implemented in other nations highlights their distinct advantages as well as limitations. These frameworks differ considerably concerning governmental assistance, tax benefits, and obligatory disclosure standards.

As one of the methods to assess and compare the sustainability performance of various countries and companies, the authors investigated the global ESG indices: the S&P ESG index, the Nastaq-100 ESG index, the MSCI KLD 400 Social index, and the FTSE US All Caps Choice index. These indices provide valuable insights into organisations' practices' environmental, social, and governance aspects. By using these resources, meaningful comparisons have been made to evaluate their sustainable efforts in a standardized manner.

The methodology of the article is illustrated as follows:

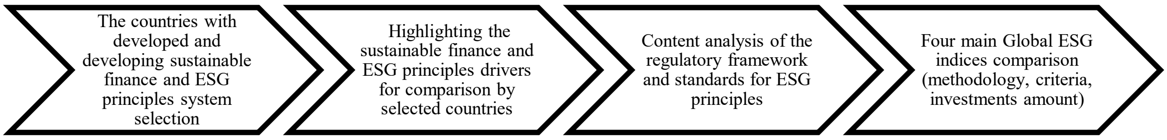

Figure 1 - The methodology of the research

To achieve the objective of the paper and demonstrate the best practices of ESG implementation and development, the authors used a combination of considered methods. The experiences of Europe, the United States of America, China, Latin America, and Asia have been investigated. The considering countries' experience and the comparative analysis results allow to develop recommendations for Kazakhstan in the ESG principles of integration in the financial system.

Results and discussion

As noted earlier, there has been a significant increase in investments based on ESG principles in the world in recent years, and there is the focus of attention of state regulators, international organizations and academia. As a result, with the purpose of promoting ESG criteria at the country level and requesting ESG implementation for corporations and financial institutions, the state regulators developed regulatory frameworks in different countries.

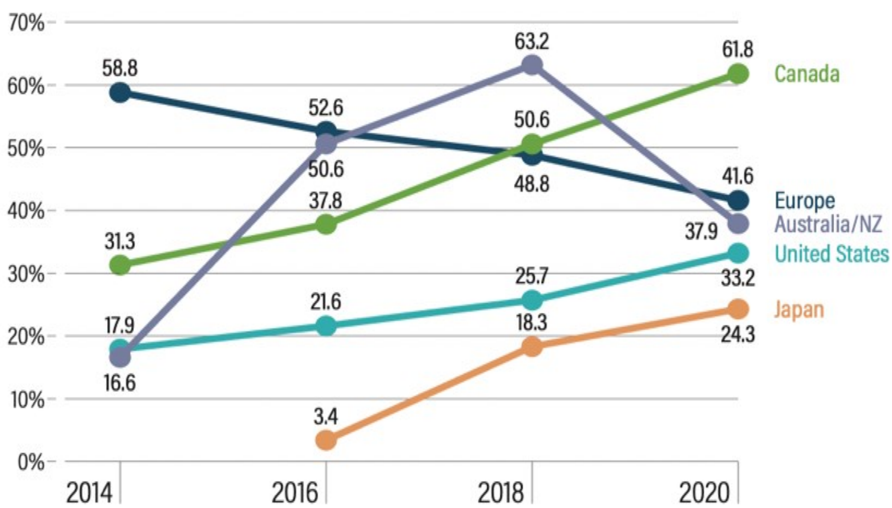

Figure 2 - Sustainable investing assets in total assets under management, 2014-2020 (GSIR, 2020)

The country with the highest amount of sustainable investing assets in total managed assets is Canada; it has about doubled for the past six periods and reached 61.8%. The following region of sustainable investment assets is European countries, with 41.6%, a slow decrease over the last few years for 17.2%. This is a valuable measure considering the share in the global total sustainable assets of 16%, or 4 140 billion US dollars. In Australia and New Zealand, sustainable assets increased dramatically from 17.9% to 63.2% for the four years. However, for the following years, sustainable investing had been reduced to 37.9%, which is more than 1.7 times. The value of sustainable assets increased from 17.9% to 37.9% for the considering period in the United States. It is the essence of changing globally, as the US covers 64% of the ESG (16 059 billion US dollars) of the total ESG assets of the world. Sustainable investing development has been started in Japan since 2016 and has reached 24.3% in the following years.

Notably, sustainable investing and investing covered by ESG principles are considered the same assets. While both ESG and sustainability emphasize environmental, social, and governance factors, ESG primarily involves assessing a company's performance based on these factors. In contrast, sustainability adopts a more comprehensive approach by promoting responsible and ethical business practices that consider environmental, social, and economic interconnectedness. ESG serves as a standardized framework for evaluating a company's impact on society and the environment, along with its corporate governance practices. Meanwhile, sustainability aims to guide businesses towards sustainable development through mindful consideration of environmental stewardship, societal well-being, and economic viability.

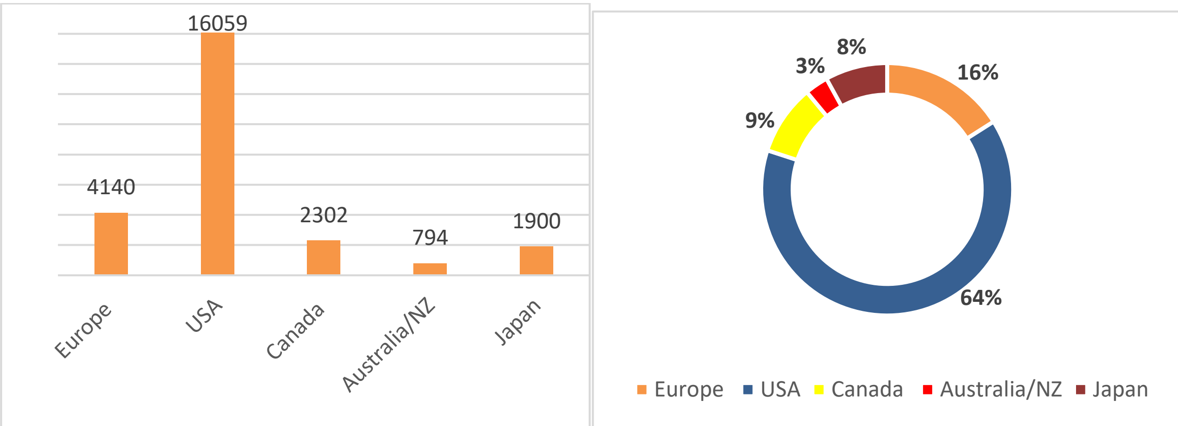

Figure 3 - ESG integration assets by region, in billion US dollars

ESG funds regulation and implementation are crucial in ensuring the alignment of financial investments with environmental, social, and governance factors. A comprehensive methodology is necessary to conduct a comparative analysis of ESG funds regulation and implementation. To begin the comparative analysis of ESG funds regulation and implementation, the first step is to gather relevant data from multiple sources. This data includes information on the policies, regulations, and guidelines for ESG funds in different countries or regions. The authors have examined several regulatory documentation and standards of the following countries and demonstrated the findings in a schematical way. The following figure illustrates the jurisdictions which propose the regulation and guidelines for ESG funds across the world.

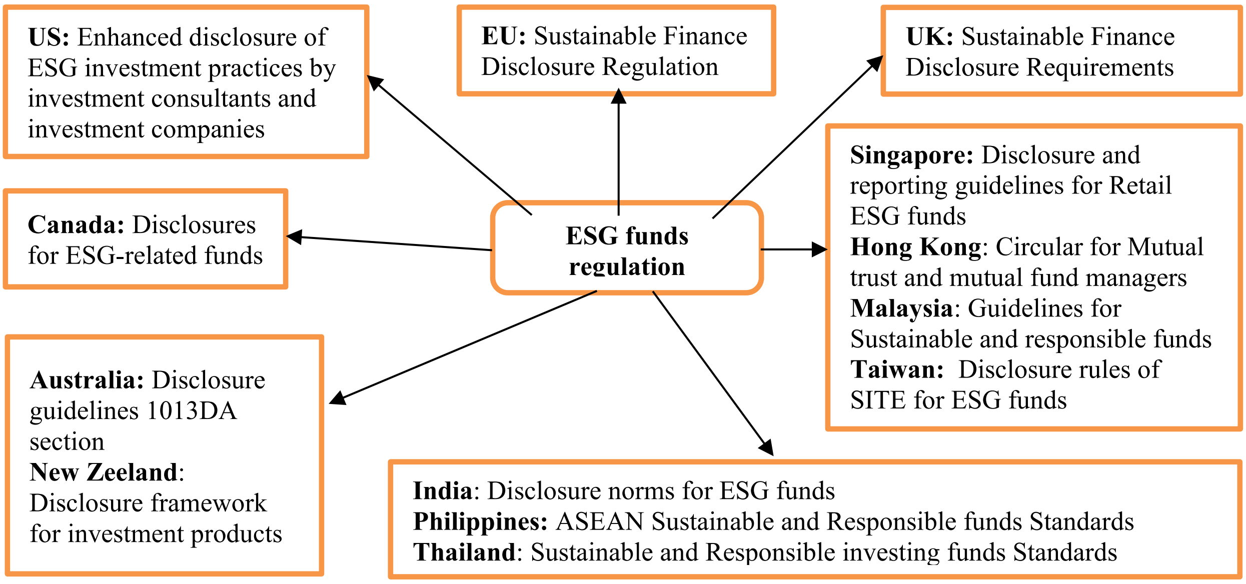

Figure 4 - Regulation of ESG funds in selected countries (MSCI, 2023)

There is now a significant shift towards greater regulation in ESG-focused funds. Regulatory bodies worldwide are displaying increased interest in the names of funds and their obligations to disclose information about their classification. This trend has been spearheaded by the European Union's Sustainable Finance Disclosure Regulation, which mandates more transparent reporting for ESG funds. In response, other prominent market regulators are also taking steps to implement similar requirements.

Countries such as Australia, Hong Kong, and Singapore have been guided to standardize the disclosure of ESG factors in investment selection processes. In the European Union and Canada, regulators have gone a step further by attempting to categorize sustainable funds based on their level of ESG integration, which corresponds with varying degrees of disclosure requirements. The United States has also made some initial moves towards a similar proposal, a significant development given its position as the world's largest fund market accounting for over 60% of global fund investments. While this may result in better-informed investment decisions for stakeholders, there is concern that multiple disconnected regional standards for classifying ESG funds might emerge across different jurisdictions and pose challenges for investors seeking a unified approach towards achieving common ESG goals worldwide.

Studying the literature and international reports on the ESG integration and development processes of financial institutions allows to find a lack of structured and complete information and data. To reach the second and third objectives of this study by structuring and content analysis of the regulative framework as well as standards, the authors analyzed using the comparative cases method and illustrated in the table the results of six countries and regions (Collier, 1991).

Table 1 – Drivers influenced ESG in Europe

Europe			
Policy and regulatory	Industry	Customer	Market
The European Union Sustainable Finance Action Plan, 2018 Sustainable Finance Disclosure Regulation (SFDR) Markets in Financial Instruments Directive 2 (MiFID II), 2018	The encouragement of voluntary certifications for sustainable investment funds. There are about 1500 which use the European sustainable finance labels	The SRI investment sector has witnessed a significant increase in retail investor interest (14 billion EUR ESG equity funds in 2020)	Approximately 13% of newly offered funds were centered around environmental sustainability 2021
The EU Taxonomy Regulation, 2020	Financial Data Exchange Templates (FinDatEx), 2022	According to MiFID II clients need be advised that ESG products	Shareholder Rights Directive II aims to promote measures to ensure corporate sustainability
Corporate Sustainability Reporting Directive (report on the social and environmental impacts), 2021 EU Sustainable Finance Strategy, 2021	Net Zero Asset Owner Alliance (NZAOA)	More than 65% of German and French investors prefer to invest in environmentally responsible way.	Products on the European market reflect themes related to sustainable development, including gender, smart cities, and the ocean.
Organization	The European Sustainable Investment Forum (Eurosif), 2012		
Note – compiled by the authors, source (GISA, 2021, p. 54; www.bloomberg.com)			

Since Europe covers 16% of global ESG investing, the experience of ESG principles implementation and drivers influenced have an essential impact on other countries. Eurosif, a renowned European membership organization focused on sustainable and responsible investment, plays a crucial role in advancing sustainability across financial markets in Europe. Eurosif operates as a collaborative partnership between national Sustainable Investment Fora based in Europe. It receives direct support from its extensive network of over 400 organizations engaged within the sustainable investment industry value chain.

The EU Taxonomy Regulation, implemented in 2020, is a crucial milestone in defining legally sustainable activities within the European Union and its Member States. This regulation plays a vital role in ensuring the environmental sustainability of financial markets by establishing clear criteria for determining the degree to which an investment is environmentally sustainable. The EU Taxonomy Regulation aims to establish criteria for environmentally sustainable economic activities, with a particular focus on the protection and restoration of biodiversity and ecosystems. In addition, the Taxonomy Regulation provides a common framework of criteria that will be applied to measures adopted by the EU or its Member States, as well as guidance for private sector entities in identifying environmentally sustainable activities.

The UK is also committed to implementing a green taxonomy, aligning with the EU's efforts to promote environmentally sustainable practices. By implementing the EU Taxonomy Regulation, the EU and the UK are taking proactive steps to transition towards biodiversity-aligned portfolios.

The Taxonomy Regulation is a step towards creating a standardized classification system that will help investors and financial institutions identify environmentally sustainable activities and projects. It will also aid in addressing the issue of greenwashing by promoting transparency and trust among investors.

There are three main directions in Europe for improving ESG results based on sustainable and responsible investment:

- voluntary sustainable fund labels have been introduced to showcase investment funds' environmental, social, and governance qualities to individual investors. A considerable number of investment funds, numbering around 1 500 in total, currently possess one or more of these European sustainable finance labels;

- the European financial services sector has initiated a collaborative effort called Financial Data Exchange Templates (FinDatEx) to streamline and enhance data exchange;

- The United Nations-convened Net Zero Asset Owner Alliance (NZAOA), a coalition of institutional investors consisting of 32 out of 42 groups, which the United Nations established to promote the achievement of net zero emissions.

Table 2 – Drivers influenced ESG in the USA

United States			
Policy and regulatory	Industry	Customer	Market
Sustainable investment and ESG disclosure have been limited by the Securities and Exchange Commission and Department of Labor till 2021	Investor Statement of Solidarity and Call to Action, 2020	7.6 trillion US dollars in assets are at ESG (2022)	Institutional Investor ESG Assets Public - 54% Insurance Companies 36% - Education 8% Foundations - 1% Other - 1% (2022)
Securities and Exchange Commission requested ESG disclosure and information on climate risk (2021)	Exposure Draft of the standards of the CFA Institute with ESG disclosure requirements (2021)	1.Climate/carbon – 3.45 trillion USD 2.Military/weapons – 1.78 trillion USD 3. Tobacco – 1.70 trillion USD 4. Fossil Fuel Divestment – 1.23 trillion USD 5. Anti-Corruption – 1.02 trillion USD (2022)	Adopting multi-stakeholder models that prioritize also communities, environmental impacts, and improving labor conditions
The Executive Order on Climate-Related Financial Risk (measures seeking ESG disclosure including) (2021)	US SIF found the shareholder's ESG themes for the 2018-2020 period: corporate political activity, equal employment opportunity, labor, climate.	More than 61% of investors prefer to invest in sustainable investment	There has been an upward trend in the proportion of shareholder proposals concerning social and environmental issues receiving significant support.
Organization	The Forum for Sustainable and Responsible Investment (US SIF), 2011		
Note – compiled by the authors, source (GISA, 2021, p. 97; www.sec.gov; www.ussif.org)			

The leading country by ESG investing with a share of 64%, the USA's regulation of sustainable investment and ESG disclosure have been limited until 2021 as a result of country politics. In 2021, Securities and Exchange started to request Commission ESG disclosure and information on climate risk. From that period standards of the CFA Institute with ESG disclosure requirements began to be implemented for financial institutions. Expanding beyond the traditional shareholder-centric approach, many companies in the United States are adopting multi-stakeholder models that prioritize their shareholders and communities, environmental impacts, and improved labor conditions. As a result, 61% of the investors prefer sustainable investing, and the proportion of shareholder proposals concerning social and environmental issues has significantly increased.

The CFA Institute has established standards for ESG disclosure requirements review, recognizing the growing importance of environmental, social, and governance factors in investment decision-making. Approximately two of three institutional investors anticipate that ESG issues will become the industry standard, highlighting the increasing demand for companies to disclose their ESG performance and compliance (Li et al., 2022). The CFA Institute's ESG standardization initiative, announced in November 2019, aims to address the challenges posed by the multitude of acronyms and differing standards in the ESG reporting landscape.

The CFA Institute released an ESG guide, solidifying the importance of ESG reporting in the financial industry. This guide served as a template for measuring ESG disclosure and brought about the acceptance of ESG factors as crucial considerations in investment analysis. The use of the Environmental, Social, and Governance framework has become a standardized approach for firms to report their compliance on critical corporate social responsibility issues. Moreover, the increased use of the ESG reporting framework has also led to a paradox, where some firms prioritize ESG reporting over actual ESG performance.

Despite ESG assets regulation starting in 2021, there are vulnerable results of the state policy. In terms of asset allocation, climate change emerges as the most significant specific ESG concern reported by money managers. This issue is addressed across a substantial 3.45 trillion US dollars in assets. Money managers also report implementing fossil fuel divestment policies on 1.2 trillion US dollars in assets, ranking it as the fourth priority among other environmental criteria. Additionally, avoidance of military/weapons activities and tobacco use are ranked second and third respectively, affecting 1.8 trillion US dollars and 1.7 trillion US dollars in managed assets.

Among governance considerations, anti-corruption measures take precedence with an allocation of resources amounting to 1 trillion US dollars; following this is attention towards board-related matters valued at around 926 billion US dollars under management.

When it comes to social issues from an asset-weighted perspective, human rights emerge as the primary focus area with financial commitments totalling approximately 987 billion US dollars.

Table 3 – Drivers influenced ESG in China

China			
Policy and regulatory	Industry	Customer	Market
The Green Credit Guidelines by the China Banking Regulatory Commission (CBRC), 2012 Green credit balance – 1.5 trillion US dollars	Green Investment Guidelines (2018) by the Asset Management Association of China (AMAC)	20 EGG mutual funds have been created (2020)	First green financial bonds by (2022) PBOC (Central Bank) in 2015
The Guidelines for Establishing the Green Financial System (2016) – about 700 green finance policies	The green finance pilot zones in China - Zhejiang, Jiangxi, Guangdong, Guizhou, and Xinjiang (2017)	Individual investors are mainly ready to invest in projects with environment, health, labor and ethics directions.	The second green financial market in the world for 2021 – 166.5 billion US dollars
The Guiding Opinions on Promoting Investment and Financing to Address Climate Change (2020) National Carbon Emission Trading Scheme (2021)	PBOC directed 13.42 billion US dollars for the loans provided by financial institutions to reduce carbon emissions	86% of investors consider factors of sustainable investment	Ten banks have issued 60 ESG wealth management products
Organization	China Social Investment Forum (China SIF), 2012		
Note – compiled by the authors, source (GISA, 2021, p. 71; www.china-briefing.com; www.chinasif.org)			

"The Guiding Opinions on Promoting Investment and Financing to Address Climate Change" in China is a significant policy document that outlines the country's efforts to tackle climate change through investment and financing. This instrument of the regulation is a comprehensive policy document that plays a crucial role in guiding the implementation of climate-friendly investments and financing in China. It has been issued in 2020 by the Chinese government.

The launch of China's national carbon emissions trading scheme in July 2021 marked a significant milestone in the country's efforts to address climate change and reduce greenhouse gas emissions. The scheme, which covers 12% of global CO2 emissions, is a crucial step towards achieving China's long-term goal of carbon neutrality by 2060. China's national carbon emissions trading scheme is a critical component of the country's strategy to combat climate change and achieve its emissions reduction targets. Establishing the national carbon emissions trading market builds upon China's previous carbon trading pilots, which were launched in 2011 and provided valuable insights and lessons for developing a comprehensive and robust carbon trading system. The launch of the national emissions trading scheme is the culmination of two years of meticulous planning and infrastructure development. During this period, China focused on constructing the necessary legal and technical frameworks to ensure the smooth operation of the trading market. The first trades in the national carbon emissions trading scheme are expected to take place in 2020, following the successful completion of infrastructure construction and simulation phases over the past two years.

According to the survey, a significant majority (86%) of respondents indicate that they will consider sustainable investment factors. The study also reveals that individual investors are particularly concerned about two key ESG themes: financial fraud and product quality. Additionally, over half of the participants stated that safety issues and environmental violations have an impact on their investment decisions. The top five themes identified in this regard are financial fraud, product quality, health and safety concerns, environmental violations, and corruption, and bribery.

Table 4 – Drivers influenced ESG in Asia

Asia	
Policy and regulatory	
South Korea	National Pension Service has adopted the Stewardship Code for ESG principles (2018)
Singapore	The Monetary Authority of Singapore has issued Guidelines on Environmental Risk Management (2020)
Taiwan	Corporate Governance Roadmap (2018-2020) Financial Supervisory Commission has implemented the set of regulations for TPEx- and TWSE-listed companies (2020)
Hong Kong	Green and sustainable finance strategy (2020) Hong Kong Monetary Authority (HKMA) - Common Assessment Framework on Green Sustainable Banking (2020) Hong Kong Securities and Futures Commission (SFC) - published a compilation of approved ESG funds (2020)
Industry	
Life Insurance Association and the Bankers Association - Task Force on Climate-Related Financial Disclosures framework guidance	
Customer	
Increase of sustainable investment: products on environmental protection, renewable energy, green transport and low carbon	
Note – compiled by the authors, source (GISA, 2021, p. 124)	

There is a lack of available information on ESG drivers and the results of the regulation in Asian countries. It has been considered the primary strategy of South Korea, Singapore, Taiwan, and Hong Kong.

Thus, the National Pension Service of South Korea has demonstrated its commitment to responsible investment practices by adopting the Stewardship Code for ESG principles in 2018(Bae et al., 2022). This decision aligns with the global trend of incorporating environmental, social, and governance factors into investment strategies.

By investing in 52 detailed indicators included in the ESG evaluation model, which evaluates nonfinancial factors such as environment, society, and governance, the National Pension Service of South Korea recognizes the importance of considering these criteria for responsible investment. This commitment to the Stewardship Code reflects the National Pension Service's dedication to promoting sustainable investing practices and ensuring that investments contribute to positive social and environmental outcomes.

The Monetary Authority of Singapore has taken proactive steps to address environmental risk management in Singapore by issuing the Guidelines on Environmental Risk Management in 2020. These guidelines aim to help financial institutions effectively identify, assess, and manage environmental risks, particularly climate change-related ones, in their operations and investment activities. These guidelines provide clear directives and best practices for financial institutions in Singapore to integrate environmental risk management into their operations, ensuring the resilience of their businesses and the sustainability of the financial system as a whole.

In comparison, The Financial Supervisory Commission in Taiwan has recently implemented regulations for Pex- and TWSE-listed companies to enhance corporate governance and ensure transparency. These regulations aim to promote ethical business practices and protect the interests of investors and stakeholders.

One of the critical characteristics of these regulations is the emphasis on board independence in actual practices. To address the agenda of promoting corporate governance, the Taiwan government has revised several legal acts and rules, including the Company Act and the Securities and Exchange Act.

Hong Kong regulators implemented several policy regulation rules and development concepts: Green and Sustainable Finance Strategy (2020), Hong Kong Monetary Authority (HKMA) - Common Assessment Framework on Green Sustainable Banking (2020), and Hong Kong Securities and Futures Commission (SFC) - published a compilation of approved ESG funds (2020).

The results of the implemented regulations in the region manifest in the form of growing sustainable investment: products on environmental protection, renewable energy, green transport, and low carbon production.

Table 5 – Drivers influenced ESG in Latin America

Latin America			
Policy and regulatory	Industry	Customer	Market
The implementation of regulations requiring pension funds in Mexico to incorporate ESG factors	The public Declaration for the Mexican Stock Exchange listed companies about ESG disclosure	80% of countries reported that they were unfamiliar with the B Lab system	70.8% of the firms have already been engaged to undertake projects that are either related to ESG
Norm 276 for implementation of regulations requiring pension funds in Chile to incorporate ESG and Climate change factors (2022)	Ten companies from various industries have implemented ESG principles	ESG offerings are now available to retail customers in Brazil, Mexico, Chile, and Colombia	79.1%, have integrated ESG initiatives into their management practices
The Norm 007 for implementation of regulations requiring pension funds and insurance companies in Colombia to incorporate ESG and Climate risk factors			79.8% of the firms are engaged in discussions regarding ESG activity and opportunities
Organization	No specific organization, the Principles for Responsible Investment		
Note – compiled by the authors, source (www.ibanet.org)			

Latin American countries, such as Mexico, Chile and Colombia have gained initiatives for ESG promotion in the region. The drivers that have influenced Environmental, Social, and Governance practices in Latin America are multifaceted and varied. They include factors such as regulatory frameworks, stakeholder pressure, market demands, and international norms and standards. Regulatory frameworks have played a crucial role in driving ESG practices in Latin America. Government policies and regulations have been established that require companies to disclose their ESG performance and adhere to certain sustainability standards. Additionally, stakeholder pressure has been influential in driving ESG practices. Consumers, investors, and communities increasingly demand that companies be transparent about their environmental and social impact, leading businesses to adopt ESG practices to meet these expectations and maintain their reputation. Furthermore, market demands have also played a significant role in shaping ESG practices in Latin America. As consumers become more aware of environmental and social issues, they are seeking out companies that align with their values and preferences. As a result, companies are being motivated to adopt ESG practices in order to attract and retain customers.

Norms in the regulative and legislative framework are directed to ESG and climate risk factors for pension funds (Norm 276 in Chile, Norm 007 in Colombia). As a result about ten companies in the region implemented ESG principles. However, the region has no specific organization or strategy for the Responsible or sustainable Investment Principles. According to the official data, more than 79% of the businesses integrated ISG in the management and nearly 80% are under the discussion of the engagement of ESG in the activity.

ESG indexes are a tool that investors and financial institutions are increasingly utilizing. These indexes provide a comprehensive framework for assessing companies' performance and risk in terms of environmental, social, and governance criteria. By incorporating ESG factors into investment decisions, investors are able to consider not only financial performance but also the impact that companies have on the environment and society (Chen et al., 2022).

ESG indexes serve several purposes in the investment decision-making process. Firstly, they provide a standardized and consistent set of criteria for evaluating companies' ESG performance.

This allows investors to compare companies within the same industry or across different sectors, providing a holistic view of their sustainability practices. Additionally, ESG indexes provide transparency and accountability for companies. By publicly disclosing their ESG scores and rankings, companies are motivated to improve their sustainability performance in order to attract and retain investors. Furthermore, ESG indexes serve as a risk management tool.

The Index Comparison table, created by the authors, provides a comprehensive overview and analysis of four key sustainability indices: the S&P ESG index, the Nasdaq-100 ESG index, the MSCI KLD 400 Social index, and the FTSE US All Cap Choice Index. These indices aim to evaluate the sustainability performance of companies within their respective markets and provide investors with opportunities to invest in environmentally and socially responsible companies. The S&P ESG index is a comprehensive, market-capitalization-weighted index that focuses on specific sustainability standards within the S&P 500 index.

Table 6 - ESG index methodologies

Characteristics	S&P ESG index	Nastaq-100 ESG index	MSCI KLD 400 Social Index	FTSE US All Cap choice index
Description	comprehensive, market-capitalization-weighted index; aims to evaluate the returns of stocks for specific sustainability standards within the S&P 500 index	adhere to distinct environmental, social, and governance parameters are assessed and prioritized based on operational practices, ethical concerns, and ESG Risk Ratings	offers opportunities to invest in companies that possess exceptional Environmental, Social and Governance evaluations	market cap-weighted index, designed for investors by cancelling the selection of companies based on their behavior or products in specific sectors
Investments amount	307	96	402	1000

ESG criteria	Exclusion: tobacco coal, weapons industries; under 5% of UNGC ranking; under 25% of GICs group's ESG scores	Prohibition of gambling, alcohol and tobacco weapons, oil-gas, and nuclear power; Compliance with the UNGC; ESG Risk Rating Score	Screening covers: gambling, alcohol and tobacco weapons, oil - gas, nuclear power; adult entertainment, thermal Coal Power	Screening covers: Non-Renewable Energy Vice Products Weapons Controversies by UNGC Diversity practices
First launched	2019	2021	1990	2018
Methods	Methodology based on exclusion firms from S&P 500 Float-adjusted market capitalization (FMC)	Modified market capitalization-weighted methodology	Index of market capitalization adjusted for free float	Methodology based on total return and price
Note – Compiled by the authors, sources: (www.indexes.nasdaqomx.com; www.spglobal.com; www.msci.com; www.ftserussell.com)				

It excludes companies involved in tobacco, coal, and weapons industries and incorporates rankings from the United Nations Global Compact and ESG scores from the Global Industry Classification Standard. The Nasdaq-100 ESG index, on the other hand, adheres to distinct environmental, social, and governance parameters. It evaluates companies based on their operational practices, ethical concerns, and ESG Risk Ratings. The MSCI KLD 400 Social index offers opportunities for investors to allocate their funds to companies that have exceptional Environmental, Social, and Governance evaluations. These evaluations cover a wide range of criteria, including screening for companies involved in gambling, alcohol, tobacco, weapons, non-renewable energy, and other controversial sectors. Lastly, the FTSE US All Cap Choice index is a market cap-weighted index that selects companies based on their behavior or products in specific sectors. It aims to exclude companies involved in sectors such as gambling, alcohol, tobacco, weapons, oil and gas, nuclear power, and adult entertainment. These indices help investors align their investments with their values and provide a means to track the performance of sustainable companies in the market. In addition to the four indices discussed in the Index Comparison, several other renowned sustainability indices are available in the market.

From the side of the index developers used matrix for ESG indexing, it must be mentioned that indexes are indicated for corporations and financial institutions and do not include indexation for all countries. Nowadays, most corporations and institutions are international, making it impossible to indicate the territorial affiliation of the company.

Kazakhstan on the way of ESG principles implementation.

There is an increase in institutional support for the development of sustainable finance in Kazakhstan:

1. A new Environmental Code was adopted, providing for the dissemination of "green" investments based on the use of "green" bonds and "green" loans in January 2021.

2.The Decree of the Government of the Republic of Kazakhstan No. 996 approved a green taxonomy for the classification of green projects to be financed through green bonds and loans at the end of 2021.

3. The concepts of "green" projects and "green" taxonomy were introduced into the state program "Business Roadmap – 2025". The Government Decree No. 736 of 13.10.2021 subsidised the interest rate on loans for implementing "green" projects and the coupon rate on "green" bonds.

4. A Strategy for Achieving Carbon Neutrality until 2060 was adopted, providing comprehensive decarbonization measures in various industries and emphasising the need to update production processes at the beginning of 2023. By 2030, 10 billion US dollars will need to be invested, and by 2060 - the remaining 600 billion US dollars. It will be aimed at the development of low-carbon technologies in critical sectors such as energy, industry, transport, agriculture and building construction to achieve "clean zero".

Table 7 - Kazakhstan's carbon neutrality strategy's directions by sector

Sector	The main directions of Kazakhstan's carbon neutrality strategy
Energy industry	• Decarbonization of primary energy supplies • Decarbonization of electric and thermal energy production • Decarbonization and highly efficient use of energy
Industry	• Reducing the consumption of primary materials by improving product design and using alternative materials • Increasing the volume of waste processing to reduce the need for processing raw materials as the primary source of emissions • Introduction of new zero-emission production technologies
Transport	•Reducing the need for car trips • Shift towards alternative fuels • Improving urban planning and mobility
Agribusiness	• Sustainable agriculture and livestock management • Improvement of irrigation system • Sustainable forest management and reforestation
Building	• Energy efficiency • Transition to heating and energy supply based on renewable energy sources

Following the Environmental Code, Kazakhstan has introduced the Kazakhstan Unit Trading System based on the "Cap and Trade" principle. The main objective of this system is to systematically reduce greenhouse gas emissions using market methods to stimulate market participants. The primary industries covered by the emissions trading system are electric power industry, oil and gas industry, mining industry, manufacturing industry, chemical industry, and metallurgy.

5. The Agency for Regulation and Development of the Financial Market of the Republic of Kazakhstan approved a Roadmap for implementing ESG principles for the Kazakh financial sector at the beginning of 2023. It contains step-by-step plans for the next three years. In particular, the objectives of financial market regulation for the implementation of ESG principles have been clarified:

- the ESG risks exposure information Disclosure by financial institutions;
- the ESG risk management and the carbon footprint of the loan portfolio assessment;
- Implementation of ESG principles in the risk management system and corporate governance;
- the ESG risks monitoring and integration into the supervision system.

6. Along with activating Kazakhstan's stock markets to attract sustainable investments, measures are being implemented to introduce ESG practices in the banking sector.

The first issue of "green" bonds was placed by JSC "Development Bank of Kazakhstan" on the site of the Kazakhstan Stock Exchange, with a volume of 10 billion tenge in March 2023. The European Bank for Reconstruction and Development provided financing of up to 150 million US dollars to financial institutions participating in the Kazakhstan Green Economy Financing Facility II (GEFF Kazakhstan II) project for lending to small and medium-sized businesses and individuals for developing the local market of "green" technologies, reduce the risks of climate change, and spread circular businesses and promoting gender equality.

Banks can achieve significant decarbonization in relation to their activities related to energy consumption and transport use. However, the primary influence of a commercial bank on the decarbonization of the economy lies in indirect emissions: in connection with the provision of financial, insurance and other services to companies in the real sector of the economy, which is directly responsible for direct GHG emissions. By responsibly using these tools, by strategically redistributing capital from carbon-intensive projects in favor of activities that contribute to accelerating decarbonization, banks are able to directly influence the speed at which the world economy achieves the goals of the Paris Agreement on Combating Climate Change.

Comply with the world's leading practices and expectations of the Regulator of the Republic of Kazakhstan:

▪ Conducting ESG diagnostics, developing a roadmap and assessing the Bank's impact (Basic level):

- Development of a plan for quick wins – targeted ESG KPIs;
- Self-impact assessment and USP assessment;
- Building an ESG aspects management system;
- Implementation of ESG principles in the risk management system and corporate governance.

▪ Development of approaches and tools for Responsible Financing Principles, ESG-scoring of Bank borrowers, which includes comprehensive ESG transformation of the Bank for full compliance with the requirements of the regulator in the long term and automation of processes and data in the field of ESG, for the collection, consolidation and management of ESG data for reporting according to international standards, carbon footprint assessment and climate stress testing.

▪ Development of Climate strategy, scenario modelling and climate stress testing.

Thus, in sustainable finance development and integration of ESG principles in the financial sector on the beginning stage financial institutions have started adding their plans to promote sustainable investments and ESG movement in the form of reports. However, it is too early to talk about actual results. For effective dissemination of the process and further implementation of national sustainable finance development goals, it is necessary to use the best international practices.

Establishing a comprehensive and well-defined roadmap is essential for implementing sustainable finance strategies, encompassing the integration of ESG principles within financial institutions. This program aims to enhance both funding opportunities and these establishments' long-term viability and competitiveness.

Conclusion

Summing the review of the development of sustainable finance in advanced countries in this direction, despite the existing national peculiarities of their practices, common key trends can be noted.

- A purposeful and consistent state policy being implemented to disseminate sustainable finance and promote the integration of ESG principles at the level of financial institutions, corporations and investors, reflected in the relevant strategic policy documents in the studied countries.

- Despite the cross-country differences in emphasis on the implementation of sustainable finance and the responsible financial institutions and funds for the realization, a legislative framework is being developed that contributes to the expansion of the range of financial instruments used on ESG principles in the countries studied in this paper.

- In order to unify global standards for sustainable finance implementation in the studied countries, the adaptation of international index methods for assessing ESG principles continues, considering socio-economic, environmental and institutional features.

- The commitment of the countries to information and best practices shared network has contributed to a significant global diffusion of sustainable finance.

- From the point of view of Kazakhstan's prospects for the further development of sustainable finance, an important role will be played by distributed stock market instruments that will allow the efficient allocation of "green" Investments, providing transparency of transmission mechanisms of these resources to the real sector of the economy.

Taking into consideration the raw material specifics of the national economy of Kazakhstan, the deterioration of atmospheric air in large cities, the increasing shortage of water and the aggravation of other environmental threats, at this stage a Roadmap for the development of sustainable finance with prioritization of sectors and industries of the economy is required. In this context, the creation of an ETF fund to strengthen the risk management system and prevent threats of an environmental and social nature seems to be a promising direction.

References

1. Balp, G., Strampelli, G. (2022). Institutional Investor ESG Engagement: The European Experience. European Business Organization Law Review, 23(4), 869–904. https://doi.org/10.1007/s40804-022-00266-y

2. Bloomberg (2023) (cited 20 September 2023) Available at: https://www.bloomberg.com/graphics/climate-change-data-green/?leadSource=uverify%20wall

3. Cheba, K., Bąk, I. D. (2019). The Application of Multi Criteria Taxonomy to Comparative Analysis of Structures of Sustainable Development. Acta Universitatis Lodziensis. Folia Oeconomica, 5(344), 29–48. https://doi.org/10.18778/0208-6018.344.03

4. China-briefing (2023) (cited 6 September, 2023) Available at: https://www.china-briefing.com/news/chinas-new-rules-for-private-funds-implications-for-chinese-and-foreign-fund-managers/

5. Chinasif (2023) (cited 17 September, 2023) Available at: https://www.chinasif.org/pages/2023chinasif

6. Chiappini, H., Vento, G., De Palma, L. (2021). The impact of covid-19 lockdowns on sustainable indexes. Sustainability (Switzerland), 13(4), 1–18. https://doi.org/10.3390/su13041846

7. Collier, D. (1991). The comparative method: two decade change. In Comparative political dynamics: global research perspectives pp. 7–27.

8. Common Assessment Framework on Green Sustainable Banking, Hong Kong Monetary Authority (HKMA), 2020 (Hong Kong).

9. Corporate Sustainability Reporting Directive (report on the social and environmental impacts), January 2023 (European Union).

10. Corporate Governance Roadmap for 2018-2020 in Taiwan, 24 April 2018 (Taiwan).

11. European Union Sustainable finance strategy, 2021 (European Union).

12. Gai, L., Bellucci, M., Biggeri, M., Ferrone, L., & Ielasi, F. (2023). Banks' ESG disclosure: A new scoring model. Finance Research Letters, 57. https://doi.org/10.1016/j.frl.2023.104199

13. GISA. (2021). Global sustainable investment review 2020. www.robeco.com

14. Green Investment Guidelines by the Asset Management Association of China (AMAC), 2018 (China).

15. Green and sustainable finance strategy of Hong Kong, 2020 (Hong Kong).

16. Guo, M., Nowakowska-Grunt, J., Gorbanyov, V., Egorova, M. (2020). Green technology and sustainable development: Assessment and green growth frameworks. Sustainability (Switzerland), 12(16). https://doi.org/10.3390/su12166571

17. Guidelines on Environmental Risk Management, Monetary Authority of Singapore, 2020 (Singapore).

18. Ibanet (2023) (cited 17 September, 2023) Available at: https://www.ibanet.org/article/1EAC98FE-52DA-41B4-9268-9CAD3C2B135A

19. Lee, E., Kim, G. (2022). Analysis of Domestic and International Green Infrastructure Research Trends from the ESG Perspective in South Korea. International Journal of Environmental Research and Public Health, 19 (12). https://doi.org/10.3390/ijerph19127099

20. Li, R., Li, B., Zhu, X., Zhao, J., Pu, R., Song, L. (2022). Modularity clustering of economic development and ESG attributes in prefabricated building research. In Frontiers in Environmental Science, Vol. 10. Frontiers Media S.A. https://doi.org/10.3389/fenvs.2022.977887

21. Mandas, M., Lahmar, O., Piras, L., De Lisa, R. (2023). ESG in the financial industry: What matters for rating analysts? Research in International Business and Finance, 66, 102045. https://doi.org/10.1016/j.ribaf.2023.102045

22. Markets in Financial Instruments Directive 2 (MiFID II), 3 January 2018 (European Union).

23. Misorimaligayo, B. W., Ochieng, E. G., Osiolo, H. H. (2023). ESG risks integration, management, reporting and competitive opportunities in commercial banks – a systematic literature review. 13th International Scientific Conference "Business and Management 2023." https://doi.org/10.3846/bm.2023.1021

24. Sec (2023) (cited 1 September, 2023) Available at: https://www.sec.gov/rules/rulemaking-activity?aId=&search=&rulemaking_status=178151&division_office=All&regulation_year=

25. Shirazi, N. S., Kuanova, L. A., Zhuparova, A. S. (2021). Islamic Social Finance and the impact of the Covid-19 pandemic. Economy: Strategy and Practice, 16(1), 106–116. https://doi.org/https://doi.org/10.51176/JESP/vol_16_issue_1_T11

26. The European Union Sustainable Finance Action Plan, 2018. Sustainable Finance Disclosure Regulation (European Union).

27. The European Union Taxonomy Regulation, 12 July 2020 (European Union).

28. The Executive Order on Climate-Related Financial Risk, 2021 (the United States of America).

29. The Green Credit Guidelines by the China Banking Regulatory Commission (CBRC), 2012 (China).

30. The Guidelines for Establishing the Green Financial System (2016) in China

31. The Guiding Opinions on Promoting Investment and Financing to Address Climate Change, 2020 (China).

32. Ussif (2023) cited 9 September, 2023) Available at: https://www.ussif.org/sribasics

33. Wiener, B. (2021). The framing of sustainable finance in charitable foundations—findings from a qualitative study. Sustainability (Switzerland), 13(18). https://doi.org/10.3390/su131810319

34. Ya, S., Sjarkowi, F., Emirzon, J., Meutia, I. (2018) Sustainable Financing for Biogas Fuel from Palm Oil Industry Waste. Recent Adv Petrochem Sci, 5(1). https://doi.org 10.19080/RAPSCI.2018.05.555652

35. Zioło, M., Bąk, I., Cheba, K., Filipiak, B. Z., Spoz, A. (2023). Environmental, social, governance risk versus cooperation models between financial institutions and businesses. Sectoral approach and ESG risk analysis. Frontiers in Environmental Science, 10. https://doi.org/10.3389/fenvs.2022.1077947

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