

Trends and Focuses for ESG Investment Support: A Cross Country Comparative Analysis

By Iuliia Gernego¹, Liudmyla Petrenko², Valentyna Lavrynenko³, Mykhailo Dyba⁴

ABSTRACT:

Currently, the modern society faces a measure of challenges, connected with the lack of balance between the economic and social development issue. This has caused the growing recognition of sustainable and responsible practices within the financial decisions making process, providing a measure of transformations of both financial and business landscape, contributing to a more equitable and environmentally conscious society. The modern researches in finance are significantly influenced by the increasing demand for ESG, the strengthening of ESG principles implementation in wealth and assets management. According to PwC researches, the ESG-oriented assets under management market in Europe is already about 172 % in compartment with 2021 year, the forecasted increase till 2026 year will be nearly 50 % comparing to the current volume. Thereby, there is an urgent need to summarize the theoretical descriptions of ESG investing along with the current trends of particular ESG components transformation along with the considering analytical research on trends and focuses for ESG investing's support. The current research problem lays in the highlighting the functionality of ESG-oriented activity and its investment attractiveness trough the overview of theoretical definitions of ESG, comparing with the Trends and focuses for ESG investing's support within the representative sampling on countries from the World Bank's databases. The study is focused on the detailed analysis of separate indicators within a group of ten different countries. "Agricultural land", "Electricity production from coal sources" and "CO2 emissions" indicators are analyzed within the environmental component. The social component of ESG is represented by the "Government expenditure on education" and "Individuals using the Internet" indicators. The "Regulatory Quality", "Rule of Law" and "Voice and Accountability" indicators are considered as a part of governmental component. The chosen countries (Denmark, Finland, France, Germany, Japan, Norway, Poland, Ukraine, United Kingdom and the United States of America) represent defereent environment and approaches to ESG management and its investment support. The current research aims to represent the possibility to balance the ESG components, creating synergetic effect in case of their combinations. In particular, the attention is paid to the instruments of monetary and fiscal policy to balance ESG in the COVID-19 time. The elaboration of possible scenarios of ESG's components balancing is possible in case of implementation of systematic measures to monitor debt sustainability and increase the transparency of banking institutions' balance sheets along with the developing the targeted measures to maintain an adequate level of liquidity and solvency of national economies, and coordination of national strategies and policies.

Keywords: sustainable development, sustainable finance, ESG investing, social-responsible business.

¹Kyiv National Economic University named after V. Hetman, Corporate Finance and Controlling Department, Faculty of Finance, Kyiv.

*Corresponding Author.

²Kyiv National Economic University named after V. Hetman, Department of Business Economics and Entrepreneurship, Faculty of Economic and Management, Kyiv.

³Kyiv National Economic University named after V. Hetman, Department of Business Economics and Entrepreneurship, Faculty of Economic and Management, Kyiv.

⁴Kyiv National Economic University named after V. Hetman, Corporate Finance and Controlling Department, Faculty of Finance, Kyiv.

1. Introduction

Modern society faces a measure of challenges, considering the social and economic development, business and national economy growth. In particular, there is a measure of transformations within financial landscape, reflecting a growing recognition that sustainable and responsible business practices contribute not only to long-term financial performance but also to a more equitable and environmentally conscious world. Investors are increasingly turning their attention to ESG (environmental, social, and corporate governance) considerations to guide their investment decisions, evaluating the impact of businesses on the planet, society, and their internal governance structures. ESG investing stands as a compelling avenue for aligning financial goals with broader sustainability objectives.

According to PwC top-managers, ESG is considering among the main drivers of growth in the area of asset and wealth management. The increasing trends of ESG investing widespread globally are highlighted within a measure of analytical researches that is connected with the increasing demand for ESG in business activity and social area. This significantly influences the capital market and risks typology. Therefore, asset managers and institutional investors are paying increasing attention to the understanding of ESG as a counter to potential portfolio underperformance and legacy product obsolescence. It is defined that the volume of ESG-related assets under management worldwide will increase from 18,4 tn USD to 33,9 tn USD during the following five years. The forecasted increase of projected compound annual growth rate (CAGR) is calculated at the level of almost 13 %. The ESG assets are considered to achieve the level of 21,5 % within the structure of total assets under management till 2026 year. PwC team created the PwC's Asset and Wealth Management Revolution 2022 report, based on the review of 250 institutional investors and asset managers' questioner that represents almost the half of assets under management worldwide. The forecasted growth rate of the ESG-oriented assets under management is considered to be higher than the global asset and wealth management growth. The above-mentioned trends seem to be typical for all regions. For instance, the American ESG-oriented assets under management market will increase twice within the following five years. The ESG-oriented assets under management market in Europe is already about 172 % in compartment with 2021 year, the forecasted increase till 2026 year will be nearly 50 % comparing to the current volume. There are also prospects for ESG-oriented products growth within the highly-potential African, Middle East and Latin American markets (PwC, 2023).

The increase of the above-mentioned ESG trends at practice globally caused the growing attention to these issues within the researches. In particular, the topic of ESG investing is represented in research project of Institute of Advanced Studies in Vien in the context of sustainable investing researches that gained the importance over the past years. The project aims to elaborate the plan for complex strategies implementation, paying attention to ESG as a factor for investment decisions making. The preferences of investors are considered as a mix of potential prospects and possible ESG preferences, changing the criteria of risks estimation. The project experts are working on empirical researches on the issue of finding an optimal investment strategy and scenarios, combining financial performance with sustainability. The research summarizes the need to compare the

effectiveness of ESG-oriented scenarios with more traditional profit-oriented scenarios. Namely, the traditional performance measures are considered align with the return, risk and ESG aspects in order to assess the various investment strategies. The additional attendance is paid to the urgency of consideration of ESG criteria and indexes within different sectors of economy and regional market, constructing specified ESG scores (Fortin, *etc.* 2022).

According to the Asset and wealth management 2022 report, the integration of ESG principles into investment strategies and investment management processes has significant role in asset managers' and industrial investors' functionality. There is high probability of further rapid growth of ESG activity within the markets, creating significant challenges and opportunities. The ESG-oriented activity is available to achieve the following effects in future, including:

ESG is playing the role of an engine of growth, creating its ability to replace the asset price increases;

pursuing ESG is becoming a fundamental issue in modern society;

ESG funds is a modern trend within financial sector;

there is a growing importance to broaden the objectives of ESG investing;

investors are straightening their demand for ESG projects and products;

business owners and managers need to advance their products with ESG solutions, performing an appropriate effect;

state authorities tend to provide advancements in ESG regulation;

there is increasing need for investments to implement a meaningful ESG strategy;

there is a need to balance E, S and G components within particular project;

managers need to implement a proactive risk-mitigation strategy (Olwyn 2022).

On the other hand, the attention should be paid to possible problems and main challenges, including:

complicated ESG reporting framework that is connected with the multiple standards and approaches to ESG estimation, including the Global Reporting Initiative (GRI) and the Sustainable Accounting Standards Board's standards (SASB). The European Council is working on implementation of a corporate sustainability reporting directive (CSRD) that will assist in creating of single standard of ESG reporting in Europe;

complexity in regulatory framework that is connected with different approaches to ESG definition at the level of particular economies. The topic of ESG is still new and not sufficiently described within the EU regulation;

complexity of connection between the financial impact and the impact of ESG initiatives, approving the potential effectiveness of ESG;

the lack of sufficient methodological and statistical background for ESG risks' estimation and analysis (Deloitte 2023).

According to the 2024 edition of MSCI ESG Research's Sustainability and Climate Trends to Watch, the main issue of these researches is connected with a controversy of ESG principles within projects and investment in 2023. The practical importance of ESG is connected with its role in investment attractiveness and credibility. The growing importance of sustainable and ESG investment issues caused the national regulators' activation around the world in part of the creation of the appropriate regulation basis for ESG principles' implementation (Nishikava 2023). According to J.P.Morgan asset

management research, the European Union's Sustainable Finance Disclosure Regulation and Taxonomy Regulation are developed as a basis for ESG-oriented issues regulation, boosting green and sustainable-focused policies and strategies in Europe. The political and regulatory landscape for ESG investing is developed in the USA, supporting the creation of tangible and attractive investment opportunities, and encouraging investors and businesses to redirect their capital to greener and more sustainable activity (Wu 2023).

The full-scale Russian invasion of Ukraine has caused a wide range of destructions within a wide range of industries, and social and economic infrastructure, including the energy industry and green economy (Post-war Reconstruction of Economy 2022). Since the full-scale war influenced in a negative way social infrastructure development and infrastructure for "green" project realization, the ESG principles are considered an important part of the post-war rebuilding strategy. In particular, in 2022 year the post-war recovery plan was developed and discussed at a conference in Lugano, Switzerland. It represented the background for different types of financial support, aiming at structural social and economic reforms for modernizing and ESG advancement instead of simple recovery within the post-war rebuilding process (Post-war recovery plan for Ukraine 2022, Gernego 2023).

Therefore, the ESG development trends in modern society and appropriate theoretical research show the significance of the above-mentioned issue. However, in light of recent trends, there is an increasing need to summarize the theoretical descriptions of ESG investing along with the current trends of particular ESG components transformation. This will assist in the development of particular scenarios of infrastructure transformation, boosting the support of ESG project realization and an appropriate direction of investment.

2. Theoretical Background

2.1 Previous research on the essence of ESG investing

The ESG criteria are aimed at the estimation of environmental, social, and governmental issues and their role in financial and business decision-making. The practice of applying ESG during project implementation dates back to the 1960s. ESG practices were tied to the powerful social movements of the time. As a result, investors began to review their existing portfolios in favor of so-called socially responsible industries and companies. For example, investments in tobacco production have decreased significantly (MSCI 2021). ESG principles have been included in international credit ratings since 1999, when socioeconomic sustainability parameters were applied to the S&P Dow Jones Indexes (S&P DJI). Starting in 2019, more ESG factors will be included in the indexes (S&P ESG Index Family 2021). In 2015, the United Nations adopted the Sustainable Development Goals (SDGs), also known as the Global Goals. This has brought key ESG components to the attention of the public and businesses. In particular, the idea of eliminating poverty and protecting the planet has gained traction; the application of the SDGs includes balancing social, economic, and environmental impacts in the conduct of a wide range of business operations (UNDP 2021).

The practical importance is the issue of screening the environmental, social, and governance factors during the process of investment attractiveness evaluation (Syed and

Ntim 2017). In the above-mentioned context, social, environmental, and governmental criteria are gaining particular importance in addition to economic indicators at both business and national economic levels (Figure 1).

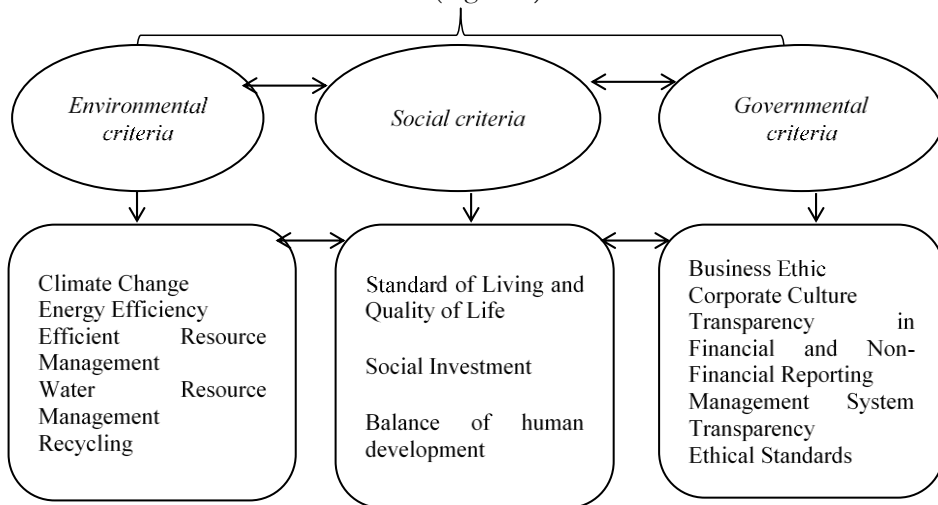


Figure 1. Criteria ESG (ESG Investment Principles 2021)

Thus, ESG issues are represented with the combination of the following components: environmental, social, and corporate governance. Within each of these components, specific aspects can be highlighted that investors and other stakeholders value. Specifically, the environment indicates how renewable and nonrenewable resources are used. For example, different stakeholders consider energy efficiency, the ability to reduce greenhouse gas emissions, resource efficiency, and waste management. Social factors primarily represent the impact of business on the social environment, particularly in terms of employee management practices, inclusiveness decisions, and social responsibility (Olszewska and Rigtering 2021). Representatives of the business and financial sectors tend to base their decisions on a set of socioeconomic factors and values (ESG principles). As a result, ESG principles have a significant impact on the attractiveness of financial markets and investments (Gernego, Petrenko, *et al.* 2021). For example, an analysis of approximately 270 U.S. companies shows a link between investment attractiveness and ESG ranking (T. Starks). When companies adhere to ESG principles, long-term institutional investor loyalty to such companies' increases. Key criteria for investment attractiveness include the presence of a sustainability strategy, transparency in financial and non-financial reporting, and adherence to corporate social responsibility. BlackRock's 2020 Investment Fund Report indicates plans to expand the range of risks considered when reviewing potential investment projects. The fund's experts have identified credit risk, liquidity risk, and ESG risk as the most influential risks. Attention was drawn to the need to prepare for a significant redistribution of capital at the level of individual companies, investors, and authorities (Starks, *et al.* 2017).

2.2 ESG terminology

According to a recent report by Moody's, ESG principles are becoming an important part of the investment decision-making process. In particular, ESG investing has gained a significant increase over the past few years (ESG Bond Market 2023). There is a measure of point of view into the essence of sustainable and ESG investing issues (Table 1).

Table 1: Sustainable and ESG investing issues

Term	Description	Group
1	2	3
ESG investing	Consideration of environmental, social, and governance (ESG) issues as part of financial analysis to widespread the criteria of decision making process, estimating the object for investment (CFA Institute 2023).	Investor side
Sustainable investing	Represents a specific investment approach, taking into account social and environmental performance during an investment decision making process (International Labor Organization 2023).	Investor side
Responsible investing	Reflects the relevance of environmental, social and corporate governance issues within investment practices (PRI 2023).	Investor side
Social-responsible investing	Paying attention to positive social change by considering both financial returns and moral values in the process of investments decisions making (S&P Global 2020).	Investor side
ESG project	The framework of understanding the sustainability of organization's operations (CFI 2015)	Business side
Social-responsible business	Integration of ideas around the way of companies' response to social issues (CFI 2015).	Business side

Thus, there is lack of standardization within the ESG terminology. This causes the problem within possible differentiation process. However, so far, along with a lack of theoretical background on ESG investing, there is a need to summarize the applied trends and focuses of ESG investing's support. The above-mentioned issue is rather complicated. Therefore, there is a growing importance of appropriated data analyzes, considering the international organizations' databases.

3. Methods

3.1. The database to estimate the focus of ESG investing's support

The World Bank's ESG Data Draft dataset is considered as a basis for the analytical part of the research. It provides information on 17 main sustainability topics, divided into 71 indicators, considering the environmental, social, and governance

components. These indicators are shedding light on the sustainable performance of national economies, combining national priorities with global sustainable development goals (Data Catalog 2023). The draft development aims to further research on defining the correlation between the indicators of sustainable development within national economies and the risk along with the return on relevant investments.

The ESG research base covers the countries within the globe during the 1960 – 2023 years. The indicators are represented as the following ones: access to clean fuels and technologies for cooking; access to electricity; adjusted savings: natural resources depletion; adjusted savings: net forest depletion; agricultural land; agriculture, forestry, and fishing, value added; annual freshwater withdrawals; annualized average growth rate in per capita real survey mean consumption or income, total population; cause of death, by communicable diseases and maternal, prenatal and nutrition conditions; children in employment; CO₂ emissions; coastal protection; control of corruption: estimate; cooling degree days; economic and social rights performance score; electricity production from coal sources; energy imports; energy intensity level of primary energy; energy use; fertility rate, total (births per woman); food production index; forest area (%); fossil fuel energy consumption; GDP growth; GHG net emissions/removals by LUCF; Gini index; government effectiveness: estimate; government expenditure on education; Heat Index; heating degree days; hospital beds; income share held by lowest 20%; individuals using the Internet; labor force participation rate; land surface temperature; level of water stress: freshwater withdrawal as a proportion of available freshwater resources; life expectancy at birth; literacy rate, adult total; mammal species, threatened; methane emissions; mortality rate, under-5; net migration; nitrous oxide emissions; patent applications, residents; people using safely managed drinking water services; people using safely managed sanitation services; PM_{2.5} air pollution, mean annual exposure; political stability and absence of violence/terrorism: estimate; population ages 65 and above; population density; poverty headcount ratio at national poverty lines; prevalence of overweight; prevalence of undernourishment; proportion of bodies of water with good ambient water quality; proportion of seats held by women in national parliaments; ratio of female to male labor force participation rate; regulatory quality: estimate; renewable electricity output; renewable energy consumption; research and development expenditure; rule of law: estimate; school enrollment, primary; school enrollment, primary and secondary (gross), gender parity index (GPI); scientific and technical journal articles; standardized precipitation-evapotranspiration index; strength of legal rights index; terrestrial and marine protected areas; tree cover loss (hectares); unemployment, total unmet need for contraception; voice and accountability: estimate (Data Catalog 2023).

3.2. Research methodology and sample model

The World Bank database on ESG indicators is rather detailed and therefore complicated both in terms of the countries and the ESG indicators. It aims to provide comparative analysis within separate countries' performances. However, there is a gap in emphasizing the growing significance of separate ESG factors in investment decisions through national economies.

Due to the growing significance of ESG factors in investment decisions globally and at the level of separate economies, our current study is focused on more detailed analysis of separate indicators within a group of ten different countries.

The chosen indicators are chosen in framework of three basic groups of ESG performance. The environmental component is analyzed through the “Agricultural land”, “Electricity production from coal sources” and “CO₂ emissions” indicator. Agriculture remains a significant sector in numerous economies, playing a crucial role in providing food and generating revenue for developing countries. At the same time, the agricultural activities integral to these economies also carry the potential for natural resource degradation. Therefore, it is crucial to consider the “Agricultural land” indicator, aiming to provide a background for its balancing. Coal stands as the world's second primary energy source, following oil, and takes the lead in electricity generation. Despite the economic advantages it brings to nations, the environmental repercussions of coal utilization, particularly emanating from carbon dioxide emissions, are noteworthy. Worldwide initiatives are actively addressing this issue by focusing on constructing more efficient plants, retrofitting outdated facilities, and decommissioning the oldest and least efficient coal-powered plants. The release of carbon dioxide (CO₂) primarily results from the combustion of oil, coal, and gas for energy purposes, the burning of wood and waste materials, and industrial processes like cement production. The environmental consequences associated with carbon dioxide are of substantial concern. Among greenhouse gases contributing to global warming and climate change, carbon dioxide (CO₂) constitutes the most significant portion (Data Catalog 2023).

The social component of ESG is analyzed through the “Government expenditure on education” and “Individuals using the Internet” indicators. The proportion of government spending allocated to education serves as an indicator to evaluate the importance a government places on education in comparison to other public investments. Additionally, it reflects a government's dedication to fostering the development of human capital. Nations with younger demographics might allocate a larger portion of their budget to education, possibly at the expense of other sectors like health or social security, and conversely, countries with older populations may prioritize differently in their budgetary allocations. The revolution in digital and information technologies has transformed the global landscape, impacting the methods of learning, communication, business operations, and healthcare practices. Emerging information and communications technologies (ICT) present extensive prospects for advancements across various aspects of life in every nation. These prospects encompass opportunities for economic development, enhanced health outcomes, improved service delivery, distance learning initiatives, and societal and cultural progress (Data Catalog 2023).

The governmental component is one of the most complicated for estimation. Therefore, this type of estimation is made in the framework of a particular estimation system of the World Bank, based on primary data gathering. The “Regulatory Quality”, “Rule of Law” and “Voice and Accountability” indicators are considered within the current research. Regulatory Quality entails the perception of the government's competency in crafting and implementing effective policies and regulations that facilitate and encourage the development of the private sector. Rule of law encompasses perceptions of the degree to which individuals have trust in and adhere to societal rules,

particularly focusing on the quality of contract enforcement, property rights, the efficiency of law enforcement, and the effectiveness of the judicial system, along with considerations of crime and violence likelihood. Voice and Accountability includes the freedom of expression, freedom of association, and the presence of a free media (Data Catalog 2023).

The sample data model within the current research considers the separate criteria within the environmental, social and governmental components. To provide a comparative analysis, the geographical overview of the sample data model is represented within the following economies: Denmark, Finland, France, Germany, Japan, Norway, Poland, Ukraine, United Kingdom and the United States of America.

Denmark and Norway are globally acknowledged as a prominent advocate for sustainability, consistently earning top positions in numerous well-regarded international ESG indices and assessments. Finland stands out as a society characterized by a robust social security system, minimal income disparities, and a highly skilled labor force. According to the EU directives, the Corporate Sustainability Reporting Directives should be transposed into the national law. Therefore, practical implementation and development of ESG and bringing into force the appropriate regulation is worth to be considered within the national economies of France, Germany and Poland. The United Kingdom has recently demonstrated a strong interest in the proactive implementation of ESG principles. The ESG becomes one of the main component of the corporate sector development in the USA. Japanese government actively implement ESG initiatives in light of the growing interest in ESG, particularly strengthening its environmental component. The full-scale war in Ukraine has not diminished the significance of the ESG agenda, but it has notably accelerated the obligatory incorporation of ESG considerations in addressing a broad spectrum of issues pertaining to the operations of individual businesses and the whole national economy. These, the above-mentioned countries represent a wide range of approaches to ESG development and support.

4. Results on estimation of current trends and focuses of ESG investing's support

The environmental component of ESG within the sample data model is represented by the following indicators: agricultural land as a % of a total land area (represents environmental efficiency), electricity production from coal sources as a % of total electricity production (represents energy efficiency) and CO₂ emissions (represents ecological efficiency).

Agricultural land may be defined as arable land. According to the FAO definition, arable land includes temporary crop cultivation and pasture land along with permanent crop cultivation land. This represents the land fertility that shows the productivity and environmental efficiency within the national economy (Table 2).

Table 2: Agricultural land (% of land area)

Country	1970	1980	1990	2000	2010	2020	2021
Denmark	74,375	72,625	69,700	66,175	65,650	65,500	65,450
Finland	8,944	8,326	7,856	7,282	7,542	7,469	7,462
France	59,344	57,933	55,871	54,436	52,828	52,148	52,148
Germany	54,487	53,043	51,648	48,912	47,910	47,497	47,486
Japan	18,260	16,795	15,996	14,425	13,588	12,845	12,782

Norway	2,612	2,563	2,672	2,853	2,754	2,707	2,704
Poland	63,806	62,056	61,357	60,116	47,176	48,127	47,368
Ukraine	-	-	-	71,470	71,234	71,300	71,300
United Kingdom	77,911	76,340	75,241	70,119	71,194	71,340	71,158
United States	47,429	46,748	46,615	45,231	44,493	44,363	44,363
Average	45,241	44,048	42,995	44,102	42,437	42,329	42,222

The percentage of agricultural land is rather diversified within the chosen economies. The average percentage of agricultural land is between 42 – 45 %. This shows the agricultural land ability to provide many national economies with sufficient resources, food, and revenue. However, some highly developed economies have a low percentage of agricultural land. For instance, it is about 2,5 % for Norway and around 7 % for Finland. This means to enhancement of sustainability along with reducing the need for additional land and the emissions from production processes. In the environmental context, there is an urgent need to increase land sustainability, considering the balance between land productivity and potential ESG outcomes. In the XXI century, coal becomes the main source of electricity production globally, producing around 40 % of total electricity. On the one hand, the coal industry provides numerous economic benefits for the national economy. However, on the other hand, there is often a negative environmental impact of coal use, providing additional carbon dioxide emissions (Table 3).

Table 3: Electricity production from coal sources (% of total)

Country	1960	1970	1980	1990	2000	2010
Denmark	71,625	31,208	81,842	90,670	46,246	43,760
Finland	29,680	30,353	42,634	18,460	13,107	18,756
France	36,469	30,553	27,352	8,491	5,766	4,663
Germany	87,029	74,464	62,940	58,731	53,146	43,642
Japan	32,208	16,939	9,595	13,490	21,484	27,155
Norway	0,000	0,000	0,016	0,067	0,051	0,085
Poland	97,463	91,701	94,713	97,493	96,331	88,092
Ukraine	-	-	-	38,186	30,078	36,944
United Kingdom	81,086	68,805	73,185	64,968	32,668	28,746
United States	53,912	46,387	51,203	53,067	52,895	45,798
Average	54,386	43,379	49,275	44,362	35,177	33,764

The average coal use within the chosen national economies is decreasing globally (from 54 % in 1960 to 33 % in 2010). The lowest electricity production from coal sources is less than 1 % in Norway which decreases the environmental damage by providing electricity using alternative sources. In particular, the balance between energy generation at the coal plants and using alternative energy sources provides an impact on balancing CO₂ emissions (Table 4).

Table 4: CO₂ emissions (metric tons per capita)

Country	1990	2000	2010	2020
Denmark	10,111	9,851	8,675	4,691

Finland	10,942	10,644	11,658	6,570
France	6,138	6,127	5,350	3,954
Germany	12,027	10,099	9,453	7,255
Japan	8,832	9,338	9,036	8,031
Norway	6,909	7,634	8,205	6,725
Poland	9,189	7,731	8,247	7,368
Ukraine	13,270	6,047	5,863	3,754
United Kingdom	9,813	9,015	7,690	4,601
United States	19,407	20,470	17,432	13,033
Average	10,664	9,696	9,161	6,598

The average CO₂ emission is decreasing almost twice within the sample data model countries. This is caused by the importance of reducing the share of greenhouse gases, which are associated with global warming. Therefore, the environmental effect is possible in the case of balancing the possible economic productivity with paying attention to an ecological component.

The second important component of ESG is the social part that is deeply connected with education, including governmental expenditures on it (Table 5).

Table 5: Government expenditure on education, total (% of government expenditure)

Country	1990	2000	2010	2020
Denmark		15,344	15,103	11,940
Finland	12,075	12,171	12,066	10,230
France	9,640		9,948	
Germany			10,269	9,180
Japan			8,418	7,310
Norway	13,894	15,630	15,088	10,140
Poland		11,583	11,044	10,660
Ukraine		11,359	15,234	13,086
United Kingdom	11,099	11,848	12,782	10,560
United States			15,567	12,650
Average	11,677	12,989	12,552	10,640

The average governmental expenditures on education are about 10 %. On the one hand, the percentage of government expenditure on education to GDP is an important indicator of public capacity in the context of the social component of ESG support. On the other hand, the decrease in governmental expenditures may be connected with an increase in the private sector's share in education funding.

Currently, the capacity of an educational sector within the national economy depends on access to the Internet (Table 6).

Table 6: Individuals using the Internet (% of the population)

Country	1990	2000	2010	2020	2021	2022
Denmark	0,097	39,172	88,720	96,549	98,866	97,860
Finland	0,401	37,248	86,890	92,170	92,808	92,989
France	0,053	14,308	77,280	84,706	86,095	85,333
Germany	0,126	30,216	82,000	89,813	91,431	91,630
Japan	0,020	29,991	78,210	90,219	82,914	
Norway	0,707	52,000	93,390	94,608	99,000	99,000
Poland	0,000	7,285	62,320	83,185	85,375	86,941
Ukraine	0,000	0,716		75,038	79,218	
United Kingdom	0,087	26,822	85,000	94,818	96,680	
United States	0,785	43,079	71,690	90,620	91,753	
Average	0,228	28,084	80,611	89,173	90,414	92,292

The access to Internet technologies within the chosen economies is increasing rapidly (almost 100 %). This increases the availability of information and communication technologies for both businesses and the financial sector. Such tendencies strengthen the information background along with the analytical and technological capacity within national economies. However, data quality is variable within the countries due to the differences in regulations covering data provision and availability. It is crucial to pay particular attention to the governmental component of ESG, in particular, to its effectiveness (Table 7).

Table 7: Government Effectiveness: Estimate

Country	2000	2010	2020	2021	2022
Denmark	1,897	2,100	1,840	1,962	1,991
Finland	2,030	2,224	1,901	1,921	1,755
France	1,637	1,463	1,205	1,231	1,166
Germany	1,805	1,516	1,314	1,291	1,290
Japan	1,142	1,522	1,548	1,363	1,620
Norway	1,816	1,874	1,888	1,798	1,942
Poland	0,569	0,630	0,324	0,255	0,259
Ukraine	-0,676	-0,821	-0,410	-0,439	-0,496
United Kingdom	1,769	1,618	1,333	1,242	1,239
United States	1,725	1,552	1,275	1,300	1,256
Average	1,371	1,368	1,222	1,192	1,202

The governmental component of ESG is one of the most complicated in part of estimation. In particular, the appropriate estimations were provided for the World Bank's ESG ranking. Government Effectiveness represents the public and civil services' quality, and the relevance of policy formulation and implementation, representing the governmental policy's credibility. The estimation is conducted within the range of -2,5 to +2,5. The average estimation of government estimation is 1,3 which shows the potential

for further growth, considering the effectiveness increase. The same method of estimation is used to show the regulatory quality (Table 8).

Table 8: Regulatory Quality: Estimate

Country	2000	2010	2020	2021	2022
Denmark	1,711	1,874	1,786	1,796	1,843
Finland	1,783	1,873	1,851	1,887	1,779
France	0,915	1,310	1,189	1,230	1,189
Germany	1,456	1,571	1,578	1,625	1,522
Japan	0,797	1,017	1,347	1,370	1,439
Norway	1,107	1,512	1,694	1,629	1,516
Poland	0,704	1,023	0,851	0,832	0,717
Ukraine	-0,406	-0,454	-0,267	-0,290	-0,332
United Kingdom	1,806	1,731	1,474	1,452	1,567
United States	1,696	1,444	1,238	1,441	1,424
Average	1,157	1,290	1,274	1,297	1,267

The Regulatory Quality shows the ability of the particular government to create and implement national policies and regulations, permitting and promoting private sector development. The level of confidence within society depends on the Rule of Law principles, including the estimation of the appropriateness of rules within the area of property rights, courts, and contract enforcement (Table 9).

Table 9: Rule of Law: Estimate

Country	2000	2010	2020	2021	2022
Denmark	1,809	1,898	1,808	1,896	1,900
Finland	1,953	1,961	2,021	2,013	1,958
France	1,432	1,500	1,297	1,260	1,183
Germany	1,609	1,638	1,520	1,572	1,533
Japan	1,290	1,320	1,474	1,541	1,558
Norway	1,831	1,890	1,931	1,908	1,762
Poland	0,633	0,712	0,521	0,427	0,431
Ukraine	-1,094	-0,844	-0,712	-0,681	-0,919
United Kingdom	1,667	1,775	1,463	1,397	1,415
United States	1,565	1,631	1,335	1,391	1,372
Average	1,270	1,348	1,266	1,272	1,219

The ability to participate in selection of government is provided within the Voice and Accountability criteria, estimating the freedom of expression, freedom of association, and a free media (Table 10).

Table 10: Voice and Accountability: Estimate

Country	2000	2010	2020	2021	2022
Denmark	1,536	1,542	1,515	1,545	1,586
Finland	1,593	1,487	1,609	1,610	1,602
France	1,183	1,203	1,066	1,105	1,106
Germany	1,315	1,298	1,374	1,420	1,410
Japan	0,958	1,041	0,983	1,067	1,017
Norway	1,526	1,595	1,719	1,738	1,775
Poland	1,076	1,038	0,615	0,579	0,600
Ukraine	-0,611	-0,084	0,089	0,071	-0,025
United Kingdom	1,323	1,290	1,231	1,265	1,232
United States	1,310	1,134	0,856	0,878	0,845
Average	1,121	1,154	1,106	1,128	1,115

Concerning the basic trends and focuses of ESG, it is important to pay attention to the possibility of balancing the ESG components, creating synergetic effect in case of their combinations.

5. Discussion on instruments of monetary and fiscal policy to balance ESG in the COVID-19 time

In most European countries, the financial sector entered the pandemic with fairly strong balance sheets, thanks to the success of financial reforms over the past decade. Therefore, the pandemic fiscal and monetary policy measures were mostly reactive.

In turn, experts from the European Systemic Risk Board (ESRB) conducted a study of the fiscal measures used to counter the effects of the COVID-19 pandemic in different European countries, emphasizing their differences. Accordingly, there is some heterogeneity in the measures used to combat the effects of COVID-19 at the national level. However, the total amount of funding announced under the programs is even slightly higher than the budgets of the measures implemented.

For example, to combat the consequences of the pandemic in Austria, a system of measures was applied that consisted of state moratoria and guarantees, grant support, and tax deferrals (Austria 2023). Accordingly, state moratoriums and guarantees mainly impacted the non-financial sector. At the same time, grant support measures and tax deferrals played an important role in maintaining the competitiveness of all sectors of the economy.

For loans granted to consumers and microenterprises, interest and loan repayment payments were suspended for certain groups of payments, and the term of the agreements was extended. AWS, ÖHT, and COFAG provide the guarantees through OeKB. This had a short-term impact on liquidity, which allowed the Austrian company to support its business activities.

In Germany, the most important fiscal measures were guaranteed loans, federal subsidies, and redundancy compensation. Many firms used several measures at the same time, such as bridging loans and direct transfers. As the economy recovers from the

pandemic, many of these measures are scheduled to be phased out, and companies report reduced needs for fiscal support.

Bank capital remained largely unchanged as policy measures curbed credit losses. While Germany's GDP fell by 5% in 2020, banks did not report significant losses. Widespread corporate bankruptcies could have led to large-scale losses for banks and triggered an increase in the shock to the financial system. This did not happen. Banks' capitalization relative to risk-weighted assets even increased slightly. The increase in the Tier 1 capital ratio partly reflects the fact that many new loans were covered by government guarantees and that some supervisory restrictions were eased (ESRB Europe 2023).

In Poland, a comprehensive mechanism of state loans was used to combat the effects of the COVID-19 pandemic, when the state provided concessional loans to Polish small and micro enterprises in the amount of up to 5 thousand zlotys, and a mechanism was in place to support the repayment of interest payments on loans for corporations (Poland 2023).

The activity done by the ESRB shows that fiscal measures related to COVID-19 have helped maintain financial stability. The financial system continued to provide financing to the real economy, and bank losses were contained during the pandemic. However, the longer the crisis lasts and the weaker the economic recovery, the losses of the non-financial sector may spread to the balance sheets of the financial sector (ESRB Europe 2023).

Accordingly, the experts of the European Systemic Risk Board have identified three priority policy areas aimed at overcoming the consequences of the COVID-19 pandemic, namely

- implementation of systematic measures to monitor debt sustainability and increase the transparency of banking institutions' balance sheets;
- targeted measures to maintain an adequate level of liquidity and solvency of national economies, and coordination of national strategies and policies;
- consideration of various scenarios of changes in the degree of insolvency and selection of potentially effective regulatory measures.

6. Conclusions, implications and further research

In conclusion, the current research provides the theoretical and analytical background on trends and focuses on ESG investing's support, providing the overview of current social and economic challenges and possibilities to overcome them in case of the balanced strategy implementation. The primary analytical research is provided according to the modern scientific background on the ESG issue and the essence of its particular principles. The research problem is considered in the context of the World Bank's analytical report on ESG trends and focuses.

Thus, in light of the current ESG trends' and focus analysis, there is the possibility to provide the following conclusions on this issue:

- ESG is considered among the main drivers of growth in the area of asset and wealth management, approving the importance of balancing its social and economic nature;
- the practical nature of ESG investing provides the background for consideration of environmental, social, and governance issues in the process

- of financial decision-making, approving the importance of ESG both for financial institutions and businesses;
- the sample data model within the current research represents the overview of the basic criteria of “E”, “S” and “G” components in the representative sampling of countries, including Denmark, Finland, France, Germany, Japan, Norway, Poland, Ukraine, the United Kingdom and the United States. The analysis represents the general tendencies of the environmental component of ESG main strengthening. However, due to the modern geopolitical tendencies, there is an increasing importance to balance the development of social and governmental components;
 - the regulation of balancing the ESG components within national economies is possible in case of the combination of direct and indirect measures of fiscal and monetary policies. In particular, the implementation of direct fiscal policy instruments and measures should go hand in hand with bringing Ukraine's national policy and strategies for post-Covid recovery and post-war economic reconstruction in line with international standards of sustainable development;
 - a number of fiscal and monetary policy measures have been implemented around the world to help mitigate the impact of the pandemic on the real economy and the financial system. A serious problem at the beginning of the pandemic was the virtual absence of long-term risk insurance for the private sector, which led to an increase in the impact of the coronavirus crisis and the vulnerability of businesses. In particular, at the beginning of the pandemic, a lack of liquidity proved to be a particular problem for companies operating in the private sector. Accordingly, governments implemented a system of measures to respond quickly to the liquidity crisis;
 - in most European countries, the financial sector entered the pandemic period with fairly strong balance sheets, thanks to the success of financial reforms over the past decade. Therefore, the pandemic fiscal and monetary policy measures were mostly reactive;
 - in the short term perspective, it is important to consider the possibility of introducing a system of state guarantees, compensation of interest on loans or extending the term of their payment, considering the post COVID-19 timeframe. In addition, at the national and regional levels, it would be advisable to consider postponing the payment of certain taxes for businesses whose activities are aimed at economic recovery and social development;
 - in the context of implementing postwar recovery programs in Ukraine, it is advisable to consider introducing a mechanism for partial or full tax exemption for representatives of certain sectors or industries. Such an incentive would help them to restore their business activity to pre-war levels and to technologize production processes. Accordingly, the subsequent resumption of taxation will create an effective basis for replenishing local and state budgets in the long term. Also, at the state level, it is advisable to consider the possibility of direct interaction between the state and employees

by stimulating work aimed at post-war reconstruction in accordance with the principles of sustainable development.

Acknowledgment: Current research is conducted within the framework of the Project "Fiscal and Monetary Security of the National Economy in the Conditions of Global Challenges and Threats Associated with the COVID-19 Pandemic" (registration number 2020.01/0546), which received a collective grant of the National Research Fund of Ukraine based on the results of the competition "Science for the safety of person and society".

References

- Austria. Measures taken in response to coronavirus (COVID-19) pandemic. (2023). URL: https://www.esrb.europa.eu/home/search/coronavirus/countries/html/esrb.covidpmc_austria_en.html
- Data Catalog. Environment, Social and Governance Data. (2023). The World Bank. URL: <https://datacatalog.worldbank.org/search/dataset/0037651/Environment--Social-and-Governance-Data>
- Deloitte. New challenges related to ESG factors. (2023). URL: <https://www2.deloitte.com/ce/en/pages/about-deloitte/articles/new-challenges-related-to-esg-factors.html>
- ESG (Environmental, Social, & Governance). (2015). CFI. URL: <https://corporatefinanceinstitute.com/resources/esg/esg-environmental-social-governance/>
- ESG Bond Market on Track to Reach \$1 Trillion Total Issuance in 2023. (2023). Responsible Assets Owners. Global Symposia. URL: <https://raoglobal.org/blog/esg-bond-market-on-track-to-reach-1-trillion-total-issuance-in-2023>
- ESG Investment Principles. *Environmental, Social, Governmental (ESG)*. Our active approach to ESG, incorporating our Sustainability Risk Policy. Janus Henderson, 2021. URL: https://cdn.janushenderson.com/webdocs/JHI_ESG_Investment_Principles_June2021.pdf
- ESG-focused institutional investment. (2023). PwC. URL: <https://www.pwc.com/id/en/media-centre/press-release/2022/english/esg-focused-institutional-investment-seen-soaring-84-to-usd-33-9-trillion-in-2026-making-up-21-5-percent-of-assets-under-management-pwc-report.html>
- ESRB Europe. (2023). URL: https://www.esrb.europa.eu/pub/pdf/reports/esrb.reports210216_FSI_covid19~cf3d32ae66_en.pdf
- Fortin, I., Hlouskova, J., Sögner, L. (2022) *Sustainable investment under prospect theory*, Institute for Advanced Studies. Vienna. URL: <https://www.ihs.ac.at/research/research-projects/projectdetail/sustainable-investment-under-prospect-theory/>
- Gernego, I., Dyba, M. I., Shkoda, T., Dyba, M. V. (2023). *Venture Financing as Support for the Sustainable Model of Post-War Rebuilding in Ukraine*. European Journal of Sustainable Development, 12(2), 1. <https://doi.org/10.14207/ejsd.2023.v12n2p1>
- Gernego, I., Petrenko, L., Dyba, M., Onikienko, S. (2021) *Regional Environmental Systems as a Driver of Innovative Economy in Ukraine*. European Journal of Sustainable Development. 10(2), 33. <https://doi.org/10.14207/ejsd.2021.v10n2p33>
- Nishikava, L. (2023). *Sustainability&Climate Trends to 2024 Watch*, MSCI ESG Research LLC. 38 p.
- Olszewska, I. Rigtering, J. (2021). *Wytyczne do raportowania ESG. Przewodnik dla spółek notowanych na GPW*. European Bank for Reconstruction and Development. URL: https://www.gpw.pl/pub/GPW/ESG/Wytyczne_do_raportowania_ESG.pdf
- Olwyn, A. *Asset and wealth management revolution. Exponential expectations for ESG* (2022) PwC. URL: <https://www.pwc.com/gx/en/financial-services/assets/pdf/pwc-awm-revolution-2022.pdf>

- Poland. Measures taken in response to coronavirus (COVID-19) pandemic. (2023). URL: https://www.esrb.europa.eu/home/search/coronavirus/countries/html/esrb.covidpmc_poland.en.html
- Post-war Reconstruction of Economy: Case Studies*. (2022). KPMG in Ukraine. 70 p.
- Post-war recovery plan for Ukraine*. (2022). National program. URL: <https://recovery.gov.ua/>
- S&P ESG Index Family. (2021). URL: <https://www.spglobal.com/esg/performance/indices/esg-index-family>
- Starks, L. T., Venkat, P., Zhu, Q. (2017). *Corporate ESG Profiles and Investor Horizons* (October 9, 2017). Available at SSRN. URL: <https://ssrn.com/abstract=3049943>
- Syed A. M., Ntim C. G. (2017) *Environment, social, and governance (ESG) criteria and preference of managers*, Cogent Business & Management, 4:1, DOI: 10.1080/23311975.2017.1340820
- The Evolution of ESG Investing. MSCI. (2021). Retrieved from: <https://www.msci.com/esg-101-what-is-esg/evolution-of-esg-investing>
- What are the Principles for Responsible Investment? (2023). PRI. URL: <https://www.unpri.org/about-us/what-are-the-principles-for-responsible-investment>
- What are the Sustainable Development Goals? UNDP. (2021). Retrieved from: <https://www.undp.org/sustainable-development-goals>
- What is ESG Investing and Analysis? (2023). CFA Institute. URL: <https://www.cfainstitute.org/en/rpc-overview/esg-investing>
- What is sustainable investing? (2023). International Labor Organization. URL: https://www.ilo.org/empent/areas/social-finance/WCMS_856595/lang-en/index.htm
- What is the difference between ESG investing and socially responsible investing? (2020). S&P Global. URL: <https://www.spglobal.com/en/research-insights/articles/what-is-the-difference-between-esg-investing-and-socially-responsible-investing>
- Wu J. (2023). *ESG Outlook 2023: Sustainable investing in the era of chaos. Five reasons why sustainability matters even more in 2023*. J. P. Morgan Asset Management. URL: <https://am.jpmorgan.com/no/en/asset-management/liq/investment-themes/sustainable-investing/esg-outlook-2023/>