SUSTAINABLE DEVELOPMENT GOALS AND THE TRIANGLE OF ESG INVESTMENTS

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Abstract
The concept of sustainable development has had an enormous effect on the world in recent decades. A company's economic activities need to be organized in a way that takes into account how they will affect society, the environment, and corporate governance standards (ESG). This is what sustainable development means. One of the key trends in the growth of the international business community has been the ESG approach. Many people assert that the financial sector is the engine that drives behind ESG because of its goals to protect the environment, the general public, and to promote responsible investment. The Sustainable Development Goals (SDGs) and their recent evolution are explained in this article using a qualitative research methodology. We'll also demonstrate how the 17 goals are intended to guide society's cautious development. We will contrast the first 10 sustainability-focused funds available on the market in light of the evidence that financial instruments have emerged on the market to enable businesses to undertake an ESG transformation more easily. At the same time, using the SDG indicators from the European Union, can compare the period before and during COVID 19. In this particular case, the primary focus will be on their contribution to the acceptance of the idea of sustainable development as well as their importance in the development of ESG principles affected by pandemics. The paper concentrates on the dependency between SDGs and ESG in light of the expanding significance of the sustainable development concept.

Keywords
Sustainable development, sustainable funds, ESG investment, SDG

JEL Classification
G10, Q50

Introduction

The 2030 Agenda could be seen as a global plan for long-term development. It aims to improve our planet by eradicating poverty and inequality by providing that the transition

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is green and enabling by 2030. The 17 environmental sustainability objectives and their 169 performance targets constitute the foundation of the 2030 Agenda. The challenges of poverty, gender equality, economic prosperity, peace, agriculture, and education are all covered, as well as the difficulties associated with sustainable development which relate to the environment, biodiversity, energy, and water. The awareness of the inherent links between all the issues and the imperative engagement of all actors, both institutional and civil society, are additional characteristics that set the 2030 Agenda apart (United Nations, 2023).

Due to its ambitious nature and cross-cutting character, sustainable development goals present numerous problems for the ensuing years. First and foremost, a genuine inventory with strict progress tracking and opportunity area identification is required. Moreover, a dynamic of assuming the goals of sustainable development by jurisdictions, civil society, the corporate sector, and citizens needs to be established.

A primary goal of the SDGs must be to foster an environment of cooperation through the sharing of best practices and the development of a framework for cooperation amongst actors. The entire agenda must be implemented by all nations with the same level of ambition while considering the different circumstances. They are obligated to update the UN high-level political forum on their progress every year.

1. Review of the scientific literature

The Sustainable Development Goals (SDGs), also referred to as the Global Goals, are a series of goals established by a global agreement to eradicate poverty, save everything that makes the world habitable, and guarantee that everyone lives in peace and prosperity, both now and in the future. In order to deal with the substantial scientific and empirical evidence that the world need a fundamentally more sustainable approach, the Goals were officially approved by all UN member states in 2015 for the period of 2016–2030 (Morton, Pencheon, & Squires, 2017).

According to the research study, while progress can be made toward each of the 17 SGGs, it may either strengthen or hinder progress toward other goals. For instance, economic progress and industrial development improved access to clean water and sanitary conditions, promoted health and well-being, and helped reduce or eradicate hunger. Unfortunately, several environmental or social goals were negatively impacted by this economic and industrial expansion. The United Nations' assessment on the progress made in achieving the various 2030 SDG targets is consistent with the documented trade-offs and synergies between SDGs. The UN report highlights the decreases in severe poverty, new born and maternal death rates since 2000, along with improved global access to power. Yet, the sustainability of fish and forest area stocks has decreased, while the "material per capita footprint" of developing nations has increased. Several studies emphasized the potential linkages between achieving certain SDGs, such as SDG 07 (Affordable and clean energy) (Fonseca, Domingues, & Dima, 2020).

Investigation into different social, economic, and national contexts has shown how climate action outcomes can have varying effects on socially disadvantaged populations, including extreme situations where climate policy adaption programs have led to the violent eviction of destitute communities. Although the connections between climate change impacts, climate action, and sustainable development are widely acknowledged, there has only been a limited amount of organized research of benefits and transfer at the level of specific SDG Goals (Nerini, & all, 2019).

Delgado-Ceballos, Ortiz-De-Mandojana, Antolín-López, & Montiel (2023) link solid sustainable and Environment, Social, and Governance (ESG) issues to the Sustainable Development Goals (SDGs), a comprehensive list of society-level objectives with the purpose of addressing major problems and attaining global sustainability by 2030. The significance of linking the SDGs to the idea of the double physical reality materiality and financial materiality—is highlighted.

Like the ideas of corporate social responsibility (CSR) and philanthropy, the concept of SRI has a considerably longer history than the word ESG. From the 19th century, particularly within faith-based groups, investment choices have included social factors and limits. The United Nations (UN), Global Compact (2004) report Who Cares Wins: Connecting Financial Markets to a Changing World is where the phrase "ESG" first appeared. For this report, the former UN Secretary General summoned a joint initiative of financial institutions to develop standards and suggestions on how to better effectively implement environmental, social, and corporate systemic problems in asset management, equities brokerage services, and related research functions (Eccles, Lee, & Stroehle, 2019)

The emphasis has changed away from the external effects of company activities on society and the environment and toward the risk and return consequences for investment managers of not adequately addressing ESG elements, even though ESG emerged from the notion of sustainability (MacNeil & Esser, 2022). In reality, by identifying ESG-related risks and opportunities that are likely to affect investors' and shareholders' returns, the major objective of incorporating ESG criteria into investment decisions is to connect social and environmental benefits and consequences with financial returns. ESG can be seen of as the "financialization" of sustainability, in other words (Eccles et al., 2020).

2. Research methodology

To help businesses adapt to an ESG mindset more easily, financial instruments have been introduced to the market. This factor will be taken into consideration as we examine the first 10 sustainability-focused funds currently available. The data was taken from the OECD database and shows the nations with the biggest assets in million dollars, followed by their financial performance in 2020–2021, their net climate effect, and their SDG alignment.

First, we analysed how the SDGs have changed at the level of the European Union (EU27), broken down by the degree of urbanization. The following metrics are included

in the database, which may be found on the Eurostat website: SDG 1: No poverty; SDG 2: Zero hunger; SDG 3: Good health and well-being; SDG 4: Quality education; SDG 5: Gender equality; SDG 8: Decent work and economic growth; SDG 9: Industry, innovation and infrastructure SDG 11: Sustainable cities and communities (Eurostat,2023)

3. Results and discussions

The first indicator under analysis focuses on SDG 1: No Poverty, and we pay particular attention to those at risk of income poverty following social transfers. The time period under consideration is 2013 to 2020, and the measurement scale uses percentages of the entire population. The final classification is divided into three categories: urban areas, suburban towns, and rural areas.

At the city level, Figure 1 shows that the highest proportion, 16.6%, was attained in 2020. In 2016, this value was also attained. One can see that the value only fell by 0.1% following the Covid-19 pandemic outbreak.

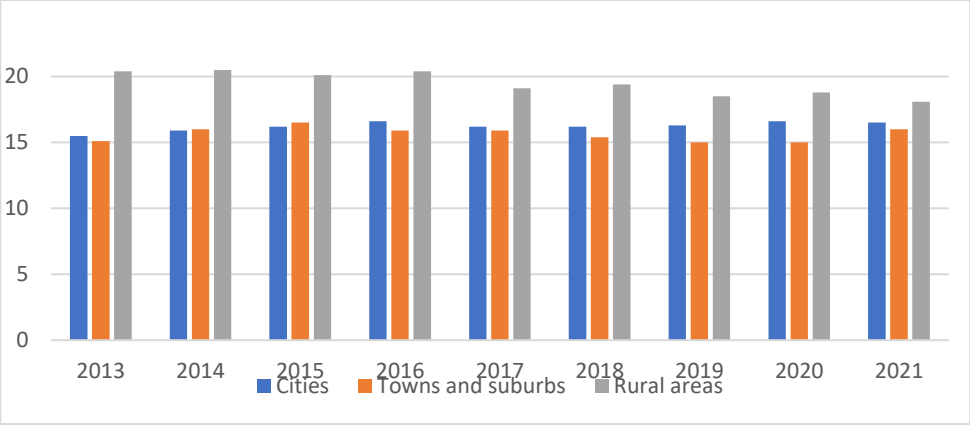

Figure no. 1: People at risk of income poverty

Source: own editing after data from (Eurostat, 2023)

The maximum percentage, 16.5%, was attained at the level of cities and suburbs in 2015; it decreased by 1% after 2020. In 2013 and 2016, urban regions had the greatest percentages (20.4%). 18.1% represented the pandemic's lowest percentage. Although there is a downward tendency, the pandemic's start had little impact on the income and living standards of those who were below the poverty line.

The second indicator examined falls under SDG 2: Zero Hunger. Body mass index (BMI) by sex, age, and level of urbanization were considered in this scenario, with data only being available for the year 2019. The index was created using data from the European Health Interview Survey, which asked people from the European Union about their health condition, health determinants, and access to healthcare services. Those above the age of

15 were given the questionnaire, and the BMI was calculated by dividing their weight in kilograms by their height in meters squared. Consequently, the following employment categories are found in Eurostat (2023): Underweight: BMI less than 18.5 - Normal weight: BMI between 18.5 and less than 25, Pre-obese: BMI between 25 and less than 30, Obese: BMI equal or greater than 30 and Overweight: BMI equal or greater than 25 (pre-obese + Obese) (Eurostat, 2023).

The percentage of the population that is overweight reached its highest point in 2019 (48,5%), followed by the percentage values of people with normal body mass indices (48,4%), and pre-obese people (33,7%). And the lowest percentage is 3,2% for underweight people, while 14,8% for obese people falls into the middle category.

Healthy living and wellbeing make up the third SDG 3 indicator. Based on a survey that split the population under study into 5 categories, including adults over 16 with very good, good, fair, bad, and very bad self-perceptions, self-perceived health by sex, age, and degree of urbanization was taken into consideration. From 2010 through 2023, the data was evaluated yearly in percentage terms.

Table no. 1. Self-perceived health by sex, age and degree of urbanisation

%	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Very good	20.5	20.6	21.4	20.4	20.5	20.2	19.5	21.1	21.2	20.6	22.4	22.7
Good	46.2	46.1	45.9	46.1	46.8	46.5	48	47.9	47.4	48.1	47	46.3
Fair	23.4	23.1	22.5	23.5	22.9	23.5	23.7	22.6	22.9	22.8	22	22.2
Bad	7.9	8.1	8.1	8.1	7.9	7.8	7.2	6.9	6.9	6.9	6.8	7
Very bad	1.9	2.1	2.1	2	1.9	1.9	1.6	1.6	1.6	1.6	1.7	1.7

Source: own editing after data from (Eurostat, 2023)

Table 1 shows that before 2020, 20.6% of respondents said they were in very good health in 2019, and that number rose to 22.7% by 2021. On the other hand, the proportion was 1.6% in 2019 and grew to 1.7% in 2021 with a very negative outlook. Self-perceived health exhibited a drop during the pandemic era only in the good, fair and bad category. Those with really poor perception continue to experience the same circumstances.

SDG 4: Quality Education was examined from the perspective of early dropouts by sex and degree of urbanization. Both at the level of urban areas and at the level of rural areas, the period analyzed was between 2012-2021 and includes the population between 18 and 24 years old.

Although by 2030 the share of early dropouts from education and training at the EU level should be fewer than 9%, during the pandemic it reached a number close to 9.7%, with considerable variations among member states. While some nations are far from achieving this goal, others have already surpassed the EU-level target for 2030. As seen in Figure 2, the trend is down, dropping from 12.6% in 2012 to 9.7% in 2021, with no significant changes. There is a 0.5% decline between 2019 and 2012.

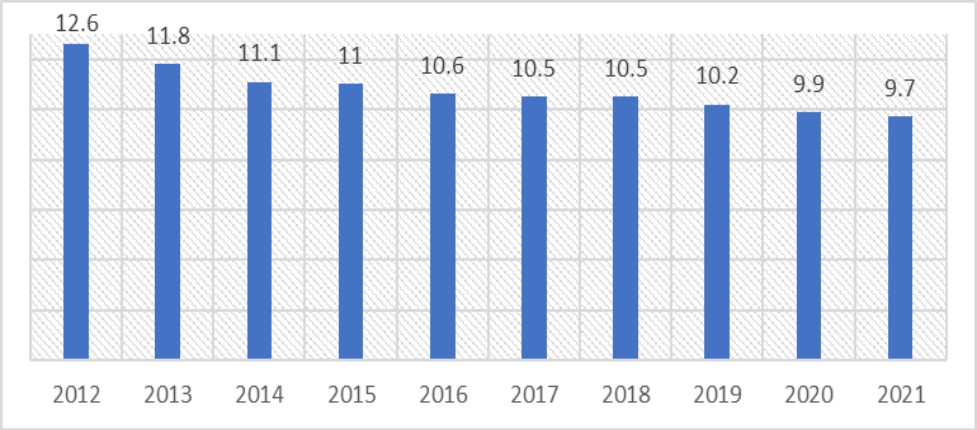

Figure no. 2: Early leavers from education and training by sex and degree of urbanisation (%) -EU27

Source: own editing after data from (Eurostat, 2023)

For SDG 5: Gender Equality, the gender employment gap was examined from 2005 to 2021 in terms of percentages for Cities, Towns, and Suburbs, as well as Rural Areas, at the level of the EU27. The EU Labor Force Survey was used to create the indicator (Eurostat, 2023). The maximum proportion, 16.6%, was attained at the city level in 2020, according to Figure 3. In 2016, this value was also attained. Note that the value only fell by 0.1% following the onset of the COVID 19 epidemic. The largest percentage, 16.5%, was attained at the level of cities and suburbs in 2015. It should be noted that the value increased by 1% following the Covid-19 pandemic outbreak. Last but not least, at the level of rural areas, the highest percentages of 20.4% were attained in 2013, respectively 2016. 18.1% was the lowest percentage recorded during the epidemic.

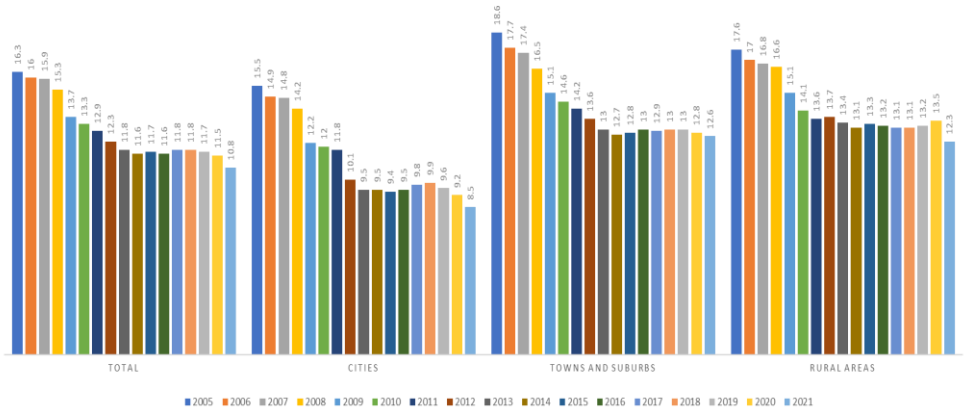

Figure no. 3: Gender employment gap by degree of urbanisation - EU 27

Source: own editing after data from (Eurostat, 2023)

Generally, the trend is downward, which means that from 16.3% in 2005 to 10.8% in 2021, the population-level differences started to narrow dramatically. Despite the minor oscillations, the pandemic stabilized this decline. If the deficit was 11.7% in 2019, it fell to 11.5% and 10.8% in 2020 and 2021, respectively.

According to the EU Labor Force Survey (EU-LFS), employment rates by sex, age, and degree of urbanization (%) for the EU 27 from 2011 to 2020 were taken into consideration for SDG 8: Decent work and economic growth.

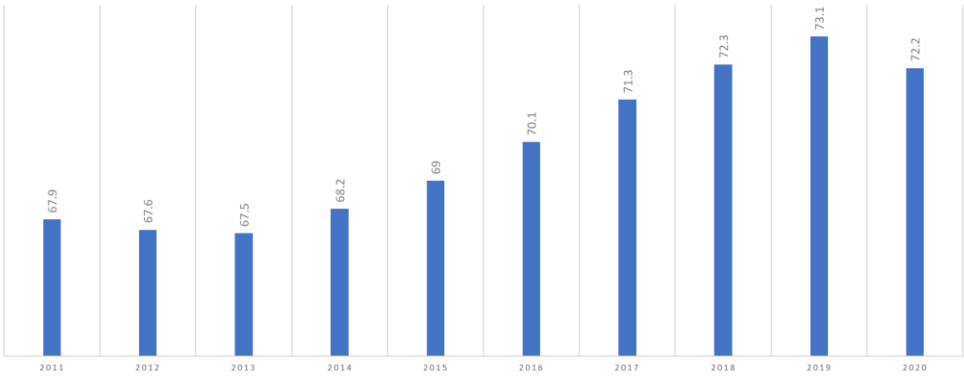

Figure no. 4: Employment rates by sex, age and degree of urbanisation (%) - EU 27

Source: own editing after data from (Eurostat, 2023)

Figure 4 shows that the lowest proportion was obtained in 2021 with 67.9% and the highest percentage was in 2019 with 73.1%. Although the trend was an upward one, with modest oscillations between 2011-2015, the COVID 29 epidemic caused employment rates to decline by 0.9%, which suggests that the labour force was negatively affected, slowing down the growing process.

Regarding SDG 9: Industry, innovation, and infrastructure, the gross domestic expenditure on R&D as a share of the GDP was examined beginning in 2000 and continuing through 2021.

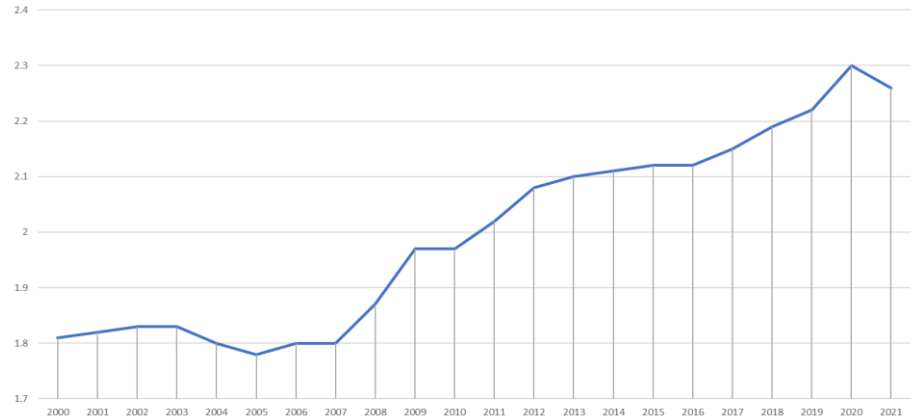

Figure no. 5: GERD by sector of performance and NUTS 2 regions

Source: own editing after data from (Eurostat, 2023)

Figure 5 shows an exponential increase between 2007 and 2012, despite the trend being abrupt with minor oscillations between 2003 and 2021. The pandemic has resulted in a fall in R&D spending in the business enterprise sector as the peak is reached in 2020 with 2.3% and a minor decline to 2.26% in 2021.

Finally, the indicator Severe housing deprivation rate by degree of urbanization based on the EU-SILC survey was used to examine SDG 11: Sustainable Cities and Communities. It focuses on "indicators linked to economic pressure, durables, housing deprivation, and environment of the house," according to Eurostat. The information was gathered between 2010 and 2020, and the outcomes were expressed as percentages.

A considerable growth between 2012 and 2014, followed by a period of stagnation between 2017 and 2020, can be seen as confirmation of Figure 6's regular oscillations. The largest proportion, 20.8%, was attained in 2013, and it will fall to 17% in 2019. Up to 16.3% of the population decreased in 2020 at the start of the COVID 19 pandemic, which was followed by an increase of 0.6%. In this way, the pandemic has had a detrimental impact on how this indicator has stabilized, aggravating the housing shortage.

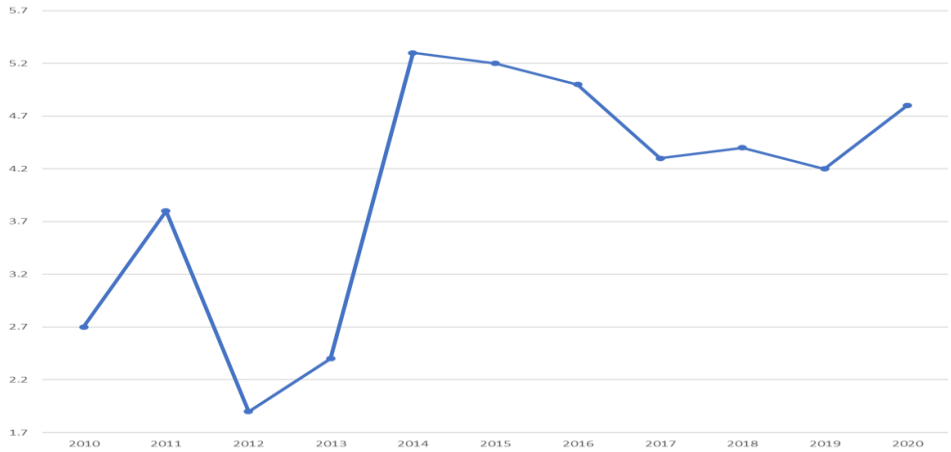

Figure no. 6: Severe housing deprivation rate by degree of urbanisation (EU27)

Source: own editing after data from (Eurostat, 2023)

Capital markets that promote sustainable growth may assist in covering the funding gap for the Sustainable Development Goals (SDGs). The variety of financial products with a sustainability focus has increased dramatically in recent years. The asset allocation process for these products takes into account ESG (environmental, social, and governance) factors as well as the Sustainable Development Goals (SDGs). With a rise in climate and social funds and bonds, the worldwide campaign to combat the COVID-19 pandemic and climate change is intensifying this momentum. These sustainability-focused funds have developed into crucial tools for institutional investors to invest in sustainable development, directing billions of dollars into significant industries that are essential for attaining the SDGs (UNCTAD, 2023).

The classification made in this article was done according to the value of assets under management (AUM) in millions of USD. Assets under management (AUM) refers to the total value of all investments managed by an individual or an organization on behalf of their clients. Some financial institutions include cash, mutual funds, and bank deposits in their calculation of AUM, while others only consider funds that are managed at their discretion (CHEN, 2022).

Also, ESG rating utilizes a reverse engineering patented process to gather the range of ESG viewpoints held by top rating agencies and significant ESG asset managers on a firm or issuer, thereby identifying and reflecting the market consensus (CONSER, 2007).

The percentage of the fund's exposure to each of the following SDG-relevant sectors is known as SDG Alignment: ecosystems/biodiversity, water and sanitation, telecommunication networks, healthcare, agriculture and food production, education, and climate change mitigation/renewables (UNCTAD, 2023).

Assessing the sustainability profile of financial products that make the claim to be sustainable, including assessing how well they align with the SDGs and how exposed they are to risks from the climate and other factors, is one of the action areas of the UN Global Sustainable Finance Observatory. The objective is to increase openness in the global market for sustainable finance (UNCTAD, 2023). With additional evaluations to be added in the future, the table below offers a preliminary assessment of the first 10 sustainable funds based on their assets under management, financial performance from 2020 to 2021 %, region, ESG Rating, Net Climate Impact and SGD alignment.

Table no. 2. Sustainable funds based on ESG

Fund Provider	AUM, millions of USD	Financial performance 2020-2021, %	Region	ESG Rating	Net climate impact, %	SDG Alignment, %
DWS Investments	22 452	8.5	Global	5/10.	-17.26	26.65
DWS Investments	13 106	13.2	Europe exclusive UK	8/10.	-2.44	23.6
Nordea Asset Management	11 859	14.6	Europe	8/10.	5.75	11.88
BlackRock Asset Management	10 589	0.6	Europe	9/10.	4.47	32.14
Swedbank Robur Fonder AB	10 019	21	Sweden	5/10.	2.81	7.28
Pictet Asset Management	9 684	21	Europe	9/10.	-0.67	14.08
Northern Trust Asset Management	9 629	12.8	Europe	5/10.	-1.82	19.6
First Sentier Investors	9 341	-2.7	Global	6/10.	±0.0	27.83
Pictet Asset Management	8 889	27.2	US	4/10.	14.35	18.42
DWS Investments	8 001	16.8	Global	9/10.	-0.95	23.92

Source: own editing after data from (UNCTAD , 2023)

The first foundation considered is DWS Investments, and DWS Top Dividends LC comes in first globally. Most of the fund's contributions come from domestic and foreign corporate actions with consistently forecasted dividends above average. 2023 (UNCTAD). AUM is valued at 22 452 million US dollars. With a financial performance of 8.5 percent, a negative climate effect of 7.26%, and 26.65 percent SDG alignment.

The second place is occupied by DWS Vermoegensbildungsfonds I Ld in Europe. The fund primarily invests in stocks issued by domestic and international issuers in order to accomplish this. These securities will primarily be those issued by large corporations from a number of industrial sectors as well as by medium-sized and smaller businesses that, according to their configuration and structure, present promising long-term growth and earnings potential (UNCTAD, 2023). The value of AUM is estimated at 13106 million USD. With a financial performance of 13.2%, a Net climate impact of -2.44% and SDG Alignment of 23.6%.

The Nordea 1 Global Climate and Environment Fund, the third Nordea Asset Management fund, BP At the European level, EUR concentrates on companies that develop environmentally and climate-friendly solutions, like resource efficiency and renewable energy, and those appear to have stronger growth prospects and investing qualities. The fund mostly purchases shares in large international corporations (UNCTAD, 2023). AUM is thought to be worth 11,859 million USD. With a 14.6% financial performance, a +5.75% net climate impact, and an 11.88% alignment with SDGs.

DWS Akkumula LC is the final fund whose valuation of AUM has been examined. AUM is worth approximately $8 001 million USD. With a 16.8% financial performance, a -0.95% net climate impact, and a 23.92% alignment with the SDGs.

In conclusion, the investigated funds have a sizable AUM value, however there are considerable differences between them. All of the examined funds' financial performance for 2020–2021 was favourable, but First Sentier Investors stands out with a performance of –2.7% as a result of a Net climate impact of almost zero. Pictet-Water-P EUR and DWS Akkumula LC have the highest ESG Ratings of 9 out of 10, while Pictet-Security-P USD has the lowest rating.

The Pictet-Security-P USD fund has a 14.35% gain in net climate impact based on a cleantech minus fossil fuels of +14.35%. Due to a spike in fossil fuels, DWS Top Dividende LC is at the other pole with a percentage of -17.26%.

Finally, BlackRock Asset Management - iShares MSCI USA SRI UCITS ETF USD (Acc) has the best SDG alignment with a score of +32.14%, while Swedbank Robur Fonder AB has the worst with a score of +7.28%.

Notwithstanding their fast rise, the overall assets of sustainability funds are growing slowly, and the bulk of them are registered and managed in developed economies. Concerns regarding "ESG washing" and a lack of transparency in sustainability labelling regulations have surfaced as a result of this.

Conclusions

In conclusion, the idea of sustainable development serves as the foundation for the ESG principles. Yet, stakeholders and states can significantly impact the creation of legal output tools due to special attention from these parties. Certain governments have

currently established laws requiring adherence to some degree of the ESG principles. Also, there are currently a large number of various ESG-related rules, guidelines, and laws at both the international and national levels. There are numerous concerns about the use of ESG principles, even while legal mechanisms are available. As a result, the aforementioned EU directive mandates the disclosure of pertinent information but does not specify the requirements for reporting standards, which given their multiplicity undermines the effectiveness of legal regulation and price information for interested parties.

In order to implement the principles of responsible investing, other entities also reveal the substance of the environmental, social, and corporate determinants of sustainable growth. Greenhouse gas emissions, energy use, water use, and waste production are examples of ecological factors. Social factors include working conditions, labour costs, average wages, and employee turnover. Corporate factors include the capital structure, the presence of controlling shareholders, constrained individuals, management history, and the role and location within the economy.

AUM and ESD ratings analysis of the top ten most well-known sustainable investment funds revealed that just a few companies appear to address this issue. All of this simply weakens the private sector's contribution to the SDGs' implementation and gives rise to scepticism and cynicism about the application and use of ESG-principles. For instance, it makes sense that CSR and other commercial practices just serve to boost profits rather than genuinely care about the environment. Hence, the SDGs are a blueprint for the implementation of the ESG standard comrade and are the culmination of many years of the sustainable development concept's crystallization. ESG principles are also a tool for including the private sector and civil society in the global sustainable development agenda. Without them, the SDGs and the attainment of predetermined indicators for promoting social development and environmental protection would not be successfully implemented.

Integration of the three elements is necessary to achieve the SDGs. In a way, this concept is stretched to ESG principles, which are considered, particularly as a whole in the long view. The concept of integration, which is significant in understanding ESG principles and demonstrated the capacity to promote the legal growth, was in line with the vision outlined in the Agenda for Sustainable Development until 2030.

When implementing the SDGs internationally, how will this aim be reflected in legal standards and state practice, particularly at the judicial, international, and national levels? This will help reveal the true potential of the year's 2030 Agenda. The basis for defining the ESG principles' substance can be found in the widespread agreement regarding the significance of the SDGs.

The SDGs' environmental components have been significantly strengthened, which opens the door to a more complex understanding of them in the context of ESG.

One of the fundamental features of the SDGs is its desire to increase institutions' and stakeholders' understanding of and trust in the transformative change required for humanity to pursue sustainable development.

References

[1] Chen, J. (2022). Investopedia. Available at https://www.investopedia.com/terms/a/aum.asp, accessed online in 2 April 2023
[2] Conser. (2007). Independent verification methodology. Conser ESG Consensus. Preluat de pe https://files.trackinsight.com/Conser-ESG-Methodology.pdf
[3] Delgado-Ceballos, J., Ortiz-De-Mandojana, N., Antolín-López, R., & Montiel, I. (2023). Connecting the Sustainable Development Goals to firm-level sustainability and ESG factors: The need for double materiality. BRQ Business Research Quarterly, 2-10. doi:https://doi.org/10.1177/23409444221140919
[4] Eccles R. G., Lee L. E., Stroehle J. C. (2020). The social origins of ESG: An analysis of Innovest and KLD. Organization & Environment, 33(4), 575–596.
[5] Eccles, R., Lee, L.-E., & Stroehle, J. (2019). The Social Origins of ESG: An Analysis of Innovest and KLD. 1-22. Available at https://journals.sagepub.com/doi/10.1177/1086026619888994
[6] Eurostat. (2023, March). Available at https://ec.europa.eu/eurostat/web/sdi/database, accessed online in 2 April 2023
[7] Fonseca, L., Domingues, J., & Dima, A. (2020). Mapping the Sustainable Development Goals Relationships. Sustainability, 1-15. Available at https://www.mdpi.com/2071-1050/12/8/3359
[8] MacNeil I., Esser I. M. (2022). From a financial to an entity model of ESG. European Business Organization Law Review, 23(1), 9–45.
[9] Morton, S., Pencheon, D., & Squires, N. (2017). Sustainable Development Goals (SDGs), and their implementation: A national global framework for health, development and equity needs a systems approach at every level. 81-90, available at https://www.researchgate.net/publication/320685121_Sustainable_Development_Goals_SDGs_and_their_implementation_A_national_global_framework_for_health_development_and_equity_needs_a_systems_approach_at_every_level
[10] Nerini, F., Sovacool, B., Hughes, N., Cozzi, L., Cosgrave, E., Howells, M., Milligan, B. (2019). Connecting climate action with other Sustainable Development Goals. Nature Sustainability, 674–680. Available at https://www.nature.com/articles/s41893-019-0334-y
[11] Sustainable development goals. (2023, March). Available at https://ec.europa.eu/eurostat/web/sdi/database, accessed online in 2 April 2023
[12] UNCTAD. (2023). Sustainable funds database. Available at https://gsfo.org/search/node?keys=Assets+under+management, accessed online in 2 April 2023
[13] UNITED NATIONS. (2023). Available at https://sdgs.un.org/gsdr/gsdr2023, accessed online in 2 April 2023