FINANCIAL ACCOUNTING INFORMATION IN THE CONTEXT OF SCORE-BASED SUSTAINABILITY REPORTING ESG (ENVIRONMENTAL, SOCIAL, GOVERNANCE)

Marilena ZUCA[1]

Alice Emilia ȚÎNȚA[2]

Anda Mihaela LĂCEANU[3]

Georgiana POPA[4]

Abstract

Reliability, accuracy, relevance, and compliance with current accounting regulations are all necessary for reporting financial and accounting data responsibly from a sustainability standpoint.

Sustainability refers to an organization's ability to meet long-term goals, which include economic, social, and environmental aspects (ESG). *Sustainable accounting* is becoming increasingly significant in today's world, as businesses are becoming more aware of their environmental and societal impact and are more actively participating in sustainable development initiatives. Reflecting accurate and relevant financial and accounting information entails having a clear understanding of an organization's financial condition, performance, and social and environmental impacts. Enterprises that have invested more in social and environmental initiatives and have considered corporate governance have reported increased profits. ESG activities benefit businesses at every stage of the value chain, from cost reduction to maintaining a competitive advantage.

Keywords: sustainability, sustainability reporting, corporate social responsibility (CSR), ESG scores

JEL Classification: M41

1. Introduction

Sustainable development is a big scientific field with untapped potential. Many academic disciplines can contribute to the study of this topic, and accounting processes and actors in the accounting business connect with many of these disciplines. Reality shows the importance of analysing the function and impact of accounting methods within the

[1]PhD, Assoc. Professor, Romanian-American University, Romania, marilena_zuca@yahoo.ro, corresponding author
[2]PhD, Lecturer, external public auditor, The Court of Accounts, Romania, alicetinta@yahoo.com
[3]PhD, director, external public auditor, The Court of Accounts, Romania, andastancioiu@yahoo.com
[4]PhD, external public auditor, The Court of Accounts, Romania, georgianapopa@yahoo.ro

framework of sustainable development, using an interdisciplinary approach. This approach may help us better understand how accounting might help promote sustainable development and address environmental, public health, and poverty challenges. The application of the idea of sustainable development necessitates adjustments in accounting practice to fulfil the needs of users of financial and accounting data [1]. Although sustainable development is becoming more prevalent in accounting and management literature, it is critical to define this idea in the many contexts in which it is used [2]. According to research, the specialized literature lacks empirical evidence supporting the existence of a direct causal link between accounting and economic progress [3]. The International Federation of Accountants (IFAC) emphasizes accounting and the accounting profession's critical role in achieving at least 8 of the 17 United Nations goals, such as improving educational quality, promoting gender equality, improving working conditions, stimulating economic growth, supporting innovation and infrastructure development, and promoting responsible resource consumption.

2. Literature review

CSR (corporate social responsibility) reporting has been successively referred to as 'sustainability reporting', 'CSR reporting' (notably by the Global Reporting Initiative), 'extra-financial reporting' (the current official name), 'non-financial reporting' (the 2017 European name), 'extra-financial or non-financial disclosure', 'social or societal reporting', etc. Behind this diversity nowadays is all the information that companies publish on the social, societal and environmental aspects of their activities and their performance [4]. But there may be other components in the future, as the gap will be widening between financial information and non-financial. There is nothing to prevent, for example, the New Economic Regulations (NER) information mentioned above. It should be noted that the 'governance' aspect is sometimes included in extra-financial reporting and sometimes not because it has been considered that it can be linked to accounting and financial information.

The regulatory process for sustainability reporting has evolved significantly in recent years. According to the Financial Times, there are more than 230 initiatives on corporate sustainability standards in more than 80 business sectors. According to a study [4] by Albu N, the most widely used sustainability reporting frameworks are the Global Reporting Initiatives (GRI) and the United Nations Global Compact (UNGC). GRI is mainly preferred by multinational companies, while UNGC is preferred by small and medium-sized enterprises due to its simpler nature. According to International Financial Reporting Standards (IFRS), information is considered relevant when it can be used to make predictions or estimates about an entity's future financial position and performance. In this context, predictability is essential and relevant financial and accounting information can be used to support decision making. Directive (EU) 2022/2464 is based on the premise that information is performative, with the ability to create reality and influence behavior. This distinguishes between constative and performative statements, requiring large, small and medium-sized enterprises to include in their management reports information on their sustainability impact and how it affects their development, performance and position. By adopting this policy, companies make a commitment and promise, creating an obligation. However, performance cannot be realized without a collective commitment between the authors and receivers of the statements. Through its meaning, value, content and status,

Directive (EU) 2022/2464 encourages sustainability information to become more performative, generating significant changes in the representation of actors and individuals.

3. Research methodology

The research methodology was based on a careful analysis of the function and influence of accounting procedures in sustainable development, using an interdisciplinary approach. This investigation sought to gain a better understanding of how accounting can help to promote sustainable development and address difficulties linked to conveying business performance in the social, environmental, and governance domains.

To obtain solid and complete conclusions, a hybrid strategy was used, integrating quantitative and qualitative studies. To acquire a thorough knowledge of the complex relationship between sustainability reporting and financial success in a set of companies in the Reuters Eikon database, statistical data were supplemented with detailed field observations. This combined research strategy enabled the identification of significant elements impacting financial performance while also providing a comprehensive view of the impact of non-financial information on the activities of the organizations under consideration.

By evaluating the environmental impact and sustainability of enterprises (the application of ESG standards) in the context of resource optimization, performance enhancement, and decision-making, the focus was on quantifying sustainable value and sustainable added value.

We list the following methods and techniques as part of the study's development: 1. Documentary analysis and systematic review of specialized literature, as evidenced by bibliographic and bibliographic references: theoretical documentation (books, national and international articles, studies), as well as documentation pertaining to the applied part, processing, and interpretation of information gleaned from the documentation; Classification, synthesis, factor analysis, variation and correlation analysis, trend analysis, average rate of variation, analysis of central tendency, average representativeness, and graphic representation of the events and phenomena under investigation are examples of mathematical and statistical techniques; 3. Interdisciplinary research approach: the study draws on expertise from computer science, statistics, and finance and accounting. The inquiry entails collecting, systematizing, analyzing, and interpreting data, studying specific financial reports and publications, and formulating conclusions and suggestions.

4. Sustainability reporting - premises of enterprise performance

Sustainability reporting communicates a company's performance in the social, environmental, and governance domains. This technique has been increasingly crucial for businesses in recent years, as worries about their environmental and social impact have grown. Sustainability reporting is regarded as a must-have for businesses seeking to demonstrate their commitment to social responsibility while also attracting investors, partners, and customers interested in sustainability (Table 1).

Table 1. Sustainability reporting requirements in relation to entity performance

Requirements	Description
Transparency and responsibility	Sustainability reporting promotes transparency in business activities. Publishing information about environmental impact and social contribution helps build trust among stakeholders, including customers, investors and employees.
Risk management	By assessing and reporting sustainable performance, organizations can identify environmental and social risks that could affect their business operations. This enables them to develop strategies to manage these risks and minimize potential damage.
Innovation and competitiveness	Adopting sustainability practices can stimulate business innovation. For example, the development of environmentally friendly products and efficient production processes can provide a competitive advantage in the marketplace.
Access to financing	By reporting performance in this field, businesses can more easily attract investment and benefit from more advantageous financing conditions.
Employee involvement	Organizations that have well-defined and effectively communicated sustainability practices can attract and retain talented employees. An organizational culture based on sustainable values can raise team motivation and engagement.
Regulations and compliance	Many countries are adopting stringent environmental and social reporting regulations. Companies that comply not only avoid penalties but also improve their business reputation.
Contribution to global objectives	Sustainability reporting can help businesses contribute to global goals such as those of the United Nations 2030 Agenda for Sustainable Development. It enables them to position their activities in the context of global issues.

Source: authors conception and processing

4.1. The influence of corporate social responsibility on the community and the environment

The concept of corporate social responsibility (CSR) is a very modern conception, being almost in the "embryonic stage".[6] The definitions offered by different authors differ significantly: some focus solely on the social dimension, while others highlight the philanthropic and ethical aspects of commercial activity (particularly among American authors). Some European authors emphasize the interconnectedness of the three pillars of sustainable development: economics, society, and the environment.[7] Modern businesses are encouraged to contribute to the common good by the growth of consumer and environmental movements as well as rising interest group pressure. As a result, corporate social responsibility (CSR) has emerged as a strategic problem for managers and a research area for marketing and management science scholars in recent years. Peloza and Shang claim that because of its influence on employee and customer behaviour, corporate social responsibility, or CSR, is a subject of increasing managerial and scholarly attention.[8] It also includes an opportunity to consider the company's relationship with society in a broader context, as well as an environmental component. It can be defined as the managerial process by which the company's strategic orientations toward sustainable development are expressed. Under institutional and social pressure, most multinational corporations have now launched a variety of social responsibility initiatives, originally with the goal of addressing an image problem and enhancing commercial performance. For some

businesses, taking social responsibility into account becomes a means of distinguishing themselves from the competition; as a result, their innovation is focused on the development of new goods and approaches that are more environmentally friendly. Investing in corporate social responsibility becomes vital for businesses since it becomes a competitive aspect that affects performance. The interaction with the new information and reporting requirements in the field of corporate social responsibility (CSR) defines the need for significant improvement/revision, or possibly a complete overhaul of the current accounting model. This entails developing an accounting model tailored to the concept of "green capitalism". Several recommendations have been made in this area, and extra-financial reporting is becoming more regulated by legislative frameworks. According to Postel et al., CSR appears to be an attempt to balance economic efficiency with ethical considerations. The European Commission defines corporate social responsibility as the voluntary incorporation of social and environmental issues into a company's commercial activities and interactions with stakeholders. It is critical to consider the voluntary nature of this behaviour. A lot of businesses aggressively highlight the ethical components of their business practices. It is important to remember that many businesses are frequently under pressure from stakeholders to adhere to these standards, even though responsible commitments can be made voluntarily. The three essential elements of extra-financial analysis are ESG criteria, which relate to the environment (such as conservation of biodiversity), society (such as working conditions), and governance (such as business ethics). These criteria enable the evaluation of how businesses incorporate the concepts of sustainable development. For instance, AccountAbility bureau and its founder, J. Elkington, spearheaded the adoption of the Triple Bottom Line strategy by numerous multinational firms in the late 1990s. In order to supplement the evaluation of economic success with an estimate of social consequences and an evaluation of how well the company's operations correspond with the preservation of the planet's ecosystems, this expression refers to the net result from the traditional profit and loss statement. As a result, a metric that takes into account the enterprise's social and environmental effects in addition to its financial performance is suggested. The "triple P"—which stands for "Profit, People, Planet"—is another name for the approach. [9] In 1996, a consortium of multinational corporations launched the Global Reporting organization (GRI), the oldest commercial organization devoted to harmonizing social and environmental reporting, which utilized the tertiary method. The social and environmental externalities—both positive and negative—caused by economic activity are addressed by the GRI reference frameworks, which are increasingly acknowledged as essential guidelines for non-financial reporting. The purpose of the suggested non-financial indicators is to help with a better understanding and management of enterprises. This does not mean arguing against the conventional accounting model; rather, it means putting up an alternative framework that incorporates non-financial data. The World Council for Sustainable Development's (WBCSD) affiliated organizations seek to emphasize the private sector's pivotal role in promoting sustainable development, a notion that has its origins in the political and macroeconomic domains.

The primary objective of these companies' experiments with different valuation methods is to establish a price for natural capital so that externalities may be minimized, and it can be managed. Therefore, expressing the value of natural capital is crucial to current discussions on the evolution of social-environmental accounting models.

4.2. Integration of non-financial reporting in Europe and Romania

As early as 2001, when Article 116 of the law on New Economic Regulations (NRE) was implemented in France, and in 2014, when Directive 2014/95/EU on non-financial reporting (also known as the Non-Financial Reporting Directive, or NFRD) was implemented in Europe, a legal framework started to take shape, and the dissemination of social and environmental information became mandatory. This directive was implemented into French law by the decree of August 9, 2017, which requires major firms, both listed and unlisted, to prepare an Annual Non-Financial Performance Statement (DPEF) and include it in their annual management report. The information they must provide in this statement relates to the measures they have taken to adapt to the consequences of climate change, the voluntary objectives they have set themselves in the medium and long term to reduce greenhouse gas emissions and the means they have implemented to this end, as well as their actions aimed at combating discrimination and promoting diversity; listed companies must also provide information on the protection of human rights and the fight against corruption and tax evasion. However, this DPEF requirement is relatively vague and lacks a formal framework; in essence, it does not link financial and non-financial elements.

Non-financial reporting has grown in popularity among Romanian businesses as European legislation evolves and investors and consumers seek greater openness. This type of reporting involves the disclosure of information about a company's environmental, social, and governance (ESG) performance, which supplements standard financial statistics and provides a more comprehensive picture of sustainability and accountability. The implementation of non-financial reporting has been considerably influenced by the European Directive 2014/95/EU, which requires certain types of large enterprises to publish non-financial information.

According to current legislation (OMFP no. 85/2024, issued in the Official Gazette no. 75 on January 26, 2024), enterprises with more than 250 workers, a net turnover of more than 50 million euros, or total assets of more than 43 million euros must submit these reports. Some of the important features of non-financial reporting in Romania are:

➔ *Transparency and responsibility*: Non-financial reporting contributes to increasing transparency within companies, providing stakeholders with relevant information about their impact on the environment and society.

➔ *Research and innovation*: By reporting on needs and actions taken in ESG areas, businesses can identify areas that require improvement, thus being encouraged to invest in research and innovation to develop more sustainable practices.

➔ *Attracting investment*: More and more investors are looking for investment opportunities in companies that demonstrate their commitment to sustainability. Non-financial reporting provides an assessment of the risks and opportunities associated with a company's business practices.

Although the importance of non-financial reporting is clear, Romanian companies face various challenges in implementing this process. These include:

➔*Lack of Unified Standards*: Variability in reporting standards and frameworks can create confusion and difficulties in assessing information. Businesses must decide which standards to adopt, and the absence of a clear national framework can lead to inconsistencies.

➔*Administrative capacity*: Many small and medium-sized enterprises lack the resources to collect, analyse and publish non-financial information in a coherent and efficient manner.

➔*Organizational culture*: The implementation of non-financial reporting necessitates a shift of thinking inside companies, which can be a challenge, particularly in traditional businesses or those that have not previously been exposed to transparency standards.

➔*Public perception*: There is little consumer awareness or interest in non-financial data. This might make it challenging to persuade businesses to engage in non-financial reporting because the benefits are not always evident or understood.

➔*Limited resources*: Many businesses may not have the financial or human resources to create a successful non-financial reporting system. They may believe that the costs connected with creating these reports outweigh the purported benefits.

➔*Lack of expertise*: Companies may lack knowledge and skills in the area of non-financial reporting. Training employees and developing proper internal processes for gathering and analysing non-financial data can be difficult.

➔*transparency*: Some companies are concerned that having a clear position on non-financial reporting may put them at a competitive disadvantage. This can lead to reluctance to implement such a method, which is viewed as risky.

4.3. The role of non-financial information in presenting the performance of the enterprise

The 2008 financial crisis exposed the risks associated with an overemphasis on short-term financial performance, emphasizing the necessity for a different perspective on entity performance. This should encompass financial stability, long-term success, and sustainability. Numerous worldwide and national initiatives emphasize the relevance of large firms' involvement in society, in addition to the traditional goal of generating shareholder income. [10] One pertinent example is the United Nations Global Compact, which was established in 2000 and supports 10 globally agreed principles in the areas of human rights, labour, the environment, and anti-corruption. Another notable endeavour is the ISO 26000 standard, which was adopted in 2010. It provides recommendations on how corporations can be socially responsible. Furthermore, national initiatives, such as the German Sustainability Code, established in 2011, coexist with international standards, demonstrating a global trend toward corporate social responsibility. These projects demonstrate the necessity for management to give information about the enterprise's social, environmental, and intangible activities and performance.

In addition, they clearly address the information needs of stakeholders other than shareholders. While financial information is subject to well-established accounting standards such as Generally Accepted Accounting Principles and other securities-specific laws, non-financial information (NFI) is less governed by a consistent regulatory framework. However, in recent decades, a number of projects have emerged that offer guidance on how to effectively communicate NFI in financial markets. One such response comes from the Global Reporting Initiative, a non-profit organization in the United States founded in 1997 to provide guidelines for sustainability reporting, which is defined as a report published by a company or organization on the economic, environmental, and social impacts of its activities. Another example is the International Integrated Reporting Council (IIRC), which was established in 2010 with the goal of encouraging companies to transform

their reporting by incorporating various information on value generation. In 2013, the IIRC published the Integrated Reporting Framework, which makes it easier to create integrated reports by providing a concise presentation of how an entity's strategy, governance, performance, and prospects contribute to value creation in the short, medium, and long term, within the context of its operating environment.

In 2013, the European Commission responded to the need for non-financial reporting (NFR) by amending accounting legislation to require large corporations to boost transparency about their social and environmental performance. As investors and other stakeholders grow more conscious of the social and environmental consequences of economic operations, non-financial data becomes increasingly important in providing a complete picture of a company's success.

In this light, a substantial shift has occurred in the way investors evaluate companies. Instead of concentrating just on short-term financial metrics, they are shifting their focus to larger factors that can affect long-term performance. As a result, investment evaluation and selection are becoming more sophisticated processes that incorporate environmental, social, and governance (ESG) variables into traditional analysis, contributing to a more holistic view of firm performance. As a result, the concept of firm performance is broadening beyond traditional financial indicators, incorporating non-financial characteristics that reflect a more comprehensive and responsible vision of long-term success.

This development emphasizes the importance of investors and corporate managers rethinking their performance perspectives and adopting a comprehensive approach that balances financial interest, social responsibility, and sustainability.

4.4. Representation of financial and accounting data in environmental accounting

Environmental accounting is a technique that allows organizations to quantify the outcomes of their efforts to transform the economic system in accordance with the principles of sustainable development [11]. *Environment accounting also known as green accounting* [12], is an extension of the System of National Accounts that includes the usage and depletion of natural resources. This type of accounting is critical for controlling the environmental and operational costs of natural resources. Natural resource valuation is important in analysing social costs and benefits, as well as in certain parts of environmental accounting. Environmental accounting has several categories, each concentrating on a different aspect of an entity's contact with the environment. There are several major types:

- Accounting of physical or natural resources

This type entails accounting for the quantity and quality of natural resources used by a company. Physical resource accounting aids to sustainable development planning by including environmental issues into economic studies, thereby balancing economic growth and environmental conservation. It aids in tracking the depletion or enhancement of natural resources, providing data on their availability and sustainability.

- Environmental costs accounting

Accounting is the process of identifying, measuring, and analyzing the expenses connected with a company's environmental actions. It comprises both internal and external costs associated with environmental issues such as pollution, resource depletion, and waste management. It enables firms to assess the financial implications of their environmental activities, such as the costs of pollution control, waste management, and compliance.

- Analysing eco-efficiency

It evaluates the efficacy of resource utilization in manufacturing processes and identifies possibilities to improve environmental performance. This methodology seeks to create sustainable development by optimizing resource utilization, reducing environmental impact, and enhancing economic value. It assists organizations in optimizing their operations to reduce resource consumption, waste generation, and environmental impact.

- Greenhouse gas accounting

It is the sort of accounting that involves monitoring and reporting greenhouse gas (GHG) emissions from a company's operations. GHG accounting is critical for an organization's sustainability, regulatory compliance, and worldwide efforts to prevent climate change. It tackles climate change concerns by enabling organizations to measure and manage their carbon footprint.

- Environmental performance indicators

They are quantitative measures for evaluating and communicating a company's environmental performance. These indicators give vital information about environmental impacts and sustainability practices, allowing stakeholders to evaluate progress, set goals, and make educated decisions. They include energy usage, water use, trash generation, and emissions, which provide an overview of environmental effect.

- Reporting stable development

The disclosure of an organization's social, environmental, and economic performance is known as sustainability reporting. In order to better understand how the organization incorporates sustainability into its operations and decision-making, pertinent information, statistics, and initiatives must be disclosed as part of this reporting process. It offers a comprehensive perspective on how a business operates, accounting for the triple bottom line—economic, environmental, and social factors.

- Full cost accounting

It considers both direct and indirect expenses connected with an entity's operations, including environmental and social costs. Full Cost Accounting aims to provide a thorough awareness of the true economic and environmental costs associated with decision-making. It seeks to provide a more thorough knowledge of production costs, including externalities that may affect the environment.

- Biodiversity accounting

It entails evaluating how an entity's operations affect ecosystems and biodiversity. This accounting approach measures and evaluates the diversity of species, their relationships, and their ecological responsibilities in a way that goes beyond conventional financial reporting. It aids organizations in comprehending and controlling their roles in biodiversity conservation or loss.

- Corporate environmental reporting

It entails sharing environmental performance statistics and related information with stakeholders. It necessitates open communication of a company's environmental actions, practices, and accomplishments to all stakeholders, including investors, customers, employees, regulators, and the general public. It promotes transparency and accountability,

allowing stakeholders to make informed judgments about a company's environmental practices.

Romania, as a member of the European Union, has begun to place a greater emphasis on sustainability reporting, considering the considerable impact of economic operations on the environment and society. In light of climate change and more stringent international regulations, Romanian businesses and organizations are encouraged to develop open sustainability strategies. As a result, a number of regulations aimed at sustainability reporting have been implemented at the national and European levels, including the European Union Non-Financial Reporting Directive (NFRD), which requires certain entities to disclose information about their environmental, human rights, and corruption impacts. This law was updated in 2021 and renamed the Corporate Sustainability Reporting law (CSRD), which expanded reporting requirements even further. Many Romanian companies are already structuring their sustainability reports using international standards such as GRI (Global Reporting Initiative) or SASB (Sustainability Accounting Standards Board). These guidelines provide a systematic framework for organizations to convey their economic, social, and environmental impacts. However, sustainability reporting in Romania faces a number of obstacles. Some small and medium-sized businesses lack the resources and skills required to create an efficient reporting system, and they have a limited understanding of the idea of sustainability.

4.5. ESG effects on performance in terms of added value

The notion of ESG (Environmental, Social, Governance) is becoming increasingly important in evaluating the performance of companies. Its emergence is attributed to a growing awareness of the impact of economic operations on the environment, society, and corporate governance. Implementing ESG standards improves organizations' financial and non-financial performance, demonstrating the impact of sustainable values on economic outcomes. *Sustainable value* is a notion that considers economic, social, and environmental outcomes when evaluating a company's long-term success.

It is described as an entity's potential to earn money while also positively contributing to society and the environment. ESG standards are used to assess performance in these three areas and serve as an analytical framework for investors and management. *Sustainable value* added is defined as the additional value gained while keeping the total level of environmental and social consequences constant [13]. According to studies, there is a good association between ESG (Environmental, Social, and Governance) practices and financial performance of entities. Friede's research, which evaluated over 2000 empirical studies, found that 63% of them indicated a positive relationship between ESG and financial performance. Financial information created by businesses that apply effective ESG initiatives, such as enhancing energy efficiency or cooperating with local communities, can help cut operational costs and boost consumer loyalty, according to the McKinsey analysis [14]. Companies with strong ESG scores experienced 3%-5% better sales growth than those with poor scores. Entities that incorporate environmental, social, and governance (ESG) concepts into their business strategy can dramatically minimize operational and reputational risk. Effective governance management may prevent concerns like information leakage, corruption, and fraud, while implementing sound environmental policies can lower the chance of future penalties or litigation. According to a Harvard Business School report published in 2021 [15], organizations that demonstrate appropriate

ESG risk management are better prepared to deal with economic catastrophes, such as the COVID-19 outbreak.

5. Discussion and findings of a study on the use of financial and accounting information in generating ESG scores

An effective and quick evaluation of the non-financial performance of businesses has been made possible by access to a variety of databases, including ASSET4, EIKON, Sustainalytics, MSCI ESG (KLD), and Bloomberg. These databases also provide the ability to compare organizations, sectors, or nations. As a result, it is anticipated that the need for ESG data will only increase, and these databases will aid investors in making investment decisions. The number of entities whose data will be available from these ESG databases will surely increase as a result of the European Union's legislative amendments pertaining to the disclosure of non-financial information. The Thomson Reuters EIKON database gives access to trustworthy, current, and accurate data from over 400 capital markets and over-the-counter markets. The database contains a wide range of financial indicators and information (both current and archived), including stocks and bonds, investment and trust funds, exchange rates, interest rates, financial derivatives, and commodities (raw materials), as well as international macroeconomic data and forecasts for the world's largest economies and developing countries. The Thomson Reuters EIKON database contains:

- ESG data and results for over 6000 companies,
- over 400 partial data reported during the sustainable development,
- over 70 KPIs (key performance indicators),
- data from the year 2002,
- ESG data collected in real time from 75 000 sources,
- solutions that allow monitoring and reporting CO2 emissions to fulfil legal requirements.

In this context, the Thomson Reuters EIKON database allows you to access ESG data on a company and, eventually, an ESG rating for that business.

The calculation of the indicator value that classifies a company into an appropriate score is based on three factors:

➔ ➔ indicator for the score ESG = $\frac{a+b/2}{c}$

where: a - the number of underperforming companies,
b - the number of companies with the same results as the one evaluated,
c - total number of companies with results.

Based on the calculated result, the company is assigned a specific ESG score on a scale from D- to A+.

There are three categories of ESG indicators in the Thomson Reuters EIKON database:

- ESG Score,
- ESG Controversy Score (ESGC Score),
- ESG Combined Score.

The ESG score evaluates organizations' ESG performance using publicly available data from 10 subject categories. Thomson Reuters compiles and analyses over 400 ESG data points about a company, selecting 178 essential data elements for the final ESG score. The data obtained is based on criteria such as materiality, data availability, and sector significance. The data analysis allows us to state that the following categories can be

included in the group of five important categories (taking the relevance of each category as a criterion) that have the biggest impact on the company's ESG score:
• management (importance– 19%) – pillar: governance,
• labour (importance – 16%) – pillar: social,
• emissions (importance– 12%) – pillar: environment,
• use of resources (importance – 11%) – pillar: environment,
• innovation (importance– 11%) – pillar: environment.

The five categories stated above have a total relevance of 69%. It is also worth noting that the major categories contain all of the environmental pillar's areas. It is also worth noting that a company's CSR strategy (together with human rights) is the least important factor in the ESG score, accounting for only 4.5%. The ESG Controversy Score (ESGC Score) assesses a company's exposure to environmental, social, and governance issues, as well as negative news coverage in the worldwide media. The Reuters Eikon database includes 3107 firms from advanced and emerging nations that operate in a variety of industry categories (table 2).

Table 2. Descriptive statistics

	Mean	Median	Stdev	Min	Max
ESG_score	51,99	53,58	20,40	0,47	95,06
ESG_Combined_Score	49,89	50,85	19,38	0,47	94,59
Environmental_Pillar_Score	47,70	50,32	27,79	0,00	99,18
Social_Pillar_Score	52,55	53,88	23,99	0,26	98,63
Governance_Pillar_Score	54,87	56,96	22,04	0,29	99,51
Size (ln_assets)	22,13	22,42	2,84	0,00	28,70
ROA	4,60%	3,34%	7,44%	-113,99%	249,32%
ROE	12,17%	10,07%	72,30%	-5332,55%	2604,97%
Debt_to_Equity	209,69%	58,15%	10043,60%	-0,55%	1460694,54%

Source: own editing

The table depicts the ESG (Environmental, Social, and Governance) performance, size, and financial performance of a sample businesses from the Reuters Eikon database. The calculations yield an average ESG score of 51.99, indicating moderate ESG performance overall. The median, which is somewhat higher than the average, is 53.58, indicating a slightly better-scoring dispersion. ESG scores vary significantly, with a standard deviation of 20.40, indicating a large disparity between companies. The extreme numbers, 0.47 to 95.06, demonstrate significant disparities in ESG performance, ranging from very poor to very high. The combined ESG score averages 49.89, which is slightly lower than the average of the individual ESG scores. This could indicate a tiny discrepancy in how the performances are aggregated or reported. The median total ESG score of 50.85, which is close to the average, indicates a fairly balanced distribution.

The environmental pillar scores have a mean of 47.70 and a median of 50.32, indicating a slightly centred upper end with a larger variation (standard deviation of 27.79). The mean for the social pillar is 52.55 and the median is 53.88, indicating that social performance is stronger on average than environmental performance, but there is also significant variability, as evidenced by the standard deviation of 23.99. The governance pillar has the best relative performance, with a mean of 54.87 and a median of 56.96, indicating that most entities effectively handle these components, albeit significant variation.

The average size of the entities, as measured by the logarithm of assets (ln_assets), is 22.13, with a median of 22.42 and a standard deviation of 2.84. This suggests a more consistent size for these entities. Financial performance, as measured by return on assets (ROA) and return on equity (ROE), demonstrates a diverse position. The ROA has a mean of 4.60% and a median of 3.34%, indicating modest financial performance for most organisations. However, the standard deviation of 7.44% and extreme values (minimum -113.99% and maximum 249.32%) show significant variations amongst entities. The average return on equity (ROE) is 12.17%, with a median of 10.07%. However, there is significant variance with a standard deviation of 72.30% and extreme values ranging from -5332.55% to 2604.97%.

The debt-to-equity ratio varies the most, with an average of 209.69% and a median of 58.15%. The large standard deviation of 10043.60%, combined with extreme values (ranging from -0.55% to 1460694.54%), indicates a significant difference in capital structure between firms. This could indicate severe financial risk for some or strong capitalisation for others. This research captures the complexity and diversity of the entities' ESG and financial performance.

By analysing ESG ratings in relation to ROA and ROE, an increasing trend can be noticed, indicating that companies with sustainable and socially and environmentally responsible policies perform better financially. However, the substantial variability in both data sets implies that this is not a general rule, and that each company has unique factors that influence both ESG score and financial viability. It is critical that investors and stakeholders continue to analyse these relationships in order to make sound decisions. Table 3 shows the evolution of the average ESG score for the analysed organisations from 2018 to 2024.

Table 3. ESG score values, 2018-2024

Years	ESG score	ESG_Combined_Score	Environmental_Pillar_Score	Social_Pillar_Score	Governance_Pillar_Score	Size (ln_assets)	ROA	ROE	Debt_to_Equity
2024	58,48	54,96	54,63	60,00	58,80	22,27	4,51%	12,50%	205,84%
2023	56,60	54,11	52,24	57,94	57,59	22,15	3,82%	8,45%	125,02%
2022	54,24	52,32	48,82	55,39	56,16	22,14	4,79%	10,56%	137,95%
2021	52,24	50,43	46,26	53,28	54,73	22,10	5,10%	13,58%	603,25%
2020	49,75	48,08	46,69	50,02	53,35	22,21	4,77%	13,47%	102,65%
2019	47,57	46,28	43,98	47,18	52,61	22,05	4,66%	12,86%	137,72%
2018	45,05	43,04	41,26	44,06	50,82	21,99	4,55%	13,74%	155,40%

Source: own editing

The overall ESG score has steadily increased from 45.05 in 2018 to 58.48 in 2024. This trend shows that corporations' environmental, social, and governance performance is

continuing to improve, potentially due to increased pressure from investors, regulators, or public awareness of the relevance of these issues. The combined ESG score follows a similar trend, but its values are significantly lower than the overall ESG score. This may indicate that the combined company-level performance is slightly poorer than the separate ones on different dimensions.

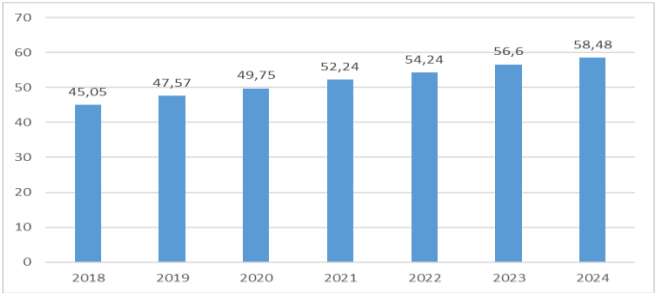
Looking more closely at the ESG pillars, it is clear that all three components (environmental, social, and governance scores) have improved over the years. The environmental pillar, for example, has risen from 41.26 in 2018 to 54.63 in 2024, indicating a more widespread adoption of sustainable methods in business operations. Similarly, the social and governance pillars have grown significantly, reflecting an increased interest in social responsibility and corporate governance excellence.

The company size, as assessed by the logarithm of assets (ln_assets), remained largely consistent during the analysed period, with only minor changes between 21.99 and 22.27. This constancy shows that firm size did not play a significant role in the variances in ESG rankings and financial performance.

ROA (return on assets) and ROE (return on equity) indicate little volatility, with ROA values ranging from 3.82% to 5.10%. This indicates a relatively consistent operational efficiency. On the other hand, ROE changes more, from 8.45% in 2019 to 13.74% in 2014, demonstrating greater variability in return on equity, which can be influenced by both capital structure and net income swings.

The evolution of the Debt-to-Equity ratio, which demonstrates significant volatility, is one of the analysis's highlights. Although the average of this indicator shows a high level of indebtedness, substantial swings, such as the sudden increase to 603.25% in 2017, signal periods of financial instability or significant changes in a company's capital structure. This could indicate different financing tactics used by businesses in response to economic opportunities or problems throughout the relevant time. Overall, the data given show an improvement in ESG performance over time, which is associated with a rather moderate variation in financial success. The rise in ESG scores indicates that companies are becoming more committed to sustainable and responsible practices, though the stability of company size and the volatility of financial indicators suggest that these improvements are not necessarily the result of company growth or stable financial performance, but rather of increased awareness and external pressure for better corporate governance and social responsibility (graph 1).

Graph 1. ESG score values, 2018-2024



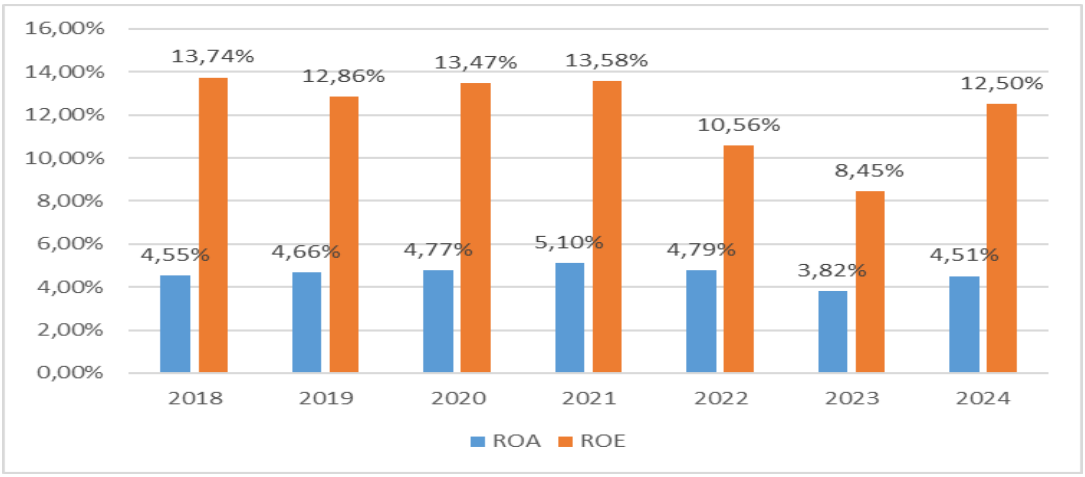
Source: authors editing

The graph shows the evolution of the ESG score from 2018 to 2024. A definite rising trend can be seen, indicating a consistent improvement in organisations' ESG performance over the period studied. Starting in 2018, the ESG score was 45.05, but by 2024 it had risen dramatically to 58.48. This constant increase reflects firms' growing commitment to incorporating environmental, social, and governance policies into their daily operations. The fact that each year sees an increase over the previous year indicates a stable and persistent tendency, rather than a transitory reaction to specific external or internal circumstances. This trend could be attributed to a variety of factors, including stronger regulation of ESG reporting and performance, a rise in investor demand for openness and accountability, or firms' improved understanding of their influence on society and the environment.

The rise can also be ascribed to the continual improvement of corporate governance, as well as the policies and procedures put in place to promote sustainability. The data shows a positive and significant evolution of ESG scores, demonstrating a gradual but consistent shift by corporations towards more sustainable and responsible practices over the period studied. This evolution shows that ESG factors have grown more incorporated into business planning, possibly becoming vital for long-term success.

The average profitability of businesses has evolved in the sense of those described in graph 2. We see a correlation between ROA and ROE in the sense that assets used in business and capital invested are stable, with net profit influencing enterprise success.

Graph 2. ROA and ROE evolution, 2018-2024



Source: authors editing

6. Conclusions

Sustainable development has been defined as meeting current needs without jeopardising future generations' ability to meet their own, with the goal of striking a balance between economic growth, social inclusion, and environmental protection, and serving as the foundation for all EU policies and initiatives. Under Article 3(3) of the Treaty on European Union, the EU officially recognises sustainable development as a long-term goal.

Sustainability reporting is more than simply a legal requirement; it is also a strategic opportunity for businesses to improve their performance and provide value in the long term. Businesses can help to create a more sustainable future by incorporating the principles of sustainability reporting into their operating plans.

Companies that invested more in social, environmental, and corporate governance initiatives saw higher returns. In summary, despite the additional costs associated with these measures, their revenues climbed, leading to the conclusion that organisations engaging in ESG actions will benefit in the short and medium term. ESG activities benefit businesses at every stage of the value chain, from cost reduction to maintaining a competitive advantage. ESG encourages investors and publicly traded companies to consider sustainability, resulting in a more robust green stock market.

References

[1] Dumitrana, M., Jianu, I., Lapteş, R., Popa, A. F. (2009), *Sustainable development and environmental accounting: concepts, trends and quality of accounting information*, Journal of Accounting and Management Information Systems, vol. 8, nr. 1, pp. 27-39

[2] Godemann, J., Bebbington, J., Herzig, C., Moon, J. (2014), *Higher education and sustainable development. Exploring possibilities for organisational change*, Accounting, Auditing and Accountability Journal, vol. 27, nr. 2, pp. 218-233

[3] Venter, E.R., Gordon, E.A. şi Street, D.L. (2018), *The role of accounting and the accountancy profession in economic development: A research agenda, Journal of International Financial Management and Accountin*g, vol. 29, nr. 2, pp. 195-218

[4] Igalens, J. (2023) , *4. La reddition de comptes en matière de RSE,* in Les grands auteurs francophones. EMS Editions, pp. 69–98.

[5] Albu, N., Albu, C.N., Dumitru, M., Dumitru, V.F. (2013), *Plurality or convergence in sustainability reporting standards*, Amfiteatru Economic, vol. XV, nr. 7, pp. 513-527

[6] Armstrong, M. (2006), *A Handbook of Human Resource Management Practice*, 10th Edition, Kogan

Page Publishing, London.

[7] Aßländer, M.S. (2011), *Corporate Social Responsibility as Subsidiary Co-Responsibility: A Macroeconomic Perspective*. Journal of Business Ethics, 99 (1), 115-128.

[8] Peloza, J., Shang, J. *How can corporate social responsibility activities create value for stakeholders?* A systematic review. J. of the Acad. Mark. Sci. 39, 117–135 (2011). https://doi.org/10.1007/s11747-010-0213-6.

[9] Bernard Colasse, Frédérique Dejean. *Représentation comptable de l'entreprise et développement durable.* L'Économie politique, 2022.

[10] Erkens, Michael, Luc Paugam, and Hervé Stolowy. *Non-financial information: State of the art and research perspectives based on a bibliometric study.* Comptabilité Contrôle Audit 21.3 (2015): 15-92.

[11] Nicolas Antheaume, Bernard Christophe, *La comptabilité environnementale, des outils pour évaluer la performance écologique*, E-theque, 2005.

[12] Iyyanki V. Muralikrishna, Valli Manickam, in Environmental Management, 2017.

[13] Figge, F., Hahn, T. (2004a), *Sustainable Value Added: measuring corporate contributions to sustainability beyond eco-efficiency*, Ecological Economics, Vol. 48, No. 2, pp. 173–187, doi: 10.1016/j.ecolecon.2003.08.005

[14] McKinsey & Company. (2020). *How ESG affects financial performance*.

[15] Harvard Business School. (2021). *The Impact of ESG on Business Resilience During Crisis*

Bibliography

-books and manuals

Brogi, M., Lagasio, V., (2019), *Environmental, Social, and Governance and Company Profitability: Are Financial Intermediaries Different?*, Corporate Social Responsibility and Environmental Management, Volume 26(3), pp. 576–587

Burlaud, A., Niculescu, M. (2015), *Non-financial reporting: a European perspective*, Audit financiar XIII Nr. 6 (126), p. 102-112.

Déjean F., (2021), *Responsabilité sociale de l'entreprise et performance intégrée : la course aux indicateurs*, In L'Etat du Management, coll. Repères, La Découverte, p. 38-48.

Martinet A.C. et E. Reynaud (2004*), Stratégies d'entreprise et écologie*, Economica, Paris.

Postel N., Rousseau S. et Sobel R. (2006), *La « responsabilité sociale et environnementale des entreprises» : une reconfiguration potentielle du rapport salarial fordiste ?,* Économie appliquée, 4, 77-104.

Ribando J.M., Bonne G., (2010), *A new quality factor: Finding alpha with ASSET4 ESG data*, Thomson Reuter, Starmine Research

Trinquecoste J.F., (2008), *Responsabilité, Ethique et Logique marchande*, Collection Questions de société, éditions EMS.

-legislation and studies

Directive (EU) 2022/2464 of the European Parliament and of the Council of December 14, 2022 amending Regulation (EU) No 537/2014, Directive 2004/109/EC, Directive 2006/43/EC and Directive 2013/34/EU as regards sustainability reporting by undertakings.

OMFP nr. 85/2024, Monitorul Oficial nr. 75 din 26 ianuarie 2024.

Wikipedia contributors (2024) ISO 26000, Wikipedia, The Free Encyclopedia. Available at: https://en.wikipedia.org/w/index.php?title=ISO_26000&oldid=1242973341

System of monitoring based on methodically organised accounts, representing the size of economically valuable and limited reserves of natural resources and using physical quantifiers such us tonnes or cubic metres, Eurostat. 2020. Economy-wide material flow accounts and derived indicators. Luxembourg.

Emissions trading scheme: targeting the free allocation of allowances (no data) Europa.eu. Available at: https://op.europa.eu/webpub/eca/special-reports/emissions-trading-system-18-2020/ro/

Set of performance indicators and standards Ministry of Environment, Water and Forests, available at https://www.mmediu.ro/app/webroot/uploads/files/2020-11-13_Studiu_indicatori_standarde.pdf

Full cost accounting (2017) European Environment Agency. Available at: https://www.eea.europa.eu/help/glossary/eea-glossary/full-cost-accounting

HG nr. 1117 /2023 on the approval of the Methodology for Sustainability Reporting.

Romanian Code of Sustainability issued by the Government of Romania Published in the Official Gazette No. 1052 of November 21, 2020.

Rapid case review Reporting on sustainability: A stocktake of EU Institutions and Agencies - Europa.eu.

Global Sustainable Investment Alliance (GSIA). (2021). Global Sustainable Investment Review 2020.

Thomson Reuters, 2017c, Thomson Reuters ESG data and solutions, https://financial. thomsonreuters.com/content/dam/openweb/documents/pdf/financial/esg-research-brochure.pdf