Accounting for a Sustainable Future: The Role and Impact of the European Sustainability Reporting Standards (ESRS)

Dimitris Balios
Department of Economics, National and Kapodistrian University of Athens
dbalios@econ.uoa.gr

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Abstract: *This study examines the evolution, structure, and implications of the European Sustainability Reporting Standards (ESRS), as a tool of sustainability accounting. The historical review starts with the Brundtland Report and concludes with the Corporate Sustainability Reporting Directive (CSRD). The paper offers a historical review of the integration of environmental and social concerns into corporate reporting. In addition, it analyzes the European legislative framework for non-financial disclosures and explores the structure and characteristics of the ESRS (illustrating good and bad practices for each standard). How the standards influence strategic business decisions and reshape corporate governance is part of our analysis. Furthermore, the paper highlights key strengths of the ESRS, while also addressing critical limitations, conflicts, risks and general challenges. The study concludes with suggestions for future improvements on the ESRS framework, highlighting the need for simplification, technological support and international convergence. It also proposes a research agenda for advancing the field of sustainability accounting.*

Keywords: accounting, sustainability accounting, non-financial reporting, corporate sustainability reporting directive (CSRD), European sustainability reporting standards (ESRS), environmental, social, and governance (ESG)

INTRODUCTION

The incorporation of sustainable development principles into accounting and corporate disclosure represents a significant advancement in business procedures in the last 20 years. The European Union adopted the CSRD (Corporate Sustainability Reporting Directive - European Parliament and Council of the European Union, 2022) which incorporates the European Sustainability Reporting Standards (ESRS). The ESRS framework enters for European companies, mandatory, harmonized and controlled disclosure of sustainability information (European Commission, 2023; EFRAG, 2023a).

Companies must confront this framework as a strategic opportunity; not just a compliance obligation and use ESRS to align their operations with the ESG (environmental, social and governance) parameters into their strategic and managerial decisions. In addition, companies must ensure the trust of investors, regulators and society (KPMG, 2023). Cho et al. (2015) argue that the nature and scope of accounting change as it captures corporate performance beyond financial figures (sustainability accounting). Sustainability accounting is defined as the process of integrating environmental, social and governance (ESG) information into corporate reporting and decision-making processes of organizations (Gray, 2010). This study aims to explore critical questions regarding the practical implementation of ESRS and their impact on businesses. The article attempts to fill an existing gap in international literature by analyzing the structure, content and challenges of ESRS. Although the European regulatory framework recently came into force, the experience in ESG issues remains limited for companies and especially for SMEs. We try to offer a holistic description of the content of the sustainability standards, a critical assessment of the strengths, weaknesses and prospects of ESRS. Additionally, we present good and bad practices as an introductory implementation guide for researchers, businesses and auditors.

The paper is organized as follows. First, we present a historical review of sustainability standards and sustainability accounting. Second, we examine the European legislative framework for non-financial information disclosure. Third, we analyze the European Sustainability Reporting Standards (ESRS), focusing on their structure, underlying principles, and detailed content. Particular attention is given to how the ESRS influence the strategic decision-making processes of companies. In the next section, we offer a critical assessment of the ESRS, outlining their strengths and limitations as well as the regulatory and practical challenges they face. Finally, the paper concludes with key insights and proposes future research questions that emerge from the analysis

HISTORICAL REVIEW OF SUSTAINABILITY STANDARDS AND SUSTAINABLE ACCOUNTING

In the 1970s, global issues such as environmental degradation, the energy crisis, and population growth highlighted the idea of sustainable development and begun to concern the international community. In 1987, a report of the United Nations World Commission on Environment and Development (WCED1 1987), more commonly known as the Brundtland Report, changed the way sustainable development is perceived today.

According to the Brundtland Report, “sustainable development” is the development that “meets the needs of the present without compromising the ability of future generations to meet their own needs” (WCED, 1987). By this definition, social, economic and environmental aspects are integrated into a single development framework. Purvis et al. (2019) argue that the Brundtland Report promoted the notion that economic development and environmental protection must be pursued in balance and mutual synergy. Since the early 1990s, the European Union has made sustainability one of the most important issues in its policy. The Maastricht Treaty (1992) introduced the concept of sustainable development into the fundamental principles of the European Union and stated that the Union should promote a “harmonious and balanced development” that combines economic growth with environmental protection (European Union, 1992).

The Treaty of Lisbon (2007) further strengthened the importance of sustainability as it officially recognized sustainable development as a central objective of the European Union. This treaty supported the EU's responsibility towards environmental protection and social cohesion issues and made sustainable development a fundamental objective and key priority of European policies (European Union, 2007). At the same time, since the 1990s and especially after 2000, the importance of non-financial reporting has increased significantly. Adams and Frost (2008) argue that non-financial reporting is now an essential tool through which companies inform stakeholders about their performance in ESG issues.

In 2014, the European Union issued the Directive 2014/95/EU (European Parliament and Council of the European Union, 2014), known as the Non-Financial Reporting Directive (NFRD). The NFRD requires large companies to provide clear and meaningful information on their sustainability policy. The Corporate Sustainability Reporting Directive (CSRD) followed in 2022. CSRD replaced the NFRD in an attempt by the European Union to highlight the importance of non-financial information. CSRD and the development of the related European Sustainability Reporting Standards (ESRS) represent a transition to standardized and comparable non-financial information reporting. The role and importance of sustainability accounting is now highlighted to align the strategic objectives of a company, ESG and the disclosures shared with social partners and investors. Sustainable accounting now functions not just as a record keeping mechanism, but also as a tool of integrating financial and non - financial information.

The idea of sustainable accounting started to emerge in the 1970s. The growing concern of environmental damage and the widening social inequalities made clear that traditional accounting was no longer enough. Accounting practices had to capture the broader impacts businesses have on society and environment (Gray and Bebbington, 2001). During the 1970s and 1980s, sustainable accounting first measured issues related to environmental and social impacts (Gray, 2002). Environmental accounting, at this early stage, focused on how to quantify environmental damage and the associated economic impacts on businesses (Mathews, 1997).
Crucial for the evolution of sustainability accounting were the 1990s, a period that international organizations and institutions started developing standards and guidelines. In the 90s, sustainability accounting is not only for the environment but include social and governmental issues (Gray, 2010). The Global Reporting Initiative (GRI), founded in 1997 and became a milestone in the history of sustainability accounting as it sets the standards for comparable information for ESG information (Brown, de Jong and Levy, 2009).

After 2000, academics and professionals start to recognize the importance of sustainability accounting as businesses start to use sustainability issues in decision making processes (Schaltegger and Burritt, 2010). In addition, initiatives proposed by UN Global Compact and the ISO 14001 standard made sustainability accounting more practical (Herzig et al., 2012). The UN Global Compact is a voluntary initiative that aims to align business activities with ten fundamental principles in the areas of human rights, labor relations, the environment and anti-corruption (Rasche and Waddock, 2014). ISO 14001 provides practical guidance to businesses to reduce their environmental impacts through the systematic management of environmental risks and the improvement of their environmental performance (Boiral et al., 2018).

The last 15 years, sustainability accounting have entered in a new phase. ESG data has become more important for investors and managers in decision making (Eccles and Krzus, 2010). The development of frameworks like TCFD (Task Force on Climate-related Financial Disclosures, 2017 - established by the Financial Stability Board (FSB) makes the incorporation of climate related risks into financial reporting crucial (Eccles and Krzus, 2018). Overall, the historical review of sustainable accounting and reporting reveals a shift to a more holistic integration of sustainability into business practices and strategies. This evolution reflects the social and environmental challenges of our time and shapes the processes corporations follow to measure and report their performance on sustainability issues.

EUROPEAN LEGISLATION AND DISCLOSURE OF NON-FINANCIAL INFORMATION

The Directive 2014/95/EU, known as the Non-Financial Reporting Directive (NFRD), was the first official institutional approach in Europe (European Parliament and Council, 2014). NFRD focused on promoting greater transparence, accountability and sustainability across the European Union. The Directive requires large and publicly listed firms to report on their ESG performance.

In practice, several shortcomings and challenges were exposed during NFRD application. Differences in quality, quantity and comparability of the disclosed information were some of these shortcomings. In addition, the reporting standards were not clear and consistent, a small group of companies applied the directive and at the end, investors and stakeholders could not use the data efficiently (EFRAG, 2021; KPMG, 2020).

In 2022, the European Commission replaced NFRD with the Corporate Sustainability Reporting Directive (CSRD) in order to address the forementioned shortcomings and challenges. CSRD extends reporting obligations by including SMEs listed on regulated markets and makes mandatory the use of European Sustainability Reporting Standards (ESRS) as a standardized, detailed, and harmonized reporting framework. This regulatory framework highlights the intention of the European Union to align itself with global developments and sustainable development. Additionally, consumers, civil society and general public pressure, force companies to increase their accountability and support the sustainability transition (Adams and Larrinaga, 2019).

The European Union has acknowledged that a unified and robust regulatory framework will decrease the risk of fragmented disclosures and increase green investments and the reliability of corporate reporting on ESG. Initiatives such as the GRI Standards, TCFD recommendations, the newly established IFRS Sustainability Disclosure Standards, the EU Green Deal, the European Union Taxonomy for Sustainable Economic Activities, and the UN Sustainable Development Goals (SDGs) developed a coherent and mandatory approach to sustainability reporting (Taxonomy Regulation (EU) 2020/852, GRI, 2021; TCFD, 2017; IFRS Foundation, 2022).

EUROPEAN SUSTAINABILITY REPORTING STANDARDS (ESRS)

Structure and principles

The European Sustainability Reporting Standards (ESRS) constitute the first mandatory European standards for corporate ESG disclosures and aim to ensure the comparability, transparency, and reliability of the information disclosed (European Commission, 2023; EFRAG, 2023a). ESRS is a unified sustainability reporting framework within the Corporate Sustainability Reporting Directive (CSRD) which is developed by the European Financial Reporting Advisory Group (EFRAG). EFRAG serves as the technical advisor to the European Commission on matters related to financial and non-financial reporting.

The philosophy and structure of the ESRS have been designed to promote clarity, adaptability, and relevance to the diverse needs of companies. Double materiality is the core principle of the ESRS which requires companies to disclose information that is material both to their financial performance and to their environmental and social impacts (EFRAG, 2023a). Another core principles of ESRS are transparency and comparability. The standards include definitions, methodologies and indicators to improve comparability across companies over time. Finally, companies are required to identify and prioritize the most relevant to them ESG topics and adjust the reporting to their business model and sector (EFRAG, 2023a).

ESRS include three types of complementary standards. First, the cross-cutting standards which define general principles, policies, targets, governance processes, and core quantitative and qualitative disclosures that apply to all organizations, regardless of sector or size. Next, the topical standards which address specific ESG areas and apply universally across companies. They cover topics such as climate change, circular economy, human rights, and equality. Finally, the sector-specific standards which are still under development and will address specific sectors of the economy. Their purpose is to capture the unique risks and opportunities of each industry, such as energy, financial services, transport, agrifood, etc. (EFRAG, 2023b).

Cross-cutting standards, topical standards and sector-specific standards allows reporting requirements to be adapted to a company’s size, industry, and impact, promoting a holistic and unified system of sustainability accountability. ESRS set a comprehensive, reliable, and comparable reporting framework which enhances corporate accountability and supports sustainable development.

Content and analysis of ESRS

As we mentioned in the previous section, the European Sustainability Reporting Standards (ESRS) are organized into three main categories: Cross-cutting, Topical, and Sector-specific standards. Each category plays a distinct role in ensuring a coherent, comprehensive, and reliable reporting framework.The cross-cutting standards form the "backbone" of the ESRS framework, as they define the core principles and mandatory requirements for all disclosures, regardless of topic or industry (EFRAG, 2023a). ESRS 1 sets out the general framework for drafting sustainability reports. It describes the key principles (e.g., transparency, consistency, completeness), the double materiality methodology, the connection between strategy–governance–risk, as well as the requirements for documenting and presenting disclosures (EFRAG, 2023a). ESRS 2 specifies the mandatory general disclosures that must be included in every report such as business model, sustainability strategy, corporate governance, risk identification mechanisms, and stakeholder engagement processes

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(EFRAG, 2023b). These standards constitute the minimum regulatory framework required for proper reporting and external assurance by independent auditors.

Topical standards define reporting requirements by ESG topic and are divided into Environmental (E), Social (S), and Governance (G) categories. Each standard includes specific indicators, targets, policies, and outcomes (EFRAG, 2023a).

The Environmental Standards (E) within the European Sustainability Reporting Standards (ESRS) framework focus on key environmental themes that companies must address and disclose. ESRS E1 covers climate change, requiring information on greenhouse gas emissions (Scopes 1, 2, and 3), emission reduction targets, climate-related physical and transition risks, and adaptation strategies. ESRS E2 addresses pollution, including the presence of pollutants and hazardous substances, as well as the measures companies take to mitigate pollution and achieve improvement targets. ESRS E3 pertains to water and marine resources, encompassing issues such as water consumption, wastewater treatment, and the protection of aquatic ecosystems. ESRS E4 deals with biodiversity and ecosystems, calling for disclosure on environmental impacts, restoration efforts, and activities affecting protected areas. Lastly, ESRS E5 focuses on resource use and the circular economy, requiring companies to report on resource efficiency, recycling practices, and the adoption of circular business models. Collectively, these standards aim to ensure transparent, detailed, and comparable environmental reporting aligned with the EU's sustainability objectives.

The Social Standards (S) of the European Sustainability Reporting Standards (ESRS) encompass key dimensions of a company's social responsibility across its operations and stakeholder relationships. ESRS S1 focuses on an organization's own workforce, requiring disclosures on workforce composition, health and safety conditions, diversity, and the protection of labor rights. ESRS S2 addresses workers in the value chain, covering labor conditions among suppliers and subcontractors, and promoting responsible business practices throughout the supply network. ESRS S3 relates to affected communities, emphasizing the need for companies to report on their social impacts, engagement with local stakeholders, and contributions to social cohesion and development. ESRS S4 concerns consumers and end-users, requiring information on product safety, transparency, data protection, and attention to vulnerable consumer groups. These standards aim to ensure that companies operate with social responsibility, respect for human rights, and accountability toward all relevant social stakeholders.

The Governance Standard (ESRS G1 – Business Conduct) within the European Sustainability Reporting Standards (ESRS) focuses on the ethical and responsible management of businesses. It requires companies to disclose information related to anti-corruption and anti-bribery measures, ethical business practices, compliance with laws and regulations, and overall transparency. Additionally, it emphasizes the importance of accountability in governance structures.

The Sector-specific Standards of the European Sustainability Reporting Standards (ESRS) are still in development and are designed to adapt the general and topical reporting requirements to the unique characteristics, risks, and opportunities of each economic sector (EFRAG, 2023c). These standards aim to provide more targeted and relevant guidance for companies operating in industries with distinct sustainability challenges and impacts. For example, the energy sector may be required to report in greater detail on emissions and environmental restoration efforts, while the banking sector will focus on ESG integration in lending and investment practices. By reflecting the specificities of each industry, sector-specific standards enhance the precision, relevance, and comparability of sustainability disclosures.

Figure 1 presents the structure of the European Sustainability Reporting Standards (ESRS), outlining their classification into cross-cutting, topical, and sector-specific standards.

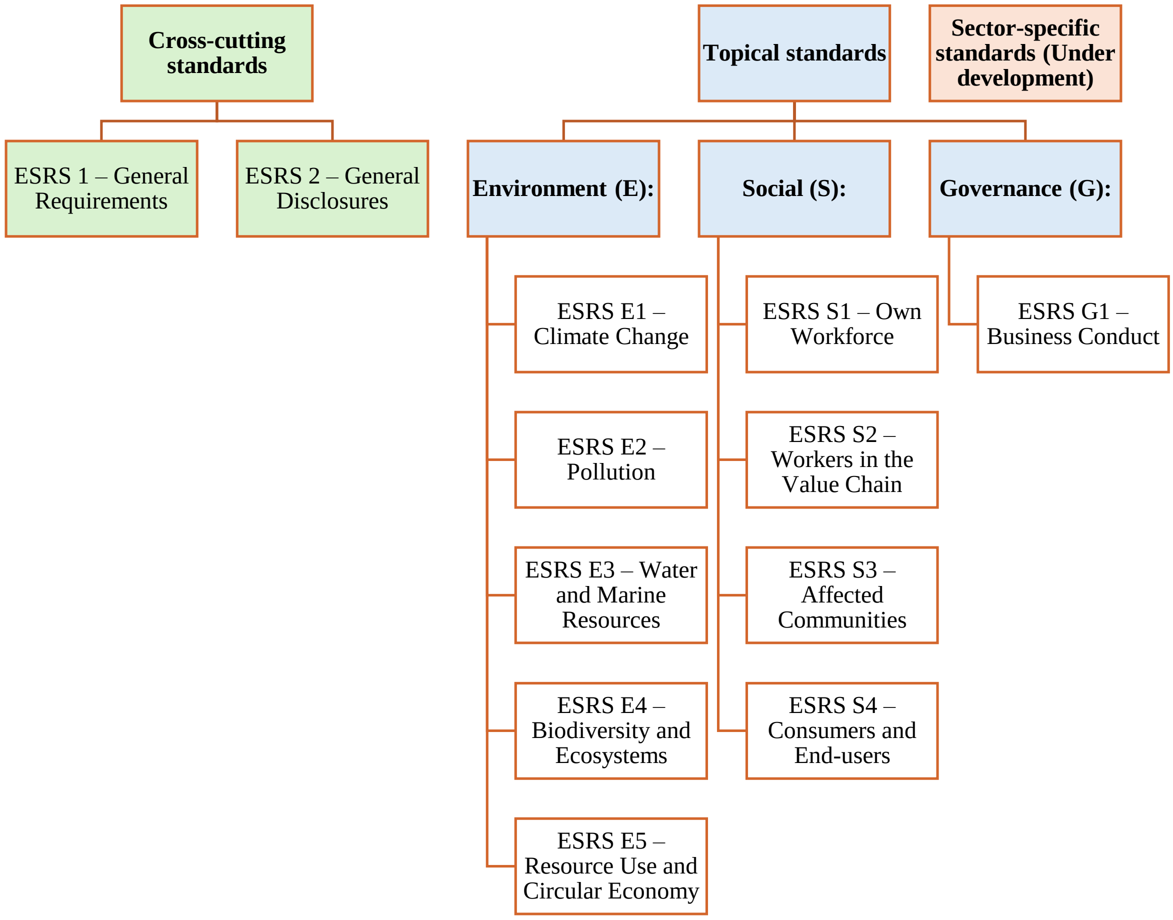

Figure 1: Structure of the European Sustainability Reporting Standards (ESRS)

In order to highlight good and bad practices associated with the topical and sector-specific standards of the European Sustainability Reporting Standards (ESRS) we can see in Table 1, organized by ESG category — Environmental, Social, Governance — and selected economic sectors, examples of how companies can align their practices with the expectations set out in the ESRS framework.

The structure of the ESRS illustrates the EU's commitment to building a consistent, integrated, and impactful framework for sustainability reporting. The tiered structure—cross-cutting, topical, and sector-specific—enables targeted, relevant, and credible corporate disclosures, reinforcing market and public trust in ESG data.

Table 1: ESRS and good and bad practices

ESRS Category	Standard	Good Practice	Bad Practice
Environmental	ESRS E1 – Climate Change	Measuring and reporting all emissions (Scopes 1, 2, 3), setting science-based targets, investing in renewable energy	Using vague statements, failing to disclose Scope 3, or publishing inaccurate data
Environmental	ESRS E2 – Pollution	Installing filters, monitoring and disclosing pollutants, emergency response planning	Waste discharge without monitoring or disclosure
Environmental	ESRS E3 – Water and Marine Resources	Water recycling, waste minimization, collaboration with local authorities	Uncontrolled consumption and disposal of wastewater
Environmental	ESRS E4 – Biodiversity and Ecosystems	Conducting impact studies, restoring ecosystems, biodiversity monitoring	Expansion into protected areas without study or mitigation
Environmental	ESRS E5 – Resource Use and Circular Economy	Use of recycled materials, clear waste reduction goals, circular production systems	Linear production with no targets or waste-reduction actions
Social	ESRS S1 – Own Workforce	Training programs, equality policies, accident prevention	Poor working conditions, frequent accidents
Social	ESRS S2 – Workers in the Value Chain	Supplier audits, certification requirements, improvement initiatives	No oversight or concern for labor rights in the value chain
Social	ESRS S3 – Affected Communities	Community involvement, compensatory measures, social contributions	Projects without consultation, neglect of social impacts
Social	ESRS S4 – Consumers and End-users	Clear labeling, product quality and safety, protection of personal data	Misleading information, weak consumer protection
Governance	ESRS G1 – Business Conduct	Code of ethics, employee training, whistleblowing mechanisms	Lack of controls, ethics violations, concealment of wrongdoing
Sector-specific	Energy Sector	Investments in renewables, transparent CO_2 reporting, environmental restoration	Fossil fuel dependency, data concealment, disregard for local environment
Sector-specific	Banking Sector	Applying ESG criteria to lending, offering green products, sustainability portfolio disclosures	Financing harmful projects, lack of transparency
Sector-specific	Agri-food Sector	Traceability, environmental/social criteria, packaging recycling	Child labor, harmful practices, no monitoring

ESRS and their impact on strategic decisions of companies

The introduction of mandatory sustainability standards—such as the ESRS under the CSRD Directive and the EU Taxonomy—deeply influences how businesses operate, plan, and communicate their strategies. Kotsantonis and Serafeim argue (2019) that the integration of these frameworks is not merely about regulatory compliance but serves as a catalyst for the strategic transformation of organizations.

First, these standards encourage businesses to rethink their business models with a focus on long-term sustainability. The concept of double materiality requires companies to adopt a holistic approach to strategy (EFRAG, 2023). Second, ESRS improve the quality of information available to management and enhance the reliability and depth of information accessible to corporate leadership, supporting more strategic and data-driven decision-making (Eccles and Krzus, 2018). In addition, Fornasari and Traversi (2024) argue that these standards improve comparability across businesses, reduce the risk of greenwashing, and increase transparency for regulators, consumers, and stakeholders. The true strategic significance of these standards lies in their potential to strengthen a company's long-term resilience, enhance its reputation, and improve its competitive position, effectively transforming compliance into a source of strategic value (Wang et al.).

CRITICAL ANALYSIS OF THE EUROPEAN SUSTAINABILITY REPORTING STANDARDS (ESRS)

Strong aspects and limitations

Two strong aspects of ESRS are the transparency and comparability they promote and the support they provide to businesses in their transition to sustainable business models.The application of common, standardized frameworks ensures that the sustainability information disclosed by companies is reliable, consistent, and comparable across both national and European levels (KPMG, 2023). ESRS, based on the principle of double materiality, obligate companies to disclose both the impact they have on the environment and society, as well as the sustainability-related financial risks they face (EFRAG, 2023a). This dual perspective enables investors, analysts, and other stakeholders to make clearer comparisons and more objective evaluations of companies' sustainability performance and exposure to ESG risks (Michelonet al., 2015). In addition, frameworks like the EU Taxonomy offer clear and shared criteria for identifying environmentally sustainable activities, thereby reducing uncertainty and the risk of greenwashing (European Commission, 2021). This clarity improves investment evaluation and comparison, increases transparency in the market, and leads to more effective capital allocation decisions.

The transition to sustainable business models is the 2nd aspect that ESRS bring in ESG reporting. The obligation to set specific and measurable sustainability goals integrates ESG considerations into the heart of corporate strategy and operations. The mandatory implementation of these standards encourages companies to identify, manage, and reduce their negative environmental and social impacts, adapting their practices to more sustainable solutions (Eccles and Krzus, 2018). In this way, ESRS act as catalyst for integrating sustainability into corporate strategies, ensuring long-term viability, competitiveness, and social acceptance of businesses.
Although the adoption of European Sustainability Reporting Standards (ESRS) offers clear advantages, their implementation also presents notable limitations that require thoughtful consideration. Complexity and high compliance costs, risk of standardization at the expense of meaningful impact and data reliability issues and risk of greenwashing are a few challenges and limitations.

The need to collect, process, and verify large volumes of non-financial data demands considerable resources—both financial and human (Eccles and Krzus, 2018) and increases the complexity and high cost of compliance associated with the application of these standards. Especially, for small and medium-sized enterprises (SMEs), this cost can be a barrier, potentially limiting their access to investment capital and related opportunities. The challenge becomes even greater due to the need to implement the new standards in parallel with existing financial and operational reporting frameworks, adding pressure to administrative structures and internal control mechanisms (KPMG, 2023).

Another significant concern is that over-standardization could come at the expense of achieving meaningful sustainability outcomes. While standardization improves comparability, it may also lead to a checkbox approach and mentality that focuses on formal compliance over real improvement in sustainability performance (Adams and Larrinaga, 2019). Strict standards can constrain companies' ability to address the unique sustainability challenges of their sector or region, limiting the actual value and impact of their disclosures.

Another limitation concerns the reliability and quality of the disclosed data. Accurate and credible ESG reporting is essential but the complexity of gathering such information—combined with weak internal control systems—can lead to errors, whether accidental or intentional (Michelon et al, 2015). In addition, despite the strengthened reporting requirements introduced through the ESRS, the risk of greenwashing, i.e., companies presenting themselves as more sustainable than they truly are, remains a concern (Lyon and Maxwell, 2020). The absence of stringent verification procedures for non-financial information may allow some companies to publish misleading information, undermining both the credibility and effectiveness of the standards (European Commission, 2021).

We conclude that although ESRS offer valuable mechanisms for enhancing transparency and advancing the shift toward sustainable business practices, their effective implementation demands thorough planning, consistent monitoring, and ongoing adjustments to adequately overcome the associated challenges.

Conflicts and challenges of ESRS

The adoption of the European Sustainability Reporting Standards (ESRS) is not without challenges, as it gives rise to conflicts and contradictions with other regulatory frameworks as well as with business interests, making the transition particularly complex for companies.

One major conflict is the potential incompatibility or overlap with other existing regulatory obligations at both national and international levels. For instance, companies may face difficulties in complying with the ESRS due to various national or sector-specific regulations that require different reporting methodologies or differ in their disclosure requirements. This lack of full alignment increases complexity and compliance costs and can create confusion among both businesses and investors. Beyond regulatory inconsistencies, the implementation of the ESRS may also conflict with powerful business interests, particularly when they require significant changes to existing practices and investment strategies. For example, companies operating in high-carbon or resource-intensive sectors (e.g., energy, heavy industry, agriculture) often face serious challenges and may react negatively to regulations they perceive as threats to their short-term profitability or competitiveness (Eccles and Krzus, 2018).

Influential economic stakeholders resist and press regulators to introduce exemptions or weaken standards, which undermines the effectiveness and ambition of the ESRS (Lyon and Maxwell, 2020). This procedure increases the risk of compromise solutions, dilutes transparency and reduces the actual impact of sustainability measures. As a result, these tensions require careful management and ongoing dialogue among businesses, regulators, and civil society to ensure that sustainability goals can be achieved without sacrificing business viability and competitiveness.

The practical implementation of the European Sustainability Reporting Standards (ESRS) comes with significant challenges, particularly in relation to adoption by small and medium-sized enterprises (SMEs) and the lack of a unified global approach, which may have implications for competitiveness.

SMEs face major difficulties in adapting the ESRS requirements. Implementing the ESRS demands substantial investments in human resources, technical expertise, and management/reporting systems, resources that are often limited for SMEs (Mio and Fasan, 2022). SMEs frequently fight to meet the extensive data collection, processing, and verification requirements due to a lack of appropriate technological infrastructure and specialized staff. This situation may create additional barriers to accessing financing and investment capital, which increasingly require compliance with strict ESG criteria (EFRAG, 2023a; KPMG, 2023). The complexity of the standards may discourage smaller firms from pursuing compliance altogether, resulting in missed opportunities for market access and competitiveness when compared to larger companies that have the resources to fully comply.

Another major challenge is the lack of a globally harmonized framework to sustainability reporting, which may have affected international competitiveness. Although the ESRS set high benchmarks for transparency and sustainability, the lack of global alignment may place European companies at a disadvantage compared to competitors from regions with less stringent or no reporting requirements.

Varying standards and regulations across the European Union, the United States of America, Asia and other regions contribute to market fragmentation and raise compliance burdens for multinational companies. This fragmentation can weaken the effectiveness of ESRS and make companies shift operations or investments to areas with lower sustainability requirements (Eccles and Krzus, 2018). That's why many researchers and organizations argue that the development of common international standards, such as those being promoted by the International Sustainability Standards Board (ISSB), is essential to addressing these challenges and supporting the growth of a fair and sustainable global market (Michelon et al., 2015; IFRS Foundation, 2022).
A key issue identified in the literature is the need to simplify both the structure and language of the standards without compromising the completeness of the disclosures (KPMG, 2023). Businesses—particularly SMEs—require more practical and user-friendly implementation guides, sector-specific examples, and standardized tools for assessing materiality and generating sustainability indicators. In addition, prioritizing information based on risk or sectoral impact could enhance targeted compliance and reduce reporting burdens. This logic improves the usability of sustainability reports (EFRAG, 2023a). Moreover, strengthening sector-specific standards would better align reporting requirements with the real-world needs of businesses across different industries (Michelon et al., 2015).

Finally, digitalization of the sustainability reporting process is one of the most critical areas for improvement. Automated data collection platforms can significantly reduce compliance costs, maybe increase data accuracy (at least in many areas of data) and facilitate analysis and comparison by investors and regulators (IFRS Foundation, 2023). The European Union has already launched initiatives for digital submissions such as digital tagging. Digital tagging is expected to enhance interoperability, accessibility and the integration of ESG data (European Commission, 2021). Moreover, companies are encouraged to invest in ESG data governance systems that integrate sustainability into internal operations, improving risk management and alignment with strategic objectives (Eccles and Krzus, 2018).

CONCLUSIONS AND FUTURE RESEARCH QUESTIONS ARISING FROM THE ANALYSIS

This study has provided an in-depth analysis of the legislative and institutional evolution of the European Sustainability Reporting Standards (ESRS). We provided information on the structure, strengths and weaknesses, as well as the conflicts and challenges. Through a historical review from the NFRD to the CSRD, highlighting the role of sustainability accounting, the analysis highlighted the shift from voluntary and fragmented ESG disclosures toward a mandatory, unified, and comparable reporting framework (European Commission, 2023; EFRAG, 2023a; KPMG, 2023).

We presented the three categories of ESRS (cross-cutting, topical, and sector-specific standards) and illustrated these categories with both good and bad practices focusing on topical and sector specific standards. Additionally, the study examined the standards' impact on strategic management, business decision-making, and corporate accountability.

A key finding of the study is the need for a balanced approach between regulatory compliance and meaningful sustainability impact. There is a risk of fostering a "box-ticking" culture and a bureaucratic treatment of ESG issues. The pressure to comply may not lead to a genuine integration into corporate strategic planning. Standardization, on its own, cannot drive a sustainable transformation unless supported by a sincere cultural shift and structural changes within organizations. Furthermore, the study emphasized the importance of continuously refining and updating the standards to keep pace with evolving environmental and social challenges. Key areas requiring attention include the implementation by SMEs, consistency with global frameworks (such as GRI, and TCFD), and ensuring the reliability of reported data. These challenges call for the advancement of technical guidelines, digital solutions, and robust support systems (EFRAG, 2023b).

The article emphasizes that the ESRS must remain a dynamic tool, capable of evolving with new data, scientific developments and societal expectations. The level of the ESRS transformative impact on corporate behavior and the sustainability of the European economic model is the criterion of the standards' success.

The development and implementation of the European Sustainability Reporting Standards (ESRS), the EU Taxonomy and the CSRD framework have created a dynamic and expanding area of research, calling for both conceptual and practical exploration. As sustainability reporting becomes an integral part of corporate governance and strategic planning, several pivotal research questions arise. For example, what is the actual impact of the ESRS on corporate strategy and financial performance? Or how adherence to the ESRS affects business strategy, financial outcomes, and access to investment? The interpretation, understanding, and practical application of the standards by SMEs is a critical area that has not yet been adequately explored. How are the ESRS perceived and implemented by small and medium-sized enterprises (SMEs)? What are the barriers? What adaptations are necessary?

A further critical dimension involves examining how digital technologies (like ESG data platforms) can develop the accuracy, reliability, and comparability of sustainability-related reporting. How do these technological tools affect the quality of ESG reporting?

Regarding the EU regulatory framework, starting from the hypothesis that the EU leads in imposing strict mandatory standards, questions arise about the impact on global competition. What are the implications of the EU regulatory framework on international competitiveness?

Questions that have to do with sustainability accounting relate to the adoption of environmental and social metrics to traditional accounting systems. What methodologies are most effective for quantifying sustainability impacts within financial statements? To what extent do current accounting frameworks allow for integrated assessments of environmental liabilities or social capital? How do accountants interpret and apply the principle of double materiality in their measurement and reporting practices? What role do external auditors play in ensuring the credibility and integration of sustainability information within the corporate reporting process under the ESRS framework and the principles of sustainability accounting? These are a few questions that underscore the need for interdisciplinary research that bridges accounting, governance, and sustainability.
Lastly, the EU's pioneering concept of double materiality calls for deeper investigation into how it relates to financial risk assessment and corporate value creation. The research area of accounting innovation and corporate practice combined with sustainability is more promising than ever.

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