

Evaluation of Corporate Sustainability Disclosure Practices in Listed Companies of the Baltic States

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Annotation. The relevance and novelty of this study lie in the growing importance of corporate sustainability disclosure as a mechanism for enhancing transparency, accountability, and stakeholder trust. Despite the increasing regulatory emphasis across the European Union, a critical research gap remains: the sustainability reporting practices of listed companies in smaller-market economies, such as the Baltic States, have been underexplored. This study addresses the scientific question of how well listed companies in the Baltic region are adapting to the evolving EU sustainability regulatory environment, particularly in terms of the scope of sustainability disclosures. The methodology includes a systematic literature review and a document analysis of disclosures for the period 2021–2024. Using sustainability disclosure and assessment models based on GRI topic standards and ESRS standards, the study examines the sustainability level disclosure through the ESG approach and by sectors. The study reveals that publicly listed companies in the Baltic States show limited and uneven sustainability disclosure, with economic and social indicators particularly underreported, and environmental data often strategically selected rather than substantively addressed. Sectoral analysis highlights broader engagement in construction, food, and manufacturing sectors, while financial, retail, and real estate sectors lag behind in transparency, especially on social and environmental issues. ESRS-based disclosures show a focus on climate change and business conduct, but significant gaps persist in areas such as pollution, biodiversity, and value chain impacts, indicating selective implementation and limited regulatory readiness.

Keywords: sustainability reporting, corporate sustainability, GRI, ESRS.

JEL Code: M19, M29, M41.

Introduction

In recent years, Corporate Sustainability (CS) has emerged as a fundamental element of strategic business management, driven by increasing global awareness of the Environmental, Social, and Governance (ESG) concerns. Sustainability reporting initially focused on environmental issues and only later evolved to include social and governance aspects, reflecting the broad nature of corporate responsibility. Sustainability reporting practices must ensure compliance and meet stakeholder expectations while being aligned with global frameworks such as the Global Reporting Initiative (GRI) and the United Nations Sustainable Development Goals (SDGs) (Du Toit, 2024).

In the European Union, evolving sustainability legislation such as the Directive 2014/95/EU (2014) and its successor, the Directive 2022/2464 (2022), has introduced mandatory reporting requirements, thereby increasing pressure on companies to disclose sustainability-related information transparently.

Despite CS growing global significance, existing sustainability reporting frameworks have been subject to criticism. Some organisations may not fully understand the benefits or a clear business case for sustainability reporting, or how to do it (Leal Filho et al., 2025). These shortcomings may arise from resource constraints, issues with the availability and quality of data to generate and interpret, particularly for smaller organisations (Leal Filho et al., 2025). In any case, scholars generally agree that sustainability reporting enhances transparency and credibility by offering stakeholders valuable non-financial information (Hassanein and Elmaghrabi, 2025).

The relevance and novelty of the topic stem from the growing recognition of sustainability disclosure as a tool for improving corporate accountability and stakeholder trust. At the same time, a critical research gap persists: the existing academic literature has predominantly focused on larger Western European economies, leaving the sustainability reporting practices of Baltic-listed companies underexamined. This creates a knowledge deficit in understanding how smaller-market economies are adapting to the fast-evolving regulatory landscape of corporate sustainability. These developments are particularly significant for publicly listed companies in the Baltic States, Lithuania, Latvia, and Estonia, where sustainability disclosure practices are still maturing and face unique regional challenges due to market size, limited number of listed entities, and varied levels of regulatory readiness. This study seeks to answer the scientific question: to what extent are smaller, publicly listed companies adapting to the evolving sustainability regulatory landscape, and what is the quality and extent of sustainability disclosure in their published reports? Specifically, the research aims to evaluate the current state of corporate sustainability disclosure among listed companies in the Baltic States, with a focus on their compliance with corporate sustainability standards, alignment with EU directives, and overall transparency.

1. Theoretical background

1.1 Corporate sustainability practices and framework

Over the past five decades, corporate sustainability (CS) theory and practice have evolved independently across regions, particularly within the United States and the European Union, following distinct trajectories and temporal progressions. Despite these regional variations, CS is universally grounded in the integration of three fundamental pillars: economic viability, social equity, and environmental protection. The modern concept of CS is deeply rooted in earlier frameworks such as corporate social responsibility (CSR) and the principles of sustainable development, which served as precursors to today's sustainability paradigms.

The institutional foundation of CS was significantly influenced by key international policy milestones, including the 1987 Brundtland Commission Report and the 1992 United Nations Earth Summit. These events catalysed global recognition of sustainable development as a strategic priority for governments and enterprises alike, thereby encouraging the development of diverse frameworks for tracking and assessing sustainability performance (Atkinson, 2000). Atkinson (2000) proposed two primary approaches to enhance the measurement of CS: the development of clear environmental indicators that reflect pressing sustainability issues, and the application of green accounting principles to refine the criteria distinguishing sustainable from unsustainable business practices.

According to Gray (2000), the emergence of social, environmental, and sustainability reporting is not only a technical advancement but also a normative necessity for democratic societies that aspire to justice and long-term prosperity. These reports offer mechanisms for assessing an organisation's alignment with sustainability goals. However, Gray (2000) also noted that early sustainability reports were often dominated by environmental data, with insufficient attention paid to social dimensions.

In the mid-1990s, sustainability reporting emerged as a structured tool for aligning business operations with environmental responsibilities and societal well-being (Christofi et al., 2012). Initially, these disclosures were used primarily to mitigate perceived risks, especially from the perspective of investors. Firms sought to position themselves as sustainable entities to lower their cost of capital by signalling reduced environmental and social risks (Aras and Crowther, 2009). Nonetheless, Aras and Crowther (2009) warned that such reporting could be misleading if it relied on vague or unsubstantiated sustainability claims, lacking a genuine reflection of operational practices.

The scope and quality of sustainability reporting have significantly improved over time. Kolk (2010) highlights that multinational corporations have increasingly enhanced their accountability to a wide range of stakeholders. Their reports now more frequently address critical issues such as environmental degradation, labour rights violations, and other negative externalities associated with global production and trade. This shift reflects a broader trend towards transparency and responsible business conduct in the face of global sustainability challenges.

The concept of CS arises from sustainable development at the corporate level, including the short-term and long-term economic, environmental, and social aspects (Pazienza et al., 2022). Dočekalová and Kocmanová (2016) further explained that the concept of CS derives from the macroeconomic concept of sustainable development. According to Pazienza et al. (2022), CS can be well-defined around its environmental, social, and economic constitutive elements. However, Dočekalová and Kocmanová (2016) argue that CS means measuring the extent to which companies incorporate economic, environmental, social, and governance elements into their activities. CS is built on the balance of the three pillars of the Triple Bottom Line (TBL): environmental, social, and economic dimensions (Atkinson, 2000; Gray, 2000). Additionally, CS introduces a fourth factor – corporate governance, referring to it as the ESG factors of CS.

More recently, the term ESG reporting has come into use when it comes to CS reporting (Dinh et al., 2023). Pazienza et al. (2022) argue that CS is the application of sustainable development at the corporate level, including the short-term and long-term economic, environmental, and social aspects. Short-term and long-term indicate another element within CS, which is the time element. The mentioned CS elements are closely related to the TBL concept. Sustainability and TBL are two associated constructs and are used interchangeably; thus, the elements in TBL define the essence of CS well (Alhaddi, 2015). However, the TBL construct could expand further concerning CS on other vital elements such as governance and time. TBL is a sustainability-related framework that was created by Elkington in 1997 (Alhaddi, 2015). TBL, also known as "people, planet, profit," measures organizational success using three parameters: social, ecological, and economic (Goel, 2010). Goel (2010) states that the TBL serves as a framework for assessing and reporting corporate performance in relation to economic, social, and environmental elements. According to Milne and Gray (2013), the TBL concept is a core and dominant idea that continues influencing business reporting and business engagement with sustainability. The TBL concept incorporates an entity's economic, environmental, and social performance indicators into its management and reporting processes and has become synonymous with CS and sustainability. However, Milne and Gray (2013) also show concerns about the TBL concept. They argue that TBL is unlikely to be a sufficient condition for sustainability and may lead to greater levels of unsustainability. Critics of TBL question whether the paradigm of TBL is anything but a marketing strategy (Ojo Arowoshegbe et al., 2018). Despite criticisms of TBL, the TBL concept remains a significant framework for understanding sustainability and its application to management across both the for-profit and public spheres. The TBL-based reporting also shows stakeholders that the company is embracing accountability at a higher level (Ojo Arowoshegbe et al., 2018). The TBL sustainability framework approach would arguably increase the organizations' competitive advantage and survivability in the long term by addressing different challenges related to different TBL elements (Tjahjadi et al., 2021).

The economic element of the TBL framework emphasises how an organisation's business activities affect the broader economic system. This element relates to the company's ability to grow and its contribution to the economy's growth. In essence, it shows the economic value the organisation brings to its environment in a way that fosters long-term prosperity and supports future generations (Alhaddi, 2015). *The social element* of the TBL framework involves engaging in beneficial and fair business practices for the employees and the community. This element shows the amount of positive contribution to society, often through actions that relate to giving something in return to the community. Not considering social responsibility can harm both business performance and long-term sustainability. In essence, the social element of sustainability emphasizes the organization's relationship with the community, focusing on the following fields: community involvement, employee well-being, and fair compensation (Ojo Arowoshegbe et al., 2018). *The environmental element* includes factors such as the amount of energy consumed and the origin of the energy source, emissions, resource and material usage, waste management, land use, and management of different habitats (Goel, 2010). The environmental element of TBL framework refers to different corporate practices that do not compromise the environmental resources for future generations (Ojo Arowoshegbe et al., 2018).

In addition to the economic, social, and environmental elements highlighted in the TBL, recent sustainability frameworks incorporate governance and time elements, such as the Environmental, Social, and Governance (ESG) approach. The governance element focuses on the systems a company needs to maintain its integrity and manage its internal processes effectively. Governance acts as a tool that supports implementing CS practices, serving as an enabler rather than an objective (Pazienza et al., 2022). *The time element* refers to the company's ability to handle short-term financial needs without affecting its or others' ability to meet future needs (Pazienza et al., 2022). Pazienza et al. (2022) argue that while the time aspect is crucial for establishing the goals and urgency of CS, it has often been neglected in the literature. This highlights the importance of adopting systematic, forward-looking sustainability practices in business. The mentioned elements highlight the importance of adopting systematic, forward-looking sustainability practices in business.

1.2 Benefits and disclosure requirements of corporate sustainability

Companies engaging with CS reporting not only address various stakeholder requirements but may also improve their financial performance (Kurapatskie and Darnall, 2013). Ghardallou (2022) states that the main advantages of sustainability reporting are underestimated and argues that companies that participate in sustainability reporting strengthen the company's ethnic identity, improving financial performance and increasing stakeholder satisfaction. However, the objective of sustainability reporting is not purely the pursuit of profit but the objective of seeking profitability while also fulfilling obligations towards different stakeholders regarding sustainability matters. There are many valid benefits associated with sustainability reporting: increased brand value, increased customer and employee loyalty, reduction of costs, and improved firm performance and valuation (Abdul Rahman and Alsayegh, 2021).

However, the opposite, adverse opinions towards sustainability efforts also exist. According to Ghardallou (2022), companies that engage in sustainability practices may suffer higher costs, which results in lower financial returns. Moreover, companies that report sustainability cannot stop reporting because stakeholders tend to demand more disclosure about sustainability, making it more difficult for companies to address (Lozano, 2012). It is even more challenging for larger companies regarding CS reporting because they are closely inspected by different public and special interest groups, making the companies more vulnerable to adverse reactions compared to their smaller counterparts. Because public reputation is more significant for giant corporations, those companies tend to increase their CS reporting in order to be seen as legitimate and to prevent adverse stakeholder reactions (Abdul Rahman and Alsayegh, 2021).

It is known that sustainability disclosure legislation is continuously evolving. During the 2014–2024 period, a number of legal acts were approved and applied (see Table 1).

Table 1. Corporate sustainability–related directives within the EU

Date	Title	Basic provisions
2014	Non–Financial Reporting Directive	Since 2017, requires large companies to disclose information on environmental, social and employee matters, respect for human rights, anti-corruption and bribery issues in their annual reports
2019	Sustainable Finance Disclosure Regulation	Sets consistent EU–wide rules for disclosing the sustainability of financial products
2020	EU Taxonomy Regulation	Establishes a classification system for sustainable economic activities and defines which economic activities can be qualified as environmentally sustainable
2022	Corporate Sustainability Reporting Directive	Expands NFRD requirements to a broader scope of companies that will be required to report corporate sustainability, and introduces detailed sustainability reporting standards
2023	European Sustainability Reporting Standards	Provides ESG disclosure requirements for EU companies. Aims to standardise ESG reporting

Source: compiled by authors

The Non–Financial Reporting Directive (NFRD) (Directive 2014/95/EU, 2014) was the foundation for the EU's sustainability reporting mandate, which was adopted by the EU in 2014. The NFRD required large EU-based public-interest companies with over 500 employees and assets or revenue to disclose non–financial information, including diversity-related data, starting from the 2017 financial year (Hummel and Jobst, 2024). According to Hummel and Jobst (2024), the NFRD has extended the scope of management reports and required the inclusion of a nonfinancial statement encompassing the development, performance, position, and impact of activities related to at least the following areas: the environment, social and employee matters, respect for human rights, anticorruption and bribery matters. However, the NFRD had shortcomings. Market participants also felt that the non–financial information provided by companies within the directive's scope frequently lacked comparability, reliability, and relevance. The NFRD had shortcomings, which ultimately led to the adoption of the Corporate Sustainability Reporting Directive (CSRD). According to Fiandrino et al. (2022), the CSRD proposal was issued on April 21, 2021, following a public consultation led by the European Commission for the review of the NFRD. The consultation focused on addressing eight central issues within the NFRD: the quality and scope of reporting, standardisation, materiality, assurance, digitalisation, the location of reported information, personal scope, and the need to simplify and reduce administrative burdens (Fiandrino et al., 2022). Furthermore, the CSRD was adopted on November 10, 2022 by the European Parliament (Dinh et al., 2023). According to Hummel and Jobst (2024), the CSRD introduces several significant updates compared to the NFRD. These include broadening the scope of companies required to report, expanding reporting obligations to cover the entire value chain, further detailing the double materiality concept and reporting content, requiring the integration of sustainability information into management reports, implementing assurance and digital tagging of reported data, and strengthening the sanctioning framework for statutory auditors and enforcement actions.

The CSRD also requires companies to report in alignment with the European Sustainability Reporting Standards (ESRS). According to Hristov and Searcy (2024), "the CSRD focuses on reporting related to a company's business model and strategy, policies, governance, time–bound targets, indicators, and due diligence processes related to sustainability". The CSRD requirements apply to companies that are already obliged to disclose non-financial information, i.e., certain large public-interest entities (with over 500 employees) and their groups. In addition to the aforementioned large public-interest entities, the CSRD requirements will also apply to all large companies and company groups that meet

at least two of the following three criteria: annual turnover exceeds EUR 50 million; the value of assets on the balance sheet exceeds EUR 25 million; the average number of employees during the financial year is more than 250. Small and medium-sized enterprises, whose securities are not publicly traded, may choose to follow the standards voluntarily. The directive also extends to non-European companies that generate over EUR 150 million in annual net revenue within the EU and have at least one subsidiary with either net revenue above EUR 40 million or classification as a large, medium, or small company with publicly listed securities in the EU. The application of the CSRD began in January 2023, with mandatory compliance starting in fiscal year 2024 for all covered companies, following the prescribed timeline. This broader scope greatly increases the number of companies required to publish sustainability reports, from around 11,700 to approximately 49,000 companies and groups across the EU (Odobáša and Marošević, 2023).

The EU Taxonomy Regulation was adopted by the European Parliament and the Council of the EU in June 2020 (Hummel and Jobst, 2024). EU Taxonomy Regulation establishes a classification system for sustainable economic activities and requires that companies disclose their activities in alignment with this framework (Hummel and Bauernhofer, 2024). EU Taxonomy Regulation differs from other sustainability reporting mandates, such as the NFRD and the CSRD, by providing a classification system that defines which economic activities can be qualified as environmentally sustainable and forces companies to report their activities based on this classification (Hummel and Jobst, 2024). According to Article 9 of the Taxonomy Regulation, the Taxonomy Regulation establishes six environmental objectives as follows: climate change mitigation; climate change adaptation; the sustainable use and protection of water and marine resources; the transition to a circular economy; pollution prevention and control; the protection and restoration of biodiversity and ecosystems (European Parliament and The Council, 2020). While the CSRD and Sustainable Finance Disclosure Regulation (SFDR) address all aspects of sustainability, the current version of the Taxonomy Regulation focuses exclusively on environmental sustainability in reporting (Hummel and Jobst, 2024). As noted by Hummel and Jobst (2024), "The European Commission describes the Taxonomy Regulation as a 'living document' that will evolve over time". However, adverse opinions regarding the EU Taxonomy Regulation exist. According to Kooths (2023) "The EU Taxonomy stands in sharp contrast to the principles of a market economy". Kooths (2023) argues that the EU Taxonomy Regulation creates a restrictive economic environment by discouraging financing for non-compliant activities and adding extra bureaucracy. He believes its rigid criteria clash with natural market dynamics and ignore the complexities of a market economy, which may lead to unintended problems. Given current economic challenges, Kooths (2023) suggests that the EU should focus on policies that boost productivity rather than impose restrictive regulations.

In November 2019, the European Parliament and the Council of the EU approved the SFDR to enhance transparency regarding the sustainability of financial products (Hummel and Jobst, 2024). The SFDR, which entered into force in March 2021, is a central part of the European Union's Sustainable Finance Action Plan. The SFDR seeks to redirect financing towards sustainable economic activities and to support environmentally responsible growth (Partiti, 2024). According to Hummel and Jobst (2024), the SFDR applies to financial market participants, like banks and investment firms, and to financial advisers offering investment advice. It sets consistent EU-wide rules for disclosing the sustainability of financial products. Partiti (2024) critiques the SFDR, arguing that its goal is not to enhance financial market participants' sustainability performance but to address information asymmetries, specifically regarding their negative impacts, and not to hold the companies accountable for failure to meet set sustainability targets.

ESRS are CS standards that provide detailed ESG disclosure requirements for EU companies, which were adopted by the European Commission in 2021. These standards aim to standardise environmental, social, and governance reporting by setting internationally recognised reporting requirements (Elidrisy, 2024). ESRS-based reporting will improve the quality of sustainability reporting regarding transparency and comparability while ensuring compliance with the SFDR and the

Taxonomy Regulation. The ESRS will require a double materiality assessment, which includes financial and impact perspectives, which means that companies will need to elaborate on how sustainability elements affect financial performance and how business operations affect society and the environment (Bajica and Pavlović, 2024). According to ESRS, the sustainability information should be disclosed per disclosure requirements, consisting of specific data points that can be numerical or narrative. According to the ESRS framework, sustainability reports must provide information on ten topics related to ESG: environmental information (climate change, pollution, water and marine resources, biodiversity and ecosystems, resource and circular economy); social information (own workforce, workers in the value chain, affected communities, consumers and end users); governance information (business conduct). The mentioned information classes also have sub-information classes, which expand the mentioned information types of ESG information in the ESRS framework (European Commission, 2023).

Not EU regulation include two sets of standards: The Global Reporting Initiative (GRI); and the International Sustainability Standards Board (ISSB). GRI was founded in 1997 and was one of the first organisations to provide universal sustainability reporting guidelines. Today, GRI standards are among the most used sustainability reporting standards worldwide. GRI standards consist of three sets: the GRI Universal Standards; the GRI Topic Standards; and the GRI Sector Standards, which focus on material topics. Material topics are those that reflect companies' effects on the economy, environment, and society and their influence on human rights. Hence, the GRI Universal Standards purely target the impact on materiality, the GRI Topic Standards provide detailed requirements for sustainability-related topics, including environmental, social, and economic matters, and the GRI Sector Standards require sector-specific disclosures for topics that are likely to hold material significance within each industry (Hummel and Jobst, 2024). GRI topic standards could be explained further by expanding on the criteria for each segment, whether it be economic, environmental, or social. GRI standards are considered to be one of the key standards on which the ESRS framework was created (European Commission, 2023). The GRI sets reporting principles, which comprise accuracy, balance, clarity, comparability, completeness, context, timeliness, and verifiability. The EU CSRD incorporates some of the mentioned principles, including comparability, double materiality, and increased emphasis on assurance (Luque-Vilchez et al., 2023). It was argued that reports based on the GRI framework could provide a better outlook on sustainability matters compared to Directive 2014/95/EU (NFRD), which already set some mandatory sustainability requirements for EU companies (Mihai and Aleca, 2023).

The International Financial Reporting Standard (IFRS) Foundation established the International ISSB in 2021 (Ali et al., 2023). ISSB has issued sustainability-related standards such as IFRS S1, which sets general requirements for the disclosure of sustainability-related financial information, and IFRS S2, which sets climate-related disclosures (Millar and Slack, 2024). The ISSB's goal is to set globally accepted sustainability reporting standards that are consistent, comprehensive, and comparable across industries and regions. The standards were created to address environmental, social, and governance issues, and they also include related topics such as diversity and inclusion, human rights, supply chain management, and carbon emissions. The key elements of ISSB include consistency across regions and industries in order to enable benchmarking and comparability; materiality assessment, which would identify sustainability issues that are most relevant for the organization and various stakeholders; transparency element, which would allow for different stakeholders to make informed decisions; and verification, which would enable credibility and trust regarding sustainability reports (de Villiers et al., 2024).

When it comes to smaller market economies, specifically the Baltic countries, it should be noted that despite numerous EU and global sustainability standards, these countries mainly submit sustainability reports in accordance with the provisions of the GRI and ESRS, which is why these provisions are particularly relevant for this study.

2. Research methodology

To collect and assess CS reporting information disclosed by companies listed on the Nasdaq Baltic Stock Exchange, a qualitative document analysis method is employed. Companies' selection is based on the availability of CS reports that are prepared using the GRI Sustainability Standards for the 2021–2023 reporting period and under new ESRS CS disclosure requirements for 2024. The reports used in this research were collected from the official Nasdaq Baltic Stock Exchange website.

The data contained in the document analysis procedure involves selecting, creating meaning, and synthesising. A data evaluation model and a scoring system based on the GRI and ESRS standards. In order to disclose and summarise the research results, data comparison, visual representation, and descriptive statistics methods are used.

Research sample and period. Listed Baltic State companies within Nasdaq are subject to reporting their CS-related matters, which is a regulatory requirement by NFRD and CSRD regulations, making them suitable as the research subjects. The selected research period is from 2021 to 2024. The reports of those companies are being explored and assessed to assess CS disclosure matters under the GRI sustainability topic standard guidelines and the ESRS guidelines under the CSRD regulation requirements. Starting in 2024, research companies have to report their CS matters under CSRD requirements.

During the research period, thirty-four companies were listed on the Nasdaq Baltic Stock Exchange main list, of which fourteen reported their CS matters using GRI sustainability guidelines at least once from 2021 to 2023. As of the time of research, four listed companies had published CS reports for the year 2024 under CSRD requirements, and all four had previously reported using GRI sustainability guidelines at least once between 2021 and 2023 (see Table 2).

Table 2. Number of listed Baltic States companies providing corporate sustainability reports

CS reporting year	2021	2022	2023	2024
Number of companies that provide SR	30	31	32	
Number of companies that provide sustainability reports following the GRI sustainability guidelines	10	14	13	N/A*
Number of LT-based companies that provided sustainability reports following GRI sustainability guidelines from 2021 to 2023 and ESRS requirements from 2024	6	8	7	2
Number of LV-based companies that provided sustainability reports following GRI sustainability guidelines from 2021 to 2023, and ESRS requirements from 2024	0	1	1	0
Number of EE-based companies that provided sustainability reports following GRI sustainability guidelines from 2021 to 2023 and ESRS requirements from 2024	4	5	5	2
Number of companies that provided sustainability reports following ESRS requirements	N/A	N/A	N/A	4
Total CS reports used for this research by year	10	14	13	4

*Not applicable

Source: compiled by authors

Companies included in this research were also grouped by economic activity sectors: construction, energy and utilities, financial services, food production, manufacturing, real estate investment, and retail. Such a type of classification suggests useful insights into sector-specific disclosure practices. (see Table 3).

Table 3. **Companies by economic activity sector**

Sector / Year	2021	2022	2023
Construction	2	3	3
Energy and Utilities	2	2	2
Financial Services	2	3	3
Food Production	2	2	2
Manufacturing	2	2	1
Real Estate	0	1	1
Retail	0	1	1
<i>Total</i>	<i>10</i>	<i>14</i>	<i>13</i>

Source: compiled by authors

To explore and assess CS disclosures, two evaluation models were applied. *The first evaluation model* was used for companies that disclosed CS matters using GRI reporting guidelines from 2021 to 2023 and is based on the model developed by Mihai and Aleca (2023). This model was created using GRI topic standards, which include GRI 200 – economic indicators, GRI 300 – environmental indicators, and GRI 400 – social indicators (see Annex 1).

In order to explore and assess further CS disclosure for the year 2024, the ESRS topical standards were applied as these became mandatory under CSRD regulation for companies operating within the EU to disclose their sustainability matters using new sustainability requirements as described in Regulation (EU) 2023/2772 supplementing Directive 2013/34/EU. The ESRS topical standards consist of three elements: environmental (E), social (S), and governance (G) (see Annex 2).

The scoring system in this research was developed based on earlier work by Mihai and Aleca (2023), who previously assessed corporate sustainability reports using a scoring system of 0 to 4 based on the availability and format of the disclosed information. This research applies a scoring system to assess individual indicators taken from the GRI topic standards and the ESRS topical standards (see Table 4).

Table 4. **Corporate sustainability disclosure scoring system**

Score	Description
1	Full disclosure. The indicator is clearly and transparently addressed with comprehensive and detailed information.
0.5	Partial disclosure. The indicator is mentioned, but the information is limited, vague, or presented only as future intentions without specific details.
0	No disclosure. The indicator is not addressed at all, or no relevant information is provided.

Source: compiled by authors

The disclosure index was custom-developed based on the approach by Baazaoui (2020), who calculated disclosure scores by accounting standard or information category (e.g., environmental, financial). This study adapts Baazaoui's (2020) disclosure index calculation method to evaluate CS disclosure scores based on indicators from the GRI topic standards and the ESRS topical standards. CS disclosure index formula:

$$D_s = \frac{\sum_{j=1}^p S_j}{p} ;$$

here:

D_s – disclosure score, which represents the average level of disclosure across all companies in the sample;

S_j – score assigned to company j. Possible values for each company are 1 (fully disclosed), 0.5 (partially disclosed), and 0 (not disclosed). These individual scores are summed across all companies in the sample for the calculation;

p – total number of companies evaluated for the given criterion.

To summarise the research results, the following methods were used: data comparison, visual representation, and descriptive statistics. Descriptive statistics were applied to provide a general overview of CS disclosure practices and included the calculation of the mean, median, mode, standard deviation, variance, and standard error of the mean.

3. Corporate sustainability reporting disclosures among listed Baltic State companies

3.1. The level of GRI disclosure requirements: ESG perspective

The descriptive statistics analysis provides a general overview of CS disclosure matters for companies that were using the GRI topic standards (see Table 5).

Table 5. **GRI disclosures: the descriptive statistics data from 2021 to 2023**

Descriptive statistics	Mean	Median	Mode	Std. Dev.	Variance	Std. Error
Year 2021						
GRI Economic Indices	0.44	0.30	0.30	0.26	0.07	0.10
GRI Environmental Indices	0.64	0.68	0.35	0.22	0.05	0.08
GRI Social Indices	0.37	0.35	0.00	0.31	0.10	0.07
Year 2022						
GRI Economic Indices	0.42	0.36	0.29	0.21	0.04	0.08
GRI Environmental Indices	0.56	0.54	N/A	0.27	0.07	0.10
GRI Social Indices	0.37	0.29	0.86	0.29	0.08	0.07
Year 2023						
GRI Economic Indices	0.39	0.31	0.23	0.24	0.06	0.09
GRI Environmental Indices	0.57	0.52	N/A	0.29	0.08	0.10
GRI Social Indices	0.37	0.31	0.15	0.29	0.08	0.07

Source: compiled by authors

The trend of the decreasing average of *economic indices* shows that companies are increasingly less likely to disclose aspects related to economic impact or economic value creation in their sustainability reports (Mean: 0.44 in 2021; 0.42 in 2022; 0.39 in 2023). The gap between the mean and the median signals asymmetry in data distribution (Mean: 0.44; Median: 0.30 in 2021; Mean: 0.42; Median: 0.36 in 2022; Mean: 0.39; Median: 0.31 in 2023). This implies that the majority of organisations report economic indicators minimally or in a highly limited manner. The variance and standard deviation indicate that most companies either disclose very few *economic indices* or do not disclose them at all. Low mode values indicate that most organizations provide only isolated or fragmented data on economic aspects. Thus, the overall trend in economic disclosure shows regression.

In the environmental domain, a relatively high average indicates that environmental issues are among the most frequently disclosed areas. However, from a critical perspective, the dominance of environmental indices in mean values across all years raises the question of whether this reflects actual attention to environmental issues or merely more advanced disclosure practices. It is possible that organisations prioritise “easily presentable” areas that help them appear more favourable in the eyes of investors or the public.

The GRI *social indicators* have shown no significant progress over the three-year period. Their low mode values, high data dispersion, and nearly unchanged averages suggest that the social dimension remains superficially disclosed. This raises concerns about the perceived importance of social aspects within the ESG framework and reveals a fundamental deficit in the evaluation of social aspects.

GRI economic disclosure consists of seven indicators, and all of them were assessed during the study (see Figure 1).

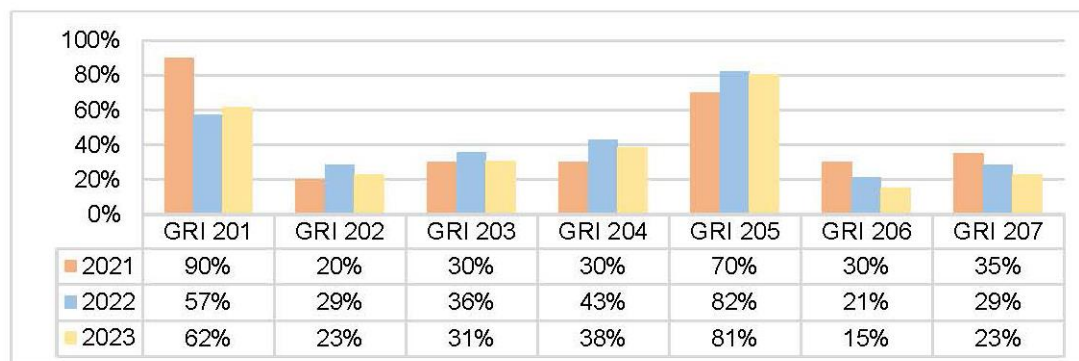


Figure 1. **GRI disclosures: economic element (2021–2023)**

Source: compiled by authors

The topics related to economic performance (GRI 201) and anti-corruption (GRI 205) are dominant, as they are considered the most material to stakeholders. Lower levels of disclosure on issues such as taxation (GRI 207) or anti-competitive behaviour (GRI 206) may indicate both organisational challenges and a strategic reluctance to disclose more sensitive information.

Figure 2 presents the GRI *environmental element* indicators, and the GRI environmental element disclosure consists of eight indicators.

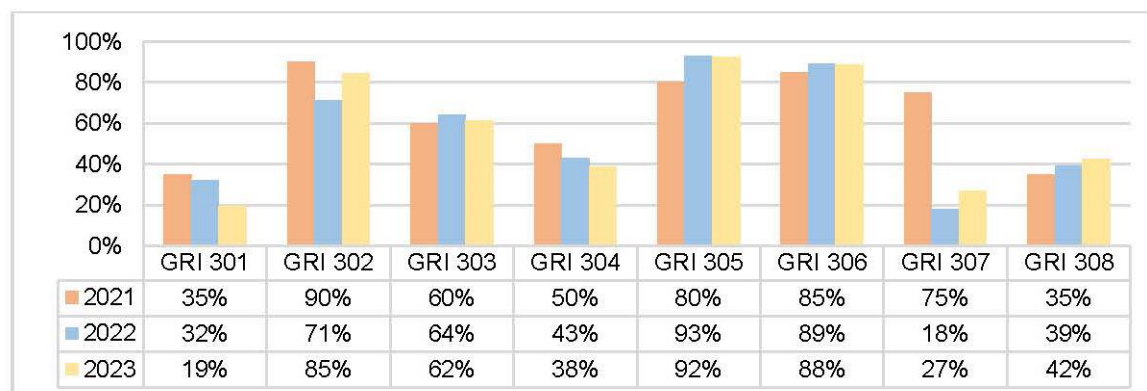


Figure 2. **GRI disclosures: environmental element (2021–2023)**

Source: compiled by authors

Materials were the least disclosed indicator (GRI 301) over the three-year period; the downward trend may indicate persistent difficulties in collecting and reporting data on material inputs. It may also

suggest that material usage is perceived as less relevant in certain service-oriented companies. Energy (GRI 302) use remained a highly disclosed topic. This indicator appears to be among the most consistently prioritized, likely due to regulatory emphasis, stakeholder attention, and the relative ease of quantifying energy consumption. Emissions (GRI 305) reporting stood out as one of the most prominently disclosed areas. This consistent and growing attention reflects the central role that emissions data plays in sustainability reporting, driven by global climate commitments and decarbonization targets. Waste-related (GRI 306) disclosures also remained consistently high. This sustained emphasis may be linked to regulatory pressures and a broader shift toward circular economy principles, highlighting growing stakeholder demand for transparency on waste generation. The significant drop in the disclosure of GRI 307 – Environmental Compliance can be directly linked to the structural revisions introduced in the GRI Universal Standards 2021. According to GRI guidance, the content of GRI 307 (2016) and GRI 419 (2016) has been relocated and expanded under Disclosure 2-27 Compliance with laws and regulations in GRI 2: *General Disclosures 2021*. With the adoption of the new standards, both GRI 307 and GRI 419 have been officially withdrawn. Overall, disclosure scoring results may imply that companies focused on reporting information related to energy, water and effluents, emissions, and waste, while providing less disclosure regarding materials and biodiversity, possibly due to different business sector practices, where some indicators may be less material for specific industries.

Further, regarding the *social aspect*, the data shows the following trends (see Figure 3).

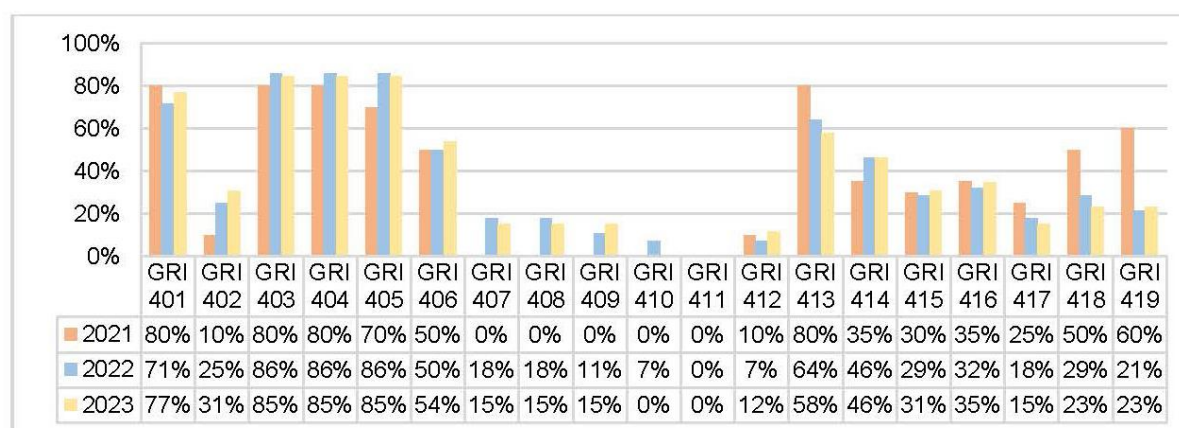


Figure 3. **GRI disclosure: social element (2021–2023)**

Source: compiled by authors

The trend of social elements indicates that companies had higher disclosure scores related to employment (GRI 401), health and safety (GRI 403), training and education (GRI 404), diversity and equal opportunities (GRI 405), discrimination (GRI 406), and local communities (GRI 413). At the same time, there were low or non-existent disclosure scores related to freedom of association and collective bargaining (GRI 407), child labour (GRI 408), forced compulsory labour (GRI 409), security practices (GRI 410), rights of indigenous peoples (GRI 411), and human rights (GRI 412). The disclosure of all these different social element indicators may vary due to the nature of the business, where businesses of different sectors may consider specific indicators more material that need to be addressed within their CS reports. It should also be noted that some areas are specific or unique to certain regions.

3.2 The level of GRI disclosure and comparison by economic sectors

The examined companies operated across seven business sectors: *construction, energy and utilities, financial services, food production, manufacturing, real estate investments, and retail*. Table 6 presents a longitudinal analysis of GRI topic-specific disclosure indices across seven economic sectors spanning the years 2021 to 2023 and disclosing the economic, environmental, and social elements.

Table 6. **GRI disclosure: economic element by sectors (2021–2023)**

GRI	GRI 201	GRI 202	GRI 203	GRI 204	GRI 205	GRI 206	GRI 207	Indices
Year	Construction sector							
2021	100	50	50	50	100	0	0	50
2022	67	33	33	67	100	0	0	43
2023	67	33	33	67	100	0	0	43
	Energy and Utilities sector							
2021	100	50	0	50	50	50	100	57
2022	50	50	0	50	100	50	50	50
2023	50	50	0	50	100	50	50	50
	Financial Services sector							
2021	50	0	100	50	100	50	0	50
2022	33	0	67	33	100	33	0	38
2023	67	0	67	33	100	33	0	43
	Food Production sector							
2021	100	0	0	0	0	0	75	25
2022	100	50	50	50	25	0	100	54
2023	100	50	50	50	25	0	100	54
	Manufacturing sector							
2021	100	0	0	0	100	50	0	36
2022	100	50	50	50	100	50	50	64
2023	100	0	0	0	100	0	0	29
	Real Estate sector							
2021								
2022	0	0	0	0	0	0	0	0
2023	0	0	0	0	0	0	0	0
	Retail							
2021								
2022	0	0	0	0	100	0	0	14
2023	0	0	0	0	100	0	0	14

Source: compiled by authors

The economic perspective of GRI shows that *the construction sector* maintains consistent attention to core economic topics, particularly economic performance (GRI 201) and anti-corruption (GRI 205), while consistently omitting disclosure on tax transparency (GRI 207) and anti-competitive behaviour (GRI 206).

The *Energy and Utilities sector* demonstrates balanced yet narrow reporting, primarily focused on compliance-related indicators such as economic performance (GRI 201), anti-corruption (GRI 205), taxes (GRI 207) and legal adherence. With limited engagement in areas such as market presence (GRI 202), procurement practices (GRI 204), and anti-Competitive behavior (GRI 206). The indirect economic impact (GRI 203) is zero, indicating that the energy industry has a direct impact on the economy.

The *Financial Services sector* shows fragmented economic disclosure, with some attention to economic performance (GRI 201), indirect economic impacts (GRI 203), and anti-corruption (GRI 205), but a consistent lack of reporting on procurement practices (GRI 204), and competitive behaviour (GRI 206). Zero is a market presence indicator (GRI 202) and tax (207), which may indicate that these indicators are not related to legislation and do not require disclosure. However, from a public interest perspective, disclosure of these indicators could provide useful information to the public.

Food production companies and the manufacturing sector have expanded their economic disclosure over time (GRI 201), moving from a narrow focus on market presence indicator (GRI 202), indirect economic impacts (GRI 203), and procurement practices (GRI 204). The manufacturing sector fully discloses information on anti-corruption (GRI 205); however, the food production sector has paid very little attention to disclosing the objectives of this area. It should be noted that the food industry is particularly susceptible to corruption due to regulatory requirements and ensuring the public interest. Further comparing these sectors, the food production sector fully discloses taxes, but the manufacturing sector is more likely to report zero.

The real estate and retail sector shows a complete absence of almost all economic indicators. An exception is just anti-corruption (GRI 205) disclosure in the retail sector. All differences in disclosure outcomes can arise on varying levels of regulatory oversight, the degree of public interest relevance, or specific characteristics of sectoral operations, such as reputational risk management, stakeholder pressure, or industry-specific sustainability priorities.

Table 7. GRI disclosure: environmental element by sectors (2021–2023)

Year	GRI 301	GRI 302	GRI 303	GRI 304	GRI 305	GRI 306	GRI 307	GRI 308	Indices
Construction sector									
2021	25	100	0	50	50	75	75	50	53
2022	17	67	33	33	67	83	17	50	46
2023	17	100	33	33	67	83	17	26	47
Energy and Utilities sector									
2021	0	100	100	50	100	100	100	0	69
2022	0	100	100	50	100	100	0	0	56
2023	0	100	100	50	100	100	50	0	63
Financial Services sector									
2021	50	50	50	50	100	50	50	0	50
2022	33	33	33	67	100	67	33	0	46
2023	33	33	33	67	100	67	33	0	46
Food Production sector									
2021	50	100	100	50	100	100	50	75	78
2022	50	100	100	50	100	100	0	75	72
2023	50	100	100	50	100	100	50	100	81
Manufacturing sector									
2021	50	100	50	50	50	100	100	50	69
2022	100	50	100	50	100	100	50	75	78
2023	0	100	100	0	100	100	0	100	63
Real Estate Investments sector									
2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
2022	0	100	100	0	100	100	0	0	50
2023	0	100	100	0	100	100	0	0	50
Retail sector									
2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
2022	0	100	0	0	100	100	0	100	50
2023	0	100	0	0	100	100	0	100	50

Source: compiled by authors

The environmental indices of sustainability reporting, as captured through GRI indicators 301–308, reveal notable inter-sectoral disparities in transparency and commitment (see Table 7).

The construction sector environmental disclosure index declined overall, its decline being due to a decreasing level of disclosure in materials (GRI 301), biodiversity (GRI 304), environmental compliance (GRI 307), and supplier environmental (GRI 308). The areas with greater disclosure are energy (GRI 302), effluents and waste (GRI 306).

Meanwhile, *the energy and utilities sector* is fully represented by energy (GRI 302), water and effluents (GRI 303), emissions (GRI 305), and effluents and waste (GRI 306). It is important to note that the manufacturing and energy sectors are precisely the areas that pose the greatest risk to the environment, but the energy and utilities sector shows more responsibility. This selective pattern likely reflects: a focus on regulated areas (e.g., carbon emissions, wastewater); different uses of materials; and different consumer and stakeholder groups.

The financial sector discloses environmental indicators moderately, with a greater focus on emissions (GRI 305). In the financial services sector, there is a consistent neglect of biodiversity (GRI 304), compliance (GRI 307), and supplier assessments (GRI 308). This is most likely due to the sector's predominantly indirect environmental impact.

The food production sector demonstrates comprehensive environmental disclosure in all areas. The possible reason: high external pressure from regulators and consumers; the sector's direct dependence on natural resources, making environmental transparency a material issue.

The manufacturing sector is not much different from food production, with the only notable exceptions being the decreasing disclosure in 2023 in the areas of materials (GRI 301), biodiversity (GRI 304), and environmental compliance (GRI 307). The fact that information about materials is not disclosed in the manufacturing sector makes us think and look for reasons for this, because the need for environmentally friendly materials is relevant today, and this should be disclosed in sustainability reports.

The real estate investment and retail sectors have consistently underperformed, despite growing environmental scrutiny in areas such as building energy efficiency and the environmental impacts of supply chains. Although core indicators such as energy (GRI 302), emissions (GRI 305) and effluents and waste (GRI 306) are well disclosed, more complex or less visible aspects (GRI 301; 304; 307) remain unreported. In these sectors, the differences between the reported aspects are not material.

Finally, the assessment of the social element (GRI 401–419) (see Annex 3) reveals selective but consistent social disclosure within the construction sector. In this sector, likely due to elevated operational risks and legal requirements, the main focus is on Employment (GRI 401), Occupational Health and Safety (GRI 403), and Training and Education (GRI 404). Additionally, disclosures also cover aspects related to Local Communities (GRI 413), Supplier Social Assessment (GRI 414), Public Policy (GRI 415), and Customer Health and Safety (GRI 416).

Social reporting in the energy and utilities sector reflects similar patterns to those observed in the construction sector. However, unlike the construction sector, disclosures in this area do not include supplier social assessment (GRI 414), public policy (GRI 415), or customer health and safety (GRI 416), but instead cover customer privacy (GRI 418) and socioeconomic compliance (GRI 419).

The overall social disclosure index in the financial services sector is lower compared to the construction, energy, and utilities sectors, although the areas of disclosure remain broadly similar. The key difference lies in the lower percentage of disclosure across the reported indicators.

In the food production sector, social disclosure is gradually improving, likely driven by growing stakeholder and market expectations concerning labour practices and local community impacts. However, certain areas remain entirely undisclosed, including security practices (GRI 410) and rights of indigenous peoples (GRI 411). Limited disclosure is observed for freedom of association and

collective bargaining (GRI 407), child labour (GRI 408), forced or compulsory labour (GRI 409), public policy (GRI 415), and customer privacy (GRI 418).

A very similar situation is observed in the manufacturing sector, although its overall social disclosure index is slightly higher.

The real estate investments sector focuses primarily on occupational health and safety (GRI 403), training and education (GRI 404), diversity and equal opportunities (GRI 405), and customer health and safety (GRI 416).

Meanwhile, the retail sector places emphasis on employment (GRI 401), occupational health and safety (GRI 403), labour/management relations (GRI 402), training and education (GRI 404), as well as on freedom of association and collective bargaining (GRI 407), child labour (GRI 408), forced or compulsory labour (GRI 409), supplier social assessment (GRI 414), and customer privacy (GRI 418).

The lowest overall social disclosure coefficient is observed in the real estate investments sector, which may stem from a perception that social impacts are minimal in this industry or from a lack of established ESG reporting practices within the sector.

It is worth noting that the construction, energy and utilities, financial services, and real estate investments sectors do not disclose any indicators related to forced or unlawful labour (GRI 407; 408; 409; 410; 411; 412), while the food production, manufacturing, and retail sectors disclose them only to a limited extent. This may suggest that in the context of the Baltic states, such issues are not considered high-risk areas.

3.3 Disclosure of the level of ESRS requirements

The next part presents descriptive statistics for companies that have started to report their CS matters using the ESRS for 2024 (see Table 8).

Table 8. Descriptive Statistics of ESRS for 2024

ESRS	Mean	Median	Mode	Std. Dev.	Variance	Std. Error
ESRS E1 Climate change	0.78	0.88	1.00	0.28	0.08	0.09
ESRS E2 Pollution	0.00	0.00	0.00	0.00	0.00	0.00
ESRS E3 Water and marine resources	0.00	0.00	0.00	0.00	0.00	0.00
ESRS E4 Biodiversity and ecosystems	0.25	0.25	0.25	0.00	0.00	0.00
ESRS E5 Resource use and circular economy	0.56	0.63	0.75	0.22	0.05	0.09
ESRS S1 Own workforce	0.88	1.00	1.00	0.17	0.03	0.04
ESRS S2 Workers in the value chain	0.25	0.25	0.25	0.00	0.00	0.00
ESRS S3 Affected communities	0.23	0.25	0.25	0.06	0.003	0.03
ESRS S4 Consumers and end-users	0.73	0.75	0.75	0.06	0.003	0.03
ESRS G1 Business conduct	0.88	1.00	1.00	0.21	0.04	0.09

Source: compiled by authors

Disclosure practices in the *environmental domain* under the ESRS framework have a notable exception in Climate Change (E1), which stands out as a prioritised area due to strong EU policy alignment on climate neutrality targets. The accountability for sustainability in this area is the most developed. Another relatively well-disclosed area is Resource Use and Circular Economy (E5), which shows a moderately high average disclosure level (mean: 0.56), indicating growing organisational engagement. In contrast, Biodiversity (E4) exhibits only superficial inclusion, possibly due to a perception that it is either less relevant or more difficult to quantify. And alarmingly, Pollution (E2) and Water and Marine Resources (E3) are almost entirely ignored, despite their critical importance for many industrial sectors. Zero-value indicators in these areas point not only to a lack of disclosure but

potentially to negligence or a systemic avoidance of responsibility. Several factors may explain this outcome. First, 2024 marks the initial year of ESRS implementation, and many companies may still lack the necessary knowledge, systems, or data to fully comply. Second, strategic selectivity may be at play, with companies disclosing selectively to mitigate reputational risks by focusing on areas that portray them more favourably.

In *the social aspect*, the priorities in sustainability disclosure have shifted. Compared to GRI-based disclosures from 2021–2023, social indicators have become the central axis of sustainability reporting. Particularly high average (0.88) and mode (1.00) for the ESRS S1 – Own Workforce indicator suggest that the majority of organisations disclose information about their employees widely and consistently. This indicates the emergence of a strong disclosure practice in this area, with compliance to standards becoming an almost universal norm. Similarly, a high level of disclosure is observed in the Consumers and End-users area (S4) (average – 0.73), which may be attributed to reputational risk considerations and growing consumer pressure for greater transparency. In contrast, the ESRS S2 – Workers in the Value Chain (S2) and Affected Communities areas (S3) remain weakly disclosed, as reflected in their low averages (0.25 and even lower, respectively). This selectivity may be linked to the specific nature of organisational activities.

A high average (0.88), along with identical median and mode values (1.00), indicates that most organisations disclose information consistently and comprehensively in accordance with ESRS G1 – Business Conduct requirements. The disclosed information typically covers business conduct policies and organisational culture, supplier relationship management, anti-corruption prevention and detection, actual incidents of corruption or bribery, political influence and lobbying activities, as well as payment practices. This high level of disclosure in the area of business conduct can be attributed to several factors. First, there is a clear regulatory framework at the EU level, particularly concerning transparency, anti-corruption policies, and tax practices. Second, reputational risk management, especially in relation to corruption or inappropriate political affiliations, encourages companies to publicly disclose their policies and practices in this domain.

At the time of conducting this research, four companies disclosed their CS matters using ESRS, which had previously reported using the GRI sustainability guidelines. Table 9 shows the ESRS environmental element indicators scores for Baltic companies listed in the Nasdaq Baltic Stock Exchange that have reported their CS matters using the new and mandatory CS disclosure framework in 2024. The companies are: “Ignitis grupė”, “Harju Elekter Group”, “LHV Group”, and “Šiaulių bankas”.

Table 9. **ESRS environmental element indicators scores**

ESRS	Ignitis grupė	Harju Elekter Group	LHV Group	Šiaulių bankas	Score per criterion
ESRS E1 Climate change	8	6	9	6	7
ESRS E2 Pollution	0	0	0	0	0
ESRS E3 Water and marine resources	0	0	0	0	0
ESRS E4 Biodiversity and ecosystems	6	0	0	0	2
ESRS E5 Resource use and circular economy	5	5	4	0	3
ESRS S1 Own workforce	17	17	14	13	15
ESRS S2 Workers in the value chain	5	0	0	0	1
ESRS S3 Affected communities	5	0	0	0	1
ESRS S4 Consumers and end-users	5	0	5	5	4
ESRS G1 Business conduct	6	5	6	4	5
<i>Total</i>	<i>57</i>	<i>33</i>	<i>38</i>	<i>28</i>	<i>38</i>

Source: compiled by authors

“Ignitis grupė” achieved the highest overall score (57), followed by “LHV Group” (38), “Harju Elekter Group” (33), and “Šiaulių bankas” (28). This ranking reflects varying degrees of maturity and integration of sustainability practices among the assessed entities.

The highest-scoring area across all companies is the own workforce (S1) domain, indicating a strong alignment with social issues concerning employees, such as working conditions, equal opportunities, and employee representation.

Within the environmental dimension, climate change (E1) is the only indicator reported by all four companies, highlighting a region-wide emphasis on climate-related disclosures, potentially driven by regulatory pressures and investor expectations. Other environmental indicators, such as pollution (E2) and water and marine resources (E3), are entirely unaddressed (score: 0), pointing to a critical gap in environmental reporting and strategic engagement. Biodiversity (E4) is acknowledged exclusively by “Ignitis grupė”, suggesting that this topic remains marginal within current corporate sustainability strategies. The indicator on resource use and circular economy (E5) shows moderate engagement, with reporting from “Ignitis grupė”, “Harju Elekter Group”, and “LHV Group”, but entirely absent in “Šiaulių bankas”.

In the governance dimension, business conduct (G1) is broadly disclosed by all companies, indicating a shared recognition of the importance of ethical conduct, anti-corruption measures, and compliance frameworks as core elements of corporate governance.

“Ignitis grupė”, operating in the energy sector, demonstrates clear leadership in environmental disclosures, consistent with the sector’s exposure to climate-related and environmental regulatory frameworks. Representatives of the financial sector—“LHV Group” and “Šiaulių bankas”—perform better in governance and workforce-related social indicators but show limited engagement with environmental and supply chain-related standards. “Harju Elekter Group”, an industrial manufacturing company, presents a balanced yet modest approach, with notably low performance in social indicators beyond its own workforce.

Conclusions

Corporate sustainability (CS) is an evolving, multidimensional construct grounded in the Triple Bottom Line (TBL) framework, encompassing economic, social, and environmental pillars, and increasingly incorporating governance and time dimensions. While early CS efforts focused narrowly on environmental metrics, contemporary approaches emphasise a more holistic, integrative perspective that balances immediate performance with long-term sustainability objectives. Despite critiques of the TBL as potentially superficial or insufficient on its own, it remains a central model in corporate sustainability thinking and reporting. The addition of governance and time elements, particularly through ESG frameworks, reflects the growing complexity and strategic importance of sustainability in corporate decision-making. This highlights the need for forward-looking, accountable, and systematically embedded sustainability practices across all sectors and regions. Corporate sustainability integrates economic, social, and environmental performance, promoting a holistic and accountable assessment of business impact and resilience. The Global Reporting Initiative (GRI) plays a key role in setting universal sustainability reporting standards, while in the EU, practices are guided by a strong regulatory framework, including the NFRD, CSRD, EU Taxonomy, SFDR, and ESRS.

This study addresses a critical knowledge gap by evaluating how publicly listed companies in the Baltic states are adapting to the evolving corporate sustainability regulatory landscape, with a particular focus on the quality, extent, and compliance of their sustainability disclosures amidst region-specific challenges. The overall GRI assessment results indicate a limited commitment to comprehensive sustainability disclosure. Economic indicators show a declining trend and narrowing distribution, suggesting reduced focus and fragmented reporting. While environmental indicators appear frequently disclosed, their dominance likely reflects strategic, easily presentable data rather than substantive progress. Social

indicators remain weak and inconsistent, revealing a superficial approach to social accountability and a neglect of the broader ESG agenda.

Sectoral differences in sustainability disclosure reveal varying levels of maturity and strategic focus. Construction and food production sectors show broader engagement in economic and social areas, while real estate and retail remain largely non-transparent. Environmental reporting is more advanced in food and manufacturing sectors, likely due to regulatory and resource pressures, but remains weak in financial and real estate sectors. Overall, social disclosure is uneven, with limited prioritization in several industries.

ESRS-based environmental disclosure shows a strong focus on climate change and moderate attention to resource use. However, pollution, water, and biodiversity indicators remain largely neglected, pointing to implementation gaps and strategic selectivity. Social indicators have gained prominence, especially in areas related to their own workforce and consumers. In contrast, transparency on value chain and community impacts remains low, reflecting internal prioritisation and limited readiness. High and consistent disclosure on business conduct highlights strong regulatory influence and reputational concerns, particularly around ethics and anti-corruption.

Limitations. While this research provides valuable insights into CS disclosure in the Baltic region, it is subject to certain limitations, such as the reliance on publicly available reports and secondary literature, as well as the inherent challenges in evaluating the qualitative aspects of sustainability disclosures across diverse sectors.

Future research. Considering the implementation of the mandatory sustainability reporting requirement, the development of the study should encompass an evaluation of the changes introduced following the entry into force of the EU Directive on mandatory sustainability reporting, as well as an assessment of the benefits of sustainability reporting for both consumers and companies.

Declaration of Artificial Intelligence (AI) use

We declare that AI-based tools, including OpenAI's ChatGPT, were used in the preparation of this publication for the purposes of language refinement and academic paraphrasing. However, the research idea was developed by the authors, the literature review was conducted by the authors, the research methods were selected and adapted specifically for this study by the authors, and the data were collected and analysed by the authors.

Authors' contributions

Paulius Česlovas Jokūbauskas: conceptualisation, data curation, formal analysis, methodology. **Asta Šalienė:** supervision, validation, visualisation, writing – original draft.

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Corporate sustainability GRI topic standards disclosure and assessment model

GRI 200 Economic indexes	GRI 201 Economic performance
	GRI 202 Market presence
	GRI 203 Indirect economic impacts
	GRI 204 Procurement practices
	GRI 205 Anti-Corruption
	GRI 206 Anti-Competitive behavior
	GRI 207 Tax
GRI 300 Environmental indexes	GRI 301 Materials
	GRI 302 Energy
	GRI 303 Water and effluents
	GRI 304 Biodiversity
	GRI 305 Emissions
	GRI 306 Effluents and waste
	GRI 307 Environmental compliance
GRI 400 Social indexes	GRI 308 Supplier environmental assessment
	GRI 401 Employment
	GRI 402 Labor/Management relations
	GRI 403 Occupational health and safety
	GRI 404 Training and education
	GRI 405 Diversity and equal opportunities
	GRI 406 Non-Discrimination
	GRI 407 Freedom of association and collective bargaining
	GRI 408 Child labor
	GRI 409 Forced or compulsory labor
	GRI 410 Security practices
	GRI 411 Rights of indigenous peoples
	GRI 412 Human rights assessment
	GRI 413 Local communities
	GRI 414 Supplier social assessment
	GRI 415 Public policy
	GRI 416 Customer health and safety
	GRI 417 Marketing and labeling
	GRI 418 Customer privacy
	GRI 419 Socioeconomic compliance

Source: compiled by authors using Mihai and Aleca (2023); GRI official website.

Corporate sustainability ESRS topical standards disclosure and assessment model

ESRS E1 Climate change	
E1-1 Transition plan for climate change mitigation E1-2 Policies related to climate change mitigation and adaptation E1-3 Actions and resources in relation to climate change policies E1-4 Targets related to climate change mitigation and adaptation E1-5 Energy consumption and mix	E1-6 Gross Scopes 1, 2, 3 and Total GHG emissions E1-7 GHG removals and GHG mitigation projects financed through carbon credits E1-8 Internal carbon pricing E1-9 Anticipated financial effects from material physical and transition risks and potential climate-related opportunities
ESRS E2 Pollution	
E2-1 Policies related to pollution E2-2 Actions and resources related to pollution E2-3 Targets related to pollution	E2-4 Pollution of air, water and soil E2-5 Substances of concern and substances of very high concern E2-6 Anticipated financial effects from pollution-related impacts, risks and opportunities
ESRS E3 Water and marine resources	
E3-1 Policies related to water and marine resources E3-2 Actions and resources related to water and marine resources policies E3-3 Targets related to water and marine resources	E3-4 Water consumption E3-5 Anticipated financial effects from water and marine resources-related risks and opportunities
ESRS E4 Biodiversity and ecosystems	
E4-1 Transition plan and consideration of biodiversity and ecosystems in strategy and business model E4-2 Policies related to biodiversity and ecosystems E4-3 Actions and resources related to biodiversity and ecosystems	E4-4 Targets related to biodiversity and ecosystems E4-5 Impact metrics related to biodiversity and ecosystems change E4-6 Anticipated financial effects from biodiversity and ecosystem-related risks and opportunities
ESRS E5 Resource use and circular economy	
E5-1 Policies related to resource use and circular economy E5-2 Actions and resources related to resource use and circular economy E5-3 Targets related to resource use and circular economy	E5-4 Resource inflows E5-5 Resource outflows E5-6 Anticipated financial effects from resource use and circular economy-related impacts, risks and opportunities
ESRS S1 Own workforce	
S1-1 Policies related to own workforce S1-2 Processes for engaging with own workforce and workers' representatives about impacts S1-3 Processes to remediate negative impacts and channels for own workforce to raise concerns S1-4 Taking action on material impacts on own workforce, and approaches to managing material risks and pursuing material opportunities related to own workforce, and effectiveness of those actions S1-5 Targets related to managing material negative impacts, advancing positive impacts, and managing material risks and opportunities S1-6 Characteristics of the undertaking's employees S1-7 Characteristics of non-employees in the undertaking's own workforce S1-8 Collective bargaining coverage and social dialogue S1-9 Diversity metrics	S1-10 Adequate wages S1-11 Social protection S1-12 Persons with disabilities S1-13 Training and skills development metrics S1-14 Health and safety metrics S1-15 Work-life balance metrics S1-16 Remuneration metrics (pay gap and total remuneration) S1-17 Incidents, complaints and severe human rights impacts
ESRS S2 Workers in the value chain	
S2-1 Policies related to value chain workers S2-2 Processes for engaging with value chain workers about impacts S2-3 Processes to remediate negative impacts and channels for value chain workers to raise concerns	S2-4 Taking action on material impacts on value chain workers, and approaches to managing material risks and pursuing material opportunities related to value chain workers, and effectiveness of those actions S2-5 Targets related to managing material negative impacts, advancing positive impacts, and managing material risks and opportunities
ESRS S3 Affected communities	
S3-1 Policies related to affected communities	S3-4 Taking action on material impacts on affected communities, and approaches to managing material risks and pursuing material opportunities related to affected communities, and the effectiveness of those actions

S3–2 Processes for engaging with affected communities about impacts	S3–5 Targets related to managing material negative impacts, advancing positive impacts, and managing material risks and opportunities
S3–3 Processes to remediate negative impacts and channels for affected communities to raise concerns	
ESRS S4 Consumers and end–users	
S4–1 Policies related to consumers and end–users	S4–4 Taking action on material impacts on consumers and end–users, and approaches to managing material risks and pursuing material opportunities related to consumers and end–users, and the effectiveness of those actions
S4–2 Processes for engaging with consumers and end–users about impacts	S4–5 Targets related to managing material negative impacts, advancing positive impacts, and managing material risks and opportunities
S4–3 Processes to remediate negative impacts and channels for consumers and end–users to raise concerns	
ESRS G1 Business conduct	
G1–1 Business conduct policies and corporate culture	G1–4 Incidents of corruption or bribery
G1–2 Management of relationships with suppliers	G1–5 Political influence and lobbying activities
G1–3 Prevention and detection of corruption and bribery	G1–6 Payment practices

Source: compiled by authors using Regulation (EU) 2023/2772 supplementing Directive 2013/34/EU

Annex 3

GRI disclosure: social element

Year	GRI 401	GRI 402	GRI 403	GRI 404	GRI 405	GRI 406	GRI 407	GRI 408	GRI 409	GRI 410	GRI 411	GRI 412	GRI 413	GRI 414	GRI 415	GRI 416	GRI 417	GRI 418	GRI 419	Indices
	Construction sector																			
2021	100	0	100	100	50	50	0	0	0	0	0	0	100	50	100	50	0	0	50	39
2022	67	0	100	100	67	67	0	0	0	0	0	0	67	50	67	33	0	0	0	33
2023	100	33	100	100	67	67	0	0	0	0	0	0	67	50	67	33	0	0	0	36
	Energy and Utilities sector																			
2021	100	50	100	100	100	100	0	0	0	0	0	0	50	0	0	0	0	100	50	39
2022	100	50	100	100	100	100	0	0	0	0	0	0	100	0	0	0	0	50	50	39
2023	100	50	100	100	100	100	0	0	0	0	0	0	100	0	0	0	0	50	50	39
	Financial Services sector																			
2021	50	0	0	50	100	0	0	0	0	0	0	50	50	0	0	0	50	50	50	24
2022	67	0	33	67	100	0	0	0	0	0	0	33	33	33	0	0	33	33	33	24
2023	67	0	33	67	100	0	0	0	0	0	0	33	33	33	0	0	33	33	33	24
	Food Production sector																			
2021	50	0	100	50	50	50	0	0	0	0	0	0	100	75	0	50	50	50	50	36
2022	50	50	100	50	100	50	50	50	0	0	0	0	100	75	0	50	50	0	0	41
2023	50	50	100	50	100	50	50	50	50	0	0	25	75	75	50	75	50	0	50	50
	Manufacturing sector																			
2021	100	0	100	100	50	50	0	0	0	0	0	0	100	50	50	75	25	50	100	45
2022	100	25	100	100	100	100	25	25	25	50	0	0	100	75	100	75	25	50	50	59
2023	100	0	100	100	100	100	0	0	0	0	0	0	100	100	100	100	0	0	0	47
	Real Estate Investments sector																			
2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
2022	0	0	100	100	100	0	0	0	0	0	0	0	0	0	0	100	0	0	0	21
2023	0	0	100	100	100	0	0	0	0	0	0	0	0	0	0	100	0	0	0	21
	Retail sector																			
2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
2022	100	100	100	100	0	0	100	100	100	0	0	0	0	100	0	0	0	100	0	47
2023	100	100	100	100	0	100	100	100	100	0	0	0	0	100	0	0	0	100	0	53

Source: compiled by authors