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Factors influencing the choice to declare CSR reporting standards: Evidence from Baltic public companies

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Abstract

Research background: Recently, companies have been increasingly focusing on social responsibility and disclosure. They use a variety of standards to disclose their social responsibility. The prevalence of these practices varies between companies in different countries. In addition, some companies declare CSR reporting standards, while others do not. Stakeholders need to know the characteristics of companies that declare CSR reporting standards.

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Purpose of the article: This study aims to reveal the factors influencing the choice to declare CSR reporting standards in Baltic public companies.

Methods: The choice to declare CSR reporting standards is measured by the fact of CSR reporting standards' declaration and the choice of GRI. The data for dependent variables are collected from non-financial reporting of Baltic public companies by making the content analysis. Company visibility, financial performance, and market expectations are chosen as independent variables. Their data is obtained from the Bloomberg database. Logistic regression models are applied.

Findings & value added: Only half of the companies surveyed disclosed the CSR reporting standards used. Estonian public companies prefer GRI standards, and Lithuanian public companies prefer GRI plus UNGC. CSR reporting standards tend to be declared by those public companies that are larger and operate in the "heavy industry" as well as have higher EPS and lower ROA and CAPI. Market expectations are irrelevant to the disclosure of CSR reporting standards. By contrast, GRI standards are used and disclosed by public companies with the same characteristics as those declaring the standards. Still, in this case, age and market expectations are also important factors. Younger and higher market-value companies tend to choose GRI standards. These results reflect managerial behavior based on legitimacy, stakeholder, and signaling theories. Our findings are important to investors, market regulators, policymakers, managers and shareholders.

Introduction

To assess companies' ESG performance, it is important to know what standards are used to produce CSR reports. The choice and popularity of CSR reporting standards are important for companies in both developed and emerging economies. This information is useful for making decisions on the unification of standards, which is necessary to improve the transparency, reliability, and comparability of non-financial reporting. Unified standards will provide companies with a new starting point for the preparation of their non-financial statements and will facilitate informed decision-making by stakeholders. In addition, the characteristics of companies that determine their choice not only to declare CSR reporting standards, but also to opt for the most popular international sustainability standards provide additional insights for investors, market regulators, policymakers, managers and shareholders.

With the recent increase in the importance of socially responsible investment disclosure in financial markets, many companies need to meet the needs of stakeholders and enhance their reputation in the eyes of the public. CSR information is useful for investors in assessing a company's future cash flows and risks (Christensen *et al.*, 2021; Halkos & Nomikos, 2021), and is also important for other stakeholders such as consumers, employees,

local communities (Christensen *et al.*, 2021) and society at large (Tsang *et al.*, 2023; Ching *et al.*, 2017). By disclosing their social responsibility, companies enhance their reputation in the eyes of customers, investors, and public authorities, which leads to better financial performance in the future (Moser & Martin, 2012) and reduce information asymmetries (Cho *et al.*, 2013). Thus, the implementation of appropriate CSR reporting policies is an important task for governments, companies, and consumers around the world, who must take responsibility for their impact on society and the environment (Halkos & Nomikos, 2021). Various CSR reporting standards and guidelines have been developed and are in use globally: GRI, UN Global Compact, SASB, NFRD, etc. Their diversity and the choices available to companies make comparability and effective evaluation of companies' ESG performance difficult.

Research shows that the most widely used standards for CSR reporting are the GRI or GRI-UNGC standards (Khatri & Kjærland, 2023; KPMG, 2022; Halkos & Nomikos, 2021; Balluchi *et al.*, 2019; Fernández-Gago *et al.*, 2018; Yevdokimova *et al.*, 2018). The results of the studies conducted confirm that reports produced according to GRI standards are more reliable, of higher quality, and positively related to the degree of environmental disclosure (Helfaya *et al.*, 2023; Lock & Seele, 2016; Torelli *et al.*, 2020; Galani *et al.*, 2012; Moroney *et al.*, 2012; Lu & Abeysekera, 2014; Rosa *et al.*, 2014; Vogt *et al.*, 2017). The literature review has revealed that CSR reporting research is mostly based on stakeholder, legitimacy, and signaling theories (Koseoglu *et al.*, 2021; Solikhah, 2016; Lu & Abeysekera, 2014; Cotter & Najah, 2012). Disclosing more information about a company's corporate social responsibility increases its legitimacy (Marano *et al.*, 2017; Vogt *et al.*, 2017; Solikhah, 2016; Lu & Abeysekera, 2014), decreases decoupling practices (García-Sánchez *et al.*, 2022) and addresses the interests, expectations, and needs of different stakeholder groups, which may differ according to stakeholder theory (Cotter & Najah, 2012). *Signaling theory* is seen by some scholars as an extension of voluntary disclosure theory (Ching *et al.*, 2017). It argues that voluntary CSR disclosure demonstrates a company's efforts to respond to both public and other stakeholder pressures to do so (Hahn *et al.*, 2015; Huang & Watson, 2015). While theories explain CSR disclosure, one of the problems currently faced is that there is no clear methodology and no comprehensive standard to follow when reporting CSR. Researchers who analyzed the issues of standardizing CSR reporting practices and improving the comparability of corporate information concluded that

standardization and content are key to ensuring the quality of reporting (Afolabi *et al.*, 2023; Christensen *et al.*, 2021; Lock & Seele, 2016), as standard-setting is an important mechanism for coordination (Bochkay *et al.*, 2021) and that standardization has a positive impact on the disclosure of social reporting (Hsiao *et al.*, 2022). At the same time, it has been argued that a double materiality approach needs to be considered in standardizing CSR reporting (Christensen *et al.*, 2021), as CSR should not only involve strict compliance with regulations (Wang *et al.*, 2023), but also encourage and disclose certain changes in corporate behavior that have a positive impact on society and the environment (Jackson *et al.*, 2020).

Previous research has focused on analyzing the drivers of CSR disclosure. El-Bassiouny and El-Bassiouny (2019), Dyduch and Krasodomska (2017) and Giannarakis *et al.* (2014) investigated the key determinants of the extent of CSR disclosure. Syed and Butt (2017) investigated the financial and non-financial determinants of the degree of CSR disclosure. Nguyen *et al.* (2021) examined the determinants of the degree of CSR disclosure, which varied from a broad scope to a very narrow and specific. The most analyzed company-level factors were company size, company age, management and ownership structure, and performance. In contrast, there are few studies analyzing the factors influencing companies' decision to disclose CSR reporting standards. Some worth mentioning are the study by Nikolaeva and Bicho (2011), which investigated what determines companies' decision to prepare CSR reports in line with GRI standards, and the study by Vouros *et al.* (2020), which found the degree to which companies integrate GRI reporting principles and how this integration correlates with CSR reports' comprehensiveness and accountability level.

Our analysis has revealed that research in the Baltic countries has focused on trends and characteristics of CSR reporting (Leitonienė *et al.*, 2024; Gurvitš-Suits & Sidorova, 2022; Zumente *et al.*, 2022), and the main barriers to CSR disclosure in Baltic companies (Lu *et al.*, 2020). It should be noted that these researchers did not analyze the factors that are important in the choice of CSR reporting standards. The novelty and originality of our study come from the fact that it focuses on the factors influencing the choice to declare CSR reporting standards in Baltic public companies. The choice to declare CSR reporting standards includes the fact of declaring CSR reporting standards and the choice of GRI standards. We measure the fact of CSR reporting standards' declaration and choice of GRI as binary variables and apply logistic regression models.

The paper is organized as follows. In Section 1 we reveal the similarities and differences of CSR reporting standards. In Section 2 we review the prevalence of standards and the choice of companies. Section 3 is dedicated to the research data and methods: sample of companies, measurement of choice to declare CSR reporting standards, regression models, and formulation of hypotheses. In section 4 we determine factors influencing the choice to declare CSR reporting standards. Finally, we develop the discussion in Section 5 and present the conclusions in Section 6.

Literature review

CSR reporting standards: similarities and differences

Today's investment decisions and business processes require a thorough understanding of environmental, social, and governance (ESG) regulation, and an understanding of the opportunities and challenges that ESG presents. Companies report on their ESG activities in their CSR reports. The literature review has revealed that various CSR disclosure standards are currently in use around the world, such as the Global Reporting Initiative (GRI), UN Global Compact (UNGC), ISO 26000:2010, SASB, Task Force on Climate-Related Financial Disclosures (TCFD), Sustainable Development Goals (SDG), Disclosure of non-financial and diversity information (Directive 2014/95/EU) and Guidelines on non-financial reporting (2017/C 215/01) (NFRD), International Integrated Reporting Council (IIRC), and other.

Some standards are more abstract, others more concrete. Their content and level of detail vary. The UNGC Global Compact includes 10 core principles on human rights, labor rights, environment, and anti-corruption. The UNGC principles cover the ESG dimensions and apply to all companies. ISO 26000 highlights the key features of CSR and offers guidance on how companies can organize their sustainability initiatives and communicate achievements and progress to their customers. In contrast, the GRI and SASB standards are much more specific. The GRI standards provide a framework for public reporting on sustainability issues. Subject-specific GRI standards are designed to disclose the economic, environmental, and social impacts of a company's activities. Boiral *et al.* (2019) observe that, although reports are claimed to be prepared following the GRI standards,

the standards are not fully implemented and there are expectations about the completeness and materiality of CSR reports that are not in line with reality. Halkos and Nomikos (2021) conclude that although the GRI and ISO 26000 standards are similar, each is designed to meet clear stakeholder requirements. GRI focuses on social, environmental, and economic factors when assessing sustainability, while SASB focuses on environmental and economic factors. In addition, the SASB standards are developed on a sectoral basis and are designed to reveal financially relevant ESG information for a specific industry. The release of these standards has led to increased disclosure of ESG information in industries where there has been disagreement on ESG reporting, especially in companies that previously had little or no disclosure of sustainability topics (Bochkay *et al.*, 2021). While the GRI, SASB, and ISO 26000 standards cover different aspects of corporate social responsibility, the TCFD guidance provides detailed suggestions on how to disclose information on financial impacts related to climate change risks and opportunities. Although the TCFD focuses on identifying climate change risks, these principles can be applied to reflect all ESG objectives (Halkos & Nomikos, 2021).

Regulation of CSR reporting in EU countries is presented in the Table 1. The Guidelines on Non-financial Reporting (NFRD) outline approaches to reporting non-financial information, including key sustainable performance indicators. However, the format of presentation, the extent of disclosure, or specific indicators are not specified in the Guidelines. The Directive 2014/95/EU gave companies considerable flexibility to use GRI, ISO 26000, UNGC, and other global guidelines (Dyduch & Krasodomska, 2017). To make ESG information of listed companies in the Baltic States comparable, Nasdaq Baltic has developed a guide with 10 indicators to highlight ESG aspects. These indicators are aligned with GRI requirements.

The lack of unified standards and methodologies makes it difficult to compare and effectively assess companies' ESG performance. Standardization of reporting practices is necessary for global sustainable development to improve the comparability of corporate information (Afolabi *et al.*, 2023; Christensen *et al.*, 2021). Therefore, the EU Corporate Sustainability Reporting Directive (CSRD) (Directive 2022/2464/EU) was adopted in 2022. Since 2024 this Directive replaced Directive 2014/95/EU. In 2023, two main sets of ESG standards were published: the European Sustainability Reporting Standard (ESRS), which applies in the EU, and two new standards developed by the ISSB, IFRS S1 and IFRS S2, which apply internationally. These

will harmonize the requirements of different advisory bodies to make CSR reporting more consistent, accurate, and reliable. The objective in developing the ESRSs was to align them as much as possible with IFRS S1, IFRS S2, and GRI standards to avoid unnecessary duplication of corporate reporting and to ensure a very high level of interoperability between EU and global standards. ESRS will ensure greater transparency and reliability of companies' sustainability reports.

Prevalence of CSR standards and their choice by companies

As the public demand for information on the environmental and social performance of companies has increased, the Global Reporting Initiative (GRI) standards adopted by an independent international standards organization, have become an appropriate tool to meet this demand (Nikolaeva & Bicho, 2011). According to the Global Reporting Initiative (2017), as many as 80% of the world's major companies measure CSR against the international GRI and UNGC standards. The fact that GRI standards remain the most widely used sustainability reporting standards globally is confirmed by the international sustainability reporting survey conducted by Halkos and Nomikos (2021) and KPMG (2022). KPMG is a global network of professional firms providing Audit, Tax, and Advisory services. KPMG's results showed that 78% of the 250 largest companies worldwide follow GRI, but there are some regional differences. The GRI is also cited by Khatri and Kjærland (2023), Yevdokimova *et al.* (2018), and Fernández-Gago *et al.* (2018) as one of the most common frameworks for corporate CSR disclosure. Balluchi *et al.* (2019) found that in Italy, among the benchmarks used for the preparation of voluntary disclosure reports, GRI standards are the most used. Helfaya *et al.* (2023) concluded that the GRI had a positive and significant effect on the overall disclosure of ESG practices in Europe.

Meanwhile, Dyduch and Krasodomska (2017), analyzing the reports of Polish listed companies, concluded that the number of CSR reports prepared by the GRI guidelines has increased, but is still very low compared to other Western European countries. In the US, Canada, and Brazil, SASB is the main standard for CSR reporting (KPMG, 2022). Khatri and Kjærland (2023) conclude that GRI standards are universal, while the US-based SASB standards are industry-focused. KPMG (2022) found that as an alternative to GRI or SASB, stock exchange guidelines are increasingly used in certain

regions. They are popular in the Asia Pacific region, the Middle East & Africa. The most common use of stock exchange benchmarks is in Southern Africa, Malaysia, and India. A study by Anas *et al.* (2015) confirms that the general principles of CSR disclosure established by Bursa Malaysia Berhad had a positive impact on the CSR reporting practices and the extent of CSR reporting by Malaysian listed companies. Scholars who analyzed CSR disclosure in European countries noted that the Disclosure of non-financial and diversity information (Directive 2014/95/EU) and Guidelines on non-financial reporting (2017/C 215/01) (NFRD), among other frameworks, had a significant impact (Cuomo *et al.*, 2024; Cicchiello *et al.*, 2023; Khatri & Kjærland, 2023; Balluchi *et al.*, 2019; Mayorova, 2019; Dyduch & Kraśodska, 2017).

The main theories of corporate sustainability disclosure identified by scholars explain the different behaviors of companies in pursuit of CSR objectives. Although stakeholder and legitimacy theories are closely inter-related and belong to the same group of socio-political theories of disclosure (Ching *et al.*, 2017), according to Cotter and Najah (2012), stakeholder theory is concerned with the interests, expectations, and needs of different stakeholder groups, which may differ. Meanwhile, legitimacy theory considers the stakeholder to be the public which demands sustainable company performance (Solikhah, 2016). According to Garcia *et al.* (2021), disclosure is used to foster stakeholder perceptions of environmental responsibility and to confirm that a company's value system is in line with the social norms in which it operates. Legitimacy theory focuses on what society expects from companies, as companies that are more publicly controlled disclose more social and environmental information (Lu & Abeysekera, 2014). Thus, it can be argued that, depending on the extent to which a company considers the expectations of the public when developing its sustainability strategies, the public will be able to perceive the company's actions as desirable, appropriate, and deserving of public support. However, research shows that companies feeling pressure from stakeholders to act in a socially responsible way are more likely to provide information to the public about their activities but avoid making tangible commitments in this area (de Grosbois & Fennell, 2022). Increased disclosure of a company's social responsibility increases its legitimacy, reputation, and public recognition (Vogt *et al.*, 2017), and enhances its CSR initiatives (Khatri & Kjærland, 2023). Companies can use sustainability reporting as an effective tool to demonstrate that they meet global standards and public expectations,

thereby gaining legitimacy (Marano *et al.*, 2017). García-Sánchez *et al.* (2022), using legitimacy theory, found that CSR reporting according to GRI standards reduces decoupling practices, as a company's CSR disclosure is consistent with its CSR activities.

Ching *et al.* (2017) argue that signaling can be seen as an extension of the voluntary disclosure theory. Qiu *et al.* (2016) confirmed the voluntary disclosure theory and found that companies with greater economic resources tend to make more disclosures, which provides a net positive economic benefit. This theory was also confirmed by Koseoglu *et al.* (2021). The researchers found that companies applying GRI standards are more likely to disseminate their corporate social responsibility reports externally. According to Hahn *et al.* (2015), by voluntarily disclosing CSR, companies demonstrate their efforts to respond to both societal and stakeholder pressure to do so. In agreement, Huang and Watson (2015) argue that external stakeholder pressure influences CSR reporting. According to Park *et al.* (2023), the application of international sustainability standards is particularly associated with legitimacy and voluntary disclosure theories, while Khatri and Kjærland (2023) argue that companies consciously disclose sustainability issues and comply with GRI standards, which is consistent with stakeholder and legitimacy theories.

According to Lock and Seele (2016), standardization and content are of primary importance for the quality of CSR disclosure, with external influences being at best secondary. Policymakers can play a significant role here by creating a level playing field for the regulation of CSR reports and thereby consistently increasing the level of reliability of reports, as the self-reporting of CSR reports in Europe is not high. Given the current heterogeneity in CSR reporting, mandatory CSR reporting standards could increase the level of consistency, particularly, across industries. Such harmonization could, in turn, increase the ability of users to compare CSR information for companies in the same industry, which could have a real impact on the capital market (Christensen *et al.*, 2021).

A study by Lock and Seele (2016) confirmed the hypothesis that CSR reports produced following the GRI's standardized reporting guidelines are more robust. Research shows that the level of GRI application plays an important role in decisions regarding the quantity and quality of a company's non-financial disclosures (Torelli *et al.*, 2020), is positively associated with environmental performance (Khatri & Kjærland, 2023), and contributes to the degree of environmental disclosure (Galani *et al.*, 2012; Moroney

et al., 2012; Lu & Abeysekera, 2014; Rosa *et al.*, 2014; Vogt *et al.*, 2017). However, Wang *et al.* (2023) emphasize that CSR must go beyond strict compliance with laws and regulations, and primarily reveal a company's intention to have a positive impact on society and the environment in which it operates. Research by Jackson *et al.* (2020) has shown that in countries where non-financial disclosures are required, companies carry out significantly more CSR activities. Thus, researchers question whether the purpose of reporting is to provide meaningful information to investors or to induce certain changes in corporate behavior. Christensen *et al.* (2021) argue that if the objective is to induce change, then a double materiality approach to CSR information should be considered, including financial, social and environmental materiality.

Researchers mostly focused on the CSR disclosure volume (level, extent, or degree) and its factors or determinants in previous publications. CSR disclosure volume was measured either through qualitative or quantitative indicators making content analysis of non-financial reporting of companies or using ESG scores. Factors or determinants of CSR disclosure varied from generic to very narrow and specific. Giannarakis (2014) examined the potential effects of corporate governance and financial characteristics on the extent of CSR disclosure, Dyduch and Krasodomska (2017) and Giannarakis *et al.* (2014) — the generic determinants of the extent of CSR disclosure. Syed and Butt (2017) explored the degree of CSR disclosure and investigated financial and non-financial CSR disclosure determinants. Nguyen *et al.* (2021) investigated the factors of CSR disclosure level, such as company size, industry sensitivity, government ownership, liquidity, and company age, while El-Bassiouny and El-Bassiouny (2019) analyzed the effects of organizational-level factors, particularly, diversity and corporate governance structure on CSR disclosure levels.

More specific research was carried out by Lu *et al.* (2017) and Gallego-Álvarez and Quina-Custodio (2016): Lu *et al.* (2017) determined the association between CSR disclosure level and company's characteristics in the forestry industry, while Gallego-Álvarez and Quina-Custodio (2016) were focused on voluntary disclosure of CSR in companies of different countries and their explanatory factors. A large body of research has analyzed how the extent of CSR disclosure depends on company-level factors such as company size (Ting, 2021; Vouros *et al.*, 2020; Qiu *et al.*, 2016), age or life cycle (Nguyen *et al.*, 2021; Gunawan *et al.*, 2019; Wuttichindanon, 2017), management and ownership structure (Dewi & Wirawati, 2021; Naseem *et*

al., 2017; Nurleni & Bandang, 2018), and performance indicators (Balogh *et al.*, 2022; Khan, 2022; Wuttichindanon, 2017; Dyduch & Krasodomska, 2017).

An analysis of research on the choice of companies to declare CSR reporting standards found studies by Nikolaeva and Bicho (2011) and Vouros *et al.* (2020). Nikolaeva and Bicho (2011) analyzed the role of the company's institutional environment and identity communicators as drivers of the adoption of the GRI principles as a reputation management tool. Vouros *et al.* (2020) investigated to which degree GRI reporting principles are integrated in the companies' disclosures, and how their integration is correlated with CSR reports' comprehensiveness and accountability level.

Other studies focus on CSR disclosure practices. Torelli *et al.* (2020) examined the relationship between the extent of application of GRI standards and the degree of disclosure of social responsibility. Gurvitš-Suits and Sidorova (2022) identified the main trends and characteristics of CSR reporting in Baltic public companies. The results of Zumente *et al.* (2022) confirmed the findings of Gurvitš-Suits and Sidorova (2022) that companies have relatively low use of international sustainability standards for CSR disclosure. According to Leitonienė *et al.* (2024), initiatives to implement sustainability and improve reporting come from EU legal legislation and foreign capital companies. Lu *et al.* (2020), in their study on the evaluation of ESG activities in the Baltic States, identified the main barriers to these activities. Klimczak *et al.* (2023), in a study of Warsaw Stock Exchange-listed companies, found that top managers are not prepared to implement mandatory non-financial reporting. They respond primarily to the needs of investors and, in deference to their stakeholders, avoid setting targets and reporting on the environmental impact of their activities. Researchers believe that effective regulation can bring about the necessary changes.

Analysis of previous scientific publications has revealed that there are some findings related to the prevalence of CSR reporting standards among companies in different countries and regions. However, the scientists do not focus on the characteristics of companies that are important for the choice of CSR reporting standards. They usually investigate factors or determinants influencing the level, extent, or degree of CSR disclosure. Our research is dedicated to factors influencing the choice to declare CSR reporting standards. Therefore, we intend to close the gap in this field of research.

Data and methods

There were 51 companies listed in the main (33) and secondary (18) lists of the Nasdaq Baltic Stock Exchange in 2017–2022. Some of them operate in financial services. They are excluded from the sample because of the specificity of financial indicators. The companies that started listing later than in 2017 and/or were missing data are also excluded from the research. So, the total number of companies is 42, and the total number of observations is 252. The sample of the companies that have disclosed CSR is 30, and the number of observations is 180.

Table 2 represents the sample of public companies that disclosed CSR by country and industry under the classification used by NASDAQ. The largest share of the companies is from Lithuania (53.3%), 40.0% is from Estonia and 6.7% is from Latvia. Among the industries, companies operating in consumer discretionary (26.7%), consumer staples (23.3%), industrials (20.0%), and real estate (6.7%) dominate. The share of the companies operating in the basic materials, energy, and telecommunication industries is the smallest, each consisting of only 3.3%. No companies from the sample are operating in the technology and healthcare industries.

Measurement of choice to declare CSR reporting standards. The choice to declare CSR reporting standards is measured by two dependent variables. We use the fact of CSR reporting standards' declaration and choice of GRI as binary variables. The fact of CSR reporting standards' declaration takes the value "0" if CSR reporting standards are not declared and is "1" if declared. The choice of GRI takes the value "1" if a company chooses GRI and is "0" if otherwise. The data for dependent variables are collected from non-financial reporting of Lithuanian, Estonian, and Latvian public companies by making the content analysis.

Measurement of factors. The research is focused only on company-level factors. Such a choice was determined by the results of previous research aimed at analyzing the dependence of CSR disclosure on company-level factors. These factors are classified into three groups: company visibility (size, industry, and age), company financial performance (profitability, efficiency, and leverage ratios), and market expectations. SIZE is measured as a natural logarithm of total assets; IND – takes the value "1" if a company is operating in industrials, basic materials, and energy ("heavy" industries), and "0" if otherwise; AGE is a natural logarithm of years since the establishment of a company. The choice of financial performance indi-

cators was made considering the studies of Qiu *et al.* (2016) and Ting (2021). Profitability is measured by earnings per share (EPS), dividends per share (DPS), return on assets (ROA), return on equity (ROE), efficiency — by capital intensity (CAPI), and sales growth (GROWTH). CAPI is the ratio of total assets to sales, GROWTH is the difference between sales in the year t and the year $t-1$, divided by the sales in the year $t-1$. The total debt to equity is chosen for the company's leverage (LEV). TOBINQ represents market expectations. All independent variables are taken from the Bloomberg database.

Regression models. The multiple logistic regression models usually were applied to reveal the choices of non-financial reporting and determinants of CSR disclosure (Park *et al.*, 2023; Wuttichindanon, 2017; Stacchezzini *et al.*, 2016; Stanny & Ely, 2008). According to Park *et al.* (2023), the dependent variable must be discrete rather than continuous. A time lag between dependent and independent variables has already been applied in such research (Chiu & Wang, 2015; Wuttichindanon, 2017). The motivation of Wuttichindanon (2017) is that strategic planning on CSR for year t should be driven by the factors in year $t-1$, except for company age and industry dummies which should be the status of the company in the current year. Moreover, explanatory variables in all estimations should be lagged using one-year time lag values to overcome the endogeneity problem. We did not apply a time lag because of a very small sample, and that caused the limitation of applied regression models. Another limitation of logistic regression is that it is constructed under the assumption of linearity between dependent and explanatory variables. It not only provides a coefficient size but also its direction (positive or negative).

Logistic regression models are specified in Formula 1. The difference between the models relates only to the dependent variable. The choice to declare CSR standards (CSR_{SD}) is used in Model 1 and the choice of GRI standards (CSR_{GRI}) is used in Model 2.

$$\begin{aligned} y_{i,t} = & \alpha_0 + \beta_1 IND_{i,t} + \beta_2 SIZE_{i,t} + \beta_3 AGE_{i,t} + \beta_4 EPS_{i,t} + \beta_5 DPS_{i,t} + \\ & + \beta_6 ROA_{i,t} + \beta_7 ROE_{i,t} + \beta_8 LEV_{i,t} + \beta_9 CAPI_{i,t} + \\ & + \beta_{10} GROWTH_{i,t} + \beta_{11} TOBINQ_{i,t} + \varepsilon_{i,t} \end{aligned} \quad (1)$$

Model 1 is used for testing the H1 hypothesis:

H1: Company visibility, financial performance, and market expectations are statistically significant for the choice to declare CSR reporting standards.

Model 2 is used for testing the H2 hypothesis:

H2: Company visibility, financial performance, and market expectations are statistically significant for the choice of GRI standards.

Results

The CSR reporting standards were disclosed by 15 public companies, i.e., 50.0% of the total sample. Among them, there were 6 Lithuanian, 7 Estonian, and 2 Latvian public companies. Among the industries, companies operating in consumer discretionary (35.7%), industrials (21.5%), utilities (14.3%), and consumer staples (14.3%) dominate. The share of the companies operating in the energy and telecommunication industries is the smallest, each consisting of 7.1%. The companies operating in basic materials and real estate did not disclose CSR reporting standards.

The distribution of the companies according to the declaration of CSR reporting standards is presented in Table 3. Data show that among CSR reporting standards GRI dominates as a separate standard and together with UN Global Compact standard (53.3% of companies applied in total). The companies also apply GRI together with SDG and EU NFRD. The importance of SDGs is increasing for two reasons. First, the SDGs give a comprehensive framework of goals and targets and create a shared language about the complexity of the actions across social, environmental, and economic aspects. Second, it connects the different international agreements and areas of activities that different actors from the local, regional, and global levels are undertaking into one common point of reference. According to van Zanten and van Tulder (2021), if companies can better align their activities with the whole SDG agenda, rather than just individual sustainability goals, their sustainability strategies will be more successful.

GRI is applied by 2/3 of the investigated companies in total. Research by KPMG (2022) found that 68% of companies in Europe and the Asia Pacific

region use GRI for CSR disclosure. This shows that Baltic public companies are fully in line with the European average.

The choice of CSR reporting standards differs in each Baltic country. Estonian public companies prioritize GRI standards, Lithuanian – GRI-UNGC. As only 2 Latvian public companies were investigated, their priorities could not be identified.

The descriptive statistics of the regression variables are presented in Table 4. The mean is greater than the median for all variables except ROA and ROE. This means that the distribution is skewed to the right. The average size of assets of the companies analyzed, measured in millions of euros, is around 257. It varies in the range 11.49-1585. This shows that the public companies studied are of very different sizes. Moreover, the distribution is asymmetric, indicating that larger companies are more dominant. The average age of a company is 35 years. There is a huge gap between the oldest and the youngest companies (almost 100 years). The asymmetric age distribution shows the dominance of older companies. The EPS average shows that Baltic public companies paid an average of 0.17 euros in dividends per share during the period under study. Considering the EPS, the average dividend payout ratio is quite high (84.1%). The average ROA is 1.60 times higher than the average ROE, but the standard deviations of the two variables show a 3.7 times higher variance of the observed data around the average ROE. Such statistics reveal a strong effect of capital structure on ROE. The implementation of CSR normally requires larger or smaller capital-intensive investments by companies, and the returns are not always higher than the cost of capital. Financial leverage shows that, on average, borrowed capital exceeds equity capital by a factor of 1.74, but the large difference between the mean, median, and standard deviation shows the opposite situation: equity exceeds debt capital. The highest value of leverage indicates that some public companies are highly overborrowed. The large difference between the minimum and maximum value of capital intensity indicates that some companies are capital-intensive and others labor-intensive. The mean and median sales growth are positive and shifted to the right. The mean and median of TOBINQ indicate good market expectations, but there are companies with very low market performance. In general, TOBINQs are typical for companies operating in emerging markets as most of them are growing.

Table 5 shows the Pearson correlations of the independent variables. TOBINQ is weakly positively correlated with EPS, DPS, ROA, and AGE,

but its relationship with ROE is not statistically significant. EPS, DPS, and ROA are statistically significantly positively correlated with each other and with the age of the company. Leverage is negatively correlated with EPS, ROA, and ROE. Higher leverage and lower EPS and ROE indicate inefficient management of capital structure. Larger companies are characterized by lower capital intensity, i.e., they achieve economies of scale faster. Sales grow faster in companies with lower capital intensity.

The estimation results of the Logit regression models are presented in Table 6. The first model is designed to reveal the characteristics of public companies that determine their choice to disclose or not the standards against which CSR reports are prepared. The second model characterizes public companies that prefer to use GRI standards exclusively or combine them with other standards or guidelines.

The first model shows that CSR reporting standards tend to be declared by public companies operating in the so-called “heavy industry”, which includes industrials, basic materials, and energy industries. This can be explained by the particular importance of the environmental dimension in these industries and, at the same time, by the explicitly regulated reflection of the social responsibility to mitigate climate change, adapt to climate change, and other environmental objectives. Although measured by the natural logarithm of assets, SIZE is strongly correlated with the number of employees, which is a criterion for mandatory disclosure according to the Guidelines on non-financial reporting (2017/C 215/01). 23 out of the 30 companies analyzed had an obligation to disclose the CSR in 2017, i.e., 76.7% of the companies. CSR reporting standards are also declared by public companies with higher EPS, although ROE is not statistically significant. EPS and ROE are closely interrelated and move together until they are both affected only by net profit. Splitting or reverse splitting of stocks changes their number in the market, and after these transactions, EPS and ROE start to move separately. EPS is a key driver in determining a company’s stock price, and companies with higher EPS often have larger fair and market value. It means that EPS works as a signal for investor decision-making especially through the price-to-earnings ratio. Public companies that invest heavily, especially in green projects, increase wealth, reduce ROA, and increase CAPI. The data shows that CSR reporting standards tend to be declared by public companies with lower ROA and CAPI. This implies that investment requires additional costs that reduce ROA, but that the economies of scale in production lead to a higher growth in sales revenue than in

assets. Other factors are not statistically significant in the choice of whether to publicly declare CSR reporting standards. McFadden's R-squared for the Logit model is 34.6%. The research results allow us to partly confirm H1: the company's visibility and financial performance are statistically significant for the choice to declare CSR reporting standards but not market expectations.

The second model shows that the choice of GRI standards is driven by the same factors as the decision to declare or not declare the CSR reporting standards applied, except that two additional factors become statistically significant: age and TOBINQ. Of course, the strength and statistical significance of the effects of the selected factors differ slightly between the two models. Younger companies tend to choose GRI standards, but they are fast-growing companies in the market, as the relationship between the size of public companies and the choice of GRI standards is direct. Typically, fast-growing companies with large market capitalization also have higher TOBINQ scores. McFadden's R-squared for the Logit model is 26.8%. Our findings confirm H2: the company's visibility, financial performance, and market expectations are statistically significant for the choice of GRI standards.

Discussion

The results of our study allow us to assess which factors and in what way influence the choice of Baltic public companies to declare CSR reporting standards. The choice to declare CSR reporting standards is measured by two dependent binary variables: the fact of CSR reporting standards' declaration and the choice of GRI. The data for dependent variables are collected from non-financial reporting of companies by making the content analysis. We divided the characteristics of companies as independent variables into three groups: company visibility, financial performance, and market expectations. Their data is obtained from the Bloomberg database. Logistic regression models for testing the hypotheses were applied.

Explanatory factors are only company-level and reflect company visibility, financial performance, and market expectations. Institutional and reputational factors (Nikolaeva & Bicho, 2011), as well as analysis of the size of a company as a factor that may influence the decision to apply CSR reporting standards (Vouros *et al.*, 2020), can also be found in scientific literature.

We applied multivariate logistic regression models to conduct this analysis. There are some limitations related to applied logistic regression models. Explanatory variables should be lagged to overcome the endogeneity problem. We cannot apply a time lag because the sample is too small. Moreover, logistic regression is constructed under the assumption of linearity between dependent and explanatory variables.

Our study shows that only half of the companies surveyed disclose the CSR reporting standards applied. This can lead to information asymmetry for stakeholders. On the one hand, some studies (Cuomo *et al.*, 2024) contributed to the debate about whether and how non-financial information disclosure should be regulated and supported the positive effects of the “comply or explain” approach. On the other hand, companies may comply with regulations by providing superficial information that is irrelevant to stakeholders and may therefore not be considered when evaluating a company (Nampoothiri *et al.*, 2024).

Baltic public companies that disclose standards tend to declare GRI or GRI together with other standards. Our finding of the highest extent of GRI standards application in Baltic public companies confirms the claims of other researchers that GRI is the best-known and most widely used framework in the business world for disclosing companies’ ESG performance (Brown *et al.*, 2009; Halkos & Nomikos, 2021) and for assessing companies’ reported sustainability performance (Tschopp & Nastanski, 2014; Nikolaeva & Bicho, 2011). It can be assumed that the popularity of the GRI standards is because they address the needs of different stakeholders by covering different aspects of sustainability. According to Koseoglu *et al.* (2021), signaling theory assumes that companies with high CSR performance are more likely to choose GRI standards to signal strong CSR commitment. Similarly, socio-political theories (legitimacy and stakeholder) assume that companies with poor CSR performance are less likely to choose GRI standards. Following all these theories, a positive association between CSR performance and GRI adoption is supported.

We studied Baltic public companies, while Zumente *et al.* (2022) and Gurviš-Suits and Sidorova (2022) — both public and private. Their studies have showed that companies in the Baltics make relatively little use of international CSR reporting standards for ESG disclosure. Zumente *et al.* (2022) surveyed Latvian public and private companies and found that only a tenth of the companies disclose social responsibility by international standards. According to Gurviš-Suits and Sidorova (2022), GRI reporting

is less popular and mainly implemented by companies in the industrial sector due to the time and effort-consuming process; the SDG is not widely implemented but gaining popularity. It is obvious that public companies are more visible and are under greater pressure from various stakeholders which is why they prefer international standards. Moreover, the above-mentioned scholars investigated the prevalence of CSR reporting standards, whereas our research focused on the declaration of CSR reporting standards. Nevertheless, the influence of the industry is important both in the choice of standards and in the declaration.

The results of previous research reflect how the extent of CSR disclosure depends on company-level factors (Balogh *et al.*, 2022; Khan, 2022; Nguyen *et al.*, 2021; Ting, 2021; Vouros *et al.*, 2020). Therefore, this study assumes that company-level factors also influence the choice to declare CSR reporting standards. An assessment of the significance of the company visibility group of factors on the extent to which companies declare CSR reporting standards shows that the extent and choice of disclosure of standards varies across companies in different industries. This supports the conclusion of Balluchi *et al.* (2019) that the industry sector plays an important role in decisions on the quantity and quality of non-financial disclosure. Companies belonging to the industrials, basic materials, and energy industries tend to disclose the most CSR reporting standards. This partly confirms the results obtained by Vouros *et al.* (2020) showing that the highest scores for the integration of CSR reporting standards were found in companies operating in the building materials, telecommunications, and energy sectors. According to Qureshi (2020), the regulatory frameworks or constraints in the sectoral environment have an additional impact on companies' response to sustainability compliance, which is considered essential by society.

The assessment of the other factors in the group of corporate visibility factors found that company size is significant, both in terms of disclosing CSR reporting standards and in terms of selecting GRI standards to disclose ESG performance. This confirms the findings of Vouros *et al.* (2020) showing that the size of the organization is positively correlated with the level of inclusion of GRI principles, and the conclusion of Brown *et al.* (2009) that the majority of GRI reporting companies are large multinational corporations, while small and medium-sized companies are almost non-existent. In terms of company age, the results showed that younger companies are more likely to apply GRI standards. This suggests that younger companies have a higher level and quality of ESG disclosure.

The analysis of the significance of a company's financial performance and market expectations factors for CSR reporting and GRI disclosure showed that companies with higher EPS and lower ROA and CAPI are more likely to disclose CSR reporting and choose GRI disclosure. Market expectations are also relevant to the choice of the latter. This suggests that companies that are growing and have a higher market value are more visible in the market and are subject to greater pressure from various stakeholders, in particular investors and the public. This supports the findings of Chauvey *et al.* (2015) that larger companies face greater social and political pressure to disclose their broader impact to the public due to their higher visibility. According to Vouros *et al.* (2020), the widespread adoption by reporting bodies of internationally recognized specific performance indicators, such as those proposed by the GRI, would increase transparency and comparability, as well as the objectivity of stakeholder assessments.

In summary, when companies disclose ESG performance in CSR reports, they must not only seek legitimacy in the eyes of the public and a positive evaluation by other stakeholders, but they must also have a real commitment to sustainability. This would help to achieve the SDGs more quickly and mitigate information asymmetries between the company and stakeholders.

Conclusions

The empirical findings have revealed that only half of the investigated public companies in the Baltic states disclosed the CSR reporting standards applied. The choice of CSR reporting standards is different in each country, and it mostly depends on managerial practice. This choice is determined by the competence of the company's managers in the field of CSR, their strategic attitudes, and their risk management approach. Such results could be due to several circumstances: CSR disclosure is a relatively new phenomenon for companies and adapting to new requirements requires time and resources; lack of experience in how to properly implement the rules, especially when there is a lack of clear guidelines; subsidiaries are often subject to the requirements of parent companies. The lack of specific and stricter regulations hindered the building of companies' non-financial reporting strategies. The new CSR reporting regulations in EU countries, which came into force in 2024, will improve the quality of CSR disclosure.

CSR reporting standards tend to be declared by those public companies that are larger and operate in the “heavy industry” such as industrials, basic materials, and energy, as well as those that have higher EPS and lower ROA and CAPI. Market expectations is not a statistically significant factor of choice to declare CSR reporting standards. GRI standards are the most popular among the investigated companies. The choice of these standards depends on the same factors as the choice to declare standards. Additionally, this choice is typical for younger companies and companies with larger market value.

These findings are valuable from a scientific perspective. They prove managerial behavior based on legitimacy and stakeholder theories, because companies deliberately disclose sustainability issues to meet the expectations of society and other consumers. Companies under greater public scrutiny tend to be more likely to declare their CSR reporting standards and thus disclose more about the sustainability of their operations to meet public expectations. Market expectations are also relevant to the choice of GRI standards. This shows that investors, as important stakeholders, play an important role in a company’s CSR disclosure and the choice of CSR reporting standards. The findings also extend the signaling, legitimacy, and stakeholder theories. According to the signaling theory, companies with high CSR performance are more likely to adopt the GRI standards, while legitimacy and stakeholder theories assume that companies with poor CSR performance are less likely to adopt the GRI standards. We have determined the prevalence of GRI standards in Baltic public companies and revealed what type of companies tend to declare CSR standards, i.e. are of high CSR performance. Declaration of CSR standards through signaling also reduces the information asymmetry.

The research results broadcast messages to various stakeholders. Investors should be interested in the transparency and clarity of CSR disclosure. It would allow them to make more rational investment decisions. Market regulators should pay attention to the prevalence of standards among companies before starting discussions on the unification of standards on a global scale. Unification of standards would make markets more efficient. Larger companies tend to declare CSR reporting standards more often than smaller companies. Therefore, policymakers should focus on CSR disclosure issues in smaller companies. Finally, we have revealed the association between industry type and the choice to declare CSR reporting standards. These findings could encourage the managerial team and shareholders to

reconsider CSR reporting standards' application practice depending on the industry.

Our research has some limitations. It covers a short period because the mandatory CSR disclosure started only in 2017, so, future research could be focused on a longer period. The extent of disclosure and the choice of standards varies across the Baltic States. This may be due to the different political, legal, and cultural environments in the countries. We investigated only a limited set of factors reflecting the main characteristics of companies. Other factors such as the ownership structure of a company, institutional system, and cultural environment of each country could be included. A comparison of the factors influencing the choice to declare CSR reporting standards in public companies of the Baltic states with other public companies operating in different EU countries could be valuable.

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Compliance with ethical standards

This article does not contain any studies with human participants or animals performed by the authors. Extracting and inspecting publicly accessible files (scholarly sources) as evidence, before the research began no institutional ethics approval was required.

Data availability statement

All data generated or analyzed are included in the published article. The raw data supporting the conclusion of this article will be made available by the authors, without undue reservation. The raw anonymized data can be provided by emailing the primary author.

Author contributions

All listed authors have made a substantial, direct and intellectual contribution to the work, and approved it for publication. The authors take full responsibility for the accuracy and the integrity of the source analysis.

Conflict of interest statement

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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Annex

Table 1. CSR reporting regulations in EU countries

Regulations	Subject	Date of validity
EU Commission. Directive 2014/95/EU of the European Parliament and the Council of 22 October 2014 amending Directive 2013/34/EU as Regards Disclosure of Non-Financial and Diversity Information by Certain large Undertakings and Groups.	<p><i>Identified:</i></p> <ul style="list-style-type: none"> - the need to raise the transparency of the social and environmental information provided by undertakings; - the requirements that large undertakings which are public-interest entities exceeding the criterion of the number of 500 employees shall in the management report a non-financial statement containing information of its activity, relating to, environmental, social and employee matters, respect for human rights, anti-corruption and bribery matters; - reporting areas: business model; policies, including due diligence processes; the outcome of those policies; risks and risk management; and key performance indicators relevant to the business. 	until 2024
EU Commission. Communication from the Commission. Guidelines on Non-Financial Reporting (Methodology for Reporting Non-Financial Information) (2017/C 215/01).	<p><i>Key performance indicators:</i></p> <ul style="list-style-type: none"> - environment (including climate-related information); - social and employee issues; - anti-bribery and anti-corruption issues; - diversity; - respect for human rights. <p><i>The double materiality perspective:</i></p> <ul style="list-style-type: none"> - climate change impact on company; - company impact on climate. 	until 2024
EU Commission. Communication from the Commission. Guidelines on non-financial reporting: Supplement on reporting climate-related information (2019/C 209/01).	<p>Updated and tightened regulations related to social and environmental information.</p> <p>All large undertakings and small and medium-sized undertakings, whose securities are admitted to trading on a regulated market in the Union and third-country undertakings which generate a net turnover of more than EUR 150 million in the Union, are required to submit sustainability reports (information).</p> <p>Undertakings shall report in accordance with the European Sustainability Reporting Standards (ESRS).</p> <p>Requires CSR reporting assurance.</p>	since 2024
EU Commission. Commission delegated regulation 2023/2772 of 31 July 2023 supplementing Directive 2013/34/EU of the European Parliament and of the Council as regards sustainability reporting standards.	<p>ESRS 1 – General requirements.</p> <p>ESRS 2 – General disclosures.</p> <p><i>Environment:</i></p> <ul style="list-style-type: none"> - climate change; - pollution; - water and marine resources; - biodiversity and ecosystems; - resource use and circular economy; <p><i>Social:</i></p> <ul style="list-style-type: none"> - own workforce; - workers in the value chain; - affected communities; - consumers and end-users; <p><i>Governance:</i></p> <ul style="list-style-type: none"> - business conduct. 	since 2024

Table 2. The sample of public companies that disclosed CSR by country and industry

Industry	Country			Total
	Lithuania	Estonia	Latvia	
Basic materials	1	0	0	1
Energy	1	0	0	1
Industrials	2	4	0	6
Healthcare	0	0	0	0
Consumer discretionary	3	5	0	8
Consumer staples	6	1	0	7
Technology	0	0	0	0
Telecommunications	1	0	0	1
Utilities	2	1	1	4
Real estate	0	1	1	2
Total	16	12	2	30

Table 3. Distribution of the companies according to the declaration of CSR reporting standards by country

Country	CSR standards					
	GRI	GRI, UNGC	GRI, SDG	GRI, EU NFRD	EU NFRD	Other
Lithuania		3		1	1	1
Estonia	4		1		1	1
Latvia		1				1
Total	4	4	1	1	2	3

Note: GRI – Global Reporting Initiative; UNGC – UN Global Compact; SDG – Social Development Goals; EU NFRD; Other standards include Paris Climate Agreement, GHG Protocol Standard; ESG NASDAQ; UN World Agreement.

Table 4. Descriptive statistics of regression variables

	Obs.	Mean	S.D.	Min	Median	Max
SIZE, m €	180	256.83	308.54	11.49	135.05	1584.92
AGE, years	180	35	26	6	28	123
EPS, €	180	0.17	0.36	-1.29	0.10	1.65
DPS, €	180	0.16	0.30	0.00	0.04	1.55
ROA, %	180	2.98	8.56	-36.10	3.32	34.94
ROE, %	180	1.85	36.89	-342.21	6.41	101.40
LEV	180	1.74	9.85	0.00	0.60	132.10
CAPI	180	2.08	2.42	0.34	0.92	12.76
GROWTH	180	0.06	0.34	-0.77	0.03	2.62
TOBINQ	180	1.14	0.34	0.62	1.08	2.34

Table 5. Correlation matrix

	TOBINQ	EPS	DPS	ROA	ROE	Size	Leverage	Capital intensity	Sales growth	Age
TOBINQ	1.000									
EPS	0.141**	1.000								
DPS	0.259***	0.415***	1.000							
ROA	0.248***	0.642***	0.246***	1.000						
ROE	0.017	0.427***	0.149**	0.769***	1.000					
Size	-0.015	0.123*	0.096	0.074	0.108	1.000				
Leverage	0.111	-0.280***	-0.047	-0.364***	-0.463***	-0.085	1.000			
Capital intensity	-0.083	-0.072	0.003	0.041	0.013	-0.283***	-0.039	1.000		
Sales growth	-0.082	0.074	-0.020	0.109	0.134*	0.019	-0.043	-0.120*	1.000	
Age	0.274**	0.286***	0.388***	0.019***	0.002*	-0.103***	-0.003	0.030***	0.046	1.000

Note: *** significant at 1%; ** significant at 5%; * significant at 10% level.

Table 6. Estimation results of the Logit regression models

Variables	Model 1		Model 2	
	Estimate	z-statistics	Estimate	z-statistics
Constant	-5.837**	-2.491	-3.377*	-1.767
IND	1.350**	2.388	1.859***	3.428
SIZE	0.800***	3.084	0.821***	2.982
AGE	0.048	0.082	-1.260**	2.155
EPS	7.390***	3.132	5.335***	3.261
DPS	-2.703	-1.609	-2.490	-1.462
ROA	-0.167**	-2.120	-0.208***	-2.727
ROE	0.027	1.240	0.010	0.552
LEV	0.883	1.204	-0.421	-0.951
CAPI	-0.574***	-3.182	-0.387**	-2.284
GROWTH	-1.219	-1.381	-1.438	-1.169
TOBINQ	-1.083	-0.354	2.623***	2.850
Obs.	180	180	180	180

Note: *** significant at 1%; ** significant at 5%; * significant at 10% level.

Appendix

List of abbreviations:

CSR – corporate social responsibility; CSRD – Corporate Sustainability Reporting Directive; ESG – environmental, social, and governance; ESRS –European Sustainability Reporting Standard; GRI – Global Reporting Initiative; IFRS – International Financial Reporting Standards; IIRC – International Integrated Reporting Council; ISSB – International Sustainability Standards Board; NFRD – Non-Financial Reporting Directive; SASB – Sustainability Accounting Standards Board; SDG – sustainable development goals; TCFD – Task Force on Climate-Related Financial Disclosures; UNGC – United Nations Global Compact.