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Master's thesis in Regnskap og Revisjon
Supervisor: Anders Berg Olsen
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May 2022

Master's thesis

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Forord

Denne masteravhandlingen er en avsluttende del av masterstudiet i regnskap og revisjon ved NTNU Handelshøyskolen. Det har vært to utfordrende og krevende studieår, men vi sitter igjen med riktig kompetanse som vi tar med oss videre. Temaet for denne avhandlingen er effekten av selskapsstyring-egenskaper på ESG-karakterer. Arbeidet med artikkelen har vært en lærerik, men samtidig utfordrende prosess som har gitt oss mye nyttig kunnskap om selskapsstyring og bærekrafts-rapportering.

Vi ønsker å takke våre veiledere Anders Berg Olsen og Seyed Mahmoud Hosseinniakani for konstruktive tilbakemeldinger gjennom prosessen.

Innholdet i denne oppgaven står for forfatternes regning.

- Andreas Solem og Kubra Islek

Sammendrag

Den betydelige utviklingen av bærekraftige og ansvarlige investeringer det siste tiåret har resultert i opprinnelsen av ESG-karakterer som en kvalitetsreferanse på ESG-rapportering. En voksende mengde forskning tyder på at et selskaps styre kan påvirke prestasjonen på ESG. Til tross for tidligere forskning på lignende temaer, er forholdet mellom selskapsstyringsegenskaper og ESG-karakterer fortsatt lite utforsket. Dette studiet har som mål å bidra til å fylle dette gapet i litteraturen ved å gi nye bevis basert på et utvalg norske børsnoterte selskaper, gjennom å undersøke om et selskaps eierstyring påvirker ESG-rapportering. Våre funn viser en signifikant positiv effekt av styrets størrelse og styrets ekspertise på ESG-karakteren. Vi finner imidlertid ingen signifikant effekt av styrets uavhengighet og antall styremøter på selskapenes ESG-karakter. Dette studiet bidrar til eksisterende litteratur om selskapsstyringsegenskaper og ESG-karakterer og utvider omfanget av agent-teori i forhold til vårt tema. Så vidt vi vet er dette det første studiet som analyserer sammenhengen mellom selskapsstyringsegenskaper og ESG-karakterer for norske børsnoterte selskaper.

Abstract

The significant development of sustainable and responsible investment in the last decade has resulted in the appearance of ESG ratings as a reference of quality on ESG performance. A growing body of research suggests that a firm's board of directors can influence its environmental, social, and governance (ESG) performance. Despite past research on related topics, the relationship between corporate governance characteristics and ESG ratings is still little explored. This study aims to contribute to filling this gap in the literature by providing new evidence based on a sample of Norwegian listed companies by examining if a company's corporate governance influences the ESG. Our findings reveal a significant positive effect of board size and board expertise on ESG ratings. However, we find no significant effect of board independence and board activity on the companies' ESG ratings. This study contributes to the existing literature on corporate governance characteristics and ESG ratings and broadens the scope of agency theory in relation to our topic. To our knowledge, this is the first study that analyses the association between corporate governance characteristics and ESG ratings for Norwegian listed companies.

Innhold

1 Introduction

This study aims to analyse the impact of corporate governance characteristics on ratings given by rating agencies on companies' environmental, social, and governance (ESG) reports. The role of corporate governance has proven essential concerning environmental challenges, with previous studies highlighting the importance of different corporate governance characteristics towards the quality of companies' ESG performance, disclosures, and integrated reporting. This essential role is our motivation for examining the importance of corporate governance characteristics towards ESG ratings.

ESG-reporting has rapidly increased in importance after the United Nations sustainable development goals in 2015. In addition, the significant development of sustainable and responsible investment in the last decade has increased the need for information concerning ESG matters from stakeholders (Galbreath, 2013). This has resulted in the appearance of ESG rating agencies, which assess corporate sustainability performance by evaluating ESG reports and using ESG ratings to measure companies' performance. Because of this, ESG ratings have turned into a quality reference for companies' sustainability reporting and ESG performance (Escrig-Olmedo et al., 2019).

In the last decade, the interest in sustainability rating has grown considerably (Elbasha & Avetisyan, 2018), making ESG rating as a quality reference on ESG reporting highly interesting for further research. However, corporate governance has been the subject of many previous studies not concerning ESG ratings. Therefore, by reviewing previous research on related subjects, we seek to extend the literature by contributing new evidence on the association between corporate governance characteristics and ESG rating.

Vitolla et al. (2020) highlight the board of directors' responsibility to communicate with stakeholders to satisfy their interests. In this perspective, according to agency theory, developed by Jensen and Meckling (1976), the board of directors represents a valuable control mechanism for matching the interest of stakeholders and managers in financial information (Brennan & Solomon, 2008; Healy, Hutton, & Palepu, 1999; Healy & Palepu, 2001) and non-financial information (Prado-Lorenzo, Gallego-Alvarez, & Garcia-Sanchez, 2009; Prado-Lorenzo & Garcia-Sanchez, 2010). As a result of previous literature, the importance of corporate governance characteristics on sustainable strategies and disclosure quality is evident and indicates its importance in ESG ratings.

The Deloitte Review addresses the role of corporate governance in relation to environmental concerns by indicating the need for corporate boards to monitor sustainability and calls for boards to increase their awareness of sustainability concerns (Wagner, Hespenheide, and Pavlovsky 2009). Shareholders are interested in ensuring whether the appointed board of directors pay attention to environmental factors and risks, which may affect the company's overall performance. Afeltra, Alerasoul and Usman (2022) conducted a systematic literature analysis on board of directors and corporate social reporting. They provide evidence from previous studies claiming that disclosure policies emanate from the board and find that the characteristics of the corporate governance model adopted by the company are fundamental determinants of companies' disclosures. The board's control and monitoring is a means to obtain higher quality disclosures and, therefore, higher quality ESG reporting. In addition, Khan, Muttakin and Siddiqui (2013) find that internal governance structure through environmental and social disclosures can play a crucial role in reducing the legitimacy gap among stakeholders.

The literature analysis on corporate governance characteristics by Afeltra et al. (2022) states that new literature focuses more on sustainability disclosure. For example, Ben-Amar, Chang and Mcilkenny (2017) find that some board characteristics increase voluntary climate change disclosures. In addition, the increasing awareness of the environmental implications of companies' economic activities leads to greater demands for firms and boards to implement sustainable strategies. Furthermore, Helfaya & Moussa (2017) investigated the impact of a board's CSR strategy on disseminating information about the environmental impact of their economic activities and found that CSR-oriented directors are more likely to impact the quality of disclosed environmental information positively.

Our study focuses on board characteristics such as the size of the board, independence of board members, number of board meetings and level of expertise on the board. These characteristics have been proved influential concerning the control and monitoring of the board on the quality of disclosures and a company's performance in general (Adams et al., 2005; Helfaya & Moussa, 2017; Frias-Aceituno et al., 2013; Abbott et al., 2004).

Although studies on ESG rating have grown in recent years, only a few contributions have analysed the effects of corporate governance characteristics on ESG performance. For example, Birindelli et al. (2018) studied the effect of different board characteristics such as independence, the board size, number of board meetings and CSR committee on ESG performance in the banking industry, and Waterstraat et al. (2021) examined the effect of board directors with sustainability expertise on ESG ratings. However, studies on the relationship between corporate governance characteristics and ESG ratings are still little explored, and this gap in the literature is the motivation behind our study.

As a result, we extend previous literature on corporate governance characteristics to study the effect on ESG ratings. The role of the board of directors is essential when it comes to the quality of companies' reporting performance and, therefore, the companies' ESG rating. This study aims to contribute to literature about the relationship between corporate governance characteristics and ESG rating, focusing on the Norwegian market and the ratings given by The Governance Group (TGG) in their yearly assessment of the 100 biggest companies on the Oslo Stock Exchange.

TGG rates companies by evaluating the content of the ESG report published in companies' annual reports, using their assessment method and criteria (e.g., as explained under institutional background). Since the quality of the ESG report is the determinant for ESG rating, and the importance of corporate governance on the quality of disclosed information is highlighted by previous research, we seek to produce evidence on their interrelationship. Our findings suggest that the board size and expertise positively affect ESG ratings. However, we find the effect of the independence and activity of the board to be insignificant.

We contribute to the existing literature on corporate governance and provide further evidence of the effect of board independence, size, and activity on ESG reporting. In addition, the way we measure board expertise is, to our knowledge, not done in previous literature. Therefore, this contributes to how to measure ESG expertise. Finally, the study will be of interest to shareholders, boards, the Governance Group and regulators by highlighting the association between corporate governance characteristics and ESG ratings.

Our sample consists of 122 Norwegian companies in a panel dataset from 2019 to 2021, giving us 342 observations. We analyse the data in a pooled regression model. Focusing on Norwegian firms allows us to examine the Norwegian law and guidelines in the Norwegian Code of Practice for corporate governance have any effect on the ESG performance of the companies.

The structure of the rest of this article is as follows: Section 2 presents institutional background; Section 3 presents theoretical background; Section 4 examines relevant literature; Section 5 presents the study's hypotheses; Section 6 explains the research methodology; and Section 7-8 present and discuss the results. In the end, we will list limitations and recommendations for further studies.

2 Institutional background

This study investigates the relationship between corporate governance characteristics and ESG ratings. The basis of our analysis is a sample of Norwegian listed firms that have been evaluated at least once by the Governance Group from 2019 to 2021 (e. g., see the introduction of TGG further down in the Institutional background). Furthermore, since we analyse Norwegian companies, we investigate the effect of Norway's legal system and corporate governance practice on our corporate governance characteristics.

All the companies in our samples are public limited liability companies listed on the Oslo Stock Exchange and, according to the Accounting act §1-5, are considered big companies (Accounting act, 1998, §1-5). Furthermore, according to the Accounting act §3-3c, big companies must report on social responsibility and are required to report environmental, social, and governance factors (Accounting act, 1998, §3-3c). This means all the companies in our sample must disclose information about ESG.

Furthermore, in addition to the Accounting Act, companies listed on the Oslo Stock Exchange must publish an annual statement of their policy on corporate governance following the Code of Practice in force. This means that every company in our sample must report after the Norwegian Code of Practice (Euronext, 2022). The Norwegian Code of Practice for Corporate Governance (the Code of Practice) is issued by The Norwegian Corporate Governance Board (NCGB). During our study, the version in force was from 14th October 2021 (The Norwegian Corporate Governance Board, 2022).

In many ways, the Norwegian Code of Practice for corporate governance is like the practice of other Nordic countries. For example, Schøning (2017) points to the fact that there is a fundamental resemblance in the regulation of companies in the Nordic countries[1]. In addition, they have the same legal traditions, and the corporate governance bodies of the Nordic countries cooperate and address their corporate governance practice as Nordic. This implies that the institutional setting in this study can generalise to all Nordic countries. However, we

[1] Norway, Denmark, Finland, Iceland, and Sweden

do not compare Nordic practice and the practice of corporate governance for European and international countries.

The objective of the Norwegian Code of Practice is to guide listed companies in Norway to practice corporate governance that regulates the difference in the division of roles between the board of directors, executive management, and shareholders. The Code of Practice is based on the "comply or explain" principle. This means that the companies either comply or justify the deviation, and the solution opted instead. The idea behind the principle is that the code acknowledges it may not always be suitable, and there may be fair reasons to deviate. Schøning (2017) highlights that the Code of Practice is meant to improve companies' corporate governance practices and that the norms of the codes work as recommendations, not injunctions. The code sets out what companies "should" do, but not what they "must".

Our study investigates the relationship between corporate governance characteristics and ESG ratings. Above, we established that the companies in our sample must report on ESG matters and follow the Norwegian Code of Practice for corporate governance. Further, we examine what the recommendations in the Code of Practice mean for our study. Consequently, to what extent does the Code of Practice guide Norwegian companies concerning the characteristics in our study: The size, independence, activity, and expertise of the board. The Code of Practice consists of 15 sections representing a recommendation. However, our study's only section of importance is the eighth section.

Section 8 of the Code of Practice contains guidelines for disclosing information about the characteristics mentioned above (The Norwegian Corporate Governance Board, 2022). The recommendation states how a company should report on the board's composition in the annual report. First, the board composition should meet the company's need for expertise, capacity, and diversity. This means that if the company reports in adherence to the code, we should be able to find data on the board's expertise, diversity, and capacity in the annual report. The board's capacity is related to their performance, guiding companies to ensure the board is composed to complete all tasks. In addition to the code, the Public Limited Liability Companies act §6-1 (1) states that every company must have at least three board members.

Second, the section provides guidelines on the independence of board members. The code does not explicitly state how many board members are required to be independent but instead says that the majority of the board should be independent. Further, the board must operate independently of any special interest, and most board members should not be in the company's executive management. In addition, a board member is not considered independent according to the Code of Practice if he is one of the company's main shareholders. Furthermore, the annual reports should state whether a board member is considered independent or not and how many board meetings they attended. This means that we can find information about the independence of board members to use in our analysis.

In addition to making the information about the characteristics in this study available in annual reports, the objective of the Code of Practice is to help improve the company's corporate governance model. Therefore, in addition to guiding companies to up their quality in corporate reporting, the code should lead to "better" corporate governance in general. This leads us to expect that the Norwegian companies in this study, on average, will practice good corporate governance and disclose quality information in their reports.

Furthermore, we briefly look into the Governance Group (TGG), the ESG rating agency we use to collect data on ESG ratings in our study. The Governance Group is an independent research and advisory firm based in Oslo, Norway, specialising in risk analysis and sustainability strategies (The Governance group ESG100, 2019, s. 2). Once a year, they publish an ESG100 report where they evaluate the ESG reporting of the 100 largest companies on the Oslo Stock Exchange. As a result, each company is given an overall rating from A-F on their ESG reporting.

The Governance Group's rating method aims to answer the following question: To what extent do listed companies on the Oslo Stock Exchange succeed in providing specific sustainability information that is relevant for decision-makers? (The Governance Group ESG100, 2021, s. 9). Their assessment criteria include commonly reported ESG topics and reporting practices listed in table 1 below. TGG has given an equal weighting of 35 per cent to environmental and governance factors, while social factors weighed at 30 per cent. The ESG rating from TGG is the measurement we use in this paper to indicate the quality of companies' ESG reports.

Table 1*: The Governance Group, 2021, s. 9. ESG100 - THE OSLO STOCK EXCHANGE 2021.*

Environment	Social	Governance
E1 Climate emission	S1 Human rights	G1 Materiality assessment
E2 Climate risk	S2 Human resource development	G2 Reporting standard
E3 Other environmental factors	S3 Absenteeism and injury reporting	G3 Suppliers
	S4 Equality	G4 Whistleblower mechanism
		G5 Corruption risk
		G6 Strategic ESG opportunities

3 Theoretical background

In this paper, the theoretical foundation for studying the association between corporate governance characteristics and ESG rating is agency theory. Corporate governance is now widely accepted as "the system by which companies are directed and controlled" (Cooray et al., 2020; Cadbury, 2000). According to agency theory, managers act on behalf of the shareholders (Eisenhardt, 1989; Fox, 1984; Jensen & Meckling, 1976; Ross, 1973). Whereas the management aims to maximise the short-term value of the company, the shareholders are more interested in the long-term (Healy & Palepu, 2001). This usually represents agency costs and derives mainly from information asymmetry between managers and shareholders (Barako et al., 2006).

Corporate governance plays an essential role in reducing information asymmetry. Some corporate governance mechanisms aimed at protecting shareholder interests can effectively extend managerial accountability to a broader set of stakeholders (Jizi et al., 2014). For example, the board of directors represent a control and monitoring mechanism to supervise the work of the management and ensure shareholders' profits are maximised (Donnelly & Mulcahy, 2008). In addition, Stout (2003) considers this monitoring function one of the main reasons the board is relied upon by shareholders to supervise their investments. Furthermore, the board is identified as an endogenously determined mechanism to mitigate agency problems by Hermalin and Weisbach (2003).

Management has incentives to distort information to the shareholders in several ways. For example, management tends to conceal negative information to preserve their reputation and tenure at the company (Donnelly & Mulcahy, 2008). This results in information asymmetry.

One way of reducing this is through disclosures by harmonising the interest between shareholders and managers (Healy & Palepu, 2001). However, for disclosures to reduce information asymmetry, a certain level of control is required. As we mentioned above, the board represent a control and monitoring mechanism. This highlights the important role the board of directors play in controlling the company's disclosures, which ultimately will reduce information asymmetry (Donnelly & Mulcahy, 2008).

To further highlight the board's important role in disclosures, Helfaya and Moussa (2017) find that the board's role positively impacts the quality of environmental sustainability disclosures. They highlight the importance of the board's monitoring and control functions in ensuring the firms' legitimacy and accountability towards stakeholders by producing quality disclosures. In addition, it is stated by Afeltra et al. (2022) that disclosure policies emanate from the board and that corporate governance characteristics are determinants of companies' disclosures.

Based on this analysis, the board's control and monitoring is a means to reduce information asymmetry by obtaining higher quality disclosures and, therefore, higher quality ESG reporting. In addition, control and monitoring of disclosures can mitigate agency problems. Board composition is also considered a key factor in promoting sustainable business management and focusing on the long-term (European Commission, 2020; Ferrero et al., 2015). As a result, our study assumes a complementary relationship between some board characteristics (size, level of activity, independence, and expertise) and a company's ESG performance and, therefore, a relationship between board characteristics and ESG rating.

4 Literature review

The relationship between corporate governance characteristics and ESG ratings are still little explored in literature and previous studies. However, corporate governance concerning related subjects is widely studied. Moreover, ESG rating is a measurement of the quality of ESG reporting. Therefore, we review literature studying the effect of corporate governance characteristics on sustainability reporting, ESG performance, integrated reporting, and ESG disclosures and extend this literature to this study.

The need for corporate boards to monitor sustainability and increase their awareness of ESG concerns was addressed by The Deloitte Review (Wagner, Hespenheide, and Pavlovsky 2009). However, prior research on the role of board participation within the sustainability reporting topic provides mixed evidence. For example, Prado and Garcia (2010) argue that the

Board of Directors generally remains unresponsive to the demands for ESG reporting and instead focuses on the traditional responsibility to create economic value. However, according to Setó Pamies (2015), the composition of the board of directors and its characteristics is "one of the most significant issues that firms have to deal with nowadays" (p. 355). Board composition is considered a critical factor in promoting sustainable business management and focusing on the long-term (European Commission, 2020; Ferrero et al., 2015).

Even though Prado and Garcia (2010) argue that the board remains unresponsive to ESG reporting, many studies highlight the importance of corporate governance on non-financial reporting. For example, Dienes and Velte (2016) imply that companies interested in pursuing a strategy of achieving high-quality CSR reporting should have a supervisory board composed of observant members with appropriate diversity. Furthermore, they argue that boards should be composed to provide necessary monitoring skills and resources to ensure sustainability. Jizi et al. (2014) also researched the impact of corporate governance on the quality of CSR reporting for US-listed banks after the US sub-prime mortgage crisis. Their findings suggest that corporate governance mechanisms positively impact CSR reporting, particularly highlighting the importance of board independence and board size.

Furthermore, the impact of corporate governance on the quality of sustainability reporting has been the subject of previous literature. For example, Gerwing et al. (2022) argued that corporate governance enhances the quality of sustainability reporting, researching German firms in their first year of mandatory sustainability reporting according to the European CSR Directive. They provide evidence of a significant positive association between sustainable corporate governance and the quality of sustainability reporting. In line with this, the empirical results from Campanella et al. (2021) show that corporate governance characteristics contribute to the extent of ESG disclosure.

In addition to Campanella et al. (2021), others also studied the association between corporate governance and ESG disclosure. For example, Michelon and Parbonetti (2012) discuss that good corporate governance, and ESG disclosure can be viewed as complementary mechanisms. They show that corporate governance plays a vital role in orienting the heterogeneity of sustainability disclosures provided by US and European companies. This was further extended by Helfaya and Moussa (2017). They found that effective board CSR strategy and CSR-oriented directors have a positive and significant impact on the quality of ESG disclosure.

Last, the relationship between corporate governance and the quality of integrated reporting has been subject to previous research. For example, Cooray et al. (2020) studied the impact of corporate governance on integrated reporting quality in an emerging South Asian economy, Sri Lanka. Their results gave limited support for their research question but proved a positive and significant relationship between the size of the board and integrated reporting quality. The limited support was argued to be because the corporate governance structure of Sri Lankan companies was not expanded enough. However, the study of Vitolla et al. (2020) found strong evidence of a positive association between several board characteristics and the quality of integrated reporting. In contrast, Melloni et al. (2017) showed the absence of a relationship between governance performance and completeness of information in disclosures.

Furthermore, Birindelli et al. (2018) and Arayssi et al. (2020) both study the effect of corporate governance characteristics on ESG performance. Birindelli et al. (2018) found a positive association between different board characteristics and ESG performance in the bank industry in Europe. This is supported by Arayssi et al. (2020), who completed a similar study but for companies in the Gulf. Waterstraat et al. (2021) extended these two studies by researching the relationship between sustainability expertise on the board and ESG rating from Thomas Reuters Datastream. The study found that sustainable expertise had a positive impact on ESG rating. The findings above are also supported by Villiers, Naiker & van Staden (2011), who prove that board characteristics impact environmental performance.

Summing up, previous literature has highlighted the effect of corporate governance on companies' reporting. As mentioned before, the quality of the ESG report determines the ESG rating. By reviewing previous literature, we find evidence that corporate governance is a fundamental determinant for the quality of companies' non-financial reporting and therefore predicts corporate governance characteristics to be a determinant for ESG rating.

This study extends the scope of these previous studies about corporate governance characteristics concerning ESG performance, integrated reporting quality, ESG reporting, and ESG disclosures to research the relationship between governance characteristics and ESG rating. The analysis of existing literature indicates the absence of contributions aimed at analysing the relationship between governance characteristics and ESG rating, which represents the theme of our study. Therefore, we aim to contribute to the topic through our research.

5 Hypotheses development

Our study examines the influence of corporate governance characteristics (board characteristics) on ESG rating. Specially, we examine the impact of the following elements: board independence, board size, board activity and board expertise. These variables are widely studied in the literature reviewed in this paper. Since the effect of these variables on ESG rating is little explored, we extend previous research related to integrated reporting quality, ESG disclosure, and ESG performance to research the association with ESG rating.

5.1 Board size

The board's main actions are controlling and monitoring the work of management (Fama & Jensen, 1983). Gandía (2008) underlines how a board consisting of a larger number of members favours the efficiency of these functions, which increases the company's level of transparency and the disclosure of information by top management. Adams, Almeida, and Ferreira (2005) find that larger boards, usually providing greater diversity of experiences and opinions, favour the ability to monitor and improve the quality of disclosures. The study of Hidalgo, García-Meca and Martínez (2011) supports this, underlining that more members on the board result in an increased pool of skills and resources. An increased pool of skills and resources and greater diversity of experiences and opinions resulting from larger boards are necessary to carry out supervisory functions successfully, according to García-Sanchez et al. (2011). In addition, management control and accuracy of the information provided require directors with the right expertise, gender and stakeholder representation. According to previous studies, a variety of such expertise can only be found on large boards (Pearce & Zahra, 1992; Campanella et al., 2021). Therefore, we expect larger boards to be more efficient when engaging in good ESG practice.

Board size positively impacts integrated reporting quality (Vitolla et al., 2020). Others have found a positive relationship between board size and ESG performance (Birindelli et al., 2018) and a positive relationship with environmental performance (de Villiers et al., 2011). However, Campanella et al. (2021) have found the effect of board size to be insignificant in relation to disclosure quality. With more extensive diversity of expertise and experience found in larger boards, in addition to previous evidence on the impact of board size, we introduce the following hypotheses:

H1*: There is a positive association between board size and ESG rating.*

5.2 Board independence

The most frequently adopted variable by scholars in terms of corporate governance characteristics is the independence of company board members (Cucari et al., 2018). It is considered key to ensuring effective monitoring from the board to link shareholders' interests and expectations with the firms' strategic policies (Ortas et al., 2017). According to agency theory, independent directors facilitate effective monitoring of the board's practices to produce more objective evaluations of the executive management and reduce agency costs (Frias-Aceituno et al., 2013). In addition, a board with a higher number of independent, non-executive members monitor management more efficiently (Liao, Luo & Tang, 2015). The reason is that independent board members do not have a position within the company and are not involved directly with business activity (de Villiers et al., 2011).

García-Sanchez et al. (2011) highlight how independent board members are more interested in guaranteeing the company's objectives and correct behaviour; therefore, they are more likely to respond to a request for quality information. As a result, independent board members promote disclosures of higher quality information as this information impacts the experience and reputation of independent board members (Fama & Jensen, 1983). Furthermore, the Governance Group evaluates companies' ESG performance based on the information in their reports. The above indicates that board independency influences the reports' disclosed information quality.

Vitolla et al. (2020) find that board independence positively impacts the quality of integrated reporting, and Campanella et al. (2021) provide evidence that board independence has a positive relationship with ESG disclosure. The study of Birindelli et al. (2018) finds the relationship between board independence and ESG performance negative. However, other researchers have found the opposite, providing evidence that more independent board members positively impact environmental performance (de Villiers et al., 2011) and ESG disclosure score (Arayssi et al., 2020).

Given the facts above, independent board members make management monitoring more efficient resulting in higher quality disclosure. Furthermore, previous research also produces evidence of a positive impact from independent board members and ESG performance. Therefore, we introduce the following hypotheses:

H2: *There is a positive association between board independence and ESG rating.*

5.3 Board activity

Board activity relates to the board's ability to monitor managers' actions (Frias-Aceituno et al., 2013). The number of board meetings per year is an often-used proxy for board activity (Vafeas, 1999). Lipton and Lorsch (1992) find that boards that set a greater number of board meetings are more diligent and better meet general shareholders' interests. Focusing on the relationship between board activity and the dissemination of information, they add that active boards better disseminate information to shareholders and stakeholders. Kanagaretnam, Lobo, and Whalen (2007) underline that increased board activity reduces information asymmetry in quarterly earnings announcements. In addition, meeting more frequently is necessary to coordinate beneficial actions when facing challenges from events related to sustainability (Dienes & Velte, 2016).

Birindelli et al. (2018) find the relationship between board activity and ESG performance to be insignificant, which is supported by Karamanou and Vafeas (2005), who found no significant relationship between the activity of the board and non-financial performance. However, Campanella et al. (2021) prove that board activity positively affects ESG disclosure. Furthermore, Vitolla et al. (2020) find that board activity positively affects integrated reporting quality. Therefore, increased attention and monitoring by the board through a greater number of board meetings could lead a company to improve the quality of ESG performance. As a result, we introduce the following hypotheses:

H3: *Board activity is positively associated with ESG rating*.

5.4 Board expertise

According to Rindova (1999), for the board of directors to make significant contributions to strategy, it is necessary to have two categories of expertise: firm-specific knowledge and skills and general expertise. Firm expertise refers to understanding the firm's operations and internal management issues. General expertise refers to knowledge of a specific domain, awareness of specific issues, and the skills to solve those issues (Sullivan, 1990). Board member expertise is generally associated with a higher level of performance (Abbott, Parker, and Peters, 2004; Cohen, Hoitash, Krishnamoorthy, and Wright, 2014; Carcello et al., 2011). In general, expertise by a respective board member is argued to promote greater sensitivity to reporting risks and deficiencies, thus leading to a better questioning of management reporting. Therefore, board member expertise is likely to influence the extent of monitoring (agency theory perspective) offered over sustainability-related issues, including the demands for information in disclosures (Peters & Romi, 2015).

Previous studies about the relationship between board expertise and ESG rating are little explored. Waterstraat et al. (2021) studied if the number of board directors with sustainability expertise and sustainability leadership positively affects ESG ratings of EURO STOXX Banks 30. The study provides evidence of a significant relationship between sustainability expertise on boards and the ESG rating. We extend this research to our study. However, we define our expertise variable as ESG expertise instead of sustainability expertise. This is to highlight that ESG expertise covers all environmental, social and governance functions. The Governance Group evaluate environmental, social and governance functions. Therefore, we assume board expertise in all ESG functions impacts the ESG ratings. In line with the agency theory perspective, board member expertise is likely to influence the extent of monitoring sustainability-related issues. Therefore, we expect a relationship between board expertise and ESG rating. Therefore, we introduce the following hypotheses:

H4: *ESG expertise on the board of directors positively affects ESG rating.*

6 Research methodology

6.1 Sample

There are a total of 348 listed companies on the Oslo Stock Exchange (Euronext, 2022). Out of the 348, our sample comprises 122 Norwegian companies that have been evaluated in at least one of the Governance Group's ESG100-reports from the last three years. The Governance Group evaluates the 100 biggest companies each year-end, resulting in various companies being included in each year's report. As a result, some companies will miss an ESG rating for one of the years. We conducted a panel dataset from 2019 to 2021, giving us 342 observations since the ESG100-report is only available for those three years. We collected data on the dependent variable ESG rating from the ESG100-reports. The data for independent variables and control variables were collected manually through annual reports and by accessing Thomson Reuters (EIKON). All financial and ESG data available in Thomson Reuters (EIKON) were collected from the database, while the data not available was collected manually from annual reports and company websites.

6.2 Model specification

We use a regression model to test the relationship between corporate governance characteristics and ESG ratings. More specifically, pooled regression. Even though we have a panel data set, we choose to do a pooled regression because it dominates when there is not much heterogeneity and will result in more powerful tests if the model parameters and regressors are uncorrelated with regression errors (Mark & Sul, 2012). The four models to test the hypotheses that we propose are estimated as:

(1) $Y_1 = \beta_0 + \beta_1 BOARDSIZE + \beta_2 SIZE + \beta_3 ROA + \beta_4 LEV + \beta_5 INDUSTRY + \varepsilon$

(2) $Y_2 = \beta_0 + \beta_1 BOARDIND + \beta_2 SIZE + \beta_3 ROA + \beta_4 LEV + \beta_5 INDUSTRY + \varepsilon$

(3) $Y_3 = \beta_0 + \beta_1 BOARDACT + \beta_2 SIZE + \beta_3 ROA + \beta_4 LEV + \beta_5 INDUSTRY + \varepsilon$

(4) $Y_4 = \beta_0 + \beta_1 BOARDEXP + \beta_2 SIZE + \beta_3 ROA + \beta_4 LEV + \beta_5 INDUSTRY + \varepsilon$

***Table 2**: Variables definition*

Variable	Definition	Measurement
ESGrating	ESG rating	The Governance Group's ESG rating is an overall score based on how a company report information on the environmental, social and governance pillars. Value 0-5.
BOARDSIZE	Board size	Natural logarithm of total number of board members at the end of the fiscal year
BOARDIND	Board independence	Ratio of independent board members on the board. Value 0-1 (0%-100%).
BOARDACT	Board activity	Natural logarithm of total number of board meetings during the year
BOARDEXP	Board Expertise	Level of expertise on the board measured by our criteria (e.g., definition under *Independent variables*)
SIZE	Firm size	Natural logarithm of total assets
ROA	Return on assets	Net income divided by total assets
LEV	Leverage	Ratio of total liabilities divided by total assets
INDUSTRY	Industry	6 different industries divided into 6 dummy variables

6.3 Dependent variable

To test our hypotheses, we used the ESG ratings from the Governance Group. TGG's assessment method evaluates 13 different criteria across environmental, social and governance dimensions, with an equal weighting of 35 per cent for environmental and governance factors, and social factors are weighed 30 per cent. The criteria evaluated are solely focused on the disclosed information in the ESG reports. As a result of TGG's assessment, each company receives an overall ESG rating from A-F based on the quality of their reporting. The ESG rating has a number value from 0 to 5, where 0 equals "failed to report" and results in an F, 1 equals "No reporting" and results in an E, and 2-5 results in the ratings D-A. We use ESG rating (ESGrating) as the dependent variable and test for corporate governance characteristics to test our hypotheses.

6.4 Independent variables

The independent variables included in our study are board size, board independence, board activity and board expertise. According to the Code of Practice Section 8, the annual report should contain information about whether board members are considered independent or not. Board independence (BOARDIND) is measured as the percentage of board members considered independent according to the Code of Practice, which means the percentage of non-executive directors within the board (Frias-Aceituno et al., 2013). Board size (BOARDSIZE) is measured by the number of directors on the board, and board activity (BOARDACT) is measured by the number of board meetings during the year (Frias-Aceituno et al., 2013). Some annual reports say the board will meet at least 3-4 times during the year instead of disclosing the exact number of board meetings. We put the minimum value of 3 instead of the missing value in this case. We use natural logarithm transformations for the variables board size (BOARDSIZE) and board activity (BOARDACT) to better approximate a normal distribution and overcome a possible problem of heteroskedasticity (Birindelli et al., 2018).

Board expertise (BOARDEXP) concerning the subject of this study is still little explored. Waterstraat et al. (2021) studied the effect of sustainable expertise on ESG performance. They defined sustainability expertise as the proportion of directors with expertise in sustainability divided by the total number of board members. However, since this study aims to study the effect of board expertise on ESG rating, the measurement of expertise must include both environmental, social and governance dimensions, and not only sustainability expertise.

Jeanjean and Stolowy (2009) found the determinants of directors' financial expertise to be two things: education and career history. We extend this to our study and assess board members' level of expertise based on their education and experience through career history.

To our knowledge, the measurement of ESG expertise in this study is unique and not done in previous research. We measure expertise as a total score, combined with the environmental and social dimensions of ESG and industry education. This makes it different from the expertise variable in Waterstraat et al. (2021). The reason for excluding the governance dimension is because the board of directors is composed to best meet the company's need for expertise, capacity, and diversity, according to the Code of Practice. This means that every company's board comprises experienced people with previous experience in management and board positions. Therefore, our assessment leads every company to have board members with governance expertise, and therefore not of use in our variable. In addition, we choose to not include financial expertise in our variable because Jizi et al. (2014) found that financial experts do not affect sustainability reporting.

As a result of the above, board expertise (BOARDEXP) is measured as a total score from three dimensions, from the value 0-3. If one or more of the board members are considered an expert within one of the dimensions, they score 1 point, making the value 3 represent a board with expertise on environmental and social factors and having relevant education within the company's industry. Data on the expertise of board members were collected manually from annual reports and company websites. Our criteria for assessing board members' expertise are:

- Environmental: Score 1 if one or more board members have either education or experience within the field of sustainability, renewable energy and resources, or other environmental fields
- Social: Score 1 if one or more board members have either education or experience within the field of human resources, social behaviour, or other related fields
- Industry education: Score 1 if one or more board members have relevant education in the company's industry

6.5 Control variables

To improve the accuracy of the regression model, we introduce control variables to counter the possibility of bias in our results. In line with previous research reviewed in this study, we identify the following most widely studied control variables that might impact the ESG rating:

- Firm size (SIZE) is measured as the natural logarithm of total assets at the end of the year. Larger firms are more likely to identify environmental issues as a separate management priority and manage it effectively (Al-Tuwaijri et al., 2004; McKendall et al., 1999).
- McKendall et al. (1999) find that profitable firms have better environmental performance because they are more likely to accommodate higher environmental compliance costs. Therefore, we control for profitability through return on assets (ROA)
- Clarkson et al. (2008) provide evidence of a positive association between debt levels and environmental disclosures and find better environmental performance in companies with higher leverage. We control for leverage (LEV) measured as total debt divided by total assets.
- Branco et al. (2014) find industry a determinant for deciding to have the sustainability report assured. Firms belonging to industries with more significant environmental or social impacts are more exposed to environmental or social risks. They need to manage these risks by having the sustainability report assured to increase user confidence in the credibility of the information disclosed. In addition, Belkhir, Bernard and Abdelgadir (2017) studied the different effect industry have on GRI reporting and sustainability improvement. Therefore, all regressions control for the industry effect by introducing six dummy variables for firms' industry (INDUSTRY): technology and telecommunication, health care, financials and real estate, consumer discretionary and consumer staples, industrials and basic materials, and energy and utilities.

7 Results

7.1 Descriptive statistics

Table 3 illustrates the descriptive statistics for both the dependent and independent variables. The table with descriptive statistics includes the mean, standard deviation, minimum and maximum. The average ESG rating for companies in the sample is 2,90, resulting in a C or C minus. This reveals that the companies' ESG performance from 2019 to 2021 was on an average level by the Governance Group's rating definition standards. The proportion of independent directors on the board reaches the adequate mean of 63% and a maximum level of 100%, which is in line with previous studies (Birindelli et al., 2018; Waterstraat et al., 2021). Board independence is a continuous variable from 0% to 100%. This shows that for some companies, all board members are considered independent.

Furthermore, the average score of board expertise is relatively low, with a value of 0,93. This indicates that most companies have at least one board member with expertise in environmental or social factors or education relevant to the company's industry. However, by the minimum value, we can see that some boards do not include any members with expertise according to our definition (the minimum value is equal to zero). The board size has an average of 7 members and a minimum of 3 members, which is in line with the Public Limited Liability Companies act §6-1 (1), stating every company must have at least three board members. The annual board meetings for the companies in our sample are, on average, 11 meetings per year, which is in line with Vitolla et al. (2020).

Table 3*: Descriptive statistics for the dependent and independent variable*

Variable	Observations	Mean	Standard deviation	Minimum	Maximum
ESG rating	342	2,90	1,541	0	5
Board size	342	1,932	0,31	1,098	2,833
Board independence	338	0,634	0,284	0	1
Board activity	302	2,344	0,503	1,1	3,932
Board expertise	342	0,93	0,728	0	3
Firm size	342	16,48	1,73	11,259	21,974
Return on assets	337	0,026	0,063	-0,093	0,123
Leverage	342	0,603	0,225	0,0000018	1,134
Industry	342	2,792	1,477	1	6

Finally, it is worth mentioning that the average ROA is low. During the years of our study (2019-2021), the Covid-19 pandemic was a significant factor in the world, affecting the economy of most companies in a challenging way.

7.2 Correlation results

We explore the relationship between corporate governance characteristics and ESG rating through a pair-wise correlation matrix shown in table 4. Harmful levels of multicollinearity should not exist until the correlation coefficient reaches ±0.9 (Farrar & Glauber, 1976). The correlation matrix has the highest correlation between firm size and board size. We, therefore, conclude there is no problem with multicollinearity in the analysis. Furthermore, the board size, expertise, and firm size are positively associated with ESG rating. These relationships indicate that larger companies tend to have more members on the board, and more members on the board are more likely to bring more expertise, which all positively affects ESG ratings. The size of the board is also positively associated with the number of board meetings, indicating that larger boards tend to meet more often.

Table 4*: Correlation matrix*

	ESGrating	BOARDSIZE	BOARDIND	BOARDACT	BOARDEXP	SIZE	ROA	LEV	INDUSTRY
ESGrating	1,0000								
BOARDSIZE	0,3790***	1,0000							
BOARDIND	-0,0840	-0,1422***	1,0000						
BOARDACT	-0,0390	0,2788***	0,0333	1,0000					
BOARDEXP	0,1886***	0,3752***	-0,0086	0,1560***	1,0000				
SIZE	0,4133***	0,4831***	-0,1394**	0,1157**	0,2936***	1,0000			
ROA	0,1292**	0,1271**	-0,1061*	-0,1310**	0,0345	0,0584	1,0000		
LEV	0,0856	0,2811***	-0,0634	0,2443***	0,0407	0,4377***	-0,0936*	1,0000	
INDUSTRY	-0,0271	0,0487	0,1884***	0,1845***	-0,0683	-0,241***	0,0830	-0,161***	1,0000

*** Significant at the 1% level.

** Significant at the 5% level.

* Significant at the 10% level.

7.3 Regression results

Table 5 illustrates the estimation results from the regression model, which can address the hypotheses relating to the impact of corporate governance characteristics on ESG rating. Results for hypothesis 1 are in the first column, with hypothesis 2 in the second, hypothesis 3 in the third and last hypothesis 4 in the fourth column. The R^2 in the models are around 0,30 which means the regression model explains about 30% of the variance in the dependent variable, which is in line with Vitolla et al. (2020) and de Villiers et al. (2011). The findings support Hypothesis 1 (H1), where we predicted a positive association between the size of the board and the ESG rating. Board size (BOARDSIZE) shows a positive and significant association with ESG rating (ESGrating) at p-value = 0,001 and the coefficient of BOARDSIZE = 1,006. This result suggests that more members on the board positively affect the company's ESG rating.

The findings do not support Hypothesis 2 (H2). Board independence (BOARDIND) shows a negative relationship with ESG rating (ESGrating), but not a significant one at p-value = 0,306 and coefficient BOARDIND = -0,302. A greater number of independent board members seem to affect the ESG rating negatively but remains insignificant and provides no support for our Hypothesis 2.

Additionally, board activity (BOARDACT) has a negative and insignificant relationship with the ESG rating (ESGrating), with the coefficient of BOARDACT = -0,726 and p-value = 0,657. This contradicts Hypothesis 3 (H3), where we predicted a positive association between board activity and ESG rating. The findings indicate that a greater number of board meetings during a year negatively affects the ESG rating, but the results are insignificant.

Finally, the results provide support for our Hypothesis 4 (H4), showing that board expertise (BOARDEXP) has a positive and significant association with ESG rating (ESGrating) with the coefficient BOARDEXP = 0,2907 and p-value = 0,007. This indicates that a higher level of board expertise, expressed by boards composed of board members with ESG expertise by our definition (e.g., the definition of ESG expertise under Independent variables), positively affects ESG rating.

For our control variables, the results show a positive and significant impact of the company's size (SIZE) on the ESG rating (ESGrating). Furthermore, return on assets (ROA) shows a positive impact on the company's ESG rating. At the same time, leverage (LEV) negatively impacts the ESG rating (ESGrating), but neither is significant for all independent variables. Finally, the last control variable controlled for is the industry effect (INDUSTRY). This indicates that larger companies obtain better ESG ratings, and a higher return on assets positively affects the ESG rating. In contrast, companies with a higher ratio between total debt and total assets are negatively associated.

Table 5: Pooled regression results

	ESGrating		ESGrating		ESGrating		ESGrating	
	Coeff.	t-stat.	Coeff.	t-stat.	Coeff.	t-stat.	Coeff.	t-stat.
BOARDSIZE	1,006***	3,50						
BOARDIND			-0,302	-1,03				
BOARDACT					-0,0726	-0,45		
BOARDEXP							0,2907***	2,73
SIZE	0,442***	7,36	0,5212***	9,24	0,5213***	9,26	0,4934***	8,71
ROA	1,715	1,37	1,9594	1,53	1,1798	0,88	2,0401	1,63
LEV	-0,6628*	-1,74	-0,5536	-1,42	-0,5689	-1,33	-0,3487	-0,91
Intercept	-5,84***	-6,69	-5,126***	-5,6	-5,014***	-5,29	-5,209***	-5,93
Industry effect	YES		YES		YES		YES	
R^2	0,329		0,2942		0,3154		0,3186	
N	342		342		342		342	

*** Significant at the 1% level.

** Significant at the 5% level.

* Significant at the 10% level.

8 Discussion

The association between corporate governance characteristics and ESG ratings is little explored in prior research. Our results provide new evidence of the relationship between board size, board independence, board activity, board expertise and ESG ratings. In interpreting our results, agency theory and institutional background are essential.

The ESG rating results from the Governance Group's evaluation of companies' ESG disclosures, which leads to assuming high-quality disclosures will result in a high ESG rating. From an agency theory perspective, disclosures represent a means to reduce information asymmetry, match the interests of managers and shareholders, and consequently reduce agency costs (Healy & Palepu, 2001). However, to materialise the above, the disclosures must disseminate high-quality information to provide a holistic view of the business management. In this regard, the monitoring and supervision of the managers' work from the board of directors is fundamental (Donnelly & Mulcahy, 2008). For the board to effectively carry out its role, it must have specific characteristics.

The first board characteristic we test is the size of the board. Our results show a positive and significant association between board size and ESG rating. A larger board involves a broader variety of skills and experience, favouring the monitoring function's efficiency (Gandía, 2008). Therefore, the number of board members must be assessed in line with the level of competence on the board to complete its tasks adequately. The Code of Practice section 8 also highlights that the board's composition should ensure the company's need for expertise and capacity (The Norwegian Corporate Governance Board, 2022). By the criteria of the Governance Group, we know that the rating assessment is based upon the disclosed information in the ESG report. Therefore, in line with agency theory, board size contributes to the board's monitoring role, leading to higher quality disclosures and a higher ESG rating.

Previous literature supports our findings, which also finds the effect of board size to be positive towards integrated reporting quality, ESG disclosure and ESG performance (Vitolla et al., 2020; de Villiers et al., 2011; Birindelli et al., 2018). Our study extends these studies to ESG ratings and provides evidence that larger boards positively impact a company's ESG rating.

The second board characteristic we test is the level of independent board members. The independence of board members is considered key to ensuring effective monitoring from the board (Ortas et al., 2017). In line with agency theory, an independent board of directors facilitates effective monitoring as they can remain more objective and reduce agency costs (Frias-Aceituno et al., 2013). In addition, independent board members are more likely to respond to a request for quality information, promoting disclosure of higher quality (García-Sanchez et al., 2011; Fama & Jensen, 1983). Based on the above and TGG's assessment of the ESG report providing an ESG rating, we assumed the board's independence to impact the ESG rating positively. However, our results show that board independence has a negative impact on ESG rating and an insignificant one.

Our results do not support the previous literature that finds the impact of board independence on similar subjects to be positive (Vitolla et al., 2020; Campanella et al., 2021; de Villiers et al., 2011; Arayssu et al., 2020). However, the results support the study of Birindelli et al. (2018), who found the impact of board independence on ESG performance negative. Birindelli et al. (2018) argue that an excessive number of independent board members is selfdefeating and leads to the decimation of expertise, which is a component of increasing sustainability performance. However, our results show the association to be insignificant. Therefore, our study contributes to previous literature by highlighting the insignificant relationship between board independence and ESG rating.

Furthermore, we test the association between board activity measured as the number of board meetings during the year and ESG rating. The activity of the board of directors is also connected to the monitoring ability of the board (Frias-Aceituno et al., 2013). Agency theory states that active boards disseminate information better, which will reduce information asymmetry and agency costs (Lipton & Lorsch, 1992; Kanagaretnam et al., 2007). In line with agency theory, a board with effective monitoring of the managers' work will lead to higher quality disclosures and, therefore, a higher ESG rating.

Contrary to the studies from Campanella et al. (2021) and Vitolla et al. (2020), our results indicate a negative association between board activity and ESG rating. However, our results show this association to be insignificant. The insignificant impact of board activity is supported by Birindelli et al. (2018) and Karamanou and Vafeas (2005), who finds the impact of board activity in relation to ESG performance and non-financial performance to be insignificant. One limitation with our board activity variable is missing values, which could explain the result being insignificant. Even though the Code of Practice states that companies are to report the number of board meetings in their annual report, many fail to do so. The evidence provided by our study shows the relationship between board activity and ESG rating to be insignificant.

Finally, we tested the association between board expertise and ESG rating. Our results show that a higher level of expertise on the board of directors has a positive and significant impact on ESG ratings. In order to make a significant contribution to strategy, the board must possess two categories of expertise: firm-specific knowledge and skills and general expertise (Rindova, 1999). Board member expertise is generally associated with a higher level of performance. It is likely to influence the extent of monitoring offered over sustainability-related issues and in line with agency theory, leading to greater quality in disclosures. The Code of Practice section 8 states that the board's composition should meet the company's need for expertise.

Our results have tested ESG expertise on the board of directors. Based on the above, this should lead to better ESG rating through greater quality in disclosed information concerning environmental, social and governance factors. The positive impact of board expertise is in line with the studies of Waterstraat et al. (2021) and Peters & Romi (2015). They provide evidence that board expertise was positively associated with ESG ratings and sustainability report assurance. Our study extends these studies and contributes new evidence that the level of ESG expertise on the board of directors has a positive relationship with the company's ESG rating.

Overall, our results provide new evidence on the relationship between corporate governance characteristics and ESG ratings, especially in the Norwegian market. The characteristics of the board, referring to size and expertise, favour greater ESG performance and rating, while board activity and independence show no significant effect. The Norwegian Code of Practice presents clear recommendations for the board's composition. However, from collecting our data, we learned that some companies still fail to report quality information regarding board characteristics. However, we can see improvement in companies' annual reports during our time period, indicating companies wish to improve their disclosed information. In addition, the increased focus on sustainability from stakeholders indicates the interest in the ESG ratings from the Governance Group. This may lead companies and shareholders to view ESG ratings as an element of competitive advantage.

9 Conclusion

This work has examined the effect of corporate governance characteristics on ESG ratings. Specifically, using agency theory, this study examines the effect of the board's size, independence, activity, and expertise as determinants of ESG rating. Discovering if these factors influence a company's ESG disclosure, which is the base of the Governance Groups assessment of ESG rating, represents insight into the importance of corporate governance. The analysis conducted on a sample of 122 Norwegian companies revealed that the board size and expertise positively impact the ESG rating collected by TGG's ESG100 report. In contrast, the independence and activity of the board are not significant.

This study contributes, in several ways, to extend the existing literature on the effect of corporate governance characteristics on ESG ratings, which are still little explored. In addition, to provide further evidence on corporate governance and ESG ratings, the study also broadens the scope of application of agency theory concerning the topic. Moreover, from a conceptual point of view, the study stimulates reflection on the potential effect of different characteristics of the board on the dissemination of information and disclosures. Finally, our evidence extends previous literature on similar subjects highlighted in the literature review (Vitolla et al., 2020; Birindelli et al., 2018; Arayssi et al., 2020; Waterstraat et al., 2021; Campanella et al., 2021).

The findings of this study have implications for corporate executives and high-level corporate governance bodies. First, the results suggest an additional motivation for identifying directors with expertise in environmental, social and governance functions. Our board expertise variable is, to our knowledge, measured by our criteria in a unique way not done in previous literature. This represents a contribution to how to measure ESG expertise and can encourage future research to extend our work to provide further evidence on board expertise. Our results indicate the importance of board size and expertise. Companies are encouraged to have a board composition favouring a higher ESG rating. Companies should appoint larger boards of directors with high, relevant expertise to perform better monitoring and support the development of high-quality disclosures. This would lead to a reduction in information asymmetry and agency costs.

However, this study has limitations. First, it does not consider the differences between countries regarding different institutional backgrounds and corporate governance systems. Another limitation is related to the time period of our data. The Governance Group has only published their annual ESG100 report evaluating companies' ESG reports for three years. It would be beneficial if reports for more years were available to increase our number of observations. Some of our variables are also limited by some missing values due to the annual reports we used to collect our data consisting of different quality. This is because some companies still fail to report according to the recommendations in the Code of Practice and do not disclose information considering our variables, especially about the number of board meetings and expertise.

These limitations may, however, represent a basis for future research. For example, future research may conduct a similar study using a more extensive sample across countries, considering if the difference in institutional background and corporate governance practice impacts ESG ratings. Studies may also conduct a more longitudinal study after the Governance Group publishes more reports, resulting in more observations to study the development over time better. Finally, future research can also analyse the impact of other board characteristics, such as the presence of foreign board members and their age.

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