Masteroppgave

NTNU
Norges teknisk-naturvitenskapelige universitet
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NTNU Handelshøyskolen

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The Impact of Corporate Governance Mechanisms on Non-Financial Disclosure Quality

Effects of Board Committees, Third-Party Assurance and Stakeholder Engagement

Masteroppgave i regnskap og revisjon
Veileder: Frode Kjærland
Medveileder: Seyed Mahmoud Hosseinniakani
Mai 2023

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Kunnskap for en bedre verden

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Abstract

Stronger corporate governance is found to be positively associated with higher-quality non-financial reporting. However, evidence on governance-based determinants for disclosure quality remains scarce. The purpose of this paper is therefore to provide insights into the effects of corporate governance mechanisms on non-financial disclosure quality by examining whether and how environmental- and social board committees, third-party assurance, and stakeholder engagement practices impact the extent and quality of non-financial disclosures.

Using a sample of 1,224 firm-year observations from Swedish listed firms over the period from 2013 to 2021, we extract linguistic features from annual reports using textual analysis to measure extent and quality of non-financial disclosures. The results of this study provide evidence that environmental- and social board committees, third-party assurance and stronger stakeholder engagement is positively associated with higher-quality non-financial reporting. The presence of environmental- and social committees is associated with more transparent disclosures. Similarly, third-party assurance contributes to increased reporting transparency. Stakeholder engagement is found to positively affect both the extent, transparency and complexity of non-financial disclosures.

Through the use of socio-political theories, we show that the implementation of corporate governance mechanisms signals stronger commitment towards stakeholders' information demands. This master thesis contributes to the understanding of the quality-enhancing effects of environmental- and social committees by illustrating how such committees act as determinants for the disclosure of non-financial information. Furthermore, we provide insights on the role of third-party assurance in enhancing non-financial reporting quality. Finally, we show that strong stakeholder engagement facilitates stronger dynamics that allow for effective dissemination of value-relevant information by increasing the extent and quality of non-financial disclosures.

Sammendrag

Sterkere foretaks- og eierstyring (*«corporate governance»*) er positivt assosiert med høyere kvalitet på ikke-finansiell rapportering, men lite er kjent om de spesifikke virkningene av ulike typer foretaksstyringsmekanismer. Formålet med denne masteroppgaven er derfor å belyse effektene av foretaksstyringsmekanismer på kvaliteten av ikke-finansiell rapportering gjennom å undersøke hvordan bærekraftkomiteer i styret, ekstern attestasjon og praksiser for involvering av interessenter påvirker omfanget og kvaliteten på ikke-finansiell rapportering.

Masteroppgaven benytter et utvalg av 1,224 observasjoner fra børsnoterte foretak i Sverige i perioden 2013 til 2021. Ved anvendelse av tekstanalyse drar vi ut lingvistiske egenskaper fra årsrapporter for å måle omfang og kvalitet av ikke-finansiell rapportering. Resultatene av denne studien finner støtte for at bærekraftkomiteer i styret, ekstern attestasjon og praksiser for involvering av interessenter er positivt assosiert med høyere rapporteringskvalitet på ikke-finansiell informasjon. Funnene i denne studien indikerer at eksistensen av bærekraftkomiteer er positivt assosiert med åpenhet i rapportering. På lignende måte bidrar ekstern attestasjon til høyere transparens. Involvering av interessenter påvirker positivt både omfang, kvalitet og kompleksitet i rapporteringen av ikke-finansiell informasjon.

Ved bruk av sosiopolitiske teorier finner vi støtte for at implementering av foretaksstyringsmekanismer signaliserer sterkere engasjement og forpliktelse til å møte interessenters økende informasjonsbehov. Denne masteroppgaven bidrar til å øke forståelsen av effektene bærekraftkomiteer har på rapporteringskvalitet ved å illustrere hvordan slike komiteer fungerer som forklaringsfaktorer for rapportering av ikke-finansiell informasjon. Videre belyser studien hvordan ekstern attestasjon hever rapporteringskvalitet på ikke-finansielle temaer. Til slutt viser studien hvordan grundigere involvering av interessenter legger til rette for etablering av sterkere dynamikker som muliggjør effektiv spredning av verdirelevant informasjon ved å øke omfang og kvalitet på ikke-finansielle rapporter.

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"The content of this thesis is at the expense of the authors. NTNU does not have any responsibility for the view or content in this thesis."

Trondheim, May 2023

Paul Einar Giskås and Anneli Kalliainen Kyrrø

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1 Introduction

Organizations are accountable towards a wide range of stakeholders and depend on the stakeholders' continued support to ensure long-term survival and success. In exchange for their support, stakeholders demand that firms prepare transparent corporate disclosures that provide credible and reliable non-financial information. To strengthen corporate accountability, firms can adopt voluntary corporate governance mechanisms that could enhance the transparency and quality of non-financial reporting. For instance, firms may choose to delegate specific responsibilities to board committees tasked with environmental- and social matters (Rodrigue et al., 2013); firms may seek third-party assurance on non-financial disclosures to enhance credibility (Simnett et al., 2009); and firms may implement and disclose stakeholder engagement practices to maintain and strengthen stakeholder support (Thomson & Bebbington, 2005). The purpose of this study is therefore to investigate the impact of these voluntary corporate governance mechanisms on the extent and quality of non-financial disclosures.

The quality and credibility of non-financial reporting has been criticized due to the lack of standardized mandatory non-financial reporting frameworks (Muslu et al., 2019; Sethi et al., 2017), which could enable firms to opportunistically disclose more favorable environmental- and social aspects in order to legitimize their activities (Christensen et al., 2021; Healy & Palepu, 2001; Mishra & Modi, 2013). Stronger corporate governance is found to positively affect non-financial disclosure quality (Gao et al., 2016), indicating that corporate governance mechanisms constrain managements' ability to engage in opportunistic reporting behavior (Lee & Park, 2019). However, disclosure quality is considered a complex and multi-dimensional concept (Beattie et al., 2004), and its conceptual properties is not strictly defined in the literature. Non-financial disclosures provide quantitative and qualitative information about the firm's economic performance, governance, and CSR activities (Cohen et al., 2015) intended to reflect the firm's behavior and accountability towards broader groups of stakeholders, suggesting that the aim of non-financial reporting is to provide transparency. The impact of voluntary corporate governance mechanisms is arguably understudied in the non-financial disclosure quality literature, emphasizing the importance of examining how such mechanisms affect the extent and quality of non-financial reporting.

Considering that firms rely on the continued support of their stakeholders to remain competitive, stakeholders must perceive firms as legitimate, otherwise their support would deteriorate (Ashforth & Gibbs, 1990). Socio-political theories are found to explain how and why firms engage in various activities to enhance corporate legitimacy (Bear et al., 2010; Rao

& Tilt, 2016) and therefore provide powerful tools to examine the credibility and reliability of non-financial reporting. Ashforth & Gibbs (1990) argue that firms can enhance their reputation either through signaling substantive action, or by attempting to symbolically legitimize themselves through self-serving initiatives. In this regard, the voluntary adoption of corporate governance mechanisms may be signals of actual commitment and responsiveness, or they may be mere tokens to portray action without substance.

Prior research indicates that increased stakeholder demand for non-financial information affect the relationship between the firm and its stakeholders, in effect pressuring board of directors towards more proactive roles to enhance disclosure quality (Hung, 2011). Firms might establish environmental- and social board committees to inform and balance the information needs of multiple stakeholder groups (Rodrigue et al., 2013) which ultimately affects the information contents of non-financial disclosures. Third-party assurance is assumed to complement non-financial disclosure quality (Muslu et al., 2019), as disclosures being subject to external assurance are expected to be of higher quality and credibility (Global Reporting Initiative, 2013; Simnett et al., 2009). To enhance disclosure reliability, firms may adopt stakeholder engagement practices that allows for the inclusion of stakeholders' views and concerns in matters relating to corporate social responsibility (CSR) and related non-financial reporting (Ardiana, 2023; Herremans et al., 2016). Considering that environmental- and social responsibilities is within the scope of corporate governance (Donnelly & Mulcahy, 2008), the voluntary adoption of environmental- and social board committees, third-party assurance and stakeholder engagement practices is likely impact non-financial disclosure quality.

To examine the effects of corporate governance mechanisms on non-financial reporting quality, we employ a sample of 1,224 firm-year observations of Swedish listed firms over the period from 2013 to 2021, and define the scope of non-financial information following Cohen et al. (2015) to include narratives on economic performance, firm governance and CSR found in corporate annual reports. Following prior studies (e.g., Muslu et al., 2019) we consider disclosure quality as the transparency of disclosures in corporate non-financial narratives and utilize computer-based textual analysis to extract linguistic features that capture the extent, quality and complexity of non-financial disclosures. In additional analyses, we examine whether the introduction of the Non-Financial Reporting Directive (NFRD) (2014/95/EU) in the European Union (EU) complement or substitute the impact of voluntary corporate

governance mechanisms in voluntary versus mandatory reporting environments (Becher & Frye, 2011; Samani et al., 2023).[1]

Overall, the results of this study suggest that the presence of voluntary corporate governance mechanisms impact the quality of non-financial disclosures. The findings indicate that environmental- and social board committees are positively associated with higher-quality non-financial reporting, which extends extant literature (Peters & Romi, 2015; Rodrigue et al., 2013) by providing alternative explanations for the presence of such committees. Similarly, third-party assurance is positively associated with higher disclosure quality, providing further support that external assurance complements non-financial disclosure quality (Muslu et al., 2019). Stakeholder engagement is found to overall increase the extent and quality of non-financial disclosures, suggesting that the engagement of stakeholders have a substantive effect on disclosure quality. Additional analyses show that the impact of environmental- and social board committees is most prominent before the introduction of NFRD, while the opposite relationship seems to be true for third-party assurance. These findings suggest that regulation substitutes and complements governance, respectively.

This study contributes to the literature on non-financial disclosure in several ways. First, we expand on the findings of Gao et al. (2016) and extend the understanding of the role environmental- and social board committees play as a corporate governance mechanism (Peters & Romi, 2015; Rodrigue et al., 2013) by illustrating how such committees act as determinants for non-financial disclosure quality. Second, we provide support to the assumption that third-party assurance complements disclosure quality (Muslu et al., 2019). In addition, we replicate the hypothesis that assurance can affect corporate non-financial reporting utilizing updated data as well as providing evidence of before and after the introduction of NFRD. Third, we provide evidence that stronger stakeholder engagement affects the extent and quality of non-financial disclosures, arguing that stakeholder engagement facilitates stronger dynamics that allow for effective dissemination of value-relevant information from both parties (Thomson & Bebbington, 2005). Taken together, these findings have important implications for corporate leaders, regulators, investors, assurance providers and academic researchers.

The remainder of this study is structured as follows. Section two provide a description of the institutional background, while section three describes the theoretical framework and

[1] The objective of the NFRD is to increase relevance, consistency, and comparability in non-financial disclosures. After 2017, compliance with the NFRD is mandatory for large companies that meets two out of three threshold values; net turnover (> *€40M*), number of employees (> *500*), and total assets on the balance sheet (> *€20M*) (European Commission, 2013, 2014).

review the literature in order to develop the hypotheses. Section four provides information on the data sample and describes the research methodology. Section five presents the results of statistical analyses, while section six discusses the findings. Finally, section seven deliver concluding remarks and suggests avenues for future research.

2 Institutional background

Swedish firms were early adopters of voluntary non-financial reporting, and global surveys find that roughly 80% of Swedish listed firms voluntarily disclose non-financial information (KPMG, 2013, 2015). Because Sweden is generally considered a stakeholder-oriented country, the opinions and concerns of stakeholders are expected to play a more important role in the governance of companies than it otherwise would in a shareholder-oriented country (Dhaliwal et al., 2012; Gao et al., 2016).

Non-financial reporting in Sweden has been subject to requirements regarding disclosures on corporate governance for the last 15 years. From 2008 onwards, the Swedish Code of Corporate Governance ("The Code") requires firms to disclosure their corporate governance practices including board compositions and -committees (The Swedish Corporate Governance Board, 2008), which provides significant insights into the corporate governance functions in the firm. One of the main objectives of The Code is to enhance transparency towards stakeholders in general and shareholders in particular, which could ultimately affect the disclosure quality and the narratives of non-financial information. The introduction of The Accounting Directive (2013/34/EU) in 2013 mandated additional requirements to disclose corporate governance statements (European Commission, 2013).

Before the implementation of the NFRD in 2017, there were no mandatory guidelines for external CSR reporting in Sweden (Samani et al., 2023, p. 4). However, Swedish firms are in the top globally when it comes to referencing Global Reporting Initiative (GRI) guidelines in CSR reporting (KPMG, 2013, 2015), indicating that non-financial reporting has long been of great importance for Swedish companies. Korca et al. (2021) argue that extant literature (e.g., Deegan, 2002) have acknowledged the importance of mandatory reporting in enhancing non-financial disclosure quantity and quality. From the firm's perspective, the implementation of the NFRD therefore represents an exogenous shock as it alters the environment for non-financial reporting.

The NFRD incorporate greater precision in terms of its requirements (Korca et al., 2021), and while the Directive does not give detailed descriptions on how to report on non-financial information, it encourages the adoption of board committees tasked with transparency matters, effective stakeholder engagement and independent external assurance (European Commission, 2017). Compared to the criteria set out by the NFRD, Swedish legislation sets lower threshold values for net turnover (> *SEK 350M*), number of employees (> *250*), and total assets on the balance sheet (> *SEK 175M*). Companies mandated to follow the NFRD through

the Swedish Annual Account Act (SFS 2016:947) are obligated to provide information on a broad set of subjects including, but not limited to, sustainability practices concerning environmental protection, social responsibility and treatment of employees, respect for human rights, anti-corruption and bribery, and diversity on corporate boards (European Commission, 2014), and is generally subject to the *comply-or-explain* and *safe-harbor* principles (CSR Europe, 2018).

All things considered, the Swedish setting is likely to take a stronger role in implementing sustainability committees, third-party assurance and stakeholder engagement practices due to its stakeholder-orientation and long traditions for corporate governance- and sustainability reporting, and therefore constitute an ideal research setting to examine the impact of corporate governance on non-financial disclosure quality.

3 Literature review and hypothesis development

3.1 Theoretical framework

Stakeholders demand that firms provide non-financial information on environmental-, social-, and governance (ESG) performance to hold the firm accountable for its actions. To this end, the voluntary adoption of corporate governance mechanisms such as environmental- and social board committees, third-party assurance, and stakeholder engagement practices portrays the organization as proactive towards corporate responsibility concerns. While it is generally asserted the firms seek to reduce information asymmetry through the use of voluntary non-financial disclosures (Clarkson et al., 2008; Healy & Palepu, 2001), the voluntary nature of non-financial disclosure practices suggest that the benefits of providing disclosures outweigh its costs. Managements' decision to voluntarily disclose non-financial information is therefore assumed to reduce information asymmetries that originates from the separation of ownership and management (Healy & Palepu, 2001; Moser & Martin, 2012) by signaling their concern and responsiveness to relevant stakeholders.

Signaling theory build on the concept of information asymmetry, and assume that firms provide voluntary disclosure as a means to signal their commitment to economic-, environmental-, and social concerns (Campbell et al., 2001). Corporate governance characteristics is found to signal stronger commitment to corporate social responsibility activities (Bear et al., 2010), and the voluntary adoption of governance mechanisms is therefore assumed signal a stronger commitment to provide reliable and credible non-financial information to stakeholders. In the signaling perspective, the adoption of such mechanisms therefore represents a substantive approach towards increased accountability which could impact the transparency and quality of non-financial disclosures (Ashforth & Gibbs, 1990).

However, recent evidence on disclosure quality suggest that non-financial disclosures are mostly ceremonial and symbolic in nature (Ruiz-Lozano et al., 2022), which suggest that managers utilize voluntary disclosure to legitimize their activities through self-serving narratives (Ashforth & Gibbs, 1990; Clarkson et al., 2008; O'Donovan, 2002). Ashforth & Gibbs (1990) assert that management might symbolically portray themselves as committed to environmental- and social concerns in order to appear legitimate. O'Donovan (2002) find that the decision to voluntarily disclose environmental- and social information in the annual report is associated with the aim of maintaining corporate legitimacy, suggesting that voluntary disclosure is utilized to justify the organizations role in the social system (Ashforth & Gibbs,

1990). To this end, firms might take advantage of self-serving disclosures to maintain their current operating conditions in order to reduce future political costs related to compliance with potential regulatory changes (Gamerschlag et al., 2011).

Regulation is assumed to reduce information asymmetry (Healy & Palepu, 2001), and recent research on economic and behavioral consequences of CSR reporting regulation have found that the implementation of regulation lead to an increase in reporting extent while reporting quality generally remains low (Haji et al., 2023). Ottenstein et al. (2022) provides evidence that listed firms in the EU provide longer sustainability reports and are more likely to seek third-party assurance after the introduction of NFRD. All things considered; firms might therefore utilize voluntary governance mechanisms as self-serving devices create the appearance of legitimate concern without actual substance.

The provision of corporate disclosures serves as a mechanism to appease the information needs for various stakeholder groups, and stakeholder theory is a useful framework for examining the integration of stakeholders' information demand in non-financial reports. Prior research argue that directors on the board view stakeholders differently depending on their occupation and dependency towards the company and/or shareholders (Wang & Dewhirst, 1992). Board structures and compositions is therefore assumed to play an important role in the governance and management of stakeholder relationships. The managerial perspective of stakeholder theory emphasizes the need to *"manage"* stakeholder groups that are deemed *"powerful"* and *"legitimate"* because of their ability to control resources that are critical for the firm's operations (Deegan, 2002). As such, the managerial perspective represents the operationalization of stakeholder salience, which argue that firms – due to inherent characteristics – face different levels of power, legitimacy and urgency (Gamerschlag et al., 2011; Mitchell et al., 1997). The managerial stakeholder perspective therefore indicate that firms are strongly incentivized to disclose information about various programs and initiatives to indicate that they are conforming to stakeholders' expectations (Deegan, 2002), suggesting that stakeholder engagement serves as a means to achieve organizational objectives (Sciulli & Adhariani, 2022).

3.2 Hypothesis development

The implementation of the NFRD extend firms' accountability to a wider range of stakeholders (European Commission, 2017), and since the Board of Directors is responsible for the firm's governance (Adams et al., 2010), it is argued that the environmental- and social responsibility

is within the scope of corporate governance (Donnelly & Mulcahy, 2008; Rodrigue et al., 2013), and to that effect, the Board of Directors become responsible for non-financial reporting (Rao & Tilt, 2016). Gao et al. (2016) provide evidence that suggest stronger corporate governance is associated with higher-quality non-financial reporting, which indicate that both the advising and monitoring roles of the board contribute to reduced information asymmetry through more transparent non-financial disclosures (Mallin et al., 2013; Rao & Tilt, 2016).

In their roles as directors, board members act as formal links between shareholders, non-investor stakeholders and the organization's management, and as such, board members have an inherent responsibility towards not only the organizations shareholders, but also towards a wider groups of non-financial stakeholders (Hung, 2011). Prior research finds that more diverse and independent boards are more conscious of this responsibility (Bear et al., 2010; Harjoto et al., 2015), arguing that diversity and independence contribute to broader and more substantive board-room discussions (Rao & Tilt, 2016). To this end, prior research argues that regulation and corporate governance mechanisms may act as compliments (Becher & Frye, 2011), asserting that regulation may enhance the strength of existing corporate governance resources (Samani et al., 2023). This study therefore argues that, within the broader scope of accountability imposed by regulation, corporate governance mechanisms and board composition influence the transparency and quality of non-financial reporting.

Corporate governance mechanisms have been shown to limit management's ability to opportunistically manipulate discretionary narrative disclosures (Lee & Park, 2019; Samani et al., 2023). Given that board committees tasked with environmental- and social matters are assumed to be both advisors and monitors of management (Mallin et al., 2013), the formation of an environmental- and social committee on the board of directors is assumed to be associated with increased governance costs which suggest the implementation of such committees is a means to signal responsiveness to stakeholders' concern. Legitimacy-based arguments suggest that the formation of environmental- and social committees act as symbolic tokens to create the appearance of responsiveness. Rodrigue et al. (2013) find no significant association between the presence of environmental committees and environmental performance. Similarly, Peters & Romi (2015) find no association between the presence of sustainability committees and CSR reporting assurance. On the other hand, stakeholder-based arguments suggest that firms whose board of directors have an environmental- and social committee is more likely to inform their stakeholders of environmental- and social commitments because firms rely on active management of stakeholders' concerns in order to stay competitive. In a stakeholder-oriented environment, such committees is therefore assumed to act in the best interests of the

stakeholders and is expected to play an important role in balancing the interests of multiple stakeholder groups (Gao et al., 2016; Harjoto et al., 2015). Thus, the presence of an environmental- and social board committee is expected to enhance transparency and disclosure quality in order to reduce information asymmetry, as summarized in the following hypothesis:

- **H1:** *"The presence of an environmental- and social board committee is positively associated with the extent and quality of non-financial disclosure"*.

Third-party assurance on non-financial disclosures can be explained as an external governance mechanism utilized to increase reporting credibility. Extant literature argues that the assurance of CSR reports represents a symbolic practice that do not contribute to higher non-financial disclosure quality, indicating that the assurance decision is mainly ceremonial and made for legitimization purposes (Michelon et al., 2015). Nonetheless, prior research has found that users of non-financial information prefer disclosures made credible through assurance (Cohen et al., 2015), which suggest that assurance serves as a signaling device to communicate the credibility of the information disclosed. This assertion is substantiated by Simnett et al. (2009), who provide evidence that firms with greater need for credibility voluntarily purchase assurance for such reports. Muslu et al. (2019) provide evidence that sustainability assurance complements sustainability reporting quality in improving analyst forecast accuracy, and taken together, these arguments suggest that third-party assurance is positively linked to non-financial disclosure quality. We therefore hypothesize the following relationship:

- **H2:** *"Third-party assurance is positively associated with the extent and quality of non-financial disclosure"*.

Stakeholder engagement is understood as *"practices the organization undertakes to involve stakeholders"* (Greenwood, 2007, p. 315) in which organizations employ a structured approach to consult key stakeholders on their needs and concerns (Thomson & Bebbington, 2005). Accountability is enhanced with the engagement of stakeholders, because such practices allows for the inclusion of stakeholders' views and concerns in matters relating to corporate social responsibility and related non-financial reporting, thereby contributing to more value-relevant and useful information (Ardiana, 2023). Research has argued that sustainability reporting, since its emergence, has been developed in response to rising stakeholder demands (Herremans et al., 2016; Maon et al., 2009), such that international standards on sustainability reporting require firms to engage with their stakeholders in order to prepare complete and useful documents for the intended users (AccountAbility, 2018; Global Reporting Initiative, 2013). Environmental-

and social activities should motivate companies to improve the relationships with their stakeholders (Muslu et al., 2019), and prior research has found that reporting processes serves as monitoring roles that enhances both corporate accountability and reporting quality (Christensen, 2016; Thomson & Bebbington, 2005).

An important distinction is made between stakeholder engagement and stakeholder management where the latter is described as *"the mere management of expectations of parties involved, designed to mitigate the various interests at stake"* (Manetti & Toccafondi, 2012, p. 365), which indicate an approach to suppress the concerns of stakeholders. The mere management of stakeholders is therefore expected to be associated with shorter, less transparent disclosures (Ardiana, 2023; Michelon et al., 2015), suggesting firms manage their stakeholders to legitimize their activities. Thus, stakeholder engagement represents an active process where the relationship between the firm and its stakeholders is characterized by the creation of dynamic and interactive networks of mutual insight and learning that facilitates the mitigation of information asymmetry (Manetti & Bellucci, 2016; Thomson & Bebbington, 2005). By engaging with stakeholders, firms can more easily identify issues that should be included in corporate reporting (Manetti, 2011), and signal actual commitment and responsiveness to stakeholders' concerns. As such, the stakeholder perspective suggests that higher stakeholder engagement should result in longer and more transparent non-financial narratives. In summary, we hypothesize the following relationship:

- **H3:** *"Stakeholder engagement is positively associated with the extent and quality of non-financial disclosures"*.

4 Research methodology

This study employs a data sample consisting of 1,224 firm-year observations from Swedish-listed firms over the period from 2013 to 2021. Sample selection criteria is presented in table 1. In the initial sample, 2,105 annual reports from firms listed on the Nasdaq OMX Stockholm Exchange were identified. Of these, 638 non-English annual reports were excluded from the sample. We remark that the exclusion of non-English reports could create potential self-selection concerns. Furthermore, 99 observations were removed due to missing financial- and market data in the Compustat and S&P Capital IQ databases. Finally, 144 observations were excluded based on their industrial membership in the Finance, Insurance and Banking sectors.

Table 1: Data sample and composition.

	Firm-year observations
Initial sample (number of annual reports identified):	2,105
(−) Non-English annual reports:	- 638
(−) Observations missing financial data in Compustat/S&P Capital IQ:	- 99
(−) Observations in financial sector (except real-estate):	- 144
Final sample:	1,224
Unique firms:	*134*

Table 2 presents description and sources for the variables employed in this study. Following prior disclosure quality studies (e.g., Lang & Stice-Lawrence, 2015; Muslu et al., 2019; Samani et al., 2023), we apply computer-based textual analysis to extract linguistic features that captures the extent, sentiments and complexity of corporate non-financial disclosures. The scope of non-financial disclosures is defined following Cohen et al. (2015), and the disclosures were extracted and analyzed using computer software. Corporate governance variables were manually collected from annual reports by the authors. Financial statement- and market data was collected from the Compustat and S&P Capital IQ databases.

Table 2: Variable definitions and sources.

Variable name:	Short name	Description:
NUMBER OF WORDS	**LOGWORDS**	Natural logarithm of number of words in corporate non-financial reports, winsorized at the 1% level.
POSITIVE TONE	**POSITIVE**	Natural logarithm of positive sentiments in corporate non-financial reports, winsorized at the 1% level [Loughran & McDonald, 2011].
NEGATIVE TONE	**NEGATIVE**	Natural logarithm of negative sentiments in corporate non-financial reports, winsorized at the 1% level [Loughran & McDonald, 2011].
UNCERTAIN TONE	**UNCERTAIN**	Natural logarithm of uncertain sentiments in corporate non-financial reports, winsorized at the 1% level [Loughran & McDonald, 2011].
VOCABULARY	**VOCABULARY**	Natural logarithm of unique words in corporate non-financial reports, winsorized at the 1% level [Loughran & McDonald, 2011].
ENVIRONMENTAL- AND SOCIAL COMMITTEE	**SUSCOM**	Dummy variable coded as 1 if the Board of Directors have environmental- and/or social committees, 0 otherwise [annual reports].
INDEPENDENT ASSURANCE	**ASSUR**	Dummy variable coded as 1 if corporate non-financial reports contain limited/reasonable sustainability assurance statements, 0 otherwise [annual reports].
STAKEHOLDER ENGAGEMENT	**STKENG**	Dummy variable coded as 1 if corporate non-financial reports exhibit strong stakeholder engagement disclosure, 0 otherwise [annual report].
BOARD SIZE	**BODSIZE**	Natural logarithm of the total number of board directors [annual reports].
BOARD INDEPENDENCE	**BODIND**	The ratio of independent board directors to total board directors [annual reports].
BOARD DIVERSITY	**BODGDR**	The ratio of female board directors to total board directors [annual reports].
GLOBAL REPORTING INITIATIVE	**GRI**	Dummy variable coded as 1 if corporate non-financial disclosures is prepared in accordance with GRI reporting guidelines, 0 otherwise [annual reports].
FIRM SIZE	**SIZE**	Natural logarithm of end-of-year total assets, winsorized at the 1% level [Compustat / S&P Capital IQ].
RETURN ON ASSETS	**ROA**	Net income divided by beginning-of-year total assets, winsorized at the 1% level [Compustat / S&P Capital IQ].
LEVERAGE	**LEV**	End-of-year total dept divided by end-of-year total assets, winsorized at the 1% level [Compustat / S&P Capital IQ].
MARKET/BOOK RATIO	**MTB**	End-of-year market capitalization divided by end-of-year book equity, winsorized at the 1% level [Compustat / S&P Capital IQ].
BLOCKHOLDERS	**OWNERSHIP**	Percentage of shares collectively held by shareholders with at least 5% share ownership, winsorized at the 1% level [Compustat / S&P Capital IQ].
FIRM AGE	**AGE**	Firm age defined as the difference between reporting- and registration year [Compustat / S&P Capital IQ].
INDUSTRY	**IND**	Industry dummy using major industry division from Standard Industrial Classification (SIC) [Compustat / S&P Capital IQ].
YEAR	**YEAR**	Year dummy representing reporting year [annual reports].

4.1 Multivariate regression models

In order to test the hypotheses, we employ multivariate regression analyses using ordinary least squares (OLS). To investigate how environmental- and social board committees (*Equation 1*), third-party assurance (*Equation 2*), and stakeholder engagement (*Equation 3*) affect the extent and quality of non-financial disclosures, the following OLS models are estimated:

$$D_var_{i,t} = \beta_0 + \beta_1 SUSCOM_{i,t} + \beta_i \sum Control_variables_{i,t} + \varepsilon \quad (1)$$

$$D_var_{i,t} = \beta_0 + \beta_1 ASSUR_{i,t} + \beta_i \sum Control_variables_{i,t} + \varepsilon \quad (2)$$

$$D_var_{i,t} = \beta_0 + \beta_1 STKENG_{i,t} + \beta_i \sum Control_variables_{i,t} + \varepsilon \quad (3)$$

To measure the extent and quality of non-financial disclosures, we use a set of disclosure variables represented by $D_var_{i,t}$ that is described in detail in the following section. Equations 1 through 3 reflect the hypotheses, where *SUSCOM*, *ASSUR* and *STKENG* represents variables of interest. A detailed description of control variables is given in section 4.4.

4.2 Disclosure variables

Computer-driven textual analysis is an emerging research methodology used to extract and capture contents of corporate disclosures. Following Loughran & McDonald (2016), we utilize textual analysis to capture the extent, sentiments and complexity of non-financial disclosures as proxies for quality. A primary dimension of higher-quality non-financial disclosures is likely to be the length of disclosure narratives (Beattie et al., 2004), as previous studies have suggested that longer disclosures indicate more informative, sufficient and transparent disclosures (Lang & Stice-Lawrence, 2015; Samani et al., 2023). Following Lang & Stice-Lawrence (2015), we measure the extent of disclosure as the natural logarithm of number of words contained in corporate non-financial disclosures (*LOGWORDS*).

Extant literature argues that the *tone* of disclosure sentiments reflect both conscious and unconscious choices by non-financial disclosure preparers (Clarkson et al., 2020), finding that both optimistic and pessimistic sentiments in financial narratives reflect future firm performance (Li, 2010; Loughran & McDonald, 2011; Muslu et al., 2019). For example, Cho et al. (2010) argue that poor environmental performers tend to disclose more positive sentiments, suggesting that positive tone is associated with self-serving legitimization attempts

(Cohen et al., 2015). On the other hand, more negative and uncertain sentiments is assumed to represent more transparent disclosures (Muslu et al., 2019), as prior literature have found that firms augment positive aspects and ignore negative aspects of CSR (Mishra & Modi, 2013). We measure positive (*POSITIVE*), negative (*NEGATIVE*), and uncertain (*UNCERTAIN*) sentiments using wordlists developed by Loughran & McDonald (2011). Similar to the extent measurement, sentiment variables are measured using the natural logarithm of the number of sentiments extracted from corporate non-financial disclosures.

However, transparency in non-financial narratives is likely to be obfuscated by disclosure readability and complexity. Loughran & McDonald (2014) suggest that lower readability indicate less transparent reports, while Christensen et al. (2021) argue that lower readability indicate increased disclosure complexity. To capture the complexity of disclosure, we employ the number of unique words (*VOCABULARY*) from Loughran & McDonald's (2011) master dictionary to proxy for complexity. In summary, higher-quality reporting is associated with longer and more pessimistic non-financial disclosures. All dependent variables are winsorized at the 1%-level to address the potential outlier problem.

4.3 Stakeholder engagement score

Stakeholder engagement is an inherently abstract corporate governance mechanism that is hard to objectively observe. Previous studies (e.g., Ardiana, 2023; Manetti, 2011) have developed stakeholder engagement disclosure indexes to examine how stakeholder engagement is embedded in sustainability reports. Following a similar approach to these studies, we construct a simplified stakeholder engagement disclosure metric (*STKENG*) based on the Global Reporting Initiative (GRI) G4 guidelines to classify stakeholder engagement as either weak or strong. The GRI guidelines is widely recognized as the global standard in CSR reporting (Ardiana, 2023; Moneva et al., 2006). The components of the stakeholder engagement index employed in this study is provided in table 3, and within each category, we use a binary rating to measure whether the engagement criteria are met or not.

It is assumed that detailed disclosures on stakeholder engagement holds firms accountable to their stakeholders (Ardiana, 2023), and that powerful groups of stakeholders will refute illegitimate assertions made by the firm (Bellucci et al., 2019). The GRI guidelines recommend that stakeholders are identified and engaged with, and subsequently that the outcomes of these engagement processes are disclosed in the sustainability report (Ardiana, 2023; Global Reporting Initiative, 2013). In contrast to Ardiana (2023) and Manetti (2011), the

stakeholder engagement disclosure index utilized in this study is constructed using fewer disclosure categories. We control for the informativeness in stakeholder disclosures by measuring the existence of a *"stakeholder engagement"*-section in the annual report. Nonetheless, the mere existence of such a section is considered insufficient to deliver complete and useful information (Ardiana, 2023; Manetti, 2011), and we therefore control for the presence of several categories of stakeholder engagement to construct a valid measurement instrument to assess the magnitude and intensity of stakeholder engagement practices.

Table 3: Stakeholder engagement disclosure index.

STAKEHOLDER SECTION	1 if an identifiable section of non-financial reporting has been devoted to stakeholder engagement or -dialogue, 0 otherwise.
STAKEHOLDER LIST	1 if non-financial reporting provides a list of stakeholders engaged by the organization, 0 otherwise (GRI G4-24).
STAKEHOLDER IDENTIFICATION	1 if the report disclose the basis for identification of stakeholders with whom to engage, 0 otherwise (GRI G4-25).
STAKEHOLDER SELECTION	1 if the report discloses the basis for selection of stakeholders with whom to engage, 0 otherwise (GRI G4-25).
STAKEHOLDER APPROACH	1 if the report discloses the approaches to engage with stakeholders, 0 otherwise (GRI G4-26).
STAKEHOLDER KEY TOPICS	1 if the report discloses key topics and concerns raised through stakeholder engagement, 0 otherwise (GRI G4-27).
STAKEHOLDER RESPOND	1 if the report discloses how the organization responds to key topics and concerns that have been raised through stakeholder engagement, 0 otherwise (GRI G4-27).
MATERIALITY ANALYSIS	1 if the report contains a section for materiality analysis and assessment, 0 otherwise.

4.4 Control variables

Firm- and governance specific characteristics are assumed to proxy for the level of external pressures from stakeholders (Gamerschlag et al., 2011; Samani et al., 2023), which is also assumed to affect the extent and quality of non-financial disclosures. Larger firms are likely to publish longer disclosures of higher quality to meet the information needs of broader groups of stakeholders, and we control for firm size (*SIZE*) using the natural logarithm of total assets (Sethi et al., 2017). More profitable firms invest more in environmental- and social initiatives (Harjoto et al., 2015), and firm profitability is measured using return on assets (*ROA*). More financially constrained firms are likely to engage in fewer environmental- and social initiatives (Mishra & Modi, 2013), which we control for by measuring financial leverage (*LEV*). Furthermore, we control for share liquidity using market-to-book ratio (*MTB*) and blockholder

ownership (*OWNERSHIP*), as less traded companies are likely make fewer disclosures. All financial control variables are winsorized at the 1%-level to address outliers.

In addition, several features of governance are found to affect CSR performance and disclosure. The adoption of GRI guidelines (*GRI*) signals an active commitment by the firm toward stakeholder demand for non-financial information (Prado-Lorenzo et al., 2009). Furthermore, board size (*BODSIZE*), -independence (*BODIND*) and -diversity (*BODGDR*) are characteristics found to affect the stakeholder-orientation of the board (Wang & Dewhirst, 1992). Finally, we control for year-fixed effects (*YEAR*) and industry membership (*IND*) using 1-digit SIC codes to classify industry affiliation.

5 Results and analyses

Table 4 presents descriptive statistics for the data sample employed in this study. The table show that the average extent of disclosure (*LOGWORDS*) is 10.063 with a range of 8.933 to 10.998 (*LOGWORDS*), which indicate that the amount of non-financial disclosure varies between firms. On average, non-financial disclosures contain more positive sentiments (*POSITIVE = 5.799*) than negative (*NEGATIVE = 5.297*) and uncertain (*UNCERTAIN = 5.214*) sentiments, indicating a tendency to disclose more positive aspects in non-financial narratives. Disclosure complexity (*VOCABULARY*) has an average value of 7.869 with a range of 7.206 to 8.334, suggesting some variation in the number of different topics covered in the annual report. Furthermore, the table show that 3.5% of the sample observations have environmental- and social committees on the board, and 15.4% of the firms' sustainability reporting were assured, while 37.2% of observations exhibit strong stakeholder engagement in their non-financial disclosures. The average board have 62.5% independent directors, and 30.6% female directors.

Table 4: Descriptive statistics.

	COUNT	MEAN	MEDIAN	STD	MIN	MAX
Disclosure variables						
LOGWORDS	1224	10,063	10,055	0,426	8,933	10,998
POSITIVE	1224	5,799	5,852	0,593	3,951	6,932
NEGATIVE	1224	5,297	5,321	0,584	3,714	6,569
UNCERTAIN	1224	5,214	5,201	0,541	3,689	6,48
VOCABULARY	1224	7,869	7,873	0,232	7,206	8,334
Variables of interest						
SUSCOM	1224	0,035	0	0,184	0	1
ASSUR	1224	0,154	0	0,361	0	1
STKENG	1224	0,372	0	0,483	0	1
Control variables						
BODSIZE	1224	2,075	2,079	0,314	1,099	2,833
BODIND	1224	0,625	0,625	0,218	0	1
BODGDR	1224	0,306	0,3	0,134	0	0,75
GRI	1224	0,441	0	0,497	0	1
SIZE_w	1224	8,604	8,492	1,882	4,595	12,554
ROA_w	1224	0,057	0,064	0,117	-0,505	0,384
LEV_w	1224	0,513	0,545	0,191	0,048	1,063
MTB_w	1224	3,32	2,54	2,883	0,362	17,044
OWNERSHIP	1224	29,128	27,415	19,587	0	86,013
AGE	1224	3,564	3,45	0,744	0	4,82

Table 5 presents Pearson correlation statistics for independent variables employed in this study. Overall, the correlations between test- and control variables show low levels of correlation,

with the exception of firm size (*SIZE*), which has higher correlations with assurance ($\rho = 0.479, p < 0.01$), stakeholder engagement ($\rho = 0.607, p < 0.01$), board size ($\rho = 0.580, p < 0.01$), the adoption of GRI guidelines ($\rho = 0.660, p < 0.01$) and firm age ($\rho = 0.552, p < 0.01$), indicating that larger, older firms have more board members, more frequently seek independent assurance and to a larger degree engage with their stakeholders. Overall, the correlations provide initial evidence into firm-specific characteristics that determine the strength of the corporate governance function, indicating that larger and more seasoned firms (i.e., *age*) institute stronger corporate governance mechanisms. The correlation results indicate that there is no concerns with multicollinearity in the sample.[2]

Table 5: Pearson correlation analysis of independent and control variables.

Variable:		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(12)	(13)
(1)	SUSCOM	--											
(2)	ASSUR	,202**	--										
(3)	STKENG	,147**	,423**	--									
(4)	BODSIZE	,114**	,345**	,282**	--								
(5)	BODIND	-,037	-,084**	-,122**	-,473**	--							
(6)	BODGDR	0,043	,114**	,209**	,110**	0,052	--						
(7)	GRI	,161**	,479**	,607**	,394**	-,181**	,270**	--					
(8)	SIZE	,187**	,515**	,489**	,580**	-,363**	,230**	,660**	--				
(9)	ROA	-,021	0,050	,141**	,091**	-,080**	,115**	,117**	,184**	--			
(10)	LEV	,159**	,072*	,187**	,242**	-,245**	0,031	,195**	,401**	-,016	--		
(11)	MTB	-,046	-,109**	-,056	-,039	,048	,027	-,110**	-,222**	,210**	-,082**	--	
(12)	OWNERSHIP	-,013	-,183**	-,185**	-,172**	-,063*	-,137**	-,200**	-,214**	-,135**	0,038	-,181**	--
(13)	AGE	,021	,397**	,252**	,505**	-,337**	,019	,302**	,552**	,069*	,159**	-,127**	-,084**

Two-tailed correlation. $N = 1{,}224$. * and ** represent significance below 0.05 and 0.01 levels, respectively.

[2] To assess the multicollinearity concern, Variance Inflation Factor (VIF)-tests were run on all variables, consistently reporting values below 3.

5.1 Environmental- and social board committees

Table 6 presents multivariate OLS regression results for first research model (*Equation 1*). Regression results indicate that the model has good explanatory power for all disclosure variables (*Adjusted* $R^2 > 0.450$). The findings show that the presence of an environmental- and social committee on the board of directors is positively associated with more negative (*SUSCOM = 0.1507, p < 0.05*) and uncertain (*SUSCOM = 0.1760, p < 0.05*) sentiments in non-financial disclosures. The significant coefficients indicate that board committees tasked with environmental- and social matters provide greater non-financial reporting transparency. The insignificant coefficients for extent, complexity and positive sentiment indicates that these committees do not contribute to the production of non-financial content.

Table 6: OLS regression results for model 1 (SUSCOM).

Variable name:	Logwords	Positive	Negative	Uncertain	Vocabulary
Intercept:	8,3286***	3,643***	3,2793***	3,4058***	6,9708***
	(75,521)	(21,833)	(19,917)	(21,675)	(112,31)
SUSCOM	0,025	-0,0386	**0,1507****	**0,176****	0,0157
	(0,522)	(-0,533)	**(2,106)**	**(2,576)**	(0,583)
BODSIZE	0,248***	0,2894***	0,3539***	0,2787***	0,1318***
	(6,567)	(5,064)	(6,276)	(5,18)	(6,2)
BODIND	0,1985***	0,1385**	0,2893***	0,1303**	0,1123***
	(4,51)	(2,079)	(4,402)	(2,077)	(4,534)
BODGDR	0,1232*	0,5083***	-0,064	-0,0338	0,1223***
	(1,909)	(5,207)	(-0,665)	(-0,368)	(3,368)
GRI	0,1721***	0,1756***	0,2175***	0,178***	0,0883***
	(7,596)	(5,123)	(6,433)	(5,516)	(6,924)
SIZE	0,1047***	0,1362***	0,1082***	0,1112***	0,0535***
	(12)	(10,313)	(8,306)	(8,943)	(10,888)
ROA	-0,1241*	0,0905	-0,5631***	-0,4713***	-0,0395
	(-1,704)	(0,822)	(-5,182)	(-4,544)	(-0,965)
LEV	-0,0727	0,0307	-0,0956	-0,0616	-0,0663**
	(-1,421)	(0,396)	(-1,252)	(-0,845)	(-2,305)
MTB	0,0154***	0,0247***	0,01**	0,0117***	0,0082***
	(4,998)	(5,3)	(2,175)	(2,664)	(4,733)
OWNERSHIP	0,0009*	0,0011	0,0011	-0,0005	0,0004
	(1,95)	(1,491)	(1,521)	(-0,737)	(1,586)
AGE	-0,0049	-0,0084	-0,0093	-0,0139	0,0041
	(-0,37)	(-0,422)	(-0,472)	(-0,744)	(0,56)
Industry effects:	Yes	Yes	Yes	Yes	Yes
Year effects:	Yes	Yes	Yes	Yes	Yes
N:	1224	1224	1224	1224	1224
Adjusted R^2:	0,588	0,511	0,509	0,480	0,559

*, ** and *** indicate statistically significant regression coefficients at 10%, 5%, and 1% levels. T-statistics is shown in parentheses. Variable of interest (*SUSCOM*) is coded as 1 if environmental- and social committees is present on the board of directors, 0 otherwise. Variable definitions is provided in table 2.

The results presented in table 6 give partial support for the first hypothesis and suggest that environmental- and social board committees do not produce non-financial disclosure content but serves as oversight over the contents in the report. In addition, we observe that board size (*BODSIZE*) and -independence (*BODIND*), firm size (*SIZE*), financial leverage (*LEV*), market-to-book ratio (*MTB*) and the application of GRI guidelines (*GRI*) is significantly associated with more negative and uncertain sentiments, while profitability *(ROA*) is significantly negative, indicating that larger and less profitable firms disclose more transparent non-financial narratives.

5.2 Third-party assurance

Table 7: OLS regression results for model 2 (ASSUR).

Variable	Logwords	Positive	Negative	Uncertain	Vocabulary
INTERCEPT	8,3745***	3,6107***	3,3832***	3,5171***	6,9859***
	(72,843)	(20,744)	(19,715)	(21,476)	(107,904)
ASSUR	0,0413	-0,0324	**0,1088*****	**0,119*****	0,0148
	(1,493)	(-0,775)	**(2,636)**	**(3,02)**	(0,95)
BODSIZE	0,2428***	0,2927***	0,3436***	0,2679***	0,1302***
	(6,403)	(5,099)	(6,069)	(4,959)	(6,097)
BODIND	0,1902***	0,145**	0,2675***	0,1063*	0,1094***
	(4,29)	(2,16)	(4,041)	(1,684)	(4,38)
BODGDR	0,1297**	0,5024***	-0,0433	-0,0106	0,1249***
	(2,009)	(5,142)	(-0,449)	(-0,116)	(3,437)
GRI	0,1665***	0,1794***	0,2051***	0,1648***	0,0865***
	(7,247)	(5,159)	(5,981)	(5,034)	(6,682)
SIZE	0,102***	0,1381***	0,1019***	0,1044***	0,0526***
	(11,429)	(10,219)	(7,649)	(8,211)	(10,458)
ROA	-0,12*	0,0889	-0,5594***	-0,4681***	-0,0386
	(-1,65)	(0,807)	(-5,152)	(-4,518)	(-0,943)
LEV	-0,0609	0,0197	-0,0569	-0,0182	-0,0615**
	(-1,187)	(0,253)	(-0,742)	(-0,249)	(-2,129)
MTB	0,0154***	0,0246***	0,0104**	0,0121***	0,0082***
	(5,019)	(5,289)	(2,26)	(2,77)	(4,76)
OWNERSHIP	0,001**	0,001	0,0011	-0,0004	0,0004
	(2,023)	(1,458)	(1,619)	(-0,628)	(1,625)
AGE	-0,0076	-0,0061	-0,0173	-0,0228	0,0031
	(-0,576)	(-0,302)	(-0,876)	(-1,211)	(0,414)
Industry effects:	Yes	Yes	Yes	Yes	Yes
Year effects:	Yes	Yes	Yes	Yes	Yes
N:	1224	1224	1224	1224	1224
Adjusted R^2:	0,588	0,511	0,51	0,481	0,559

*, ** and *** indicate statistically significant regression coefficients at 10%, 5%, and 1% levels. T-statistics is shown in parentheses. Variable of interest (*ASSUR*) is coded as 1 if the firm's sustainability report is subject to limited/reasonable assurance, 0 otherwise. Variable definitions is provided in table 2.

Table 7 shows multivariate regression results for research model 2 (*Equation 2*). The results show that independently assured non-financial reporting is positively associated with more negative (*ASSUR* $= 0.1088, p < 0.01$) and uncertain (*ASSUR* $= 0.1190, p < 0.01$) sentiments, suggesting that third-party assurance enhances non-financial disclosure transparency. The coefficients for the effect of third-party assurance on the extent, positive sentiments and complexity is statistically insignificant, indicating that assurance processes mainly enhances negative and uncertain aspects of the disclosure, thereby increasing transparency. The regression results partially support *hypothesis 2*. The effects of the control variables are qualitatively similar to those found in table 6.

5.3 Stakeholder engagement

Table 8 provide multivariate regression results for the third research model (*Equation 3*) and show that stronger stakeholder engagement is positively associated with the extent (*STKENG* $= 0.0791, p < 0.01$) and complexity (*STKENG* $= 0.0333, p < 0.01$) of disclosures, indicating that stronger stakeholder engagement contributes to more disclosure on a wider variety of topics. Furthermore, strong stakeholder engagement is also found to be significantly associated with more positive (*STKENG* $= 0.0613, p < 0.10$), negative (*STKENG* $= 0.0952, p < 0.01$), and uncertain sentiments (*STKENG* $= 0.1029, p < 0.01$), generally supporting *hypothesis 3*. While the increase in number of positive sentiments could imply legitimization attempts, the significant increase can also be explained in connection with the increase in extent and complexity. All things considered, these results suggest that the engagement of stakeholders impact the diversity in topics covered in corporate non-financial disclosures, which results in longer and more transparent disclosures. In addition, board size and -independence, firm size, market-to-book ratio, and compliance with GRI guidelines are positively associated with all disclosure variables, while board gender diversity is significantly associated with the increased extent, complexity, and number of positive sentiments.

Table 8: OLS regression results for model 3 (STKENG).

Variable	Logwords	Positive	Negative	Uncertain	Vocabulary
INTERCEPT	8,3352***	3,66***	3,2627***	3,3852***	6,9726***
	(76,263)	(22,042)	(19,921)	(21,66)	(113,069)
STKENG	**0,0791*** **	**0,0613* **	**0,0952*** **	**0,1029*** **	**0,0333*** **
	(3,661)	**(1,868)**	**(2,939)**	**(3,331)**	**(2,73)**
BODSIZE	0,2461***	0,2856***	0,3565***	0,2821***	0,1312***
	(6,559)	(5,01)	(6,339)	(5,257)	(6,198)
BODIND	0,1949***	0,1356**	0,2851***	0,1257**	0,1108***
	(4,451)	(2,039)	(4,345)	(2,007)	(4,485)
BODGDR	0,1236*	0,5062***	-0,0584	-0,0271	0,1227***
	(1,927)	(5,195)	(-0,607)	(-0,296)	(3,391)
GRI	0,1358***	0,146***	0,1771***	0,1346***	0,0732***
	(5,509)	(3,898)	(4,793)	(3,818)	(5,26)
SIZE	0,1039***	0,135***	0,1084***	0,1115***	0,0532***
	(11,979)	(10,244)	(8,338)	(8,989)	(10,867)
ROA	-0,1465**	0,0779	-0,6***	-0,5123***	-0,0494
	(-2,02)	(0,708)	(-5,523)	(-4,942)	(-1,207)
LEV	-0,0816	0,0184	-0,0952	-0,06	-0,0696**
	(-1,606)	(0,239)	(-1,252)	(-0,826)	(-2,43)
MTB	0,0155***	0,0246***	0,0106**	0,0123***	0,0083***
	(5,073)	(5,294)	(2,302)	(2,819)	(4,794)
OWNERSHIP	0,0011**	0,0012*	0,0012*	-0,0004	0,0005*
	(2,241)	(1,657)	(1,703)	(-0,533)	(1,795)
AGE	-0,0063	-0,009	-0,0121	-0,0171	0,0035
	(-0,484)	(-0,454)	(-0,619)	(-0,917)	(0,471)
Industry effects:	Yes	Yes	Yes	Yes	Yes
Year effects:	Yes	Yes	Yes	Yes	Yes
N:	1224	1224	1224	1224	1224
Adjusted R^2:	0,592	0,512	0,511	0,482	0,561

*, ** and *** indicate statistically significant regression coefficients at 10%, 5%, and 1% levels. T-statistics is shown in parentheses. Variable of interest (*STKENG*) is coded as 1 if the level of stakeholder engagement is classified as "strong" based on the stakeholder engagement disclosure index, 0 otherwise.

5.4 Additional analyses

Governance-based determinants of non-financial disclosure quality is of particular interest to regulators following the debate of whether regulation substitute of complement corporate governance (e.g., Becher & Frye, 2011; Samani et al., 2023). The implementation of the NFRD represents a regulatory first step in the European Union to satisfy stakeholder demand for transparent non-financial information. In the additional analyses, we split the data sample into two sub-samples consisting of observations before (*2013 - 2016*) and after (*2017 - 2021*) the introduction of NFRD and re-estimate the multivariate regression models to examine the effects of corporate governance mechanisms in a voluntary versus mandatory reporting environment. Tables 9 to 11 provided in appendix 1 presents the multivariate regression results.

Regression results show that the presence of environmental- and social committees on the board is positively associated with number of words (*SUSCOM* $= 0.2581$, $p < 0.01$), negative (*SUSCOM* $= 0.3898$, $p < 0.01$) and uncertain (*SUSCOM* $= 0.4364$, $p < 0.01$) sentiments, and more complex disclosures (*SUSCOM* $= 0.1372$, $p < 0.05$) before the NFRD was implemented in 2017. However, after the implementation there is no evidence to supports the assumption that such committees provide quality-enhancing properties to non-financial disclosures, indicating that the NFRD substitutes the impacts of environmental- and social board committees on disclosure quality.

Regression analyses show that third-party assurance on non-financial disclosures significantly reduces the number of positive sentiments (*ASSUR* $= -0.1867$, $p < 0.05$) before the implementation of the NFRD. After the implementation, third-party assurance is positively associated with an increase in disclosure extent (*ASSUR* $= 0.0760$, $p < 0.05$) in addition to a positive and significant increase in negative (*ASSUR* $= 0.1527$, $p < 0.01$) and uncertain (*ASSUR* $= 0.1717$, $p < 0.01$) sentiments. Furthermore, third-party assurance increases disclosure complexity (*ASSUR* $= 0.0387$, $p < 0.01$), indicating that assurance complements regulation and provide additional credibility to corporate non-financial disclosures.

Stakeholder engagement is found to significantly increase the extent of non-financial reporting both before (*STKENG* $= 0.1095$, $p < 0.01$) and after (*STKENG* $= 0.0681$, $p < 0.01$) the implementation of the NFRD. Furthermore, strong stakeholder engagement is consistently associated with more complex and transparent non-financial disclosures, indicating that stronger stakeholder engagement contributes to higher-quality disclosures that covers a wider variety of topics, consistent with the findings in the main analyses.

6 Discussion

We investigate whether and how environmental- and social board committees, third-party assurance, and stakeholder engagement practices affect the extent and quality of non-financial reporting. The results of statistical analyses support the assumption that stronger corporate governance has a positive impact on non-financial disclosure quality (Gao et al., 2016), and the findings indicate that the implementation of voluntary corporate governance mechanisms enhance the extent and quality of non-financial reporting.

The relatively low occurrence of environmental- and social board committees can be explained by the adversity towards increased governance costs, indicating that firms generally does not perceive such committees as beneficial. The findings show that the presence of environmental- and social board committees is partially associated with higher-quality disclosures, which suggest that the presence of environmental- and social board committees reduce information asymmetry. These results complements the findings of Rodrigue et al. (2013) by illustrating that the activities of environmental- and social board committees affect non-financial reporting quality. This is consistent with the arguments made by Peters & Romi (2015), and implies that such committees act as monitors on behalf of the stakeholders rather than management advisors in environmental- and social matters. One explanation to this finding is that environmental- and social board committees act as agents towards powerful and legitimate stakeholder groups by aligning the interests of multiple stakeholders, thereby affecting the transparency in non-financial reports by constraining management's ability to opportunistically manipulate narrative disclosures (Lee & Park, 2019; Samani et al., 2023).

Additional analyses provide further insights into the effects of environmental- and social board committees in a voluntary versus mandatory setting. While such committees increase both the extent and quality of non-financial disclosures in a voluntary reporting environment, the implementation and mandatory reporting requirements of NFRD mitigate these quality-enhancing effects. These findings suggest that the requirements of NFRD substitutes the role of board committees tasked with environmental- and social matters (Becher & Frye, 2011), and contrasts the findings of Samani et al. (2023). This indicate that such committees only carry a substantive effect in voluntary non-financial reporting environments, suggesting that the roles of corporate governance mechanism are complex and multi-dimensional. Taken together, these findings indicate that the implementation of environmental- and social committees represents a substantive approach that signals stronger stakeholder commitment by the board (Hung, 2011), which contradicts the legitimacy-based arguments for the presence of such committees.

Third-party assurance on non-financial disclosures represents a corporate governance mechanism aimed at increasing the credibility of non-financial reporting. Consistent with our expectations and prior research (Muslu et al., 2019), the analyses provide evidence which indicates that the application of third-party assurance increases disclosure transparency. This suggest that third-party assurance provide credibility through transparency (Simnett et al., 2009), which implies that the decision to seek third-party assurance is a determinant for non-financial disclosure quality (Cohen et al., 2015). As such, voluntary third-party assurance signals a commitment to provide credible non-financial disclosures to stakeholders (Campbell et al., 2001), implying that firms will communicate the credibility of the information supplied in corporate disclosures by utilizing assurance as a signaling device, consistent with a substantial approach to provide corporate accountability (Ashforth & Gibbs, 1990).

Before the implementation of NFRD, third-party assurance is found to significantly reduce positive sentiments in corporate disclosures, which could imply that assurance constrain managers' opportunity to make self-serving disclosures (Cho et al., 2010; Clarkson et al., 2008). Another explanation to this finding could be that firms utilize voluntary assurance to reduce potential future regulations costs (Gamerschlag et al., 2011), which could explain why assurance does not have any significant effects on quality before the NFRD. After the implementation, third-party assurance is found to increase the extent and complexity in disclosure, and the effect on transparency is more prominent than the overall sample. This could suggest that assurance contribute to effective monitoring in a regulatory reporting environment (Deegan, 2002; Healy & Palepu, 2001), and is generally consistent with the findings in Ottenstein et al. (2022). The above discussion suggests that third-party assurance to some extent is utilized as a symbolic legitimization device in the voluntary reporting environment. When mandatory reporting requirements is introduced, regulation seems to complement the quality-enhancing properties of third-party assurance. However, seeing as it is not known whether disclosures are of high quality before the assurance process, or if it is the assurance process that provide higher-quality disclosures, we interpret these findings with caution.

The engagement of stakeholders extends the range of corporate accountability to encompass the relationship between the firm and its stakeholders. Statistical analyses show moderate correlations between strong stakeholder engagement and GRI-compliant, larger firms who seek third-party assurance, which would suggest that larger companies engage more strongly with their stakeholders. However, weak correlations between board characteristics and strong stakeholder engagement would suggest that board members' stakeholder orientation does not explain stronger stakeholder engagement.

Regression analyses indicate that firms who engage strongly with their stakeholders provide longer and more complex disclosures that are more transparent. Increased length and complexity can be explained by the inclusion of stakeholders' views in matters concerning corporate social responsibility (Ardiana, 2023; Manetti, 2011), signaling actual commitment and responsiveness to stakeholders' concerns. The positive association with transparency can be explained by managements dependency on stakeholder support, which means firms have strong incentives to disclose matters that are of importance to stakeholders (Deegan, 2002; Sciulli & Adhariani, 2022). These findings extends prior literature (e.g., Christensen, 2016; Thomson & Bebbington, 2005) in our understanding of stakeholder engagement as processes to enhance corporate accountability and reporting quality, indicating that strong stakeholder engagement firms implement substantive practices to strengthen firm – stakeholder relationships in the interest of creating stronger dynamics that allow for effective dissemination of value-relevant information from both parties.

In additional analyses, we observe that firms with strong stakeholder engagement consistently disclose longer and more complex non-financial information than firms with weak stakeholder engagement. While stakeholder engagement has a significant impact on the extent and quality of disclosure overall, this effect is more prominent before the implementation of the NFRD. The relative decrease in extent and complexity would suggest that firms who engage strongly with their stakeholders communicate through other channels than corporate disclosures (Bear et al., 2010), indicating that while stakeholder engagement is still a quality-enhancing mechanism, it also serves as a complex practice to involve and engage stakeholders. The reduced effect of stakeholder engagement on extent and complexity after the implementation is explained by the increased requirements for non-financial reporting, which suggests an alignment of the various non-financial topics disclosed in annual reports. Furthermore, a similar effect is found on the transparency in non-financial disclosures before and after the implementation, which would suggest that the introduction of the NFRD alter the disclosure motives to comply with the requirements of the regulation, indicating more ceremonial and symbolic disclosures (Ruiz-Lozano et al., 2022; Samani et al., 2023). These findings would indicate that requirements of the NFRD substitutes the disclosure quality effects of stakeholder engagement to a certain extent, but due to inherent idiosyncrasies of the firm, this suggest that the regulatory effect on corporate governance exists on a continuum in which regulation will never completely substitute the effects of strong stakeholder engagement, because firms face different levels of stakeholder salience (Gamerschlag et al., 2011; Mitchell et al., 1997).

7 Concluding remarks

The purpose of this study is to investigate the impact of voluntary corporate governance mechanisms on the extent and quality of non-financial disclosures. Overall, the findings suggest that corporate governance mechanisms are adopted to signal actual commitment towards stakeholders' needs and concerns. However, while the results generally support the hypotheses, this study is not without its limitations. The data sample employed in this study is constructed through a labor-intensive data collection process which naturally reduce sample size, and the results should therefore be interpreted with caution outside the Swedish context. Furthermore, disclosure quality can be measured in a variety of ways, and we encourage future research to adopt other ways in which non-financial reporting quality can be assessed within the bounds of corporate governance mechanisms.

The presence of board committees tasked with environmental- and social matters are found to positively affect transparency in non-financial disclosures, with the most prominent effects found in the voluntary reporting environment. These findings expand the extant literature on such committees (Peters & Romi, 2015; Rodrigue et al., 2013), and future research could further investigate the inner workings of environmental- and social committees. Similarly, assurance is found to increase non-financial disclosure transparency, with the most outstanding effect after non-financial reporting regulation is introduced. However, the quality-enhancing effects of assurance on the extent and tone of disclosures are unclear, which highlights the need to investigate non-financial assurance practices further. In contrast, strong stakeholder engagement is found to positively affect the extent, complexity and transparency of non-financial disclosures overall, indicating that stakeholder engagement is a substantive practice towards strengthening stakeholder accountability. Our findings suggest that regulation to some extent substitute stakeholder engagement, and future research should investigate whether and how features of stakeholder engagement is substituted when non-financial reporting regulation is introduced.

The implementation of the EU NFRD represents a regulatory shift in the non-financial reporting environment, and additional analyses in this study indicate that the extent and quality of disclosure increases when regulation is implemented, which partly contrast the findings of Haji et al. (2023). Future research should therefore further investigate the effects of regulation on non-financial disclosure quality, especially considering the political pressure to introduce additional regulations on the disclosure of non-financial information in the European Union.

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9 Appendix 1

Table 9: OLS regression results for additional analyses - Model 1 (SUSCOM)

	LOGWORDS		POSITIVE		NEGATIVE		UNCERTAIN		VOCABULARY	
	Before NFRD:	After NFRD:	Before NFRD:	After NFRD:	Before NFRD:	After NFRD:	Before NFRD:	After NFRD:	Before NFRD:	After NFRD:
INTERCEPT	8,2209*** (49,999)	8,8363*** (67,201)	3,7199*** (14,027)	4,0074*** (21,179)	3,135*** (12,402)	4,1148*** (21,582)	3,1056*** (13,64)	4,1299*** (21,437)	6,9618*** (71,901)	7,2118*** (102,36)
SUSCOM	**0,2581***** **(2,719)**	-0,052 (-0,944)	0,1564 (1,021)	-0,0947 (-1,194)	**0,3898***** **(2,671)**	0,0818 (1,024)	**0,4364***** **(3,32)**	0,0916 (1,134)	**0,1372**** **(2,455)**	-0,0228 (-0,772)
BODSIZE	0,2959*** (5,121)	0,0272*** (4,503)	0,3016*** (3,237)	0,0292*** (3,366)	0,4693*** (5,284)	0,0339*** (3,88)	0,3895*** (4,868)	0,0288*** (3,261)	0,1387*** (4,075)	0,016*** (4,955)
BODIND	0,2131*** (3,356)	0,1688*** (2,75)	0,1293 (1,262)	0,1205 (1,364)	0,327*** (3,35)	0,2516*** (2,827)	0,1525* (1,734)	0,1059 (1,177)	0,1203*** (3,217)	0,0953*** (2,897)
BODGDR	0,1959** (1,975)	0,0443 (0,523)	0,4617*** (2,886)	0,5268*** (4,321)	0,0424 (0,278)	-0,1936 (-1,576)	0,0712 (0,518)	-0,1512 (-1,218)	0,1511** (2,588)	0,0893* (1,967)
GRI	0,1802*** (5,166)	0,1836*** (6,113)	0,2169*** (3,857)	0,1674*** (3,875)	0,264*** (4,924)	0,2092*** (4,806)	0,183*** (3,788)	0,1913*** (4,347)	0,1031*** (5,021)	0,092*** (5,716)
SIZE	0,1119*** (8,482)	0,0951*** (8,067)	0,1513*** (7,111)	0,1263*** (7,447)	0,1115*** (5,501)	0,0992*** (5,805)	0,1207*** (6,607)	0,0976*** (5,655)	0,0595*** (7,666)	0,0457*** (7,245)
ROA	-0,0351 (-0,33)	-0,1715* (-1,681)	0,2567 (1,498)	-0,0799 (-0,544)	-0,5688*** (-3,482)	-0,4791*** (-3,238)	-0,4272*** (-2,904)	-0,4322*** (-2,891)	0,0378 (0,603)	-0,0969* (-1,772)
LEV	-0,2268*** (-2,896)	0,0573 (0,848)	-0,2495** (-1,976)	0,2522** (2,595)	-0,3282*** (-2,726)	0,0886 (0,904)	-0,2362** (-2,178)	0,0773 (0,782)	-0,1572*** (-3,408)	0,0093 (0,256)
MTB	0,02*** (4,038)	0,0125*** (3,14)	0,0221*** (2,762)	0,0288*** (5,011)	0,0145* (1,899)	0,0059 (1,014)	0,0227*** (3,315)	0,004 (0,684)	0,01*** (3,412)	0,0072*** (3,358)
OWNERSHIP	0,0016** (2,21)	0,0004 (0,672)	0,0016 (1,408)	0,0009 (1)	0,0024** (2,182)	-0,0001 (-0,081)	0,0005 (0,541)	-0,0013 (-1,434)	0,0009** (2,068)	0,0001 (0,343)
AGE	-0,0183 (-0,992)	0,0002 (0,01)	-0,0265 (-0,894)	0,0002 (0,007)	-0,0403 (-1,426)	0,015 (0,548)	-0,0388 (-1,524)	0,0011 (0,04)	-0,0039 (-0,358)	0,0069 (0,682)
Industry effects:	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year effects:	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
N:	544	680	544	680	544	680	544	680	544	680
Adjusted R^2:	0,578	0,568	0,465	0,533	0,488	0,448	0,471	0,418	0,543	0,551

Notes to table: Stars (*, ** and ***) represent significance at 0.10, 0.05 and 0.01-levels, respectively.

Table 10: OLS regression results for additional analyses - Model 2 (ASSUR).

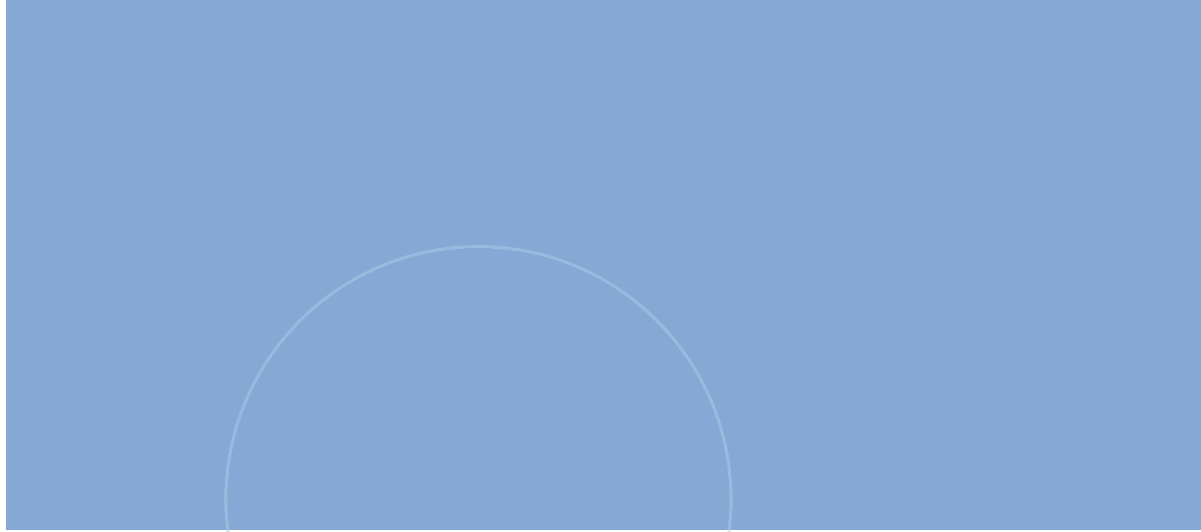
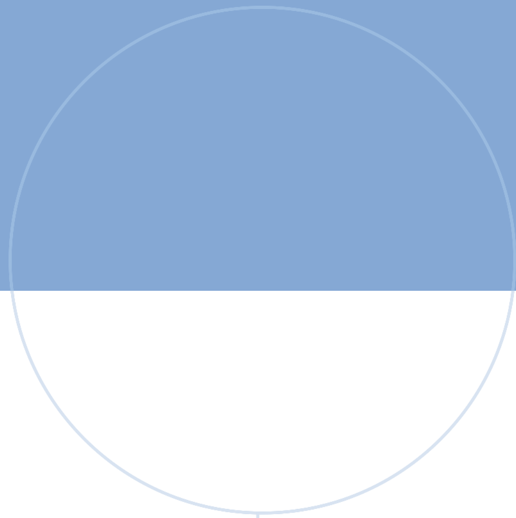
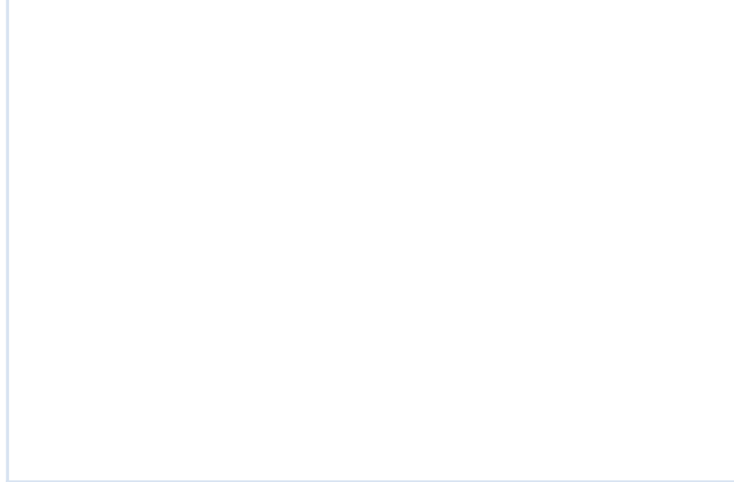
	LOGWORDS		POSITIVE		NEGATIVE		UNCERTAIN		VOCABULARY	
	Before NFRD:	After NFRD:	Before NFRD:	After NFRD:	Before NFRD:	After NFRD:	Before NFRD:	After NFRD:	Before NFRD:	After NFRD:
INTERCEPT	8,1581***	8,9404***	3,5008***	4,0908***	3,1182***	4,2921***	3,0568***	4,3293***	6,9134***	7,2642***
	(47,097)	(65,176)	(12,669)	(20,653)	(11,713)	(21,657)	(12,698)	(21,654)	(67,9)	(98,815)
ASSUR	-0,0235	**0,076****	**-0,1867****	0,0536	0,0389	**0,1527*****	0,0149	**0,1717*****	-0,0268	**0,0387****
	(-0,466)	**(2,29)**	**(-2,322)**	(1,119)	(0,502)	**(3,184)**	(0,212)	**(3,549)**	(-0,905)	**(2,174)**
BODSIZE	0,3042***	0,0252***	0,325***	0,0275***	0,474***	0,0311***	0,3978***	0,0256***	0,1446***	0,015***
	(5,211)	(4,168)	(3,49)	(3,151)	(5,283)	(3,555)	(4,903)	(2,902)	(4,214)	(4,641)
BODIND	0,2263***	0,1529**	0,167	0,1116	0,3341***	0,2124**	0,1653*	0,0619	0,1298***	0,0871***
	(3,511)	(2,482)	(1,624)	(1,254)	(3,373)	(2,386)	(1,846)	(0,689)	(3,426)	(2,636)
BODGDR	0,2034**	0,0508	0,4455***	0,5284***	0,0626	-0,1709	0,0904	-0,1256	0,1534***	0,0928**
	(2,035)	(0,601)	(2,794)	(4,331)	(0,408)	(-1,4)	(0,651)	(-1,02)	(2,611)	(2,049)
GRI	0,1854***	0,1695***	0,2401***	0,1555***	0,2633***	0,1875***	0,1854***	0,1667***	0,1075***	0,0849***
	(5,209)	(5,585)	(4,229)	(3,548)	(4,814)	(4,276)	(3,75)	(3,77)	(5,141)	(5,222)
SIZE	0,1162***	0,0888***	0,1663***	0,1214***	0,1127***	0,0884***	0,124***	0,0855***	0,0629***	0,0426***
	(8,461)	(7,402)	(7,59)	(7,003)	(5,34)	(5,095)	(6,498)	(4,885)	(7,788)	(6,625)
ROA	-0,0545	-0,1548	0,2201	-0,0617	-0,5872***	-0,4659***	-0,4521***	-0,4174***	0,0254	-0,0888
	(-0,509)	(-1,523)	(1,288)	(-0,421)	(-3,568)	(-3,173)	(-3,038)	(-2,818)	(0,404)	(-1,631)
LEV	-0,2185***	0,0658	-0,2941**	0,2511**	-0,2943**	0,1283	-0,2065*	0,1219	-0,1569***	0,014
	(-2,732)	(0,978)	(-2,305)	(2,585)	(-2,394)	(1,319)	(-1,858)	(1,243)	(-3,337)	(0,389)
MTB	0,0218***	0,0127***	0,0246***	0,0288***	0,0165**	0,0064	0,0252***	0,0046	0,011***	0,0073***
	(4,375)	(3,186)	(3,101)	(5,013)	(2,156)	(1,116)	(3,652)	(0,796)	(3,766)	(3,405)
OWNERSHIP	0,0015**	0,0005	0,0014	0,001	0,0024**	0	0,0005	-0,0012	0,0008*	0,0002
	(2,116)	(0,817)	(1,251)	(1,097)	(2,149)	(0,03)	(0,492)	(-1,321)	(1,957)	(0,475)
AGE	-0,0175	-0,0047	-0,0175	-0,0024	-0,0429	0,0022	-0,0403	-0,0133	-0,0028	0,0043
	(-0,937)	(-0,251)	(-0,588)	(-0,087)	(-1,492)	(0,079)	(-1,549)	(-0,481)	(-0,252)	(0,426)
Industry effects:	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year effects:	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
N:	544	680	544	680	544	680	544	680	544	680
Adjusted R^2:	0,572	0,571	0,469	0,533	0,481	0,456	0,46	0,428	0,538	0,554

*, ** and *** indicate statistically significant regression coefficients at 10%, 5%, and 1% levels. T-statistics is shown in parentheses. Variable of interest (*ASSUR*) is coded as 1 if the firm's sustainability report is subject to limited/reasonable assurance, 0 otherwise. Variable definitions is provided in table 2.

Table 11: OLS regression results for additional analyses - Model 3 (STKENG).

	LOGWORDS		POSITIVE		NEGATIVE		UNCERTAIN		VOCABULARY	
	Before NFRD:	After NFRD:	Before NFRD:	After NFRD:	Before NFRD:	After NFRD:	Before NFRD:	After NFRD:	Before NFRD:	After NFRD:
INTERCEPT	8,2153***	8,8267***	3,7161***	4,0053***	3,1237***	4,0829***	3,0878***	4,0925***	6,9581***	7,2087***
	(50,017)	(67,523)	(14,027)	(21,223)	(12,361)	(21,474)	(13,536)	(21,32)	(71,898)	(102,667)
STKENG	**0,1095*** **	**0,0681*** **	0,065	**0,0675***	**0,1558*** **	**0,0658***	**0,1567*** **	**0,08*** **	**0,0555*** **	**0,026***
	(2,727)	**(2,661)**	(1,004)	**(1,826)**	**(2,523)**	**(1,767)**	**(2,811)**	**(2,129)**	**(2,347)**	**(1,89)**
BODSIZE	0,2947***	0,0272***	0,301***	0,029***	0,4681***	0,0347***	0,3893***	0,0297***	0,1382***	0,016***
	(5,099)	(4,533)	(3,229)	(3,349)	(5,265)	(3,978)	(4,85)	(3,373)	(4,059)	(4,969)
BODIND	0,2121***	0,1728***	0,1287	0,1261	0,3263***	0,2502***	0,1533*	0,1046	0,12***	0,0969***
	(3,338)	(2,83)	(1,256)	(1,431)	(3,338)	(2,818)	(1,738)	(1,166)	(3,206)	(2,955)
BODGDR	0,2136**	0,0405	0,4723***	0,5208***	0,0684	-0,1905	0,0992	-0,1477	0,1604***	0,0877*
	(2,155)	(0,48)	(2,954)	(4,28)	(0,449)	(-1,554)	(0,72)	(-1,193)	(2,745)	(1,937)
GRI	0,1271***	0,1525***	0,1854***	0,1352***	0,1887***	0,1839***	0,1076*	0,1602***	0,0763***	0,08***
	(3,148)	(4,8)	(2,847)	(2,947)	(3,038)	(3,979)	(1,919)	(3,432)	(3,205)	(4,688)
SIZE	0,1149***	0,0926***	0,1531***	0,1234***	0,116***	0,098***	0,1256***	0,0961***	0,0611***	0,0448***
	(8,732)	(7,881)	(7,214)	(7,279)	(5,733)	(5,735)	(6,875)	(5,571)	(7,886)	(7,096)
ROA	-0,056	-0,1986*	0,2441	-0,102	-0,5999***	-0,5197***	-0,4612***	-0,4808***	0,0268	-0,1069*
	(-0,528)	(-1,945)	(1,426)	(-0,692)	(-3,674)	(-3,499)	(-3,13)	(-3,206)	(0,428)	(-1,949)
LEV	-0,2286***	0,042	-0,2505**	0,2318**	-0,3295***	0,0899	-0,2349**	0,078	-0,1577***	0,0031
	(-2,918)	(0,628)	(-1,982)	(2,398)	(-2,733)	(0,923)	(-2,159)	(0,793)	(-3,416)	(0,086)
MTB	0,0215***	0,0128***	0,023***	0,029***	0,0167**	0,0063	0,0252***	0,0046	0,0107***	0,0073***
	(4,36)	(3,227)	(2,892)	(5,056)	(2,201)	(1,096)	(3,69)	(0,781)	(3,7)	(3,415)
OWNERSHIP	0,0018**	0,0006	0,0017	0,0011	0,0026**	0	0,0008	-0,0012	0,001**	0,0002
	(2,43)	(0,944)	(1,485)	(1,205)	(2,38)	(0,038)	(0,766)	(-1,286)	(2,253)	(0,538)
AGE	-0,0242	0,0022	-0,0301	0,0028	-0,0488*	0,0148	-0,0475*	0,0011	-0,0069	0,0077
	(-1,309)	(0,116)	(-1,007)	(0,104)	(-1,715)	(0,544)	(-1,846)	(0,039)	(-0,634)	(0,764)
Industry effects:	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year effects:	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
N:	544	680	544	680	544	680	544	680	544	680
Adjusted R^2:	0,578	0,572	0,465	0,534	0,487	0,45	0,468	0,421	0,542	0,553

*, ** and *** indicate statistically significant regression coefficients at 10%, 5%, and 1% levels. T-statistics is shown in parentheses. Variable of interest (*STKENG*) is coded as 1 if the corporate non-financial disclosures exhibit strong stakeholder engagement, 0 otherwise. Variable definitions is provided in table 2.

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