

Navigating the corporate ego: Understanding the association between ESG performance and organizational narcissistic rhetoric

Abstract

This study investigates the relationship between Environmental, Social, and Governance (ESG) performance and the use of narcissistic rhetoric in corporate narrative disclosure. It also examines the moderating effect of board gender diversity on this relationship. Using 1,659 firm-year observations from FTSE 350 companies between 2012 and 2021 through Natural Language Processing (NLP) techniques, we find that higher ESG performance is significantly associated with increased narcissistic rhetoric, indicating that companies often highlight their ESG achievements in a self-promotional manner. Additionally, our results suggest that higher women representation on board can mitigate this trend, with more diverse boards likely to temper narcissistic expressions. The research also uncovers a positive relationship between financial performance and narcissistic rhetoric. These findings contribute to the literature on organizational behavior and communication strategies, offering theoretical insights and practical implications for corporate leaders and policymakers.

Keywords: ESG; organizational narcissism; organizational narcissistic rhetoric; women representation; legitimacy theory; content analysis; NLP.

1. Introduction

Environmental, social, and governance (ESG) considerations have become a focal point for various stakeholders, shaping academic research, business operations, and regulatory frameworks (Albitar et al., 2023; Eliwa et al., 2023; Mahran and Elamaer, 2024a; Orazalin et al., 2024). This growing focus highlights the increasing recognition that businesses impact not only financial outcomes but also broader societal and environmental concerns, reflecting the interests of investors, customers, employees, and communities (Bhandari et al., 2022; Khatib et al., 2021). As a result, companies are under constant pressure to align with these expectations and maintain their legitimacy in the eyes of stakeholders (Lee et al., 2023). To achieve this, corporate disclosure has become a key mechanism through which organizations communicate their performance, using transparency and strategic narrative to reinforce their alignment with societal values and secure their social license to operate (Merkley, 2014; Shan, 2019).

Prior research has primarily focused on the relationship between corporate ESG performance and the extent of corporate disclosure, such as the amount and type of information provided (e.g., Baldini et al., 2018; Giannarakis et al., 2017; Eliwa et al., 2023; Saputra & Murwaningsari, 2021; Wong & Zhang, 2022). However, there has been relatively little exploration into how ESG performance affects the rhetorical strategies and language organizations use in their disclosures (e.g., Asay et al., 2017; Emett, 2019; Lu et al., 2019). Given the significance of language in corporate disclosure and its impact on stakeholder perception, this study contributes to this emerging body of literature by investigating the relationship between ESG performance and organizational narcissistic rhetoric in corporate narrative disclosure within UK firms. Specifically, the research seeks to answer two key questions: *1) How does ESG performance impact the use of narcissistic rhetoric in corporate disclosures? 2) To what extent does proportion of women on the board influence this relationship?* By addressing these questions, the study provides practical insights that can guide both practitioners and researchers in understanding how firms utilize rhetorical strategies to convey their ESG achievements and manage their public image effectively.

In the organizational context, while research on narcissism has mainly focused on it as an individual trait and examined how leadership narcissistic behavior influences corporate outcomes (e.g., Al-Shammari et al., 2019; Chatterjee & Hambrick, 2007; Cragun et al., 2020; Ingersoll et al., 2019; Kind et al., 2023; Mahran et al., 2025; Marquez-Illescas et al., 2019), Brown (1997) suggests

that organizations, much like individuals, can also engage in narcissistic behaviors, to maintain their legitimacy and safeguard their status and reputation. Organizational narcissism exists on a spectrum, affecting behavior and external communications in different ways (Craig and Amernic, 2011). Organizations with low levels of narcissism may struggle with visibility and self-advocacy, potentially failing to assert their strengths and secure their market position. Conversely, organizations with high levels of narcissism risk credibility issues and stakeholder alienation due to excessive self-promotion. A balanced level of narcissism allows organizations to project confidence and pride in their achievements while avoiding the pitfalls of grandiosity, thus maintaining credibility and effectively engaging with stakeholders (Brown, 1997; Duchon and Burns, 2008). As organizations frequently rely on annual reports to communicate their performance and strategic direction, these reports often incorporate elements of narcissistic rhetoric that emphasize the organization's achievements and assert its authority (Duchon and Drake, 2009). This rhetoric reinforces a sense of entitlement to rewards and underscores the organization's perceived superiority (Anglin et al., 2018). Craig and Amernic (2011) argue that this rhetoric is not a reflection of the individual psychology of leaders, such as the Chief Executive Officer (CEO), but it serves as a collective expression of the organization's values, aspirations, and self-concept. Consequently, this collective narrative helps reinforce the organization's status and reputation, positioning it as not only successful but superior (Brown, 1997; Duchon & Burns, 2008).

To address our research objective and answer the research questions, we analyzed a dataset comprising 1,659 firm-year observations from UK companies listed on the FTSE 350 Index, covering the period from 2012 to 2021. The UK was selected due to its robust emphasis on sustainability practices and its comprehensive regulatory framework (Moussa et al., 2023). Our study employs a Natural Language Processing (NLP) approach using Python for textual analysis of the corporate narrative disclosures within annual reports. Our primary rationale for focusing on annual reports is grounded in the UK's institutional and regulatory framework. Since 2013, UK-listed companies have been legally required—under the Companies Act 2006 as amended by the Strategic Report and Directors' Report Regulations—to disclose material non-financial information, including environmental, employee, and social issues, within the Strategic Report section of their annual reports. This statutory obligation ensures that ESG-related content is consistently embedded in a standardized, mandatory disclosure channel across all listed firms. As

such, annual reports offer a reliable and legally grounded source for capturing ESG-related rhetoric in the UK context.

In addition to the regulatory requirements, analyzing the full narrative content of annual reports allows us to observe how ESG themes are strategically integrated across corporate communication. This is essential for identifying narcissistic rhetorical cues, which often appear in diverse sections. For example, firms may use CEO letters or financial discussions to frame ESG efforts as signs of visionary leadership, strategic foresight, or value creation (Mahran and Elamer, 2024b; Zhou et al., 2022). Similarly, references to operational efficiency, strategic planning, and stakeholder engagement often employ ESG rhetoric to signal superior governance or social responsibility (Reber et al., 2022; Tan et al., 2025).

The research findings reveal a positive association between ESG performance and the use of narcissistic rhetoric in corporate narrative disclosure, suggesting that organizations with strong ESG performance tend to use more self-promotional language. However, this relationship is negatively moderated by proportion of women on the board, indicating that higher women representation on boards tends to reduce the extent of narcissistic rhetoric used. Additionally, our analysis demonstrates a positive relationship between financial performance and narcissistic rhetoric, suggesting that firms with better financial outcomes also engage more in self-promotional language in their disclosures.

Our study offers several key contributions to the existing literature. First, while previous research has primarily focused on the relationship between corporate performance and the content of disclosure (e.g., Baldini et al., 2018; Giannarakis et al., 2017; Eliwa et al., 2023), it has largely overlooked the language used to frame this disclosure. Our research contributes by examining the use of narcissistic rhetoric in corporate narrative disclosures, a relatively underexplored area. By analyzing how organizations utilize self-promotional language to present their achievements, we provide new insights and position this study uniquely within the field. Second, this research advances legitimacy theory by exploring how organizations use narcissistic rhetoric as a strategic tool to maintain their legitimacy. While legitimacy theory traditionally focuses on aligning organizational actions with societal norms and values (Dowling and Pfeffer, 1975; Roberts et al., 2021), our study demonstrates that narcissistic rhetoric can also play a crucial role in this process. By analyzing how firms with high ESG performance employ self-promotional language to

reinforce their status and superiority, we provide a deeper understanding of how rhetorical strategies contribute to maintaining and enhancing organizational legitimacy. Third, our research emphasizes the moderating role of female representation on board, revealing the importance of board composition in shaping how organizations communicate their performance and reinforcing the role of female proportion in promoting more ethical and transparent corporate practices. Finally, the study offers practical implications for practitioners and policymakers. By highlighting the use of narcissistic rhetoric in corporate disclosures, our findings provide valuable insights for practitioners aiming to craft more balanced and credible reports. For policymakers, the research underscores the need for regulatory frameworks that encourage transparency and accountability in corporate reporting, ensuring that disclosures reflect a more accurate and responsible portrayal of organizational performance.

The paper is organized as follows: In section 2, we discuss the organizational narcissism and narcissistic rhetoric; Section 3 encompasses the literature review and hypothesis development; Section 4 outlines the research design, covering data collection and research models; Section 5 presents the empirical findings and discussion; Section 6 includes additional tests and robustness check; Finally, Section 7 the conclusion.

2. Organizational Narcissism and Narcissistic Rhetoric

Narcissism, originally understood as an individual trait, is characterized by a self-centered personality marked by an inflated sense of self-importance, a strong need for admiration, and a lack of empathy for others (Duchon and Drake, 2009). While this concept was first explored in the realm of individual psychology, it has been extended in organizational studies to understand how leadership behaviors affect corporate outcomes (e.g., Al-Shammari et al., 2019; Chatterjee and Hambrick, 2007; Cragun et al., 2020; Ingersoll et al., 2019; Kim et al., 2018; Kind et al., 2023; Marquez-Illescas et al., 2019). Typically, narcissistic behaviors are viewed as ego-defense mechanisms designed to protect an individual's self-image. However, as Brown (1997) suggests, organizations, like individuals, are also motivated to protect their collective identity and legitimacy. To safeguard their status and reputation, organizations may engage in narcissistic behaviors. This collective effort allows individuals within the organization to work together to defend the system's identity and reinforce its self-concept (Iivonen and Moisander, 2015).

Organizational narcissism exists along a spectrum, affecting all organizations to some degree (Brown, 1997; Craig and Amernic, 2011). At the center of this spectrum lies healthy narcissism, which fosters self-confidence, innovation, and a strong organizational identity. Organizations in this state are ambitious, believing in their unique qualities while remaining grounded. However, as Duchon and Burns (2008) observe, moving toward extreme on this continuum can lead to destructive consequences. Too little narcissism leaves organizations vulnerable to self-doubt, passivity, and stagnation, making it difficult for them to assert themselves in competitive markets. On the other hand, excessive narcissism leads to overconfidence, entitlement, and unethical behavior, which can result in harmful decisions and ultimately damage the organization's reputation and functioning (Brown, 1997; Duchon and Burns, 2008). The dangers of extreme organizational narcissism are further illustrated by Stein (2003), who identifies five key attributes. First, such organizations tend to elevate themselves above others, seeing themselves as extraordinarily special and unique. This inflated self-view fosters a strong sense of entitlement, wherein the organization expects special privileges and treatment. Additionally, they view themselves as omniscient, believing they possess superior knowledge and insight, which feeds into their decision-making process. This leads to a dismissive attitude toward others—whether competitors, stakeholders, or external information—treating them with contempt. Over time, these characteristics become embedded in the organization's culture, making it rigid, inward-focused, and resistant to external influence or change.

In their pursuit of maintaining legitimacy and protecting their identity, organizations often employ narcissistic ego-defense mechanisms, especially when faced with external threats or conflicts (Duchon and Burns, 2008). These mechanisms include denial, where they downplay unfavorable facts, and rationalization, where they construct justifications for their actions to fit a preferred narrative. Organizations may also engage in self-aggrandizement, exaggerating their achievements to enhance their reputation. When they experience success, attributional egotism leads them to attribute these successes solely to their internal qualities, while failures are blamed on external factors. Furthermore, a sense of entitlement often emerges, with the organization expecting special privileges based on its perceived superiority (Duchon and Drake, 2009; Iivonen and Moisander, 2015).

To sustain a favorable self-image, organizations frequently rely on annual reports to communicate their desired message, which often includes elements of narcissistic rhetoric (Iivonen and Moisander, 2015). These reports are not only used to justify the organization's actions but also to highlight its strengths while omitting any negative aspects (Duchon and Drake, 2009). Narcissistic rhetoric within these reports emphasizes the organization's achievements and asserts its authority, reinforcing a sense of entitlement to certain rewards or privileges (Anglin et al., 2018). This form of communication reflects an idealized version of the organization, positioning it as unique and deserving of recognition. It serves as a collective expression of the organization's values, aspirations, and self-concept (Craig and Amernic, 2011). By presenting a narrative of superiority and deservedness, the organization signals its identity and accomplishments in a way that aligns with its desired public image (Stein, 2003). In this sense, organizational narcissistic rhetoric resembles the communication strategies of trade associations, which represent the collective interests of their members. The language used is authorized and endorsed by leadership, thereby embodying the organization's shared identity, goals, and sense of legitimacy (Iivonen and Moisander, 2015). This collective narrative, steeped in narcissistic rhetoric, reinforces the organization's status and reputation, positioning it as not just successful but superior (Brown, 1997; Duchon and Burns, 2008).

3. Literature Review and Hypotheses Development

3.1 ESG performance and Narcissistic rhetoric

According to legitimacy theory perspectives, organizations continuously seek to align themselves with societal norms and values to maintain their legitimacy and social acceptance (Dowling and Pfeffer, 1975; Elmarzouky et al., 2024; Lee et al., 2023; Roberts et al., 2021). Disclosure plays a central role in this process, as it allows organizations to communicate their alignment with societal expectations through public reporting, press releases, and other forms of corporate communication (Jin et al., 2024; Khatib et al., 2021). Organizations use disclosure not only to present their achievements but also to address potential legitimacy gaps by explaining their actions, framing their strategies in line with societal norms, and demonstrating accountability (Albitar et al., 2022; Elmarzouky et al., 2022; Nirino et al., 2021). Prior studies emphasize that organizations strategically use reporting and communication efforts to maintain their legitimacy. For instance, Giannarakis et al. (2017) found that companies with poor environmental performance increase

their disclosures to mitigate negative perceptions, while Baldini et al. (2018) observed that firms with weaker ESG performance often produce detailed sustainability reports to present themselves as socially responsible. Similarly, Wong and Zhang (2022) demonstrated that organizations amplify their disclosures in response to negative media coverage, aiming to restore legitimacy and reassure stakeholders. Saputra and Murwaningsari (2021) further support this, showing that sustainability reports act as tools to shape stakeholder perceptions and reinforce legitimacy.

In addition to the content of disclosures, the language organizations use plays a critical role in maintaining legitimacy. Previous studies have demonstrated that specific rhetorical strategies are frequently employed to address legitimacy gaps and shape stakeholder perceptions. For instance, companies often adopt a positive or assertive tone to emphasize their strengths and downplay any shortcomings, thereby reinforcing a favorable image (e.g., Lu et al., 2019; Merkley, 2014; Shan, 2019). Furthermore, organizations carefully adjust the readability of their disclosures by manipulating the complexity of their language. This strategic management allows them to either enhance transparency or obscure unfavorable details, depending on the context and their strategic goals (e.g., Asay et al., 2017; Du and Yu, 2021; Hasan, 2020). Additionally, future-oriented language is commonly employed, where organizations focus on their long-term goals and strategic plans, projecting confidence in their ability to overcome challenges and achieve sustainability, thus shifting focus away from current issues (e.g., Emett, 2019; Hussainey and Al-Najjar, 2011).

One potential avenue through which organizations can enhance their legitimacy is to utilize narcissistic rhetoric as a strategic tool in their communication efforts (Duchon and Drake, 2009; Iivonen and Moisander, 2015). This type of rhetoric typically involves projecting authority and self-sufficiency, effectively positioning the organization as a leader in its field (Anglin et al., 2018). Such communication not only reflects a sense of superiority and entitlement but also frames the organization's achievements as deserving of special recognition and reward (Stein, 2003). Including elements of exhibitionism and vanity, narcissistic rhetoric emphasizes accomplishments to captivate and impress stakeholders, portraying successes as superior to those of peers and thereby aiming to project an image of exceptionalism and positively influence public perception (Duchon and Burns, 2008).

In the context of ESG, we argue that organizations with strong performance may leverage this type of rhetoric to convey their ESG initiatives. For instance, in CEO letters and management

discussions, companies often use narcissistic rhetoric to underscore visionary leadership and a commitment to sustainability, suggesting that their approach to ESG is not only strategic but pioneering (Mahran and Elamer, 2024b). This rhetoric is also prevalent in discussions linking ESG practices to financial performance, where firms emphasize how their ESG investments lead to significant financial benefits, such as cost savings from energy-efficient operations or increased revenue from green products, thereby showcasing exceptional financial foresight and strategic management (Zhou et al., 2022). Furthermore, when discussing operational improvements and strategic planning, companies might employ narcissistic rhetoric to highlight their efficiency and innovative capabilities. Integrating ESG goals within frameworks like a balanced scorecard is often presented as evidence of superior strategic management, setting the company apart from competitors and reinforcing its image as a leader in corporate sustainability (Reber et al., 2022). Additionally, in narratives concerning employee well-being and community involvement, companies may use narcissistic rhetoric to underline their roles as responsible employers and community leaders, enhancing their reputation as model corporate citizens and further solidifying their standing in the eyes of stakeholders (Tan et al., 2025).

Through these various channels, narcissistic rhetoric serves not only to enhance the visibility of the company's ESG efforts but also to exploit these achievements to gain additional benefits or advantages, reinforcing its power and prestige within the corporate and social realms (Anglin et al., 2018; Duchon and Drake, 2009). Based on the prior discussion, we propose the following:

H1: There is a positive relationship between ESG performance and the extent of narcissistic rhetoric employed in corporate disclosure.

3.2 The moderating effect of female representation on board

Prior literature identifies female representation on board as a critical factor in corporate governance that influences various firm outcomes, including corporate disclosure practices (e.g., Cucari et al., 2018; Eliwa et al., 2023; Giannarakis, 2014; Liao et al., 2015; Seebeck & Vetter, 2022; Shohaieb et al., 2022; Tingbani et al., 2020). For example, Tingbani et al. (2020) and Liao et al. (2015) found a positive association between proportion of women on the board and the likelihood of disclosing greenhouse gas information, as well as the extensiveness of these disclosures. Similarly, Seebeck and Vetter (2022) observed that high proportion of women on the board was linked to

increased corporate risk disclosures. However, Cucari et al. (2018) reported a negative relationship between proportion of women on the board and ESG disclosures, which they attributed to the low representation of women and their perceived lack of expertise. Giannarakis (2014) found no significant relationship between board gender diversity and the level of corporate social responsibility (CSR) disclosure.

Beyond the content of disclosures, prior research has also examined the role of proportion of women on the board in shaping the language used in corporate communication. Albitar et al. (2023) found that companies with more gender-diverse boards tend to use a less positive tone in CSR narrative reporting. Further, Bassyouny et al. (2020) noted that increasing female board representation amplifies the negative relationship between female CEOs and the use of a positive tone in disclosure. In terms of clarity, Nadeem (2022) discovered that proportion of women on the board positively impacts the readability of 10-K reports, indicating that female directors contribute to clearer, more accessible corporate communication. On the other hand, Benameur et al. (2023) found that firms with more gender-diverse boards are less likely to use future-oriented language, which suggests a more cautious or measured communication style. Therefore, by extending this understanding to corporate narcissistic rhetoric, it can be argued that proportion of women on the board may also influence the extent of such rhetoric in corporate disclosures.

In this regard, gender socialization theory provides a valuable framework for understanding the moderating effect of proportion of women on the board on the relationship between ESG performance and organizational narcissistic rhetoric (Boulouta, 2013; Eliwa et al., 2023). According to this theory, men and women are socialized differently, leading to distinct behavioral tendencies and decision-making styles (Wahid, 2019). Women, for instance, are often associated with more collaborative, ethical, and cautious approaches, which can significantly influence corporate communication strategies (Graham et al., 2017). Prior studies suggest that the presence of women on boards enhances the quality of board discussions, as female directors tend to be better prepared for meetings (Huse & Solberg, 2006). Their involvement has been linked to reduced corporate fraud (Lenard et al., 2017), improved earnings quality and less earnings management (Cumming et al., 2015), fewer instances of aggressive tax avoidance (Francis et al., 2014), and a lower likelihood of financial restatements (Pucheta-Martínez et al., 2016).

Therefore, when women hold a more significant presence on corporate boards, they may soften the use of narcissistic rhetoric that emphasizes authority, superiority, or exhibitionism, steering corporate disclosures toward a more balanced and grounded narrative (Anglin et al., 2018). Female directors, often associated with collaborative and ethical leadership styles, are likely to discourage overly self-promotional language that exaggerates corporate achievements (Graham et al., 2017). This influence can moderate the tendency of organizations with strong ESG performance to over-amplify their successes or project an inflated image, ensuring that such accomplishments are communicated in a more measured and realistic manner. Instead, female board members may encourage more transparent, ethical, and responsible communication, focusing on genuine stakeholder engagement and aligning with sound governance practices (Mahran and Elamer, 2024a). By promoting a narrative grounded in integrity, they help ensure that the company's ESG achievements are presented authentically, responsibly, and in a way that fosters long-term trust and credibility, rather than engaging in excessive self-promotion or vanity (Eliwa et al., 2023).

Conversely, low female representation on boards can lead to an exaggerated portrayal of corporate success, as limited critical oversight may foster a corporate culture more prone to boasting and less inclined toward balanced communications (Brown, 1997; Duchon & Burns, 2008). The absence of diverse viewpoints, particularly from female directors who often bring unique insights and a propensity for ethical oversight, can diminish the board's effectiveness in moderating corporate narratives (Francis et al., 2014). This lack of balance may result in unchecked positive spins on ESG achievements, where the rhetoric not only highlights these accomplishments but also magnifies them, portraying the company as an unparalleled leader in sustainability efforts. Such rhetoric, strategically employed to appeal to investors, consumers, and other stakeholders who value corporate responsibility, may overstate the company's actual ESG credentials and use these claims to competitively position the firm above its peers (Craig and Amernic, 2011; Iivonen and Moisander, 2015). This can lead to the leveraging of supposed sustainability leadership as a dominant aspect of their corporate identity, which might compromise the authenticity and credibility of corporate disclosures (Duchon and Drake, 2009). Boards with minimal female presence are potentially less equipped to perceive and counteract these subtle shifts toward narcissistic communication styles (Graham et al., 2017). Consequently, these firms risk not just overstating their ESG achievements but may also misrepresent their sustainable

practices (Shohaieb et al., 2022). Thus, the presence of more women on corporate boards could serve as a crucial moderating factor, tempering the inclination to adopt narcissistic rhetoric and ensuring that discussions around ESG performance remain grounded in fact and genuine achievement, thereby enhancing both transparency and integrity in corporate communications (Mahran and Elamer, 2024a). Based on the prior discussion, we propose the following:

***H2:** Proportion of women on the board moderates the relationship between ESG performance and the extent of narcissistic rhetoric employed in corporate disclosure.*

4. Research Design

4.1 Sample selection and data collection

Our initial sample consists of companies listed on the FTSE 350 Index, traded on the London Stock Exchange (LSE) in the UK from 2012 to 2021. The choice of the UK FTSE 350 index is motivated by its representation of firms with the highest market capitalization, making them a central focus for investors, professional bodies, and regulators (Tingbani et al., 2020). Importantly, this index includes diverse industries and includes major firms expected to showcase proactive ESG practices and a commitment to fostering gender diversity. The inclusion of significant firms from various sectors allows for a comprehensive assessment of disclosures and facilitates reasonable extrapolation of findings (Brammer and Pavelin, 2006). Additionally, we selected 2012 as the starting point due to the significant rise in ESG commitment among these firms during this period, which reflects a broader shift towards sustainability practices (Al-Shaer et al., 2023). The sample selection process involved the exclusion of 133 financial companies, attributed to their distinct regulatory requirements and accounting practices in comparison to non-financial companies (Al-Najjar and Abualqumboz, 2024). Additionally, 17 companies were eliminated due to data gaps and the unavailability of transferable PDF annual reports in text format. Consequently, the final sample consists of 200 firms, amounting to 1659 observations, meeting the criteria for a consistent and comprehensive data analysis. To conduct our textual analysis and measure corporate narcissistic rhetoric, we first collected the available annual reports of these companies in PDF format from Bloomberg and their respective websites. For our analysis, we focused specifically on the corporate narrative disclosures, excluding the external auditor's report, as it does not represent corporate-driven disclosure, and the notes of the financial statements due to their descriptive nature

and the absence of opportunities for narrative-driven corporate communication (Bassyouny et al., 2020). Additionally, data on ESG, financial, and governance metrics were compiled from Refinitiv Eikon. Table 1 details the industrial breakdown of our sample, categorized according to the DataStream Industry Classification Benchmark (ICB) level 1 industries, encompassing ten distinct groups.

Our use of annual reports is explicitly grounded in the UK's regulatory context¹. Since 2013, UK-listed firms have been legally required—under the Companies Act 2006, as amended by the Strategic Report and Directors' Report Regulations—to disclose material non-financial information, including environmental, employee, and social matters, within the Strategic Report section of their annual reports. This legal mandate ensures that ESG disclosures appear in a standardized and mandatory format, making annual reports a consistent and appropriate source for capturing ESG-related rhetoric.

Insert Table 1 here.

4.2 Research model

In order to assess the relationship between ESG performance and narcissistic rhetoric and test H1, we employ the following model.

$$\begin{aligned} NAR_RHET_{i,t} = & \beta_0 + \beta_1 ESG_{i,t} + \beta_2 ROA_{i,t} + \beta_3 CEO_DUAL_{i,t} + \beta_4 CEO_FINEXP_{i,t} + \\ & \beta_5 CEO_GEND_{i,t} + \beta_6 B_SIZE_{i,t} + \beta_7 B_INDEP_{i,t} + \beta_8 AC_INDEP_{i,t} + \beta_9 AGE_{i,t} + \\ & \beta_{10} SIZE_{i,t} + \beta_{11} LIQ_{i,t} + \beta_{12} LEV_{i,t} + \beta_{13} Year_{i,t} + \beta_{14} Ind_{i,t} + \beta_{15} Firm_{i,t} + \varepsilon_{i,t} \end{aligned} \quad (1)$$

Where $NAR_RHET_{i,t}$ refers to the narcissistic rhetoric of firm i at time t , and $ESG_{i,t}$ refers to corporate ESG performance. All other variables are defined and measured in Table 2.

Insert Table 2 here.

4.3 Variables measurements

4.3.1 Dependent variable: Narcissistic rhetoric (NAR_RHET)

¹ While this study focuses on annual reports due to their legal status as the primary vehicle for ESG disclosure in the UK, future research may benefit from a hybrid approach that leverages standalone ESG reports where available and relies on annual report narratives otherwise.

To measure corporate narcissistic rhetoric, we employed an NLP approach for textual analysis, following the methodology of Loughran and McDonald (2011). We utilized the wordlist created by Anglin et al. (2018), which identifies distinct words associated with each of the seven components of narcissistic rhetoric. The components and their corresponding word counts are as follows: Authority (316 words), Superiority (626 words), Exhibitionism (580 words), Vanity (248 words), Self-sufficiency (317 words), Entitlement (34 words), and Exploitativeness (146 words). Our textual analysis primarily focuses on the narrative sections of companies' annual reports, as these sections fall within the scope of firms. Therefore, after collecting the annual reports of sample companies in PDF format, and prior the textual analysis we excluded the notes of financial statements due to their descriptive nature and the absence of opportunities for corporate-driven disclosure. Similarly, the external auditor report was omitted, as it pertains to the responsibilities of external auditors and does not represent companies' narrative disclosure (Bassyouny et al., 2020).

Following the cleaning of the corporate narrative text, we computed the frequency of occurrences for each word list in the corporate narrative. These frequencies were then normalized by dividing the counts by the total number of words, then narcissistic rhetoric score is derived by summing the scores for the seven components (Mansouri and Momtaz, 2022). Appendix A shows examples of the language associated with the components of narcissistic rhetoric, drawn from annual reports. To perform that, we used Python software and a range of essential libraries (Bochkay et al., 2023; Ignatov, 2023). The integration of Python for conducting textual analysis that brings significant advantages compared to previous methods. Python, as a programming language, enables the seamless integration of various NLP libraries and tools, thereby optimizing the entire analysis process (Bhandari et al., 2022).

The reliability and validity of the narcissistic rhetoric index were rigorously tested through three stages. Initially, a pilot study was carried out utilizing a random sample of narrative disclosures from 10 companies. In this first stage, two team members coded these narratives according to the index, and their work was subsequently double-checked by additional team members to minimize subjectivity, enhancing the accuracy of the results. This initial phase was complemented by an independent coder who, having undergone comprehensive training, performed the primary data collection under stringent guidelines, ensuring a consistent application

of the coding process throughout the study. The outcomes from this phase showed remarkable consistency, with an agreement coefficient of 0.93. This figure significantly exceeds the generally accepted threshold in social sciences, thereby indicating high inter-rater reliability (Bao and Datta, 2014; Krippendorff, 2018; Marston & Shrives, 1991). In the second stage, to further validate the consistency and reliability of the coding and to ascertain whether the coding results remained stable over time, a subset of corporate narratives was reanalyzed at a later date. This subsequent analysis confirmed no significant variances compared to the initial coding, thus underscoring the stability and replicability of our results over time (Krippendorff, 2018). Finally, in the third stage, the internal consistency of the index scores was thoroughly evaluated using Cronbach's alpha test, which produced a score of 0.78. This score not only exceeds the standard acceptable level for Cronbach's alpha but also affirms the index's reliability and demonstrates that the index items cohesively measure the intended construct (Allam et al., 2024; Krippendorff, 2018). This multi-stage verification process ensures that the index is a reliable and valid tool for assessing the narcissistic rhetoric within corporate narrative disclosures.

4.3.2 Independent variable: ESG performance (ESG)

We measured ESG performance using scores obtained from the Refinitiv Eikon database (Orazalin and Collins, 2024). These ESG scores are derived from a composite rating that reflects a firm's commitment across ESG dimensions. The environmental dimension scrutinizes a company's performance in key areas like sustainable production practices, responses to climate change, and initiatives related to eco-friendly marketing. Social aspects are assessed through considerations of business ethics, labour conditions for employees, and job security. Governance factors encompass elements such as the structure of the company's board, the quality of audits, and the transparency of information disclosure (Eliwa et al., 2021).

4.3.3 Control variables

Consistent with prior research (Al-Najjar and Abualqumboz, 2024; Bassyouny et al., 2020; Zalata and Abdelfattah, 2021), our regression models include several control variables that capture firm characteristics and governance that may have a significant impact on ESG performance. Specifically, financial performance (ROA), CEO duality (*CEO_DUAL*), CEO financial expertise (*CEO_FINEXP*), CEO gender (*CEO_GEND*), board size (*B_SIZE*), board independence

(*B_INDEP*), audit committee independence (*AC_INDEP*), firm age (*AGE*), firm size (*SIZE*), firm liquidity (*LIQ*), firm leverage (*LEV*). Finally, we incorporate industry fixed effects (*Ind*), year fixed effects (*Year*) and firm fixed effects (*Firm*) to account for variations in disclosure tone across different industries, firms and over time. Comprehensive definitions for each variable are provided in Table 2.

5. Empirical results and discussions

5.1 Descriptive statistics and correlation analysis

Table 3 provides the descriptive statistics of the regression variables. In terms of our dependent variable, the average value of *NAR_RHET* is 3.85, signifying that, on average, companies in our sample exhibit 3.85% narcissistic language in their narratives. Regarding our independent variables, the highest *ESG* score reached an impressive 95.26, while the lowest recorded *ESG* score was 4.77, with a mean score of 51.55. These findings highlight the diversity in ESG practices among the firms, with some demonstrating strong commitments, while others have substantial room for improvement. Nonetheless, these scores are generally consistent with those reported in previous studies (Al-Shammari et al., 2019; Eliwa et al., 2021). The sample reveals mean values of *CEO_DUAL*, *B_SIZE*, and *B_INDEP* are 0.16, 9.32, and 59.84 in a row. These figures suggest that, on average, there is a moderate presence of CEO duality, the board size is around 9 members, and the board independence is approximately 59.84%, indicating a substantial level of independence in the sampled companies. The average value of *AGE* is 30, implying that the sampled firms have an average age of 30 years. While the mean of *AC_INDEP* is 93.98. This suggests that, on average, 93.98% of audit committee members are independent.

Insert Table 3 here.

Table 4 presents the Pearson correlation coefficients, illustrating the relationships among the variables examined in the main analysis. Notably, there is a positive correlation between *ESG* and *NAR_RHET*. Additionally, *NAR_RHET* shows positive and significant correlations with *ROA*, while exhibiting a negative and significant correlation with *CEO_GEND*, *CEO_DUAL*, *B_SIZE*, *B_INDEP*, *AGE*, *LEV*. The correlations between *ESG* and the other variables align with the findings of prior research (Bochkay et al., 2019; Eliwa et al., 2023; Chen et al., 2023).

Insert Table 4 here.

5.2 Multivariate results and discussion

5.2.1 ESG performance and Corporate narcissistic rhetoric

The regression results for H1 are presented in Table 5 Column (1), focusing on the relationship between ESG performance and corporate narcissistic rhetoric. For conciseness, we report coefficients solely for our variables of interest, *ESG*. The results from Model 1 indicate that *ESG* is positive and statistically significant with a coefficient of 0.03 ($p < 0.01$). These findings strongly support the acceptance of H1, suggesting a positive relationship between ESG performance and corporate narcissistic rhetoric. These results align with prior research that shows companies often use corporate disclosures and strategic rhetoric to showcase their strong performance (e.g., Duchon and Drake, 2009; Iivonen and Moisander, 2015; Jin et al., 2024; Khatib et al., 2021). Additionally, the significance of these results is reinforced by the theoretical underpinnings of legitimacy theory. According to this theory, organizations continuously seek to align themselves with societal norms and values to maintain their legitimacy and social acceptance (Dowling & Pfeffer, 1975). In this context, the use of narcissistic rhetoric in corporate disclosures can be seen as a strategic tool to emphasize an organization's strong ESG performance. By projecting authority, superiority, and self-sufficiency, companies reinforce their alignment with societal expectations and maintain their legitimacy (Iivonen and Moisander, 2015). In terms of control variables, we observe that the coefficients are generally in line with previous research (Al-Shammari et al., 2019; Bochkay et al., 2019; Eliwa et al., 2023; Chen et al., 2023).

To further validate our findings, we conducted additional tests using alternative sources of ESG-related narrative content. In Column (2) of Table 5, we present results based on a subsample of 340 standalone ESG reports identified across our sample period. The analysis confirms the main finding that ESG performance is positively associated with narcissistic rhetoric, with a coefficient of 0.001 ($p < 0.05$). In Column (3), we focus on ESG-related sections extracted from annual reports. This analysis similarly reveals a positive and statistically significant relationship, with a coefficient of 0.018 ($p < 0.01$). Although the sample size is smaller in the standalone ESG report analysis due to limited availability, the consistency of results across different disclosure types strengthens the robustness of our findings and affirms that the observed rhetorical patterns are not confined to a particular type of document.

Insert Table 5 here.

5.2.2 ESG performance and Corporate narcissistic rhetoric: the moderating effect of proportion of women on the board in the examination of Hypothesis 2, Table 6 provides compelling insights into the moderating effect of female representation on board on the relationship between ESG performance and corporate narcissistic rhetoric. The interaction term (ESG*FEM_REP) exhibits a statistically significant negative coefficient ($t=-2.03$, $p<0.05$), offering robust support for our second hypothesis. This finding underscores the crucial role of female representation in moderating the main relationship, suggesting that high representation of females on board may temper the use of narcissistic rhetoric in corporate disclosures. Furthermore, these results are consistent with gender socialization theory, which argues that women tend to bring more collaborative, ethical, and cautious decision-making styles to board discussions. This influence can lead to more transparent and responsible corporate communication, as supported by the literature (Boulouta, 2013; Eliwa et al., 2023).

Insert Table 6 here.

6. Additional Analysis and Robustness checks

6.1 Additional analyses

In this section, we examine the association between various dimensions of ESG and organizational narcissistic rhetoric. Additionally, we evaluate the impact of financial performance on the extent of using narcissistic rhetoric in corporate disclosure.

6.1.1 ESG components and Narcissistic rhetoric

As shown in Table 7, the results in column (1) reveal positive significant association between *E_PERF* and *NAR_RHET* ($t=6.77$, $p<0.01$). This suggests that firms with stronger environmental performance are more likely to employ narcissistic language in their disclosures. Similarly, in column (2), the coefficient for *S_PERF* is also positive and highly significant ($t=10.88$, $p<0.01$), indicating that social performance is a key driver of the use of narcissistic rhetoric. However, in column (3), the coefficient for *G_performance* is positive and statistically significant ($t=9.46$, $p<0.01$), suggesting that governance performance has a meaningful impact on the use of narcissistic

rhetoric in corporate disclosures. In practical terms, the findings suggest that companies tend to highlight their achievements in environmental, social and governance performance through self-promotional or assertive language in their disclosures. This indicates that firms with strong environmental initiatives (such as reducing emissions or promoting sustainability), those excelling in social aspects (like diversity or community engagement) and those with good governance performance (such as the quality of board oversight or compliance with regulations) are more inclined to use corporate rhetoric that emphasizes their leadership and success in these areas.

Insert Table 7 here.

6.1.2 Financial performance and Narcissistic rhetoric

We employed *ROA* as a metric to assess firm profitability, serving as an indicator of financial performance. As depicted in Table 8, the findings in column (1) reveal a positive and statistically significant coefficient for *ROA* ($t = 3.66$, $p < 0.01$). This suggests that companies tend to employ narcissistic rhetoric in their disclosures when experiencing favorable financial performance. This aligns with prior studies that suggest firms are more likely to use assertive, self-promotional language to highlight their financial success and reinforce their superior market position during periods of strong profitability (e.g., Jin et al., 2024; Khatib et al., 2021). This strategic communication approach enables firms to project confidence and emphasize their leadership, particularly when financial outcomes are positive, thereby enhancing their image and maintaining their legitimacy among stakeholders.

Insert Table 8 here.

6.1.3 ESG performance and Narcissistic rhetoric dimensions

We investigated the effect of ESG performance on various components of narcissistic rhetoric, and the results, as shown in Table 9, indicate nuanced influences. The analysis reveals that the coefficient of ESG with authority is positively significant ($t = 10.39$, $p < 0.01$). Similarly, expressions of superiority and exhibitionism are positively and significantly influenced by ESG performance, with ($t = 2.78$, $p < 0.01$) and ($t = 8.66$, $p < 0.01$), respectively. Significant also show positive and significant relationships with ESG evidenced by ($t = 6.39$, $p < 0.01$) and ($t = 11.48$, $p < 0.01$). In contrast, the relationship between ESG performance and the components of entitlement and exploitativeness is found to be insignificant, indicating that these aspects of narcissistic

rhetoric are not affected by ESG metrics. These findings suggest that while ESG performance enhances certain narcissistic expressions within corporate communications, it does not universally increase all forms of narcissistic rhetoric.

The absence of a significant relationship between ESG performance and the components of entitlement and exploitativeness in corporate rhetoric can be attributed to the distinct nature of the language typically associated with these traits. Entitlement, often expressed through terms that imply an inherent right or privilege, such as "deserved" or "owing to us," may not directly resonate with the principles of sustainability and social responsibility emphasized by ESG metrics. Similarly, the dimension of exploitativeness, which encompasses notions such as "fraud" and "corruption," is likely discussed in corporate contexts with caution and reserve due to the negative connotations and legal implications these terms invoke. In contrast, terms that signify authority or superiority, such as "proud," "exceptional," or "number one," are often used to foster a positive corporate image and may be promoted in light of favorable ESG performance. These terms are more positively connotated and are typically employed to highlight corporate achievements and leadership, aligning closely with the strategic communication goals driven by strong ESG metrics.

Insert Table 9 here.

6.1.4 The moderating effect of female proportion on board (E+S as a measure for ESG)

We tested our moderating hypothesis concerning the effects of female representation on board on the main relationship, utilizing the Environmental plus Social (E+S) score, deliberately excluding the Governance (G) score. This exclusion is critical as female representation on the board—a key component of the G score—might introduce bias into the analysis if included. By isolating the E+S score, we aim to provide a more accurate measure of ESG performance that does not conflate effects due to female representation in governance (Abdelkader et al., 2024). The results, as presented in Table 10, reveal that the interaction term (E+S*FEM_REP) displays a statistically significant negative coefficient ($t = -1.69$, $p < 0.05$). These findings corroborate our main moderating hypothesis, demonstrating the substantial negative impact of female representation on the relationship between ESG performance and corporate narcissistic rhetoric.

Insert Table 10 here.

6.2 Robustness test

6.2.1 ESG performance, female representation, and narcissistic rhetoric using 2-SLS

To ensure the robustness of our findings and address potential endogeneity concerns—such as self-selection bias and omitted variable bias—we employ a two-stage least squares (2SLS) estimation. In this analysis, we use the industry mean of ESG performance (ESG_ind_mean) as an instrumental variable for firm-level ESG performance (Eliwa et al., 2023). Prior studies suggest that firms within the same industry tend to exhibit similar ESG practices (e.g., Bhandari et al., 2022; Ignatov, 2023; Mansouri et al., 2022; Wong et al., 2022). We assume ESG_ind_mean is exogenous, meaning it influences firm-level ESG performance but is unlikely to have a direct impact on the firm's rhetorical tone in disclosures.

In addition, we use the adoption of a mandatory retirement policy at the board (RETIRE) as an instrumental variable (Seebeck and Vetter, 2022). Retirement policy leads to higher turnover among directors, increasing opportunities for the appointment of female board members. As the representation of women on boards continues to rise over time, we anticipate a strong positive correlation between the existence of a retirement policy (RETIRE) and proportion of women on the board (FEM_REP). Moreover, firms that enforce mandatory director retirement are typically less likely to engage in discriminatory practices against women, reinforcing the plausibility that RETIRE affects board composition without exerting a direct influence on corporate rhetorical style.

The first-stage results, reported in Table 11, support the strength and relevance of the instruments. Column 1 shows that ESG_ind_mean is a strong predictor of firm-level ESG performance, with a statistically significant positive coefficient ($t = 10.14$, $p < 0.01$). Column 2 shows that RETIRE significantly predicts female board representation ($t = 2.12$, $p < 0.05$). In the second-stage results (Column 3), ESG performance is positively associated with corporate narcissistic rhetoric ($t = 4.48$, $p < 0.01$), while the interaction term ESG*FEM_REP has a significant negative coefficient ($t = -2.30$, $p < 0.05$), indicating a moderating effect.

These findings demonstrate that, even after addressing endogeneity concerns, the positive association between ESG performance and narcissistic rhetoric remains robust. Furthermore, female representation on the board significantly weakens this relationship, reinforcing our theoretical expectation that board gender diversity acts as a governance mechanism limiting self-promotional narrative strategies in ESG disclosures.

Insert Table 11 here.

6.2.2 Narcissistic rhetoric (Alternative measure)

To enhance the robustness of our analysis of ESG performance, we decided to implement an alternative approach for measuring narcissistic rhetoric. We employed a large language model (LLM), specifically ChatGPT, to code each sentence in corporate reports as narcissistic or neutral. Using the ChatGPT API, we measured the proportion of sentences that were classified as narcissistic. This alternative measurement helps verify the consistency and reliability of our initial findings by providing a detailed, sentence-level analysis of narcissistic rhetoric within the reports. The findings, as detailed in Table 12, reinforces our main findings. The coefficient for ESG performance is statistically significant ($t = 3.76$, $p < 0.01$), indicating a strong level of significance. This consistency between the original and alternative measurements underscores the reliability of our conclusions regarding the influence of ESG performance. Appendix B shows examples of the narcissistic sentences, drawn from annual reports as classified by ChatGPT.

Insert Table 12 here.

6.2.3 Quartile-Based Analysis of ESG Performance and Narcissistic Rhetoric

As a robustness validation for the main analysis, we performed several additional tests. First, we transformed the dependent variable into a multi-categorical measure by dividing the continuous narcissistic rhetoric score into quartiles (Q1–Q4) and estimated an ordered logistic regression model. This modeling strategy allows us to examine the effect of ESG performance across the full spectrum of narcissistic rhetoric levels, rather than limiting the analysis to the extreme quartiles. The results in table 13, show that ESG performance is positively and significantly associated with higher levels of narcissistic rhetoric. The estimated coefficient for *ESG_PERF* is 0.12 ($z = 8.43$, $p < 0.01$), suggesting that improved ESG performance increases the likelihood that firms move into a higher narcissism quartile.

Insert Table 13 here.

Second, we conducted separate regressions for each quartile independently. This approach allows us to assess how the relationship between ESG performance and narcissistic rhetoric varies across different levels of narcissistic disclosure. Additionally, to investigate whether ESG

performance is more strongly associated with higher or lower levels of narcissistic disclosure, rather than assuming the relationship is uniform across the entire sample (Hu et al., 2023). The results presented in table 14, show that the relationship between ESG performance and narcissistic rhetoric is positive and statistically significant across all four quartiles. This pattern suggests that ESG performance consistently shapes the corporate narrative tone, regardless of the firm's underlying level of narcissistic language. Overall, the findings reinforce that higher ESG performance is associated with greater narcissistic expression throughout the spectrum of rhetorical behavior.

Insert Table 14 here.

Third, we retained the continuous narcissistic rhetoric variable as the outcome and included ESG performance quartiles (Q2, Q3, and Q4) as dummy variables in a single regression model (Q1 serves as the reference category). This specification allows for a comprehensive comparison of rhetorical tone across the entire ESG spectrum. As reported in table 15, firms in Q2, Q3, and Q4 exhibit significantly higher levels of narcissistic rhetoric compared to those in Q1. Specifically, ESG quartile coefficients increased progressively from 0.18 (Q2) to 0.35 (Q3) to 0.58 (Q4), all statistically significant at the 1% level. These findings support the notion that higher ESG engagement is consistently associated with more self-enhancing language in corporate disclosures.

Together, these additional tests strengthen confidence in the reliability and consistency of the main results. They demonstrate that the positive association between ESG performance and narcissistic rhetoric is not confined to specific ranges of the variables but rather persists across different levels of rhetoric and modeling strategies.

Insert Table 15 here.

7. Conclusion

The study empirically investigates the relationship between ESG performance and narcissistic rhetoric in corporate disclosures among UK companies, while also examining the moderating role of proportion of women on the board in this relationship. The findings reveal a significant positive association between ESG performance and the use of narcissistic rhetoric in corporate disclosures. In other words, organizations with strong ESG performance are more likely to employ assertive

and self-promotional language to highlight their achievements and reinforce their market position. However, proportion of women on the board negatively moderates this relationship. Specifically, higher women proportion tend to reduce the extent to which ESG performance drives narcissistic rhetoric. This negative moderation suggests that female board members play a role in tempering excessive self-promotion and promoting more balanced and transparent communication.

Our findings offer significant theoretical contributions and practical implications. Theoretically, our research sheds light on the narcissistic rhetoric in corporate narrative disclosures, an area that has been relatively underexplored in the literature. This investigation enriches the understanding of how narcissistic rhetoric functions within corporate communications and contributes to broader discussions on organizational behavior. Additionally, our study advances legitimacy theory by demonstrating how organizations use rhetorical strategies to maintain and enhance their legitimacy. Furthermore, the exploration of proportion of women on the board's moderating role provides valuable insights into the dynamics of corporate communication, offering a deeper understanding of how internal governance structures can influence external communication strategies.

Practically, the findings of our study have significant implications for various stakeholders. For corporate leaders, they highlight the fine line between using narcissistic rhetoric to effectively differentiate their company and crossing into excessive self-promotion that might distort the true nature of their ESG achievements. Understanding this balance is crucial for maintaining legitimacy and credibility. Leaders can leverage this insight to craft disclosures that project confidence and showcase their company's strengths, while ensuring that these communications accurately reflect genuine accomplishments and do not compromise the organization's integrity. For policymakers and regulators, our research underscores the need to cultivate ethical communication practices that go beyond simply ensuring the accuracy of ESG reporting. We advocate for the creation of new legislation or regulatory guidelines that specifically address and temper excessive narcissistic rhetoric in corporate disclosures. Such measures could involve stricter transparency requirements and establishing penalties for disclosures that significantly embellish ESG achievements. Additionally, policymakers could incentivize companies that not only comply with ESG standards but also commit to honest and measured communication about their environmental and social impacts, thereby fostering a culture of authenticity and humility in corporate communications.

Furthermore, the study offers valuable insights for investors and consumers by illuminating the role of narcissistic rhetoric in corporate communication. Understanding the nuances of this rhetoric can serve as a powerful tool for stakeholders to better assess the authenticity of corporate disclosures. This awareness enables them to distinguish between genuine transparency and self-aggrandizing promotion, making more informed decisions that align with their values and expectations of corporate responsibility.

Our study is subject to certain limitations that should be addressed in future research endeavors. First, the data used in our analysis is limited to UK companies listed on the FTSE 350 Index between 2012 and 2021. Future studies could expand this by examining these relationships in different countries or within Small and Medium-sized Enterprises (SMEs) and non-publicly traded firms to provide broader insights. Second, while this research focuses on the link between ESG performance and organizational narcissistic rhetoric, future studies could investigate other aspects of communication strategies to enrich the understanding of corporate disclosure practices. Exploring how different communication frameworks or strategies impact stakeholder perceptions could provide valuable additions to the discourse on corporate transparency. Lastly, the results of our study are inherently tied to the control variables included in our analyses and underscore the moderating role of proportion of women on the board within the context of our analysis. Future research could explore additional, unconsidered variables that might influence the dynamics between ESG performance and corporate rhetoric. Investigating factors such as board structure, CEO tenure, cultural context, director qualifications, and shareholder engagement practices could provide deeper insights into the relationship between ESG practices and corporate disclosures. Such exploration is essential for developing more comprehensive strategies to improve transparency and accountability in corporate practices.

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Tables

Table 1: Sample industrial composition

Industry	Companies	Observations	Percentage
<i>Basic Materials</i>	16	139	8.38
<i>Consumer Discretionary</i>	46	366	21.96
<i>Consumer Staples</i>	19	175	10.56
<i>Energy</i>	8	62	3.74
<i>Health Care</i>	10	84	5.08
<i>Industrials</i>	50	438	26.43
<i>Real Estate</i>	27	230	13.88
<i>Technology</i>	11	61	3.68
<i>Telecommunications</i>	6	44	2.65
<i>Utilities</i>	7	62	3.74
Total	200	1659	100

Table 2: Variables description

Variable	Symbol	Details
ESG performance	ESG	Derived from the Refinitiv ESG database, the Refinitiv ESG scores are determined by aggregating the total scores assigned to firms based on their dedication to three distinct ESG dimensions: environmental, social, and governance.
Narcissistic rhetoric (%)	NAR_RHET	Derived by summing the scores for Authority, Superiority, Exhibitionism, Vanity, Self-sufficiency, Entitlement, and Exploitativeness divided by total words and then multiplied by 100 based on the wordlist devised by Anglin et al. (2018).
CEO gender	CEO_GEND	Measured as a dummy variable equal to 1 for female CEOs, and 0 otherwise. Data obtained from the Refinitiv database.
CEO duality	CEO_DUAL	Measured as a dummy variable equal to 1 if CEO also serves as chairman, and 0 otherwise. Data obtained from the Refinitiv database.
Board size	B_SIZE	Measured as the total number of members comprising the board of directors. Data obtained from the Refinitiv database.
Board independence (%)	B_INDEP	Measured as the proportion of independent non-executive directors to the total number of directors within the board. Data obtained from the Refinitiv database.
Firm age	AGE	Measured as the number of years since the firm's incorporation. Data obtained from the Refinitiv database.
Firm size	SIZE	Measured as the natural logarithm of a company's total assets. Data obtained from the Refinitiv database.
Firm profitability	ROA	Calculated as net income divided by total assets. Data obtained from the Refinitiv database.
Firm liquidity	LIQ	Calculated by dividing a firm's current assets by its current liabilities. Data obtained from the Refinitiv database.
Firm leverage	LEV	Determined by the ratio of total debt to total assets. Data obtained from the Refinitiv database.
CEO financial experience	CEO_FINEXP	Measured as a dummy variable equal to 1 if the CEO has prior work experience in banks, financial institutions, and the investment sector, and 0 otherwise. Data obtained from the Refinitiv database.
Proportion of women on the board (%)	FEM_REP	Calculated as the percentage of female directors to the total number of directors within the board. Data obtained from the Refinitiv database.
Audit committee independence (%)	AC_INDEP	Measured as the percentage of independent members within the audit committee. Data obtained from the Refinitiv database.
Retirement policy	RETIRE	Dummy variable that equals 1 if the directors retire at each annual general meeting and 0 otherwise.

Table 3: Descriptive statistics

Variable	N	Mean	Std. dev.	Min	Max
<i>NAR_RHET (%)</i>	1,659	3.85	0.65	0.11	7.67
<i>ESG</i>	1,659	51.55	10.43	4.77	95.26
<i>ROA</i>	1,659	11.01	9.99	-11.97	38.29
<i>CEO_GEND</i>	1,659	0.12	0.33	0	1
<i>CEO_DUAL</i>	1,659	0.16	0.36	0	1
<i>CEO_FINEXP</i>	1,659	0.22	0.42	0	1
<i>B_SIZE</i>	1,659	9.32	2.40	3	17
<i>B_INDEP (%)</i>	1,659	59.84	14.23	0	93.45
<i>AC_INDEP (%)</i>	1,659	93.98	13.25	0	100
<i>AGE</i>	1,659	30.00	26.58	1	113
<i>SIZE</i>	1,659	7.82	1.58	3.65	12.72
<i>LIQ</i>	1,659	1.27	1.23	0.20	10.91
<i>LEV</i>	1,659	54.94	21.46	0	168.87

Note: Variable definitions are provided in Table 2.

Table 4: Correlation matrix

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
(1) NAR_RHET	1.00												
(2) ESG	0.03	1.00											
(3) ROA	0.20*	-0.07*	1.00										
(4) CEO_GEND	-0.03	0.15*	-0.06*	1.00									
(5) CEO_DUAL	-0.10*	-0.25*	0.07*	-0.14*	1.00								
(6) CEO_FINEXP	0.03	0.01	0.16*	0.13*	-0.04	1.00							
(7) B_SIZE	-0.17*	0.09*	-0.06*	0.14*	-0.21*	0.02	1.00						
(8) B_INDEP	-0.12*	0.16*	-0.09*	0.02	-0.18*	-0.06*	0.15*	1.00					
(9) AC_INDEP	-0.03	0.06*	0.01	-0.03	-0.06*	0.02	0.14*	0.40*	1.00				
(10) AGE	-0.12*	-0.04	0.02	0.03	-0.09*	0.05*	0.13*	0.14*	0.08*	1.00			
(11) SIZE	-0.40*	0.14*	-0.25*	0.15*	-0.24*	0.00	0.60*	0.36*	0.16*	0.17*	1.00		
(12) LIQ	0.01	0.25*	0.03-	-0.04	0.03	-0.04	-0.12*	0.01	-0.00	-0.11*	-0.19*	1.00	
(13) LEV	-0.09*	-0.091*	0.17*	0.12*	-0.12*	-0.01	0.22*	0.02	-0.06*	-0.04	0.26*	-0.35*	1.00

Note: Variable definitions are provided in Table 2. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

Table 5: The relationship between ESG performance and narcissistic rhetoric

	(1) NAR RHET	(2) NAR RHET	(3) NAR RHET
<i>ESG</i>	0.03*** (15.90)	0.001** (0.03)	0.018*** (7.02)
<i>ROA</i>	0.01*** (4.46)	0.01* (1.22)	0.004* (1.89)
<i>CEO_DUAL</i>	-0.14*** (-4.08)	-0.09*** (-1.85)	-0.12*** (-2.90)
<i>CEO_FINEXP</i>	0.07** (2.22)	0.061** (1.54)	0.145*** (3.70)
<i>CEO_GEND</i>	0.08** (2.00)	-0.17* (-0.55)	-0.031 (-0.63)
<i>B_SIZE</i>	0.02** (2.05)	0.001* (1.65)	0.044*** (3.12)
<i>B_INDEP</i>	0.01** (3.34)	0.001** (1.22)	0.003* (1.66)
<i>AC_INDEP</i>	-0.01 (-1.61)	-0.01 (-1.08)	-0.002 (-1.36)
<i>AGE</i>	0.59** (2.59)	0.43** (1.54)	0.57** (1.96)
<i>SIZE</i>	0.05* (1.76)	0.05*** (1.88)	0.140*** (3.62)
<i>LIQ</i>	-0.01 (-0.99)	-0.02 (-0.54)	-0.01 (-0.76)
<i>LEV</i>	-0.01** (-2.06)	-0.02*** (-0.76)	-0.01 (-0.58)
<i>_cons</i>	-8.88** (-2.05)	-0.404** (-0.18)	-8.40** (-1.51)
<i>Year fixed effect</i>	Included	Included	Included
<i>Industry fixed effect</i>	Included	Included	Included
<i>Firm fixed effect</i>	Included	Included	Included
<i>Observations</i>	1659	340	1659
<i>adj. R²</i>	0.71	0.54	0.60

Notes: The reported coefficients for each variable are accompanied by their respective t-test values enclosed in parentheses. Table 2 fully defines all the variables used. *, **, and *** represent significance at the 0.10, 0.05, and 0.01 levels, respectively.

Table 6: The moderating effect of female representation on board

	NAR_RHET
<i>ESG</i>	0.036*** (14.25)
<i>FEM_REP</i>	-0.002 (-0.16)
<i>ESG*FEM_REP</i>	-0.045** (-2.03)
<i>Control variables</i>	Included
<i>_cons</i>	-9.92** (-2.28)
<i>Year fixed effect</i>	Included
<i>Industry fixed effect</i>	Included
<i>Firm fixed effect</i>	Included
<i>Observations</i>	1659
<i>adj. R²</i>	0.71

Notes: The reported coefficients for each variable are accompanied by their respective t-test values enclosed in parentheses. Table 2 fully defines all the variables used. *, **, and *** represent significance at the 0.10, 0.05, and 0.01 levels, respectively.

Table 7: The relationship between E, S, and G performance, and narcissistic rhetoric

	(1) NAR_RHET	(2) NAR_RHET	(3) NAR_RHET
<i>E_PERF</i>	0.007*** (6.77)		
<i>S_PERF</i>		0.016*** (10.88)	
<i>G_PERF</i>			0.01*** (9.46)
<i>Control variables</i>	Included	Included	Included
<i>_cons</i>	-7.44 (-1.60)	-10.60** (-2.34)	-2.31** (-10.56)
<i>Year fixed effect</i>	Included	Included	Included
<i>Industry fixed effect</i>	Included	Included	Included
<i>Firm fixed effect</i>	Included	Included	Included
<i>Observations</i>	1659	1659	1659
<i>adj. R²</i>	0.67	0.69	0.68

Notes: The reported coefficients for each variable are accompanied by their respective t-test values enclosed in parentheses. Table 2 fully defines all the variables used. *, **, and *** represent significance at the 0.10, 0.05, and 0.01 levels, respectively.

Table 8: The relationship between financial performance and narcissistic rhetoric

	(1) NAR RHET
<i>ROA</i>	0.006*** (3.66)
<i>Control variables</i>	Included
<i>_cons</i>	-9.26** (-1.97)
<i>Year fixed effect</i>	Included
<i>Industry fixed effect</i>	Included
<i>Firm fixed effect</i>	Included
<i>Observations</i>	1659
<i>adj. R²</i>	0.66

Notes: The reported coefficients for each variable are accompanied by their respective t-test values enclosed in parentheses. Table 2 fully defines all the variables used. *, **, and *** represent significance at the 0.10, 0.05, and 0.01 levels, respectively.

Table 9: The relationship between ESG performance and narcissistic rhetoric dimensions

	Authority	Superiority	Exhibitionism	Vanity	Self-sufficiency	Entitlement	Exploitativeness
<i>ESG</i>	0.011*** (10.39)	0.001*** (2.78)	0.006*** (8.66)	0.001*** (6.39)	0.004*** (11.48)	0.000 (1.35)	0.001 (1.63)
<i>Control variables</i>	Included	Included	Included	Included	Included	Included	Included
<i>_cons</i>	-3.02 (-1.28)	-0.40 (-0.79)	-1.30 (-0.91)	-0.31 (-0.63)	-3.16*** (-3.97)	-0.08 (-0.85)	-0.05 (-0.28)
<i>Year fixed effect</i>	Included	Included	Included	Included	Included	Included	Included
<i>Industry fixed effect</i>	Included	Included	Included	Included	Included	Included	Included
<i>Firm fixed effect</i>	Included	Included	Included	Included	Included	Included	Included
<i>Observations</i>	1659	1659	1659	1659	1659	1659	1659
<i>adj. R²</i>	0.71	0.68	0.77	0.63	0.68	0.42	0.59

Notes: The reported coefficients for each variable are accompanied by their respective t-test values enclosed in parentheses. Table 2 fully defines all the variables used. *, **, and *** represent significance at the 0.10, 0.05, and 0.01 levels, respectively.

Table 10: The moderating effect of female representation on board using (E+S)

	NAR_RHET
<i>E+S</i>	0.008*** (8.16)
<i>FEM_REP</i>	0.04 (1.20)
<i>E+S*FEM_REP</i>	-0.07** (-1.69)
<i>Control variables</i>	Included
<i>_cons</i>	4.25*** (17.66)
<i>Year fixed effect</i>	Included
<i>Industry fixed effect</i>	Included
<i>Firm fixed effect</i>	Included
<i>Observations</i>	1659
<i>adj. R²</i>	0.67

Notes: The reported coefficients for each variable are accompanied by their respective t-test values enclosed in parentheses. Table 2 fully defines all the variables used. *, **, and *** represent significance at the 0.10, 0.05, and 0.01 levels, respectively.

Table 11: The relationship between ESG performance, female representation, and narcissistic rhetoric using 2-SLS

	First stage (1) ESG	First stage (2) FEM_REP	Second stage (3) NAR_RHET
<i>ESG_ind_mean</i>	0.748*** (10.14)		
<i>RETIRE</i>		1.55** (2.12)	
<i>ESG</i>			0.104*** (4.48)
<i>FEM_REP</i>			0.156 (2.22)
<i>ESG*FEM_REP</i>			-0.003** (-2.30)
<i>Control variables</i>	Included	Included	Included
<i>_cons</i>	-39.70 (-0.71)	-9.10 (-0.09)	-15.89** (-2.48)
<i>Year fixed effect</i>	Included	Included	Included
<i>Industry fixed effect</i>	Included	Included	Included
<i>Firm fixed effect</i>	Included	Included	Included
<i>Observations</i>	1659	1659	1659
<i>Cragg–Donald Wald F statistic</i>	102.895	24.61	
<i>Stock and Yogo (2005) ID test: 10% maximal IV</i>	16.38	16.38	
<i>Anderson canon. corr. Chi-sq.</i>	110.78***	9.39***	

Notes: The reported coefficients for each variable are accompanied by their respective t-test values enclosed in parentheses. Table 2 fully defines all the variables used. *, **, and *** represent significance at the 0.10, 0.05, and 0.01 levels, respectively.

Table 12: The relationship between ESG performance, narcissistic rhetoric (narcissistic sentences as alternative measure)

	NAR_RHET
<i>ESG</i>	0.01*** (3.76)
<i>Control variables</i>	Included
<i>_cons</i>	-9.82 (-1.24)
<i>Year fixed effect</i>	Included
<i>Industry fixed effect</i>	Included
<i>Firm fixed effect</i>	Included
<i>Observations</i>	1659
<i>adj. R²</i>	0.63

Notes: The reported coefficients for each variable are accompanied by their respective t-test values enclosed in parentheses. Table 2 fully defines all the variables used. *, **, and *** represent significance at the 0.10, 0.05, and 0.01 levels, respectively

Table 13: Ordered Logistic Regression of ESG Performance and Narcissistic Rhetoric (Quartiles 1–4)

	NAR_RHET Quartile (1-4)
<i>ESG</i>	0.12*** (8.43)
<i>Control variables</i>	Included
<i>_cons</i>	-1.46 (-0.52)
<i>Year fixed effect</i>	Included
<i>Industry fixed effect</i>	Included
<i>Firm fixed effect</i>	Included
<i>Observations</i>	1659
<i>Pseudo R²</i>	0.40

Notes: The dependent variable is **narc_quartile**, representing the level of narcissistic rhetoric (1 = lowest, 4 = highest). Reported coefficients are from ordered logistic regression. Z-values are in parentheses. Table 2 fully defines all control variables. Standard errors are robust. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively.

Table 14: ESG Performance Across Different Levels of Narcissistic Rhetoric (Q1–Q4)

	NAR_RHET Q1	NAR_RHET Q2	NAR_RHET Q3	NAR_RHET Q4
<i>ESG</i>	0.03*** (10.31)	0.01*** (2.16)	0.00** (0.61)	0.01*** (2.72)
<i>Control variables</i>	Included	Included	Included	Included
<i>_cons</i>	-1.46 (-0.52)	4.04*** (5.02)	4.62*** (3.69)	-3.56 (-.56)
<i>Year fixed effect</i>	Included	Included	Included	Included
<i>Industry fixed effect</i>	Included	Included	Included	Included
<i>Firm fixed effect</i>	Included	Included	Included	Included
<i>Observations</i>	415	415	415	414
<i>adj. R²</i>	0.63	0.45	0.55	0.70

Notes: The reported coefficients for each variable are accompanied by their respective t-test values enclosed in parentheses. Table 2 fully defines all the variables used. *, **, and *** represent significance at the 0.10, 0.05, and 0.01 levels, respectively.

Table 15: ESG Performance Quartiles and Narcissistic Rhetoric

	NAR_RHET
<i>ESG_Quartile</i>	
<i>(Q2)</i>	0.18*** (5.40)
<i>(Q3)</i>	0.35*** (8.42)
<i>(Q4)</i>	0.58*** (11.19)
<i>Control variables</i>	Included
<i>_cons</i>	-9.88** (-2.18)
<i>Year fixed effect</i>	Included
<i>Industry fixed effect</i>	Included
<i>Firm fixed effect</i>	Included
<i>Observations</i>	1659
<i>adj. R²</i>	0.69

Notes: ESG quartiles are included as dummy variables, with Q1 serving as the reference category. Reported coefficients are from OLS regressions with robust standard errors. t-values are shown in parentheses. All control variables defined in Table X are included. *, **, and *** indicate significance at the 10%, 5%, and 1% levels, respectively.

Appendix A. Examples of Narcissistic Rhetoric in Annual Report Texts

Dimension	Company	Annual report text excerpts
Authority	4imprint Group (2021)	“An essential element of the 4imprint strategy is the objective to achieve a market leadership position in the markets we serve.”
	Vodafone (2018)	“Each Group policy is owned by a member of the Executive Committee so that there is clear accountability and authority for ensuring the associated business risk is adequately managed.”
Superiority	4imprint Group (2021)	“We have an exceptional culture revolving around the delivery of remarkable customer service, and a robust satisfaction guarantee that our customers can rely on.”
	Vodafone (2018)	“We offer a superior customer experience and continually improve our offering through a wide set of innovative products and services.”
Exhibitionism	4imprint Group (2021)	“This mindset is evident across the four pillars of our sustainability agenda through team members who go above and beyond every day to help each other, to provide remarkable service and to give back to their communities because they know and believe that it is the right thing do.”
	Vodafone (2018)	“Safaricom, Vodafone’s 40% associate, which is the number one mobile operator.”
Vanity	4imprint Group (2021)	“We are proud that 4imprint achieved <i>CarbonNeutral</i> ® company status in October 2021, more than a year ahead of the target date.”
	Vodafone (2018)	“The 2018 survey demonstrated that 87% of employees who responded were proud to work for Vodafone.”
Self-sufficiency	4imprint Group (2021)	“Members of our Group Environmental and SMART committees are actively engaged with the Green Masters Program.”
	Vodafone (2018)	“Our technology resilience levels continue to mature across all sites.”
Entitlement	4imprint Group (2021)	“Data-driven heritage and discipline.”
Exploitativeness	4imprint Group (2021)	“Regular review by senior management of detailed management information; other self-monitoring; no history of control breakdown or fraud .”
	Vodafone (2018)	“Vodafone does not tolerate bribery and corruption in any form – we would rather walk away from a business opportunity than engage in any act of corruption .”

Appendix B. Examples of Narcissistic Sentences as classified by ChatGPT API

Company	Sample of narcissistic sentences
ASOS (2019)	“Back in 2000, people said online fashion wouldn’t work. We proved them wrong. Almost 20 years on, we’re still pushing the boundaries for the world’s fashion loving 20-somethings, helping more and more people look, feel and be their best.”
BP (2015)	“Our strategic decisions have positioned BP as a leader in the global energy market.”
Centamin PLC (2021)	“Our successful exploration activities have not only extended the life of our existing assets but also positioned us as a leader in sustainable mini practices.”
EasyJet (2014)	“Our strategic decisions have positioned EasyJet as a leader in the global aviation Market.”
Sirius Real Estate (2020)	“Our commitment to sustainability and ethical practices sets us apart from others in the industry, reinforcing our leadership position.”