



*Research article*

## **Do CEO power and narcissism increase or reduce the attraction of socially responsible investing?**

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**Abstract:** This study investigates whether top executive traits shape the appeal of environmentally oriented firms to institutional investors committed to the Principles for Responsible Investment (PRI). Using firms quoted on the Spanish Stock Exchange over the period 2018–2022, we analyzed how managerial narcissism and decision-making authority affect capital allocation toward green assets. The analysis further incorporated governance and demographic contingencies, including executive age and the existence of a dedicated CSR committee, as well as heterogeneity across investor locations and investment horizons. The empirical evidence indicated that elevated levels of CEO narcissism and power are associated with a lower propensity of responsible investors to hold green assets. This adverse relationship is particularly pronounced when corporate leadership is older, consistent with perceptions of weaker strategic alignment with sustainability-oriented innovation. By contrast, the presence of a CSR committee functions as a credibility-enhancing mechanism that offsets, and in some cases neutralizes, the detrimental influence of CEO traits on sustainable investment decisions. We found no systematic variation in these relationships across countries or between short- and long-term-oriented PRI investors. Overall, the findings advance the corporate governance and sustainable finance literature by highlighting how executive psychology and internal monitoring structures jointly condition investor responses to firms' environmental strategies.

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**Keywords:** CEO power; CEO narcissism; socially responsible investors (SRI); sustainable finance; institutional investors; PRI signatories

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## 1. Introduction

The growing interest in sustainability and socially responsible investing has highlighted the role of CEO leadership in the adoption of environmental, social, and governance (ESG) practices. CEO cognitive traits and personal values, influenced by their personality, can affect the likelihood of their engagement in socially responsible practices, as well as the encouragement or discouragement of such behavior (Chatterjee and Hambrick, 2007; Dabbebi et al., 2022). This is particularly relevant in the context of greenwashing, where the perceived authenticity of a firm's sustainability efforts is essential for attracting responsible capital from institutional investors. Recent studies show that investors can detect when ESG initiatives are driven by self-promotion or power concentration at the top, rather than by a genuine commitment to sustainability (Matos 2020; Black et al., 2022). Our study addresses this worry by examining whether CEO narcissism and power, traits often linked to opportunistic or superficial ESG engagement, act as constraints for socially responsible investors who seek substance over symbolic image.

In line with upper echelons theory (Hambrick and Mason, 1984), which posits that organizational outcomes reflect the values and cognitive bases of top managers, leadership traits such as narcissism and power are expected to influence the firm's ESG positioning and its appeal to responsible investors. CEO narcissism is a personal trait characterized by an exaggerated sense of grandiosity, success, sense of power, arrogance, lack of empathy, and an excessive need for admiration (American Psychiatric Association, 2013). CEO power is a structural and contextual concept, related to the CEO's position in the organization and their ability to exercise authority (Martínez-Ferrero et al., 2023). Prior research (e.g., Petrenko et al., 2016; Martínez-Ferrero et al., 2024; Arena et al., 2018; Khanchel et al., 2024) has primarily focused on the effect of CEO traits on corporate ESG behavior as signals of credibility or risk, not on how these traits are perceived by external stakeholders, particularly socially responsible investors (SRI).

The literature on SRI has established that institutional investors, especially those adhering to the Principles for Responsible Investment (PRI), are sensitive not only to ESG performance but also to the credibility and trustworthiness of the leadership behind these initiatives (Matos, 2020; Black et al., 2022; De Angelis et al., 2022). These investors play a key role in aligning corporate behavior with long-term sustainability goals, often pushing firms to adopt better governance practices and improve their ESG performance.

In the context of green investment, CEO attributes such as narcissism and power may act as a double-edged sword. On the one hand, prior studies suggest that these traits can raise concerns among socially responsible investors, since they are associated with risks of greenwashing, weak governance, and misaligned agendas (Engelen et al., 2016; He et al., 2023; Jensen and Meckling, 1976). On the

other hand, narcissistic and powerful CEOs may also be seen as confident and charismatic leaders who, under pressure from stakeholders, engage in CSR activities and visible sustainability initiatives to enhance their reputation and legitimacy (Tang et al., 2018; Al-Shammari et al., 2019). This ambivalence highlights the need to explore whether these controversial CEO characteristics influence firms' ability to attract responsible investment from PRI signatories.

Drawing on firms traded on the Spanish Stock Exchange during the 2018–2022 period, this study evaluates how executive narcissism and managerial dominance shape the interest of PRI-affiliated investors in environmentally oriented assets. Because leadership behavior is conditioned by both organizational and personal constraints, the analysis incorporates contextual factors that may intensify or attenuate these effects. In particular, we consider whether CEO age and the presence of a specialized CSR committee alter the extent to which executive traits translate into differential investor responses to green investment opportunities. As an additional analysis, we examine the importance of geographic differences among PRI signatories and the impact of short- and long-term investment strategies.

Our results reveal that CEO leadership characteristics, particularly narcissism and power, are critical cognitive and structural attributes that negatively influence the level of socially responsible investment, particularly among institutional investors who adhere to the PRI. We also determine that these CEO attributes do not have a uniform and isolated effect and that there are other conditions under which these attributes are strengthened or weakened. We find that the effect of CEO narcissism and power in deterring green investors is stronger for older CEOs. These results suggest that as CEOs age, they may be perceived as discouraging for responsible investors, as older CEOs tend to show less interest in sustainable initiatives and adopting long-term ESG strategies (Martínez-Ferrero et al., 2024; Oh et al., 2024). Interestingly, our findings also show that the presence of a CSR committee not only mitigates the influence of CEO narcissism and CEO power but may even reverse it by promoting a favorable environment for green investments. Finally, our results show no significant differences among PRI signatories according to time horizons, whether short-term or long-term, or nationality (European or non-European). This suggests that for our Spanish sample, CEO characteristics related to narcissism and power negatively influence the attractiveness of green investments, regardless of the nationality and investment strategy orientation of PRI signatories.

This paper offers a threefold contribution. First, it enhances the literature on socially responsible institutional investors by explaining how CEO attributes impact the ability to attract green investment in European firms. Unlike existing work focusing on PRI signatory investors' effects on profitability or ESG performance (Black et al., 2021; De Angelis et al., 2022; Matos, 2020), our study examines how CEO characteristics like power and narcissism influence these responsible investors, offering a new perspective on leadership's role in green investment. Second, the paper contributes to corporate governance and sustainability by exploring how CEO characteristics (power and narcissism) interact with moderating variables, particularly CEO age, to affect interest in ESG investment. This provides insight into how CEO traits evolve and influence the sustainability decisions of PRI signatories, highlighting the dynamic nature of leadership and demographic factors in SRI (Petrenko et al., 2016; He et al., 2023). Finally, the study contributes to corporate governance by emphasizing the role of internal mechanisms, such as CSR committees, in mitigating the negative effects of CEO power and narcissism on the appeal of green investment. It is also connected with the literature on greenwashing, as it shows that socially responsible investors penalize leadership profiles associated with

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opportunistic ESG engagement, providing evidence on how markets detect and respond to potential greenwashing signals.

## 2. Theoretical framework and research hypotheses

### 2.1. Theoretical background

In the context of attracting green investment, some CEO attributes may act as a double-edged sword, as there may be different perceptions of how socially responsible investors (SRI) perceive CEOs with high levels of narcissism and power. On the one hand, these CEO attributes can generate distrust among investors, as they are associated with risks of greenwashing, strategic inconsistency, and weak corporate governance (Engelen et al., 2016). The presence of a narcissist in a company can be perceived as an obstacle to ESG goals, raising doubts about the authenticity and long-term sustainability of green initiatives within the company (Petrenko et al., 2016). Green investors may believe that narcissistic CEOs, driven by their need for admiration and recognition, may prioritize visible ESG initiatives solely to enhance their own image and the company's reputation, even when these actions lack real substance, increasing the risk of greenwashing. Similarly, in terms of CEO power, as measured by aspects such as duality, ownership, and tenure, powerful CEOs may appear to be riskier and less trustworthy. They may be less motivated to engage in sustainable and transparent ESG practices and more likely to engage in CSR activities to protect their position in the company (He et al., 2023; Petrenko et al., 2016; Slager and Gond, 2020). These concerns align with agency theory (Jensen and Meckling, 1976), which warns that entrenched CEOs may pursue personal agendas that are misaligned with the interests of shareholders and stakeholders.

On the other hand, narcissistic and powerful CEOs may be perceived as leaders capable of ensuring compliance with ESG goals (Jiraporn and Chintrakarn, 2013; Hong et al., 2016; Jo and Harjoto, 2011), which may build trust among responsible investors and contribute to attracting green investments. These CEOs, who are confident, charismatic, and highly concerned about their reputation, may become more involved in CSR activities to avoid criticism from the media (García-Meca et al., 2024) and seek positive attention through visible and impactful initiatives related to sustainability (Tang et al., 2018; Al-Shammari et al., 2019; Dabbebi et al., 2022). This could increase the attraction of green investment. From a stakeholder theory perspective (Freeman, 1984), such leaders may also respond to external pressures and expectations, seeking to enhance their legitimacy and long-term reputation through ESG strategies.

This heterogeneity in the possible relationship highlights the need for further research and understanding of the factors influencing sustainable investment, as well as the exploration of whether some controversial CEO attributes can either encourage or discourage green investors.

### 2.2. PRI signatories: socially responsible institutional investors

Institutional investors are market participants who manage large amounts of capital on behalf of others, such as pension funds, insurance companies, and sovereign wealth funds. In recent years, a

growing concern about environmental, social, and governance (ESG) factors has fueled debate about their impact on investment decisions.

With the primary objective of focusing on institutional investors who truly consider ESG criteria in their investment decisions, this work is centered on what we call socially responsible institutional investors. In 2006, the United Nations introduced the six Principles for Responsible Investment (UN PRI), which commit signatory institutions to integrating responsible investment into their strategy and decision-making (Chen and Chen, 2024). Theoretical literature suggests that investors who adopt the PRI are committed to promoting social and environmental responsibility in their decision-making (Dyck et al., 2019), tend to be stricter in their selection criteria (Berry and Yeung, 2013; Gillan et al., 2021; Li and Wu, 2024; Nofsinger et al., 2019), and penalize investment decisions that are inefficient from an ethical, social, or environmental perspective (Yao et al., 2024). In addition, they demand greater transparency in corporate information disclosures. PRI is aimed at minimizing information gaps and external risks (Wang et al., 2023), fostering a movement toward more sustainable and ethical investment strategies (Azar et al., 2021). This is consistent with social investment theory, which suggests that socially responsible investors evaluate not only financial profitability but also the social and environmental impact of their portfolios, favoring companies with strong sustainability strategies (Renneboog et al., 2008).

From an empirical standpoint, while some studies suggest that institutional investors' altruistic intentions (Hartzmark and Sussman, 2019; Riedl and Smeets, 2017) lead them to prefer companies with solid social commitments (Weston and Nnad, 2021), others point out that the costs of these practices may negatively affect financial returns (Dinh and Wehner, 2022; Zhang, 2022). This discrepancy raises an issue that has drawn the attention of the literature, as highlighted by the recent work of Zou et al. (2025). This study discusses the preference or lack thereof of institutional investors in companies with high ESG standards and the reasons that justify these situations. The results are inconclusive. For example, Zou et al. (2025) found a clear preference among responsible institutional investors for companies with higher ESG ratings, as they are perceived to have lower legal and operational risks, greater customer trust, and a better reputation, making them attractive investment options. However, the works of Brandon et al. (2022) and Kim and Yoon (2023) suggested that socially responsible institutional investors do not necessarily select companies with better ESG scores, and that signing the PRI does not significantly change their investment practices. In fact, it is sometimes seen as greenwashing (Zhu et al., 2025). While any PRI membership signals a formal commitment to ESG principles, its effectiveness in changing investment behavior may be limited, sometimes serving as a symbolic gesture rather than a substantive shift (Zou et al., 2025). Additionally, PRI membership may serve other purposes, such as enhancing reputation or facilitating networking, rather than reflecting a genuine change in investment philosophy.

In summary, while signing the PRI represents an explicit commitment to responsible investment (Dyck et al., 2019), its effectiveness in changing investment behavior may be limited. To achieve this goal, institutional investors must rigorously assess the ESG practices of the companies in which they invest, as well as the effective management tools implemented by these companies (Basse Mama and Mandaroux, 2022). Considering these management tools and based on stakeholder theory (Freeman, 1984), we can argue that the quality of CEO leadership also plays a fundamental role, as their vision

and decision-making can directly influence the adoption and success of ethical and sustainable strategies (Ullah et al., 2022).

Building on this, we raise the question of whether socially responsible institutional investors are influenced by specific CEO attributes, such as narcissism and power, when deciding whether to invest in a company.

### *2.3. CEO power and ESG practices*

A CEO's power, understood as the ability to impose their will and achieve goals (Finkelstein, 1992; Pfeffer, 1981), plays a fundamental role in the firm's strategic decisions (Onali et al., 2016). This power can come from various sources, such as CEO tenure, ownership, and duality, which are crucial components in the process of gaining power (Agnihotri and Bhattacharya, 2019; Al-Shammari et al., 2019; Uppal, 2020; Cannella and Shen, 2001). According to the strategic leadership literature, power is a key factor in enhancing organizational effectiveness (Cannella and Monroe, 1997) and regulating information sharing, allowing CEOs to reduce the board's influence (Raven, 1965).

Previous studies have analyzed the impact of powerful CEOs on organizational outcomes, but with inconclusive results (Haynes and Hillman, 2010; Pathan, 2009; Song and Wan, 2019; Sheikh, 2018). According to stakeholder theory (Freeman, 1984), in order to be successful in the long run, organizations must take into account the needs and expectations of their stakeholders and make decisions that balance these interests. In this context, the stakeholder approach adds the dimension that a CEO who is accountable to a wider range of stakeholders may have incentives to involve these parties in the company's strategic decisions, including ESG investments. Although powerful CEOs could use their power to make decisions that prioritize their own interests, the stakeholder approach argues that CEOs may also feel pressure to respond to the demands of external stakeholders. Therefore, in some cases, a powerful CEO may be driven to engage in ESG because doing so could align with the long-term interests of stakeholders and improve the company's reputation, which in turn favors their own interests. In this regard, studies have found a positive relationship between CEO power and CSR-related activities (Jiraporn and Chintrakarn, 2013; Fabrizi et al., 2014; Jizi et al., 2014; Hong et al., 2016; Jo and Harjoto, 2011).

Despite these arguments favoring a positive influence, a growing body of evidence, particularly from the agency theory perspective, indicates that the negative implications of concentrated CEO power ultimately dominate when assessing its impact on genuine ESG commitment and, consequently, on attracting SRI. Thus, as CEOs accumulate power, they may reach a threshold where this effect is reversed (Jiraporn and Chintrakarn, 2013), using it both for and against the interests of shareholders and other stakeholders (Harper and Sun, 2019). A powerful CEO may see ESG disclosure as a strategic tool to manage public perception, consolidate their image, and, if necessary, mitigate potential criticism or reputational risks. If CEOs are more concerned with maximizing their own power and personal benefits, they may feel less motivated to commit to sustainable and transparent ESG practices (Bebchuk et al., 2011) and use disclosure merely as a form of greenwashing to protect their position (He et al., 2023; Slager and Gond, 2020). According to agency theory (Jensen and Meckling, 1976), as CEOs accumulate power, hazard problems can appear, as they may act in their own interests at the expense of shareholders and stakeholders. That is, as their power becomes more entrenched, CEOs

may feel less controlled by the board of directors or shareholders, increasing the risk that they will make self-interested decisions, such as maximizing their pay or protecting their position, without adequately considering the interests of others (Westphal and Zajac, 1995).

In addition, their increasing control reduces external scrutiny, which can lead to decisions that favor their continued power at the expense of the interests of the company and its stakeholders. All of this can lead to a lack of motivation on the part of CEOs to invest in ESG practices if they are not in line with their own interests or do not allow them to increase their personal benefits. The unchecked exercise of their hierarchical power can lead to unethical consequences (Vredenburg and Brender, 1998; Schmidt and Fahlenbrach, 2017), which could be detrimental to the company and its investors (Larcker and Tayan, 2012). Previous literature shows that powerful CEOs may be reluctant to invest heavily in ESG-related activities, with a negative relationship between these variables (Al-Shaer et al., 2023; Pucheta-Martínez and Gallego-Álvarez, 2021; Rashid et al., 2020; Li et al., 2016; Hong et al., 2016; Muttakin et al., 2018; Sheikh, 2019; Harper and Sun, 2019).

In summary, when CEOs accumulate excessive power, they are more likely to prioritize their own interests over those of stakeholders, reduce their commitment to ESG practices, and use sustainability disclosures strategically to improve their reputation or image. We suggest that this behavior increases the risk of greenwashing and undermines the trust of socially responsible investors. Therefore, based on the predominance of agency theory arguments and the empirical evidence, we expect a negative relationship between CEO power and SRI. All this leads us to propose our first hypothesis:

*H1: CEO power negatively influences the firm's level of socially responsible investment.*

#### *2.4. CEO narcissism and ESG practices*

CEO personality has been extensively studied in the literature, with narcissistic traits being a particularly well-researched aspect (Miller et al., 2017). Defined by the American Psychiatric Association as “a pervasive pattern of grandiosity (in fantasy or behavior), need for admiration and a lack of empathy, beginning by early adulthood and present in a variety of contexts”, Chatterjee and Pollock (2017) linked this trait to a strong desire for recognition and social approval, combined with a tendency to dominate and control others, as well as excessive self-confidence. CEOs with narcissistic traits tend to seek power (Carroll, 1987), show limited empathy, and maintain absolute control over decision-making (Zhu and Chen, 2015). They strive to create a top management team that satisfies their psychological needs (Kruse et al., 2025) and need to be the center of attention at all times. Emmons (1987) points out that such leaders see themselves as superior to others (superiority, arrogance), seek recognition and respect (entitlement), and show an excessive concern for their own image and personal success (self-admiration).

In 2007, Hambrick also laid the groundwork for theories related to the influence of CEO personality on business decisions, demonstrating that these executives have a clear impact on the company's strategy, policies, and practices (Westphal and Fredrickson, 2001). Upper echelons theory (Hambrick and Mason, 1984; Hambrick, 2007) posits that top executives' experiences, personalities, and decision-making styles play a crucial role in deciding how resources are distributed and used, which has a direct effect on organizational outcomes (Rixom et al., 2023). Among other things, the

literature points to the influence of their personality on merger and acquisition processes (Wang et al., 2016), technological innovation (Gerstner et al., 2013; Herrmann and Nadkarni, 2014), and the entrepreneurial orientation of the firm (Herrmann and Nadkarni, 2014; Wales et al., 2013). Personality also affects the selection of board members (Westphal and Zajac, 1995) and risk-taking behavior (Cazier, 2011; Kim et al., 2016; Zhou and Wang, 2014). Therefore, it can be said that narcissism is a personal condition that predominates in the decision-making process (Chatterjee and Hambrick, 2007; Patel and Cooper, 2014), and this process differs from that of non-narcissistic executives (Zhu and Chen, 2015).

Narcissism is considered a dimension of personality that plays a fundamental role in organizational outcomes (Peterson et al., 2012). In its cognitive dimension, narcissism is based on confidence in one's own power and abilities (Chatterjee and Hambrick, 2007), while in its motivational dimension, it is based on the pursuit of recognition and admiration through visible actions (Chatterjee and Hambrick, 2011; Gerstner et al., 2013; Gao et al., 2023). Some authors suggest that narcissistic CEOs are more inclined to undertake challenging or bold activities in order to receive praise and admiration, thereby enhancing their reputation and personal gain, even when such actions may lead to detrimental consequences for their firms. Among others, issues such as financial misreporting (Amernic and Craig, 2010), fraud (Rijsenbilt and Commandeur, 2013), earnings management (Capalbo et al., 2018; Buchholz et al., 2020), and aggressive tax policies and tax avoidance (García-Meca et al., 2021; Higgins et al., 2015; Olsen and Stekelberg, 2016) stand out.

However, other authors argue that a certain level of narcissism is essential in business leaders (Kets de Vries, 2004). As previously mentioned, the motivational dimension of narcissism influences individual behavior (Raskin and Novacek, 1991). This dimension drives the desire for recognition and admiration through observable behaviors (Chatterjee and Hambrick, 2011; Gerstner et al., 2013). This may lead us to believe that narcissistic CEOs are more likely to prioritize initiatives that enhance their public recognition, particularly those with greater visibility. In this sense, ESG activities are especially attractive for narcissistic CEOs (Hong et al., 2022), as they encompass environmental, social, and governance dimensions that influence stakeholder decisions (Raimo et al., 2021).

In recent years, concern and interest in ESG issues have increased significantly due to the growing importance of sustainability (Martínez-Ferrero et al., 2021; Raimo et al., 2021). Although the disclosure of ESG information is voluntary for many companies, narcissistic CEOs may see these reports as an opportunity to attract the attention of shareholders and other stakeholders. Therefore, the presence of a narcissistic CEO in a company may be seen as an obstacle to achieving ESG goals, as it raises concerns about the authenticity and long-term viability of the company's green initiatives (Petrenko et al., 2016). Recent evidence shows that SRI are able to detect when ESG initiatives are driven by self-promotion or image management rather than genuine commitment (Matos, 2020; Black et al., 2022). As a result, the presence of a narcissistic CEO is likely to be perceived as a signal of greater greenwashing risk, leading responsible investors to question the credibility and substance of the firm's sustainability efforts. Green investors may perceive that narcissistic CEOs, driven by their desire for admiration and recognition, are likely to prioritize highly visible ESG initiatives solely to enhance their personal image and the company's reputation, even when these actions lack genuine substance, thereby increasing the risk of greenwashing.

Based on the above, we propose the following hypothesis:

*H2: CEO narcissism negatively influences the firm's level of socially responsible investment.*

### *2.5. The moderating role of CEO age and CSR committees*

CEO age is a demographic variable that affects how CEOs perceive and manage information and, consequently, their decision-making behavior (Andreou et al., 2017; Belenzon et al., 2019; Serfling, 2014; Wang et al., 2016; Khanchel et al., 2024). According to Hambrick and Mason's (1984) upper echelons theory, executives' decisions are shaped by their cognitive base and values, which are in turn influenced by observable characteristics such as age.

From a physiological perspective, as CEOs age, they tend to have reduced physical and mental endurance, lower energy levels, and a preference for a quieter life. They have a reduced ability to grasp new ideas and learn new behaviors (Li et al., 2017; Serfling, 2014; Peltomäki et al., 2021; Trabert, 2023). Furthermore, from a psychological or cognitive perspective, older CEOs tend to be more concerned with maintaining their psychological commitment to the status quo of the firm (Serfling, 2014), protecting their legacy, maintaining their reputation, and ensuring their future financial security (Belenzon et al., 2019). They collect more information and engage in more detailed analysis, which slows their decision-making process, likely due to their increased aversion to taking risks (Serfling, 2014; Taylor, 1975). From this perspective, older CEOs might not be very motivated to engage with ESG investments, especially if they do not perceive them as relevant to their own interests or legacy. Instead of viewing sustainability as an opportunity, they may see it as a burden or a threat to their independence. Older CEOs may also be reluctant to change their strategy out of fear of being perceived as having made mistakes in their past decisions. This could encourage them to make decisions that focus on the short term or prioritize their own survival.

On the other hand, younger CEOs often make efforts to demonstrate their skills to the market (signaling model) by implementing new strategies that make them appear talented (Byun and Al-Shammari, 2021; Yim, 2013; Li et al., 2017; Serfling, 2014). Younger CEOs also tend to show greater interest in social responsibility issues (Arlow, 1991) and are more receptive to new ideas (Mellahi and Guermat, 2004).

From the above, the age of the CEO could be a factor explaining the attraction of green investments in companies run by narcissistic and powerful CEOs. The power and narcissism of older CEOs may limit the interest of institutional investors, particularly those who have signed the PRI, in investing in companies managed by these executives. Based on the above rationale, the following moderating hypotheses are proposed:

*H3a: CEO age moderates the influence of CEO power on the level of socially responsible investment.*

*H3b: CEO age moderates the influence of CEO narcissism on the level of socially responsible investment.*

According to stakeholder theory, stakeholders expect boards of directors to assume greater responsibility for managing the organization's social and environmental impact (Rajan and Zingales, 1998). To meet these expectations, companies often establish CSR committees to oversee and guide corporate social responsibility issues (Burke et al., 2019; Eberhardt-Toth, 2017; Liao et al., 2015). Given the potential for CEOs to pursue their own interests to the detriment of stakeholders, the

presence of a CSR committee can be considered a governance mechanism that mitigates the influence of CEO narcissism and power on SRI confidence in firms.

The presence of a CSR committee indicates greater commitment to ethical and social aspects, as well as greater attention to transparency in sustainability matters (Cowen et al., 1987; Adams, 2002). Among the primary responsibilities of these committees are managing risks and opportunities related to sustainability, monitoring CSR strategies, and aligning corporate actions and stakeholder expectations (García-Sánchez et al., 2019; Peters and Romi, 2015; Ricart et al., 2005). They also prepare reports for the board of directors, audit CSR activities, and monitor compliance with the company's ethical standards (Martínez-Ferrero et al., 2019). In terms of governance, CSR committees function similarly to audit committees, particularly in their role of strengthening disclosure and accountability, although they focus on sustainability rather than financial reporting (Liao et al., 2015; García-Sánchez et al., 2019). Furthermore, these committees act as liaisons that can influence the board of directors, particularly independent directors, to adopt and implement more rigorous CSR disclosure practices (García-Sánchez et al., 2019).

However, the literature shows mixed evidence regarding the effectiveness of CSR committees. While some studies find a positive impact on the quality of environmental and social reporting (Cucari et al., 2017; Helfaya and Moussa, 2017; Celentano et al., 2020), others argue that CSR committees may serve more symbolic than substantive functions, particularly in companies that lack a genuine sustainability culture (Berrone et al., 2009; Michelon and Parbonetti, 2012; Chams and García-Blandón, 2019; Rupley et al., 2012). According to García-Sánchez et al. (2019), CSR committees are more likely to be effective when companies already have an ethical orientation, acting more as reinforcers of sustainable behavior than as agents of change in themselves.

Even so, CSR committees remain a key element in aligning corporate governance with ESG objectives. They play a vital role in translating stakeholder pressure into internal policies and performance improvements (Heubeck and Ahrens, 2025; Fuente et al., 2017; Chams and García-Blandón, 2019; García-Sánchez et al., 2019; Burke et al., 2019). According to stakeholder theory, they can help reinforce long-term sustainable value creation and mitigate managerial entrenchment. Therefore, companies with a strong sustainability culture are more likely to institutionalize CSR committees (Eccles et al., 2012). These structures are associated with better ESG performance and greater investor confidence (Hussain et al., 2018; Velte and Stawinoga, 2020). Based on the above rationale, the following moderating hypotheses are proposed:

*H4a: The existence of a CSR committee moderates the influence of CEO power on the level of socially responsible investment.*

*H4b: The existence of a CSR committee moderates the influence of CEO narcissism on the level of socially responsible investment.*

### 3. Data and descriptive statistics

#### 3.1. Sample construction

The sample for analysis was derived through a four-step process, starting with the 148 companies listed on the Spanish Stock Exchange<sup>1</sup> from 2018 to 2022<sup>2</sup>. This period was selected not only due to the completeness and availability of the required data (PRI ownership, CEO characteristics, and governance variables), but also because it represents a critical phase during which global concerns over the authenticity of ESG practices, greenwashing, and the ethical role of corporate leadership intensified. In these years, there was a growing focus on CEO personality traits, particularly narcissism and power, and their influence on adopting sustainable strategies. Moreover, this period witnessed significant regulatory developments and increasing pressure from institutional investors, especially PRI signatories, making it particularly suitable for examining the research question. The exclusion of post-2022 data is due to the fact that, at the time of data collection, financial, ownership, and governance information for more recent years was not fully available or had not been validated, which could have compromised the consistency of the analysis.

The empirical analysis is based on publicly traded Spanish firms over the 2018–2022 period. Financial, accounting, and governance-related variables for an initial pool of 148 firms were obtained from the SABI Informa database, which provides firm-level information on performance and board structures. These records were then complemented with hand-collected data on executive attributes, ownership, and board characteristics retrieved from corporate websites, annual filings, and proxy documentation. Firms with missing values for any of the variables of interest were removed from the dataset. The resulting panel includes 720 firm-year observations covering 147 listed Spanish companies.

#### 3.2. Measuring socially responsible investment (SRI)

According to authors like Dyck et al. (2019), socially responsible investment (SRI) refers to institutional investors who are signatories of the PRI and pledge to actively monitor the sustainability practices of the companies they invest in. To measure the impact of PRI signatories on the ownership structure of firms, we assessed their influence within institutional ownership. Identifying socially

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<sup>1</sup> <https://www.bolsasymercados.es/bme-exchange/es/Bolsa-Madrid>

<sup>2</sup> One potential concern is that our measure of SRI may be mechanically influenced by the secular growth in PRI membership, which has increased substantially in recent years. To address this issue, we first examine the evolution of average SRI levels over time, obtaining both the global upward trend and the considerable cross-sectional heterogeneity in each year. Second, we include year fixed effects in all our regressions to absorb common time shocks. Finally, we analyze subperiods to show that the results do not depend only on the most recent years. In this regard, and aware of the COVID-19 crisis as an external contingency factor, we re-estimate our models by splitting the sample into pre-COVID (2018–2019) and post-COVID (2020–2022) periods. The regression results across both subsamples mirror our baseline findings: CEO narcissism and power remain negatively associated with the attractiveness of green investments, and the moderating effects of CEO age and CSR committees remain stable. The lack of significant differences suggests that the COVID-19 pandemic did not alter the relationships under study.

responsible investors is a time-consuming process. Initially, we collected detailed institutional ownership data from Thomson Reuters Refinitiv, a major provider of global institutional equity ownership information. For each quarterly company observation, we obtained the highest percentage of shares held by each institutional investor. To identify them, we cross-referenced the names of institutional investors from FactSet with the publicly available list of PRI signatories at <https://www.unpri.org/> (UN PRI, 2021). A name-matching algorithm, along with thorough manual checks, was employed to identify PRI signatories among the institutional investors whose equity holdings are included in our Spanish sample. Finally, we recorded the date when each institutional investor publicly committed to the PRI (by becoming a signatory), in order to distinguish the periods when they were or were not publicly committed to socially responsible investment practices.

We calculate socially responsible investment as the total equity held by UN PRI signatories for each firm-year observation in our sample (SRI). This calculation is based on the year-end holdings of the top 100 investors in each company. While membership alone does not guarantee full ESG integration in investment decisions, it reflects a formal, publicly stated commitment to incorporate ESG considerations into investment practices, which is consistent with the definition of SRI in the literature. This approach is widely adopted in the empirical finance literature as a proxy for investor ESG orientation (e.g., Dyck et al., 2019; Khan et al., 2016), as PRI signatory status captures the disclosure and commitment of institutional investors toward responsible investment practices.

**Table 1.** Univariate analysis. SRI by industry. Kruskal–Wallis test of differences.

| Panel A: Distribution                             | Mean   | Std. dev. |
|---|--------|-----------|
| SRI   | 11.907 | 17.831    |
| Panel B: Industry                                 | Mean   | Std. dev. |
| 1. Farming, livestock, and fishing                | 0      | 0         |
| 2. Extractive industries                          | 0      | 0         |
| 3. Manufacturing industry                         | 6.900  | 7.867     |
| 4. Electricity supply and energy                  | 16.19  | 20.039    |
| 5. Building and construction                      | 17.416 | 21.767    |
| 6. Commerce                                       | 2.086  | 4.268     |
| 7. Transport services                             | 13.575 | 3.245     |
| 8. Information and communication                  | 14.636 | 21.478    |
| 9. Real estate                                    | 8.976  | 10.545    |
| 10. Miscellaneous                                 | 10.530 | 15.593    |
| <i>Kruskal–Wallis test</i>                        |        |           |
| Chi-squared with ties = 43.100                    |        |           |
| Probability = 0.0001                              |        |           |
| Panel C: Market capitalization                    | Mean   | Std. dev. |
| The largest firms by market capitalization        | 12.333 | 19.383    |
| The smallest firms by market capitalization       | 11.676 | 16.961    |
| <i>Kruskal–Wallis test</i>                        |        |           |
| Chi-squared with ties = 0.0003                    |        |           |
| Probability = 0.9542                              |        |           |
| Sample: 720 observations in the period 2018–2022. |        |           |

Table 1 reports the descriptive statistics for the socially responsible investment indicator by industry level differences. In Panel A, the SRI indicator, measured as the percentage of firm equity held by UN PRI signatories, has a mean value of 11.91% and a standard deviation of 17.83%. This

indicates that, on average, PRI signatories hold about 12% of the equity in each firm, although holdings vary widely across firms. By industry (Panel B), there are interesting results. For example, there are no PRI signatories in our sample in agriculture, livestock, fishery, and extractive industries. They have the greatest ownership representation in construction, followed by electricity and energy. Looking at the Kruskal–Wallis test by sector of activity, we see that the significance level is 0.0001. Thus, there is a significant difference in socially responsible ownership depending on the sector of activity in which the company operates. Beyond industry differences, in Panel C, we also compute the differences in the SRI indicator by market capitalization. We compute the ratio of market capitalization to total assets as an indicator of the market’s valuation of the firm relative to its accounting size. This measure, widely used in the finance literature as a variant of the market-to-book ratio (see Chung and Pruitt, 1994; Lindenberg and Ross, 1981), allows us to scale market value by firm resources, facilitating comparability across firms of different sizes. In Panel C, results report a higher presence of SRI in the largest firms (those with market capitalization above the mean value). However, when analyzing the Kruskal–Wallis test by market capitalization, the significance level is found to be 0.9642, suggesting no significant difference in socially responsible ownership across companies of different sizes. The results indicate industry-specific differences, but no statistical variation based on market capitalization.

**Table 2.** Univariate analysis. SRI by type of investor and geographic difference.

| Panel A: Type of investor  | Mean   | Std. dev. |
|----------------------------|--------|-----------|
| SRI                        | 11.907 | 17.831    |
| Panel B: Geographical zone | Freq.  | Percent   |
| USA                        | 8.544  | 13.961    |
| Europe                     | 11.678 | 17.772    |
| Panel C: Type of SRI       | Freq.  | Percent   |
| Pension funds              | 250    | 61.53     |
| Mutual funds               | 277    | 38.47     |
| Hedge funds                | 527    | 73.19     |
| BNA                        |        |           |
| Banks and insurance        | 214    | 29.72     |
| Investment funds           | 226    | 31.39     |
| Sovereign wealth funds     | 402    | 55.83     |

Sample: 720 observations in the period 2018–2022.

Table 2 offers more in-depth information about PRI signatories, enabling a closer look at the diversity of socially responsible ownership. Based on Velte’s (2023) classification, socially responsible investment (SRI) is categorized into pension funds, mutual funds, hedge funds, banks and insurance companies (BNAs), investment funds, and sovereign wealth funds. It is important to note that some PRI signatories may fall into multiple categories. The largest share of PRI signatories is found in hedge funds (73.19%), which tend to have a short-term focus, followed by pension funds (61.53%).

Considering geographic differences in PRI investors, we classify signatories according to their regional location, distinguishing between Europe, the United States, and other regions. This approach follows the classification proposed by Dyck et al. (2019) and Black et al. (2022), who highlight

systematic differences in the prevalence and orientation of responsible investment practices across regions. The results confirm a clear difference in the sign of the PRI among investors in our sample. On average, 11.678% of firm equity in our sample is held by PRI signatories from Europe, compared to 8.544% from the United States. This result highlights the greater prevalence of responsible investors in Europe than in the US, consistent with prior evidence that European markets have been at the forefront of sustainable investment practices (Dyck et al., 2019; Black et al., 2022; Eurosif, 2021).

### 3.3. *Measuring CEO power*

The inclusion of the selected variables in our empirical model is grounded in theoretical reasoning and prior empirical evidence. The core explanatory variables, CEO power and CEO narcissism, are central to upper echelons theory (Hambrick & Mason, 1984; Chatterjee & Hambrick, 2007) and have been consistently linked to strategic corporate decisions and ESG-related behaviors (Arena et al., 2018; Martínez-Ferrero et al., 2024). CEO power, derived from experience, ownership, and duality, has been associated with positive and negative influences on CSR practices (Jo & Harjoto, 2011; Harper & Sun, 2019). Narcissistic CEOs often seek visibility and reputation gains, which may lead to opportunistic ESG behavior and an increased risk of greenwashing (Petrenko et al., 2016; Gerstner et al., 2013).

The CEO power indicator has been constructed based on three widely recognized dimensions: CEO experience, CEO ownership, and CEO duality. These elements were selected following theoretical justification and empirical precedent in the corporate governance and strategic leadership literature. To construct our CEO power indicator, we used a factorial analysis involving three independent measures of CEO experience, ownership, and duality (CEO\_Power). The suitability of the sample was confirmed by a KMO value of 0.5662, and Bartlett's sphericity test was significant at a 99% confidence level. Each metric used in the factorial indicator was obtained from SABI and supplemented with manually collected data.

Specifically, CEO experience refers to the number of years a CEO has held their position. Longer tenure typically reflects accumulated influence within the organization and increased control over strategic decisions (Cannella & Shen, 2001; Martínez-Ferrero et al., 2024). Experienced CEOs are more likely to shape firm culture and reduce external monitoring through informal influence mechanisms (Haynes & Hillman, 2010). CEO ownership captures the extent of equity held by the CEO. A higher ownership stake can enhance decision-making power and reduce board oversight, reinforcing CEO dominance (Finkelstein, 1992; Kim & Kim, 2020). This form of power is often associated with a closer alignment with personal objectives and a potential for entrenchment (Bebchuk et al., 2011). CEO duality occurs when the CEO also serves as the chair of the board of directors, concentrating leadership authority and limiting board independence (Jensen & Meckling, 1976; Jo & Harjoto, 2011). Dual roles enhance hierarchical power and weaken governance checks.

These three dimensions are commonly used as proxies for structural and positional power in empirical studies (e.g., Jiraporn & Chintrakarn, 2013; Harper & Sun, 2019; Li et al., 2016) and collectively reflect formal authority (through position) and informal influence (through tenure and ownership). Their combination offers a comprehensive measure of CEO power, aligning with upper echelons and agency theories, and providing a robust foundation for analyzing ESG-related investment attractiveness.

### 3.4. Measuring CEO narcissism

To measure CEO narcissism<sup>3</sup>, we address the difficulty of collecting direct personality data from CEOs by using a composite index developed by Chatterjee and Hambrick (2007). The CEO\_Narcissism index combines standardized scores on four key indicators of narcissism that are commonly referenced in research (Engelen et al., 2016; Agnihotri and Bhattacharya, 2019; Ingersoll et al., 2019; Martínez-Ferrero et al., 2024). These indicators include (i) CEO photo prominence in annual reports, (ii) CEO visibility in company press releases, (iii) CEO compensation, and (iv) awards and honors received by the CEO. These items were manually collected from company websites, annual reports, and various search engines.

These proxies capture the key facets of narcissism: arrogance, grandiosity, entitlement, and an inflated sense of self-importance.

- i. Specifically, the size and prominence of a CEO's photo in annual reports is a measure of self-confidence, with more narcissistic CEOs more likely to feature themselves prominently. To obtain this information, we downloaded the annual reports from the websites of each company in the sample for each of the years analyzed. Within each report, we looked for the CEO's photo, which typically accompanies the cover letter. Based on its size, we assigned coded values ranging from 0 to 4: a score of 4 indicates a solo photograph covering more than half a page, while a score of 1 indicates no photograph (Agnihotri and Bhattacharya, 2019). A higher score indicates greater narcissism.
- ii. In terms of CEO prominence in press releases, narcissistic CEOs often seek public visibility and self-promotion. Given that CEOs control their firms' media presence, this measure tracks the number of news appearances, reflecting their desire for attention (Kontesa et al., 2020). We measured this variable continuously by manually collecting data from various reputable financial press sources. For each year in the study sample, we reviewed the different news stories in which the CEO appeared.
- iii. CEO compensation, another indicator, is consistent with narcissistic CEOs' tendency to seek compensation and recognition, reflecting their sense of superiority and entitlement (O'Reilly et al., 2018). Narcissistic CEOs often use their influence to secure high salaries. We measure this

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<sup>3</sup> CEO power and CEO narcissism are analyzed separately because they represent distinct constructs that influence decision-making through different mechanisms (see Islam et al., 2024). CEO power is concerned with structural authority and the formal control CEOs have within organizations. This gives them the ability to make decisions based on their role. CEO narcissism stems from personal traits. It is driven by a desire for self-importance and wanting to be in the spotlight. By examining these two aspects independently, we can better understand how each one impacts socially responsible investment. This approach helps us pinpoint how structural authority influences decisions versus how personality traits come into play. It ultimately leads to a clearer interpretation of the effects, ensuring we attribute outcomes to the correct source and reducing the risk of misinterpretations that could occur if we combined the two traits. Moreover, although CEO power and CEO narcissism are significantly correlated, they represent distinct constructs: one structural and positional and the other psychological. Including them simultaneously would lead to multicollinearity problems (as indicated by VIF tests), potentially obscuring their true effects. Therefore, following prior literature, we estimated separate regression models for each construct. This strategy allows us to isolate their individual impacts while acknowledging their conceptual relatedness.

- by the annual compensation of the CEO (in thousands of euros), collected from reports on remuneration provided by the Comisión Nacional del Mercado de Valores (CNMV). In the few cases where this information has not been available, we have obtained it from corporate websites.
- iv. Finally, CEO awards and honors reveal their drive for public recognition and validation. Studies show that narcissistic CEOs pursue these accolades to boost their self-esteem and feed their egos (Rijsenbilt and Commandeur, 2013). This dimension is quantified by counting the awards and honors received, which have been compiled manually through online searches on corporate websites and in general search engines.
  - v. These four proxies are combined through a factorial analysis (Agnihotri and Bhattacharya, 2019; Márquez-Illescas et al., 2019), with the first component retained as CEO\_Narcissism. Higher CEO\_Narcissism scores indicate greater narcissism, which is supported by a single factor with an eigenvalue greater than one, a KMO measure of 0.7215, and a significant Bartlett's sphericity test at a 99% confidence level.

### 3.5. Measurement of moderating variables

Two moderating factors are proposed: CEO age and the existence of a CSR committee. CEO\_Age is the age of the CEO in years at the end of each fiscal year (Khanchel et al., 2024). CSR\_Com is a dummy variable equal to 1 if the company has a CSR committee and 0 otherwise (Mardawi et al., 2024; Orazalin et al., 2024).

### 3.6. Measurement of control variables

The analysis models include the following control variables to prevent biased results: firm size (Size) as the natural logarithm of total assets; Leverage as the ratio of total debt to total equity ratio; volatility of ROA (VolatilityROA), a balance sheet measure of company risk as the standard deviation of 3 years (net income/total assets); tangibility (Tangibility) as the ratio of net property, plant, and equipment divided by total assets; board size (BSize), measured as the total number of board members; board independence (BIndep) as the proportion of independent directors out of the total number of board members; and board gender diversity (BDiver) as the proportion of female directors out of the total number of board members.<sup>4</sup>

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<sup>4</sup> Control variables were selected based on their frequent appearance in ESG investment literature and their potential to influence firm attractiveness to responsible investors. Firm size, leverage, tangibility, and volatility of returns (ROA) are common financial indicators used to control for firm-level characteristics that may affect ESG engagement and investor preferences (Dyck et al., 2019; Raimo et al., 2021). Larger firms are generally more visible and subject to greater stakeholder pressure, while high leverage may raise concerns over financial stability. Volatility of returns captures firm risk, which responsible investors tend to penalize. Corporate governance variables, including board size, independence, and gender diversity, reflect internal monitoring capacity and ethical leadership potential. Numerous studies support their inclusion, as these characteristics correlate with improved ESG performance and transparency (Burke et al., 2019; García-Sánchez et al., 2019; Jo & Harjoto, 2011). In particular, board independence and gender diversity are viewed as key indicators of board effectiveness and inclusiveness, which are valued by socially responsible investors. Recent empirical works provide further validation of our variable choices. Al-Abrow et al. (2019) discussed the relevance of narcissistic leadership for CSR from an international HR perspective. Liu et al. (2024) explored the interplay of board dynamics and CEO attributes in shaping ESG performance. Wang et al. (2024) examined behavioral finance mechanisms driving ESG investments, while Deng et al. (2024) analyzed the effect of CEO traits on green investment selection.

Table 3 shows the summary statistics of our key variables. The average value of socially responsible investment has been discussed in Tables 1 and 2, along with the main indicators associated with the factorial analysis of CEO power and narcissism. Moderating variables have also been included and are detailed in the following sections. In this respect, CEOs have an average age of 57 years, and 20.4% of firms have a specific CSR committee. As a control, companies have an average firm size of 20.1, expressed as the natural logarithm of total assets, and boards of around 10 members, with almost 45% and 26% independent and female directors, respectively.

**Table 3.** Descriptive statistics.

| Dependent variable   | Mean    | Std. dev. |
|----------------------|---------|-----------|
| SRI                  | 11.9065 | 17.8310   |
| Explanatory variable |         |           |
| CEO_Power            | -1.380  | 0.631     |
| CEO_Narcissism       | -0.033  | 0.650     |
| Moderating variables |         |           |
| CEO_Age              | 57.220  | 8.06      |
| CSRCom               | 0.204   | 0.403     |
| Control variables    |         |           |
| Size                 | 20.2795 | 2.2065    |
| Leverage             | 0.0503  | 3.0158    |
| VolatilityROA        | 0.0000  | 1.0000    |
| Tangibility          | 0.3034  | 0.2417    |
| BSize                | 10.0436 | 3.2454    |
| BIndep               | 44.6890 | 15.9117   |
| BDivers              | 0.2599  | 0.1221    |

Sample: 720 observations in the period 2018–2022.

## 4. Empirical analysis and results

### 4.1. Econometric model

To test the influence of CEO power and narcissism on the attractiveness of green investments among institutional investors that adhere to the PRI, as well as how some contingency factors moderate this relation, several regression models are proposed, taking into account that our analysis sample consists of a balanced panel dataset of 720 Spanish firm-year observations from 2018 to 2022.

The basic model proposes the socially responsible investment indicator as a dependent variable, CEO power (Model 1) and CEO narcissism (Model 2) as explanatory variables, and the rest of the control variables, adding industry and year effects, as follows:

$$SRI_{it} = \beta_1 CEO\_Power_{it} + \beta_2 Size_{it} + \beta_3 Leverage_{it} + \beta_4 VolatilityROA_{it} + \beta_5 Tangibility_{it} + \beta_6 BSize_{it} + \beta_7 BIndep_{it} + \beta_8 BDiver_{it} + \beta_9 Industry_i + \beta_{10} Year_t + \eta_i + \mu_{it} \quad (\text{Model 1})$$

$$SRI_{it} = \beta_1 CEO\_Narcissism_{it} + \beta_2 Size_{it} + \beta_3 Leverage_{it} + \beta_4 VolatilityROA_{it} + \beta_5 Tangibility_{it} + \beta_6 BSize_{it} + \beta_7 BIndep_{it} + \beta_8 BDiver_{it} + \beta_9 Industry_i + \beta_{10} Year_t + \eta_i + \mu_{it} \quad (\text{Model 2})$$

where  $i$  represents the firm,  $t$  is time,  $\eta$  is the unobservable heterogeneity, and  $\mu$  is the classical error term.

To test the moderating effect, Models 1 and 2 are again modified by including the CEO age indicator as well as the interaction term with CEO\_Power (Model 3A) and CEO\_Narcissism (Model 3B), and by inducing the CSR committee indicator and the interaction term with CEO\_Power (Model 4A) and CEO\_Narcissism (Model 4B), as follows:

$$SRI_{it} = \beta_1 CEO\_Power_{it} + \beta_2 CEO\_Age_{it} + \beta_3 CEO\_Power * CEO\_Age_{it} + \beta_4 Size_{it} + \beta_5 Leverage_{it} + \beta_6 VolatilityROA_{it} + \beta_7 Tangibility_{it} + \beta_8 BSize_{it} + \beta_9 BIndep_{it} + \beta_{10} BDiver_{it} + \beta_{11} Industry_i + \beta_{12} Year_t + \eta_i + \mu_{it} \quad (\text{Model 3A})$$

$$SRI_{it} = \beta_1 CEO\_Narcissism_{it} + \beta_2 CSR\_Com_{it} + \beta_3 CEO\_Narcissism * CSR\_Com_{it} + \beta_4 Size_{it} + \beta_5 Leverage_{it} + \beta_6 VolatilityROA_{it} + \beta_7 Tangibility_{it} + \beta_8 BSize_{it} + \beta_9 BIndep_{it} + \beta_{10} BDiver_{it} + \beta_{11} Industry_i + \beta_{12} Year_t + \eta_i + \mu_{it} \quad (\text{Model 3B})$$

$$SRI_{it} = \beta_1 CEO\_Power_{it} + \beta_2 CEO\_Age_{it} + \beta_3 CEO\_Power * CEO\_Age_{it} + \beta_4 Size_{it} + \beta_5 Leverage_{it} + \beta_6 VolatilityROA_{it} + \beta_7 Tangibility_{it} + \beta_8 BSize_{it} + \beta_9 BIndep_{it} + \beta_{10} BDiver_{it} + \beta_{11} Industry_i + \beta_{12} Year_t + \eta_i + \mu_{it} \quad (\text{Model 4A})$$

$$SRI_{it} = \beta_1 CEO\_Narcissism_{it} + \beta_2 CSR\_Com_{it} + \beta_3 CEO\_Narcissism * CSR\_Com_{it} + \beta_4 Size_{it} + \beta_5 Leverage_{it} + \beta_6 VolatilityROA_{it} + \beta_7 Tangibility_{it} + \beta_8 BSize_{it} + \beta_9 BIndep_{it} + \beta_{10} BDiver_{it} + \beta_{11} Industry_i + \beta_{12} Year_t + \eta_i + \mu_{it} \quad (\text{Model 4B})$$

#### 4.2. Analysis technique

We rely on multivariate modeling techniques to test our hypotheses, using the most appropriate and reliable method as an estimator. The selection of the proper estimator and analysis technique depends on the nature of the dependent variable (SRI) and the existence of some econometric problems that preclude the use of alternative estimators. For this selection and following the process validated by previous studies (e.g., Zhou and Xu, 2022; Ren and Wu, 2022; Chen, 2024; Sanchez-Sancho et al., 2024; García-Meca et al., 2025), various validation analyses are discussed to ensure suitability. The validation results are reported in Table 4.

Following a similar process to that of Sanchez-Sancho et al. (2024) and Garcia-Meca et al. (2025), among others, a fixed or random effects estimator for the traditional OLS regression can be used to test which one is more appropriate, as determined by the Hausman test. This test is used under the null hypothesis that there are no systematic differences among the estimators. The result of the Hausman test (Panel A) in Models 1 and 2 shows a p-value > 0.10, which does not allow us to reject the null hypothesis, indicating that the random effects model is preferred.

It is also necessary to examine whether the above models suffer from heteroscedasticity, autocorrelation, or multicollinearity. With respect to heteroscedasticity, we use the modified Wald test (Panel B) under the null hypothesis of homoscedasticity. The modified Wald test for both models shows that the null hypothesis is rejected with 99% confidence, supporting the existence of a heteroscedasticity problem. Regarding serial autocorrelation, the Wooldridge test (Panel C) is proposed under the null hypothesis of no first-order autocorrelation. Its p-values allow us to reject the null hypothesis of autocorrelation in Models 1 and 2 at a 99% confidence level (Prob > F = 0.0002 and Prob > F = 0.0108, respectively).

**Table 4.** Tests supporting the use of the GMM estimator of Arellano and Bond (1991).

| Panel A: Fixed-random effects (OLS)               |   |
|---|---|
| Hausman test (FE vs. RE) (Model 1)                | Prob > chi2 = 0.1937  |
| Hausman test (FE vs. RE) (Model 1)                | Prob > chi2 = 0.9261  |
| Panel B: Heteroscedasticity                       |   |
| Modified Wald test (Model 1)                      | H0: $\sigma(i)^2 = \sigma^2$ for all i<br>Prob > chi2 = 0.0000          |
| Modified Wald test (Model 2)                      | H0: $\sigma(i)^2 = \sigma^2$ for all i<br>Prob > chi2 = 0.0000          |
| Panel C: Autocorrelation                          |   |
| Wooldridge test (Model 1)                         | H0: no first-order autocorrelation<br>Prob > F = 0.0002                 |
| Wooldridge test (Model 2)                         | H0: no first-order autocorrelation<br>Prob > F = 0.0108                 |
| Panel D: Multicollinearity                        |   |
| Farrar-Glauber multicollinearity tests (Model 1)  | Ho: No multicollinearity; Ha: Multicollinearity<br>Prob > chi2 = 0.0000 |
| Farrar-Glauber multicollinearity tests (Model 2)  | Ho: No multicollinearity; Ha: Multicollinearity<br>Prob > chi2 = 0.0000 |
| Panel E: Endogeneity                              |   |
| Durbin-Wu-Hausman chi-sq test (Model 1)           | H0: Regressor is exogenous<br>P-value = 0.6263                          |
| Durbin-Wu-Hausman chi-sq test (Model 2)           | H0: Regressor is exogenous<br>P-value = 0.1064                          |
| Sample: 720 observations in the period 2018–2022. |   |

To address multicollinearity, the Farrar-Glauber test (Panel D) is applied, where the null hypothesis (Ho) assumes no multicollinearity, and the alternative hypothesis (Ha) suggests the presence of multicollinearity. The p-values indicate that we can reject the null hypothesis with 99% confidence, supporting the existence of multicollinearity issues in Models 1 and 2 (p-value > chi2: 0.0000 for both models).

In empirical corporate finance and management studies, simultaneity and reverse causality frequently generate endogeneity concerns (Wooldridge, 2010). We assess this issue using the Durbin–Wu–Hausman procedure applied to instrumental-variable specifications, where the null hypothesis states that ordinary least squares provides consistent estimates. Failure to satisfy this condition implies that correlation between regressors and the disturbance term materially biases OLS coefficients and necessitates an instrumental-variable approach. For Models 1 and 2, the test statistics (p = 0.6263 and p = 0.1064, respectively) indicate statistically meaningful departures from exogeneity, suggesting that some explanatory variables are endogenous.

Instrumental-variable techniques correct for this bias by isolating the component of the regressors that is orthogonal to the error term. However, standard IV estimators lose efficiency when the error structure exhibits heteroskedasticity or serial correlation—features that our Wald and Wooldridge diagnostics confirm. To address these multiple econometric issues simultaneously, we adopt a generalized method of moments framework following Arellano and Bond (1991). This approach yields consistent parameter estimates by removing time-invariant firm effects and exploiting internal instruments derived from the dynamic structure of the model (Roodman, 2009).

In particular, we rely on the system GMM estimator, which improves upon the difference GMM by strengthening the instrument set. This estimator combines equations in first differences, instrumented with lagged levels, and equations in levels, instrumented with lagged differences, thereby

mitigating the weak-instrument problem highlighted by Blundell and Bond (1998). At the same time, it provides robustness to heteroskedasticity and autocorrelation while controlling for endogeneity.

In addition to the above justification of the research methodology, it should be noted that socially responsible investment is not random. CEO power and narcissism can either encourage or discourage this investment, while socially responsible investment can discourage CEO power and egocentricity. To mitigate the risk of inappropriate inferences due to self-selection bias (a common endogeneity issue) and following the approach of previous studies (e.g., Habib et al., 2017), we employ Heckman's two-stage approach to tackle potential endogeneity in two stages. First, based on previous studies, we propose two panel data regressions to model CEO power in Model 1 and CEO narcissism in Model 2. This step allows us to calculate the so-called Inverse Mills Ratio (IMR) in both models, which is included as an additional explanatory variable to correct for potential self-selection bias. The results remain qualitatively the same as the primary analyses reported in the following sections when the IMR is included. After controlling for self-selection, the evidence is robust.

### 4.3. Empirical results

Table 5 reports the results of the GMM regressions proposed in Models 1 and 2 for CEO power and CEO narcissism, respectively. In Panel A, the results report how Model 1 shows a significant negative association between CEO power and socially responsible investment (coef.  $-1.3505$ ,  $p < 0.01$ ), which is in line with findings in previous literature (Rashid et al., 2020; Sheikh, 2019). This suggests that companies tend to enjoy greater institutional ownership by PRI-signatory investors when these investors do not perceive the CEO as highly powerful, since greater CEO power is often associated with less willingness to invest significantly in ESG activities (Li et al., 2016; Muttakin et al., 2018; Harper & Sun, 2019).

The results are qualitatively similar when focusing on narcissism. Model 3 shows a significant negative association between CEO narcissism and socially responsible investment (coef.  $-1.8732$ ,  $p < 0.01$ ). That is, the level of green investment among PRI signatories is lower in companies managed by a narcissistic CEO. This result relates to the findings of Hong et al. (2022), who found that institutional investors negatively moderate the positive relationship between CEO narcissism and CSR.

When institutional PRI signatories identify that a firm in which they would potentially invest is managed by a narcissistic CEO, socially responsible ownership of that firm decreases. The results confirm our hypothesis 2 (H2), which shows a negative relationship. That is, the more narcissistic the CEO, the less socially responsible the investment and ownership. While some of our findings are consistent with earlier research, they also highlight significant differences. Our findings suggest that SRI may view narcissistic CEOs with skepticism because they frequently favor environmental initiatives for their reputational benefits (Kind et al., 2023; Al-Shammari et al., 2019; Homroy and Slechten, 2019), even though previous research suggests that these CEOs often engage in highly visible ESG actions and disclosures to satisfy their need for admiration and recognition (Chatterjee and Hambrick, 2011; Gerstner et al., 2013; Raimo et al., 2021). Specifically, it seems that PRI members view ESG initiatives led by egocentric CEOs as opportunistic and possibly greenwashing rather than a sincere commitment to sustainability. Therefore, even while the research emphasizes that narcissistic

leadership increases ESG visibility, our findings imply that this visibility does not always result in increased investor trust; rather, it may discourage responsible investment.

**Table 5.** Empirical analysis using the GMM estimator.

| Panel A. CEO power and CEO narcissism             |                     |           |                     |                     |                     |           |
|---|---------------------|-----------|---------------------|---------------------|---------------------|-----------|
|   | Coef.               | St.Error. |                     | Coef.               | St.Error.           |           |
| <i>Independent variable</i>                       |                     |           |                     |                     |                     |           |
| CEO_Power   | -1.3505***          | 0.3044    |                     |                     |                     |           |
| CEO_Narcissism                                    |                     |           |                     | -1.8732***          | 0.6137              |           |
| <i>Control variables</i>                          |                     |           |                     |                     |                     |           |
| Size  | 2.4517*             | 1.3898    |                     | 7.7872***           | 0.7190              |           |
| Leverage  | 0.0289              | 0.0432    |                     | -0.0100             | 0.0314              |           |
| VolatilityROA                                     | 6.2376***           | 1.2778    |                     | -5.3194***          | 2.0135              |           |
| Tangibility                                       | -25.6460***         | 4.9663    |                     | -11.0537***         | 2.0135              |           |
| BSize   | -0.3191             | 0.3175    |                     | -2.6427***          | 0.3435              |           |
| BIndep  | 0.1446***           | 0.0349    |                     | 0.0566***           | 0.0169              |           |
| B Divers  | 10.9479***          | 3.8251    |                     | 10.4653***          | 2.1572              |           |
| Wald test   | Prob > chi2 = 0.000 |           |                     | Prob > chi2 = 0.000 |                     |           |
| Controlled by industry and year                   |                     |           |                     |                     |                     |           |
| Panel B. CEO power indicators                     |                     |           |                     |                     |                     |           |
|   | Coef.               | St.Error. | Coef.               | St.Error.           | Coef.               | St.Error. |
| <i>Independent variable</i>                       |                     |           |                     |                     |                     |           |
| CEO_Experience                                    | -0.0431**           | 0.0167    |                     |                     |                     |           |
| CEO_Share   |                     |           | -0.0522**           | 0.0240              |                     |           |
| CEO_Duality                                       |                     |           |                     |                     | -3.2192***          | 0.6361    |
| <i>Control variables</i>                          |                     |           |                     |                     |                     |           |
| Size  | 2.4319***           | 0.4250    | 2.8783***           | 0.3336              | 1.6411**            | 0.8184    |
| Leverage  | -0.0759***          | 0.0277    | -0.0753**           | 0.0296              | 0.0383              | 0.0447    |
| VolatilityROA                                     | 6.2841***           | 0.4166    | 5.1260***           | 0.3215              | 11.6046***          | 1.0220    |
| Tangibility                                       | -13.0113***         | 1.7100    | -12.2896***         | 2.0750              | -31.8231***         | 3.3180    |
| BSize   | -0.8064***          | 0.1075    | -0.5759**           | 0.0751              | -0.9284***          | 0.1618    |
| BIndep  | 0.0150              | 0.0128    | 0.0612***           | 0.0114              | -0.0328             | 0.0270    |
| B Divers  | 5.3987***           | 1.1841    | 4.3858***           | 1.0819              | 22.8783***          | 2.2109    |
| Wald test   | Prob > chi2 = 0.000 |           | Prob > chi2 = 0.000 |                     | Prob > chi2 = 0.000 |           |
| Controlled by industry and year                   |                     |           |                     |                     |                     |           |
| Sample: 720 observations in the period 2018–2022. |                     |           |                     |                     |                     |           |

\*, \*\*, and \*\*\* represent statistical significance at 10%, 5%, and 1%, respectively.

The CEO power indicator is a factorial analysis composed of three indicators: CEO experience, ownership, and duality. It is useful to explore the differences among the three items. In Panel B, the CEO power indicator is used as an explanatory variable for each indicator. Despite the rationale that some specific items could have a significant impact on socially responsible investment, no difference was found. The results confirm that the greater the CEO's experience (coef. -0.0431,  $p < 0.05$ ) and ownership (coef. -0.0522,  $p < 0.05$ ), the less attractive the company is to institutional investors adhering to the PRI. CEO duality is also associated with greater power, which limits socially responsible investment (coef. -3.2192,  $p < 0.01$ ). According to the primary results, socially responsible investment is significantly and negatively influenced by the power exercised by CEOs, including their greater experience, increased ownership, and their role as chairman of the company, as well as their narcissism. Our findings are supported by a growing body of research showing that executives who concentrate power are less likely to embrace ESG initiatives that might restrict their discretion or challenge their authority. They are more likely to resist outside pressures, especially those related to

sustainability (Li et al., 2016; Muttakin et al., 2018; Harper & Sun, 2019). Such leadership characteristics could be interpreted by these investors as an indication of strategy rigidity and a lack of openness, which could ultimately deter green investment.

#### 4.4. The moderating effect of CEO age and CSR committees

Reinforcing the main evidence above, this paper also aims to provide insights into the moderating effect that the pressures of CEO age and the existence of a CSR committee could exert.

**Table 6.** Exploring the moderating effect of CEO age and the existence of a CSR committee.

| Panel A. CEO age                                  |                                    |           |             |           |
|---|------------------------------------|-----------|-------------|-----------|
|   | Coef.                              | St.Error. | Coef.       | St.Error. |
| <i>Independent variable</i>                       |                                    |           |             |           |
| CEO_Power   | -17.8289***                        | 4.6851    |             |           |
| CEO_Narcissism                                    |                                    |           | -12.8932**  | 7.5559    |
| CEO_Age   | -0.2417**                          | 0.1211    | -0.2262***  | 0.0765    |
| CEO_Power*CEO_Age                                 | -0.1924**                          | 0.0801    |             |           |
| CEO_Narcissism*CEO_Age                            |                                    |           | -0.3388**   | 0.1361    |
| <i>Control variables</i>                          |                                    |           |             |           |
| Size  | 2.0339***                          | 0.4242    | 3.5396***   | 0.4060    |
| Leverage  | -1.3139                            | 1.5196    | -8.7548***  | 2.7948    |
| VolatiliTyROA                                     | 6.2428                             | 4.6456    | -29.8899*** | 5.6307    |
| Tangibility                                       | -1.7136                            | 2.7271    | 12.7978***  | 3.1285    |
| BSize   | -0.8209***                         | 0.2528    | -0.1610     | 0.2540    |
| BIndep  | 0.1705***                          | 0.0433    | -0.1161***  | 0.0445    |
| BDivers   | 0.6551                             | 4.5227    | -1.8936     | 5.1722    |
| Wald test   | Prob > chi2 = 0.000 for all models |           |             |           |
| Controlled by industry and year                   |                                    |           |             |           |
| Panel B. CSR committee                            |                                    |           |             |           |
|   | Coef.                              | St.Error. | Coef.       | St.Error. |
| <i>Independent variable</i>                       |                                    |           |             |           |
| CEO_Power   | -0.3757**                          | 0.1632    |             |           |
| CEO_Narcissism                                    |                                    |           | -4.2276***  | 0.4108    |
| CSRCom  | 3.5788***                          | 0.1589    | 4.6331***   | 0.6998    |
| CEO_Power* CSRCom                                 | 2.3743***                          | 0.2881    |             |           |
| CEO_Narcissism*CSRCom                             |                                    |           | 8.6024***   | 0.8968    |
| <i>Control variables</i>                          |                                    |           |             |           |
| Size  | 5.0672***                          | 0.2287    | 3.6863***   | 0.8135    |
| Leverage  | -0.0538***                         | 0.0107    | -0.0274     | 0.0359    |
| VolatiliTyROA                                     | 5.7026***                          | 0.2728    | -5.7033***  | 1.9790    |
| Tangibility                                       | -19.2953***                        | 0.3828    | -15.0393*** | 2.8722    |
| BSize   | -0.5606***                         | 0.0458    | -1.1786***  | 0.3473    |
| BIndep  | -0.0086***                         | 0.0068    | 0.0243*     | 0.0143    |
| BDivers   | 2.8774***                          | 0.4572    | -6.0508***  | 2.0877    |
| Wald test   | Prob > chi2 = 0.000 for all models |           |             |           |
| Controlled by industry and year                   |                                    |           |             |           |
| Sample: 720 observations in the period 2018–2022. |                                    |           |             |           |

\*, \*\*, and \*\*\* represent statistical significance at 10%, 5%, and 1%, respectively.

Regarding the moderating effect of CEO age, the results are reported in Table 6 (Panel A). Model 3A again supports the negative effect of CEO power on socially responsible ownership (coef. -17.8289,  $p < 0.01$ ). More significantly, it also supports the negative effect of CEO age (coef. -0.2417,  $p < 0.05$ ) as an additional CEO indicator that limits the interest of PRI-signatory institutional investors in

companies managed by older CEOs. The most relevant evidence of this model corresponds to the interaction term, which supports the moderating effect of CEO age proposed in H3A. Specifically, the negative impact of the CEO's power on socially responsible investment is even stronger when the CEO is older (coef.  $-17.8289 + (-0.1924) = -18.0213$ ) than with a younger CEO (coef.  $-17.8289$ ). These results are consistent with earlier research showing that aging is frequently linked to increased generational disconnection, cognitive rigidity, and a greater focus on leaving a legacy (Li et al., 2017; Serfling, 2014; Peltomäki et al., 2021; Trabert, 2023).

Model 3B also confirms previous evidence on the negative impact of CEO narcissism on PRI institutional investors' green investment (coef.  $-12.8932$ ,  $p < 0.05$ ) and the negative impact of CEO age (coef.  $-0.2262$ ,  $p < 0.01$ ). Again, it is important to focus on the interaction term to support the moderating effect of CEO age on the relationship between CEO narcissism and socially responsible investment. The results confirm research hypothesis 3B. The negative influence of CEO narcissism on the attractiveness of SRI is even more substantial when the CEO is older (coef.  $-12.8932 + (-0.3388) = -13.2320$ ) than when the CEO is younger (coef.  $-12.8932$ ). While the numerical differences in marginal impacts between younger and older CEOs may seem small, these consistent patterns have economic relevance. Even minor shifts in investor perception can influence capital allocation and a firm's ability to attract green finance, underlining how CEO age reinforces the negative impact of power and narcissism on sustainable investment attractiveness.

To examine whether the effect of CEO power and narcissism on socially responsible investment is likely to be moderated by the oversight and monitoring role of a CSR committee, the results are also reported in Table 6 (Panel B). Model 4A confirms the negative effect of CEO power on socially responsible ownership (coef.  $-0.3757$ ,  $p < 0.05$ ). More significantly, it also confirms the positive effect of a CSR committee (coef.  $3.5788$ ,  $p < 0.01$ ) as a corporate governance mechanism that reinforces the interest of institutional investors who have signed the PRI. The interaction term further supports the moderating effect of this committee proposed in H4A. Specifically, the negative influence of CEO power on the attraction of PRI institutional investors is less pronounced when companies have a CSR committee on their board (coef.  $-0.3757 + 2.3743 = -1.9986$ ) than when there is no such specialized committee (coef.  $-0.3757$ ). Recent studies emphasizing the CSR committee's moderating influence corroborate our results. For example, Martínez-Ferrero et al. (2024) showed that CSR committees limit the irresponsible ESG practices associated with narcissistic CEOs, even when they hold significant power. Other studies (Elmaghrabi, 2021; Bifulco et al., 2023) indicated that the presence of a specialized committee improves environmental performance by mitigating the negative effects of powerful CEOs.

Model 4B also reinforces the previous evidence on the negative impact of CEO narcissism on responsible investment (coef.  $-4.2276$ ,  $p < 0.01$ ) and the positive impact of the CSR committee (coef.  $4.6331$ ,  $p < 0.01$ ). Again, it is important to focus on the interaction term. The results confirm that the negative influence of CEO narcissism on socially responsible investment is less pronounced when companies have a CSR committee on their board (coef.  $-4.2276 + 8.6024 = 4.3748$ ) than when there is no such specialized committee (coef.  $-4.2276$ ). The constraining effect of the CSR committee allows us to reverse the situation and the negative effect of CEO narcissism in socially responsible investment.

#### 4.5. Further analysis: Geographic location and type of institutional investor

#### 4.5.1. Geographic-level factors: US vs. European SRI investors

Examining the geographic variations among PRI institutional investors highlights the regional differences between PRI signatories (Liang et al., 2022). Generally, previous studies indicate that European institutional investors are more likely to prioritize ESG factors in their investments compared to their US counterparts or investors from other regions (e.g., Dyck et al., 2019). This is evident in the higher percentage of PRI signatories from Europe compared to the US (see Table 2; 11.678% from Europe vs. 8.544% from the US). These findings align with the results reported by Black et al. (2022).

Considering the above and in support of our evidence, do CEO power and narcissism influence SRI among European and US institutional investors? Following Black et al. (2022), we compare US and non-US responsible investment to explore geographic differences. For this purpose, Europe is the total equity held by European UN PRI signatories, while the US is the total equity held by US UN PRI signatories (Black et al., 2022). These indicators are included in Models 1 and 2 to examine the influence on the relationship between CEO characteristics and responsible investment, replacing SRI as a global indicator.

The results are reported in Table 7, Panel A. The level of socially responsible investment is more negatively influenced by CEO power when the PRI signatories are from Europe (coef.  $-0.1298$ ,  $p < 0.05$ ) than when they are from the US or other regions (coef.  $-1.0056$ ,  $p < 0.05$ ). Similarly, this socially responsible investment is negatively influenced by CEO narcissism, with no differences between PRI signatories from Europe (coef.  $-0.2692$ ,  $p < 0.01$ ) and the US (coef.  $-1.1120$ ,  $p < 0.01$ ). In summary and in contrast to Black et al. (2022) and Liang et al. (2022), our evidence does not support geographic differences among PRI signatories.

**Table 7.** Further analysis exploring geographic location and type of investor differences.

| Panel A. Geographic differences                   |                                    |           |            |           |                    |           |            |           |
|---|------------------------------------|-----------|------------|-----------|--------------------|-----------|------------|-----------|
| <i>Independent variable</i>                       | European PRI signatories           |           |            |           | US PRI signatories |           |            |           |
|   | Coef.                              | St.Error. | Coef.      | St.Error. | Coef.              | St.Error. | Coef.      | St.Error. |
| CEO_Power   | -0.1298**                          | 0.0623    |            |           | -1.0056**          | 0.4703    |            |           |
| CEO_Narcissism                                    |                                    |           | -0.2692*** | 0.0630    |                    |           | -1.1120*** | 0.1443    |
| <i>Control variables</i>                          |                                    |           |            |           |                    |           |            |           |
| Size  | 0.6782**                           | 0.2713    | 0.1174     | 0.0786    | 0.2407             | 0.9069    | 6.5124***  | 0.6124    |
| Leverage  | -0.0129                            | 0.0139    | 0.0053**   | 0.0024    | 0.0387             | 0.0427    | 0.0056     | 0.0102    |
| VolatiliTyROA                                     | 0.2721                             | 0.3502    | 0.6882***  | 0.0699    | 2.4497**           | 1.2218    | -2.3952*** | 0.5888    |
| Tangibility                                       | -2.1647***                         | 0.6286    | -0.5131*** | 0.1909    | -20.9715***        | 2.7753    | -5.2193*** | 0.8553    |
| BSize   | 0.0865*                            | 0.0509    | 0.1012***  | 0.0177    | 0.1837             | 0.1692    | -1.2537*** | 0.0975    |
| BIndep  | 0.0150                             | 0.0093    | 0.0018     | 0.0015    | 0.0260             | 0.0246    | 0.0137***  | 0.0067    |
| BDivers   | -1.6457***                         | 0.3884    | -1.5782*** | 0.2572    | 9.4705***          | 2.1505    | -4.9805*** | 1.4761    |
| Wald test   | Prob > chi2 = 0.000 for all models |           |            |           |                    |           |            |           |
| Controlled by industry and year                   |                                    |           |            |           |                    |           |            |           |
| Panel B. Type of investor                         |                                    |           |            |           |                    |           |            |           |
| <i>Independent variable</i>                       | Short-term horizon                 |           |            |           | Long-term horizon  |           |            |           |
|   | Coef.                              | St.Error. | Coef.      | St.Error. | Coef.              | St.Error. | Coef.      | St.Error. |
| CEO_Power   | -0.0454**                          | 0.0223    |            |           | -0.0159***         | 0.0040    |            |           |
| CEO_Narcissism                                    |                                    |           | -0.0066*** | 0.0008    |                    |           | -0.0147*** | 0.0014    |
| <i>Control variables</i>                          |                                    |           |            |           |                    |           |            |           |
| Size  | 0.2501***                          | 0.0442    | 0.0350***  | 0.0027    | 0.0530***          | 0.0146    | 0.0658***  | 0.0050    |
| Leverage  | 0.0012                             | 0.0074    | -0.0003*** | 0.0000    | 0.0038***          | 0.0007    | 0.0003***  | 0.0001    |
| VolatiliTyROA                                     | -0.1679***                         | 0.0472    | 0.2393***  | 0.0155    | 0.1496***          | 0.0309    | 0.2198***  | 0.0149    |
| Tangibility                                       | -0.0075                            | 0.0515    | -0.0432*** | 0.0116    | 0.1811***          | 0.0239    | 0.3900***  | 0.0378    |
| BSize   | -0.0032                            | 0.0050    | 0.0333***  | 0.0009    | 0.0002             | 0.0014    | 0.0125***  | 0.0011    |
| BIndep  | 0.0049***                          | 0.0011    | 0.0025***  | 0.0001    | 0.0007**           | 0.0003    | 0.0018***  | 0.0001    |
| BDivers   | -0.4473***                         | 0.0664    | 0.2004***  | 0.0126    | -0.1594***         | 0.0216    | -0.0217*** | 0.0068    |
| Wald test   | Prob > chi2 = 0.000 for all models |           |            |           |                    |           |            |           |
| Controlled by industry and year                   |                                    |           |            |           |                    |           |            |           |
| Sample: 720 observations in the period 2018–2022. |                                    |           |            |           |                    |           |            |           |

\*, \*\*, and \*\*\* represent statistical significance at 10%, 5%, and 1%, respectively

#### 4.5.2. Type of institutional investor

The geographic origin of PRI institutional investors does not influence their response to CEO power and narcissism. But what about the type of institutional investor? Our question finds its rationale in previous studies (e.g., Gloßner, 2019; Oikonomou et al., 2020) that distinguished between the influences of short- and long-term horizon investors as determinants of ESG performance and socially responsible behavior. Authors such as Erhemjamts and Huang (2019) defended the influence of short- and long-term horizons on ESG commitment, which can be extrapolated to the institutional investors who sign the PRI. Short-term institutional investors (hedge funds), for example, do not focus on environmental performance, mainly because they are concerned with short-term profitability and do not pursue the goal of long-term firm value maximization. SRI with short-term horizons could exhibit short-sighted investment behavior in order to meet short-term goals. According to the previous classification reported in Table 2 from Velte (2023), two indicators are calculated as follows: SRI\_ST is the total equity held by UN PRI signatories that are classified as hedge funds, and SRI\_LT is the total equity held by UN PRI signatories that are classified as pension funds, mutual funds, banks and insurance companies, investment funds, and sovereign wealth funds.

These indicators are again included in Models 1 and 2, replacing the SRI indicator to examine their influence on the relationship between CEO characteristics and responsible investment. The results are reported in Table 7: Panel B for CEO power and Panel B for CEO narcissism. Regarding the former, CEO power negatively affects the percentage of green investments when PRI signatories have a short-term horizon (coef.  $-0.0454$ ,  $p < 0.05$ ) and when they have a long-term horizon (coef.  $-0.0159$ ,  $p < 0.01$ ). This socially responsible investment is also lower when the company is managed by a narcissistic CEO if the PRI signatories are institutional investors with a short-term horizon (coef.  $-0.0066$ ,  $p < 0.01$ ).

Our evidence clearly supports that there are no differences among PRI signatories in terms of their short- or long-term horizons, as both clusters are negatively associated with CEO power and narcissism. This is in line with earlier studies that emphasize how crucial investors' time horizons are to their involvement in ESG (Erhemjamts and Huang, 2019). Long-term investors may be cautious of CEOs who put their own agendas ahead of sustainable practices, while short-term investors may see narcissistic and powerful CEOs as sources of volatility that could result in fragile ESG initiatives (Chatterjee and Hambrick, 2007).

## 5. Discussion and conclusions

Building on insights from the upper echelons and agency perspectives, we analyze the role of CEO characteristics, namely power and narcissism, in determining institutional investors' decisions, particularly in responsible and sustainable investing, considering that the age of the CEO and the existence of a CSR committee can influence the active role of the CEO in investment decisions.

Examining a Spanish sample from 2018 to 2022, our results confirm and extend prior theoretical assumptions by showing that powerful CEOs tend to prioritize their own interests over those of stakeholders, which reduces the CEO's propensity to invest in ESG initiatives and discourages socially responsible investors. This negative association, consistent with agency theory (Rashid et al., 2020;

Sheikh, 2019), supports the view that greater CEO power can hinder ESG commitment and investor trust, particularly among PRI signatories (Li et al., 2016; Muttakin et al., 2018; Harper and Sun, 2019).

Specifically, our empirical analysis shows a statistically significant negative relationship between CEO power and the proportion of SRI investment, even after controlling for firm size, industry, and financial performance. This finding indicates a negative association between CEO power and SRI investment, consistent with the interpretation that CEO power may act as a deterrent for responsible investors. However, we acknowledge that this relationship should be interpreted with caution, as other unobserved factors, such as corporate governance quality, institutional pressures, or broader market trends, may also influence CEO characteristics and SRI allocations (Martiny et al., 2024; Ding & Wang, 2025; Li et al., 2025). In contrast and in line with upper echelons theory, our results show that narcissistic CEOs, characterized by a desire for admiration and recognition, are more likely to prioritize socially visible actions (Chatterjee and Hambrick, 2011; Gerstner et al., 2013; Gao et al., 2023). Previous research has pointed to the attractiveness of ESG disclosure for these CEOs (e.g., Raimo et al., 2021), as it allows them to satisfy their own expectations and needs, often without considering the actual benefits to the organization. This tendency of narcissistic CEOs is particularly evident in aspects that provide greater visibility, such as environmental initiatives (Kind et al., 2023; Al-Shammari et al., 2019; Homroy and Slechten, 2019). Our empirical findings support this characterization by showing that institutional investors, particularly those deeply committed to ESG principles, tend to interpret these actions negatively, perceiving them as opportunistic or greenwashing rather than genuine commitments to sustainability. Thus, while our results provide new evidence on the interplay between CEO traits and responsible investment, we caution against strong causal claims and emphasize the need for further research to address these potential confounding influences. This advances the literature by demonstrating that, contrary to some expectations, narcissistic leadership does not enhance SRI attractiveness; rather, it raises concerns among responsible investors about the authenticity of ESG efforts.

Reinforcing the main findings, our results also suggest that CEO age plays a moderating role in the relationship among their power, narcissistic tendencies, and attractiveness to SRI. That is, the negative impact of these traits on PRI-signatory investors becomes more pronounced as the CEO ages. This finding is consistent with previous research, which has shown that aging can lead to increased cognitive rigidity, a widening generation gap, and a greater focus on legacy (Li et al., 2017; Serfling, 2014; Peltomäki et al., 2021; Trabert, 2023). As a result, socially responsible investors tend to find older CEOs with narcissistic and authoritarian traits even less attractive than their younger counterparts. This provides new evidence on the dynamic interplay between demographic and psychological attributes of CEOs in the context of sustainable investment.

Interestingly, our study also highlights the role of CSR committees as a governance mechanism that mitigates the negative impact of narcissistic or highly powerful CEOs. Our findings suggest that the monitoring role of this governance mechanism is crucial in strengthening the credibility of the company's ESG initiatives and in helping to build trust among socially responsible investors.

Existing literature points to geographic differences in the commitment of PRI signatories, with European institutional investors showing higher adherence to ESG criteria than their US counterparts (Black et al., 2022; Liang et al., 2022; Dyck et al., 2019). However, our analysis of subsamples by investor origin (European vs. non-European) reveals no statistically significant differences, indicating that the patterns observed are robust and generalizable within the Spanish context.

Furthermore, our study examines the impact of investors' time horizons, whether short- or long-term, on ESG engagement, a factor that has been recognized as crucial in previous research (Erhemjamts and Huang, 2019). Short-term investors often perceive a narcissistic and domineering CEO as a potential source of volatility, raising concerns that ESG strategies may be implemented superficially or for purely instrumental reasons (Chatterjee and Hambrick, 2007). Meanwhile, long-term investors may be concerned that such a CEO may prioritize personal recognition and control over the organization's long-term sustainability efforts, thereby undermining genuine ESG commitments (Petrenko et al., 2016). In both cases, our findings indicate that CEO traits act as a consistent deterrent to SRI, independent of the investment strategy's temporal focus.

The implications of these findings are clear. First, this study provides valuable insights for socially responsible investors, highlighting the importance of evaluating leadership characteristics when assessing a company's commitment to sustainability and the authenticity of its ESG practices. They can use CEO characteristics, particularly their level of narcissism and power, as additional criteria in their decision-making process. As these traits can hinder the attractiveness of green investments, investors may prefer companies with strong governance mechanisms that mitigate these effects, such as the presence of a CSR committee. In addition, given their influence, PRI investors can pressure companies to implement oversight structures that balance the impact of a powerful or narcissistic CEO on ESG strategy.

Second, in light of geopolitical uncertainty and the recent weakening of external commitments to sustainable initiatives, this paper emphasizes the importance of internal governance mechanisms, such as CSR committees, in mitigating the negative impact of CEO personal and cognitive traits, including narcissism and power, on attracting sustainable investment. We suggest that these committees can act as a counterweight to the concentration of decision-making power in the hands of CEOs, ensuring that investors perceive ESG strategies as authentic, transparent, and aligned with long-term sustainability goals. This, in turn, enhances the company's credibility in the eyes of responsible investors.

Third, for shareholders and even boards of directors, considering the CEO's personality traits in hiring and succession decisions can be critical, especially if the company is seeking to attract sustainable investment. Companies can establish or strengthen internal oversight mechanisms, such as a CSR committee, which can help mitigate the negative perceptions of certain leadership styles and improve ESG investor confidence. In addition, as older CEOs with narcissistic and powerful traits may be perceived as less aligned with ESG trends, the board can develop strategies to strengthen their commitment to sustainability. At the stakeholder level, the findings of this study are relevant to employees, customers, and suppliers, who may interpret the alignment (or lack thereof) between the company and sustainable investment principles as an indicator of the company's commitment to ESG performance. In this respect, the presence of a CSR committee can enhance a company's reputation and trust among different stakeholder groups.

### *5.1. Policy implications*

The implications of this study for regulators and policymakers are clear. First, although they play a critical role in overseeing sustainability initiatives and reducing the risks related to CEO leadership styles, CSR committees are still underrepresented. We recommend that regulators use these findings

to design policies that promote responsible corporate governance, especially by encouraging the formation of CSR committees in publicly traded companies. Second, company sustainability plans are frequently shaped by leadership behavior, which is frequently overlooked by current ESG criteria. Our results provide support for the creation of more comprehensive ESG frameworks that specifically evaluate leadership characteristics, such as narcissism or the concentration of power, and a business's commitment to sustainable practices. Lastly, our findings highlight the need for greater transparency standards in corporate governance, including comprehensive details about the CEO's responsibilities, decision-making power, and the presence of sustainability oversight systems. We advise governments to improve transparency standards in this area by adding specific indicators considering ESG governance frameworks and leadership.

## *5.2. Limitations and future recommendations*

This paper is not without limitations that should be considered for future research. Regarding the measurement of variables, this paper lacks robustness checks for the main indicators. We acknowledge that PRI membership may not fully capture all aspects of ESG-oriented investment behavior, as investors may vary in their ESG integration. Future research could complement our analysis using alternative ESG proxies, such as MSCI, Sustainalytics, or Refinitiv ratings, or by focusing on funds with explicit ESG mandates (e.g., Green Funds or ESG ETFs) to further test the robustness of our findings. CEO narcissism is inherently difficult to measure directly, especially in archival settings, due to the lack of access to psychological assessments or self-reported instruments. Our composite index, based on the approach proposed by Chatterjee and Hambrick (2007), has been widely used and validated in empirical research (Engelen et al., 2016; Agnihotri & Bhattacharya, 2019; Ingersoll et al., 2019). It captures key behavioral expressions of narcissism, such as self-promotion, visibility-seeking, and recognition, through observable indicators like CEO photo prominence, press presence, compensation, and awards. While alternative methods have been proposed in the literature, including linguistic analysis of CEO letters (e.g., first-person pronoun use), facial expression analysis (e.g., dominance or smile intensity), and social media behavior, these require access to non-public or highly specialized data sources (e.g., full CEO communications, high-resolution images, or consistent social media profiles). In the context of Spanish publicly listed companies, such data are unavailable, fragmented, or inconsistent over the study period. Therefore, we rely on the established composite indicator, supported by factor analysis and empirical precedents, which remains the most reliable, transparent, and replicable method under the available data conditions. We acknowledge this as a limitation and encourage future research to complement this approach with richer behavioral or psychometric data as they become accessible.

Thus, future research could examine robust measures and use variables that incorporate direct psychological assessments, such as the Narcissistic Personality Inventory (NPI) (Raskin and Hall, 1979), and further explore some of the psychological and behavioral mechanisms underlying these relationships. For example, it would be beneficial to investigate how CEO personality traits interact with other leadership qualities, such as ethical leadership, transformational leadership, or emotional intelligence, to assess their combined effect on ESG engagement and corporate sustainability strategies.

A similar limitation is found in the CEO power measure. While the literature identifies additional dimensions of CEO power, such as founder status (Li et al., 2016), network centrality (Finkelstein, 1992), or voting-right disparities (Bebchuk et al., 2011), these indicators require access to proprietary or highly detailed datasets (e.g., BoardEx, executive contracts, shareholder agreements), which are not publicly available for Spanish listed firms. Therefore, our study relies on three widely used and accessible proxies—tenure, ownership, and duality—which are commonly applied in empirical corporate governance research (Jo & Harjoto, 2011; Jiraporn & Chintrakarn, 2013; Harper & Sun, 2019). We acknowledge this as a limitation and suggest that future research could incorporate alternative or complementary CEO power measures where data availability allows.

Another limitation of our study is that it primarily assesses statistical significance, while the economic magnitude of the effects deserves further exploration. Future research could quantify the practical consequences more directly, for example, by linking these CEO attributes to changes in firm financing conditions, green fund inflows, or ESG ratings.

Additionally, our sample is limited to Spanish companies, which restricts the ability to generalize the findings to other economies. Expanding this study to include companies from other European countries with varying regulatory frameworks, as well as non-European firms, would be valuable. A broader sample would provide insights into how the institutional-level framework influences PRI investors' green investment decisions. It is also worth noting that this paper focuses solely on listed companies. Future studies could also test our hypotheses in unlisted companies and SMEs. While the analysis period covers the years 2018–2022, more recent data (2023–2025) were not included due to the unavailability or incompleteness of relevant financial, governance, and PRI ownership data at the time of data collection. This decision ensures consistency, reliability, and completeness across all firm-year observations. Future research may benefit from incorporating post-2022 data as it becomes fully available and verified.

### **Author contributions**

M. Camino Ramón-Llorens was responsible for database construction and for writing the theoretical framework and hypotheses. Jennifer Martínez-Ferrero conducted the methodology, formal analysis, and results. Emma García-Meca wrote the introduction and the contribution of the study. All authors contributed equally to the development of the research idea and to the supervision of the paper. All authors have read and approved the final manuscript.

### **Use of AI tools declaration**

The authors declare they have not used Artificial Intelligence (AI) tools in the creation of this article.

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### Conflict of interest

The authors declare no conflict of interest.

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