ESG-Linked Compensation and ESG Controversies: Evidence from the US

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Abstract

This study examines the effectiveness of ESG-linked executive compensation in mitigating engagement in ESG Controversies. Analysing a panel of S&P 1500 companies from 2009 to 2021, we find that ESG-linked compensation is not generally effective in decreasing occurrences of ESG Controversies. On the contrary, firms with ESG-linked executive compensation tend to engage in more ESG Controversies, and this link is particularly strong for firms run by powerful CEOs. Taken together, our findings are in line with managerial power arguments that opportunistic CEOs may use ESG-linked compensation targets to extract higher benefits by symbolically improving their self-reported ESG performance without substantially addressing negative ESG outcomes. These findings provide valuable insights into both the theoretical and practical aspects of designing optimal ESG-linked compensation contracts and shaping the governance frameworks within firms that adopt such contracting.

KEYWORDS

ESG-linked compensation; ESG contracting; Executive compensation; ESG Controversies; Managerial incentives; Managerial power theory

1 | INTRODUCTION

"We have not seen that sort of increase since TSR (total shareholder return) became the measure in vogue in the early 2000s." This comment made by Phillippa O'Connor,[1] an executive compensations expert and a partner at PwC, succinctly captures the unprecedented surge of linking ESG factors to executive compensation, a practice known as *ESG Contracting*.[2] The aim of ESG contracting is to align managerial incentives with specific ESG benchmarks, thereby linking managerial compensation with ESG performance and the interests of a broader spectrum of stakeholders (Cohen et al., 2023; Flammer et al, 2019; Hong et al., 2016; Ikram et al., 2019; Tsang et al., 2021). ESG contracting is argued to be a more tangible commitment towards protecting stakeholder interests and welfare (Maas, 2018; Flammer et al., 2019) and is considered an explicit acknowledgement of the stakeholders' importance as well as a conscious effort by corporations to address ESG issues (Gennari & Salvioni, 2019; Ikram et al., 2019). In our study, we investigate the link between ESG contracting and firm's likelihood of engaging in ESG Controversies.[3]

Prominent institutional investors such as Amundi (Mooney, 2021), BlackRock, and Vanguard (Cohen et al., 2023) actively advocate for the implementation of ESG-linked pay, and a growing cohort of companies across diverse sectors and geographies embrace this paradigm.[4] For instance, at Schneider Electric, an energy management company, this involves the recalibration of its executive compensation framework, connecting 80% of bonus pay to financial performance while earmarking the remaining 20% for achievements in sustainability such as the adoption of

[1] See Hill (2021) https://www.ft.com/content/c1d0e4d5-b42f-4287-8bfe-319f31a7acbe.
[2] We will use the term ESG contracting to describe the practice where executives' compensation is linked to some form of ESG criteria. This practice is also sometimes referred to as CSR contracting and CSR-linked executive compensation.
[3] We follow Klein & Dawar (2004) and Cai et al. (2012) define corporate misconduct within the ESG framework as 'ESG Controversies,' referring to corporate actions or scandals that adversely affect stakeholders and society at large.
[4] Noteworthy examples include Unilever, NatWest, Schneider Electric from the UK; General Motors, Devon Energy, Xylem from the USA; J-Power and JFE Holdings from Japan (Hill, 2021; Temple-West, 2022).

renewable energy sources and the reduction of carbon emissions (Hill, 2021). Xylem, a water technology company, has instituted a model where 15% of executive total compensation is contingent upon meeting workplace diversity goals (Temple-West, 2022). In addition to positive ESG outcomes, negative ESG issues have also been linked to executive compensation. A case in point is Devon Energy, an oil and gas conglomerate, where compensation contracts include metrics such as the reduction of gas flaring emissions, minimization of oil spill incidents, and the decrease of severe injuries.[5]

Spurred by the strong growth in firms' adoption of ESG contracting, there has been an increase in studies examining the implications of this practice for the firms and their stakeholders. The majority of this literature suggests that linking executive compensation to ESG targets serves as an effective tool to improve stakeholder outcomes, both regarding specific ESG outcome metrics as well as overall ESG performance scores (e.g., Hong et al., 2016; Flammer et al., 2019; Tsang et al., 2021; Carter et al, 2022; Ikram et al., 2023; Cohen et al., 2023). For instance, Cohen et al. (2023) look at an international sample of firms and find that the adoption of ESG variables in managerial performance metrics is accompanied by improvements in ESG performance ratings and a decline in carbon emissions, a finding that is confirmed by Ikram et al. (2023) and Al-Shaer et al. (2023) for samples of US firms and UK firms, respectively. Beyond improving ESG metrics, Flammer et al. (2019) further show that the adoption of ESG contracting is linked to an increase in long-term orientation as well as more green innovations, suggesting that ESG contracting may significantly shift managerial attention and firm resources towards the consideration of wider stakeholder issues. Tsang et al. (2021) investigate the link between ESG contracting and overall firm innovation and explain the innovation-enhancing effect of ESG contracting via improvements

[5] More real-life examples of linking different ESG factors to executive pay can be found in Maas (2018), Flammer et al. (2019) and Walker (2022).

in employee well-being and employee innovation productivity as well as managerial risk-taking, further suggesting that the implementation of ESG contracting by firms leads to measurable changes in firm policies towards stakeholders.

While the above-cited studies document ESG contracting's positive effect on ESG outcomes, implying that this practice serves its intended purpose, a few studies cast doubt on the effectiveness of ESG contracting to advance stakeholder outcomes. Haque and Ntim (2020) find that while the adoption of ESG-based compensation policies is positively associated with firms signing up to carbon reduction initiatives, they do not find evidence of a significant link between ESG-based compensation and the reduction of actual greenhouse gas emissions. The authors interpret these findings as firms concentrating more on symbolically improving their process-oriented environmental performance, which can easily be communicated to investors, rating agencies, and other stakeholders, compared to more –costly, outcome-based improvements in ESG metrics (see also Berrone & Gomez-Mejia, 2009; Delmas et al., 2013). Liu et al. (2024) further show that ESG-contracting firms have greater stock price crash risk which they attribute to exacerbated managerial withholding of unfavourable information and managerial overinvestment, further highlighting a potential 'dark side' of ESG contracting.

Despite the significant empirical evidence on the effect of ESG contracting on different ESG and firm outcomes, the existing research has mainly focused on firms' implementation of positive ESG outcomes and policies, while less is known about ESG contracting's effectiveness in avoiding ESG-related misconduct and controversies. However, positive corporate social responsibility (CSR), including the implementation of ESG policies, processes, and initiatives, is conceptually different from corporate social irresponsibility (CSiR) such as engagement in ESG Controversies, misconduct, and related negative ESG outcomes (Kotchen & Moon, 2011;

Mattingly & Berman, 2006; Oikonomou, et al., 2012; Strike et al., 2006). For instance, Minor and Morgan (2011) claim that firms that are 'doing good' are not necessarily 'avoiding harm', while Mattingly and Berman (2006) highlight that positive and negative corporate social actions are conceptually and empirically distinct aspects of firms' more general CSR performance. Greenwood (2007) further points out that companies are not necessarily consistent in their consideration of responsible and irresponsible activities towards stakeholders, implying that firms can engage in both positive ESG activities as well as ESG Controversies. In addition, and in line with Haque and Ntim (2020)'s arguments, firms' overall ESG performance involves different components of which some are less cost-intensive to implement, potentially allowing opportunistic managers to strategically focus their efforts and attention towards advancing less costly and less effort-intensive ESG dimensions (see also Delmas et al., 2013).

Hence, results based on ESG contracting's impact on positive ESG performance scores or policies cannot simply be extended to the avoidance or mitigation of ESG Controversies, but instead the question of the impact of ESG contracting on firms' engagement in ESG Controversies warrants additional investigation. This question is particularly important given that the United States, along with other countries, have witnessed a proliferation of ESG-related misconducts, legal disputes, and regulatory interventions over the past decade (Talarides et al., 2023),[6] and ESG contracting might be seen as a solution to curbing such instances of corporate wrongdoing (Walker, 2022).

[6] Several recent studies have documented a variety of examples of notable ESG controversies. For instance, Xue et al. (2023) focus on ESG scandals ranging from the catastrophic Deepwater Horizon oil spill in 2010 to the revelation of carcinogenic ingredients in Johnson & Johnson's sunscreens in 2021. Li et al. (2019) report breaches of customer privacy, such as the unauthorized disclosure of user data by Facebook to third-party analytics firms. On the Governance front, Amazon and Starbucks are implicated in reports of transgressions against employees (Eidelson, 2023; Wasserman, 2021), eroding employee benefits.

In our study, we focus on the understudied link between firms' adoption of ESG contracting and the occurrence of ESG Controversies. Specifically, we investigate the efficacy of ESG contracting as a deterrent against ESG misconduct based on a sample of S&P 1500 constituency firms over the period 2009-2021. Our findings show that ESG-linked pay structures do not incentivise a reduction in ESG Controversies. On the contrary, firms with ESG-linked pay tend to display more ESG Controversies. At the same time – and in line with previous studies – we find that firms with ESG contracting report better self-reported ESG performance scores, suggesting that these firms seem to strategically shift their ESG efforts and attention towards specific ESG dimensions likely linked to their ESG performance targets. In line with the interpretation of our findings as indicative of strategic, rent-seeking behaviour by managers with ESG-linked pay packages, we find that the positive link between ESG contracting and the occurrence of ESG Controversies is more pronounced for firms managed by more powerful CEOs who have more leeway to direct – and divert – ESG efforts and to influence pay structures (Courty & Marschke, 2004; Kolk & Perego, 2014). Our primary findings remain robust to a variety of tests, including tests for alternative explanations and accounting for a potentially endogenous relationship between ESG contracting and ESG Controversies. Our findings also hold when we substitute the key dependent variable, an ESG Controversies metric, with the count of official corporate ESG violations and fines to address potential biases inherent in utilizing ratings-based ESG measures (Amel-Zadeh & Serafeim, 2018; Mackintosh, 2018; Berg et al., 2020; Avramov et al., 2022). Taken together, our findings are consistent with managerial power arguments that opportunistic CEOs may use ESG-linked compensation targets to extract higher rent by symbolically improving their self-reported ESG performance without substantially addressing ESG outcomes, thus resulting in more ESG Controversies and misconduct.

Our research contributes to the literature in several meaningful ways. To the best of our knowledge, we are the first study to document that the implementation of ESG contracting leads to an increased occurrence of ESG Controversies. While the financial media has reported anecdotal evidence of this potentially paradoxical effect (Temple-West, 2024),[7] we provide a systematic analysis and establish a causal link between the implementation of ESG contracting and the increased likelihood of firm engagement in ESG Controversies. As such, we contribute to studies looking at the effect of ESG contracting on corporate ESG outcomes (e.g., Hong et al., 2016; Flammer et al., 2019; Tsang et al., 2021; Carter et al, 2022; Ikram et al., 2023; Cohen et al., 2023) by showing that firms increasing their self-reported ESG Scores as a result of ESG contracting also engage in more ESG Controversies. We therefore add a new dimension to the literature that documents the 'dark side' of ESG contracting (e.g., Liu et al., 2024) by focusing on ESG-based negative outcomes instead of stock-market based indicators such as stock price crash risk.

Relatedly, we also contribute to the literature critiquing the integration of ESG targets in executive compensation by showing the limited potential of ESG contracting to address all aspects of firms' ESG performance, including the avoidance of ESG Controversies. Existing research has highlighted a variety of shortcomings of ESG contracting, including a lack of transparency of ESG contracting terms, the limited ability of external parties to verify outcomes, and the limited scope and narrow focus of ESG contracting metrics (e.g., Kolk & Perego, 2014; Flammer et al., 2019; Bebchuk & Tallarita, 2022), which have led opponents of ESG contracting to conclude that this pay structure serves as a mere symbolic tool, amplifying agency issues and allowing opportunistic managers to extract rent (Kolk & Perego; Bebchuk & Tallarita, 2022). Our study aligns with

[7] Temple-West (2024) has reported a case of Marathon Petroleum happened in 2018. "In 2018, Marathon Petroleum agreed to pay a $335,000 fine for a diesel spill that leaked into a river on the border between Indiana and Illinois. That year, the petroleum company paid its chief executive the full portion of his bonus that was tied to environmental performance." (See: https://www.ft.com/content/6528d452-1082-4e4d-8729-132a5c9a425c)

potential concerns of ESG contracting incentivising short-term and opportunistic behaviour by powerful CEOs which can shift attention away from addressing wider ESG risks and misconduct. As such, we provide empirical evidence for these adverse outcomes highlighting the deficiencies in the current ESG contractual practices, specifically their inadequacy in incentivizing managers to tackle the more profound ESG challenges, such as mitigating ESG Controversies.

In line with the above, our findings hold additional practical significance for investors, corporations, and societal entities that endorse and advocate for the wider adoption of ESG contracting. Effectively addressing ESG Controversies is paramount to maintaining a firm's legitimacy and reputation (Aouadi & Marsat, 2018) as well as safeguarding stakeholder interests (Li et al., 2019). Consequently, advocates for ESG-linked pay policies should exercise caution, refraining from assuming that the adoption of ESG-linked compensation schemes is a panacea to the global ESG challenges.

The study is structured as follows. In Section 2, we develop hypotheses on the association between ESG contracting and ESG Controversies. In Section 3, we elaborate on the research design, while Section 4 presents the empirical results and robustness checks. We discuss our study's implications and offer concluding remarks in Section 5.

2 | LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

In line with agency theoretical arguments, the adoption of ESG incentives in compensation agreements is premised on ESG-related incentives influencing managerial decisions. Assuming that (a) managers are motivated to maximise their monetary incentives (Mishra et al., 2000) and (b) the consideration of wider stakeholder concerns as measured by ESG dimensions is not

automatically aligned with their existing executive compensation targets (Flammer et al., 2019), linking executive compensation explicitly to these ESG targets could therefore incentivise managers to engage in ESG activities that are tied to their monetary compensation. For example, it is suggested that the propensity of managers to engage in proactive measures against ESG risks relies on their compensation covering additional personal costs and efforts these measures entail (Berrone & Gomez-Mejia, 2009; Godfreyet al., 2009). However, it is not clear a priori whether the integration of ESG targets into executive compensation is effective in mitigating firms' involvement in ESG Controversies. We rely on optimal contracting theory, managerial power theory as well as concepts of the Multitasking Problem to argue that, on the one hand, ESG contracting, if effectively designed, could align managerial incentives with stakeholder interests, improve managerial accountability, and create a corporate culture that focuses on stakeholder considerations and ESG risk mitigation, therefore serving as an effective tool to reduce engagement in ESG Controversies; on the other hand, ESG contracting might be ineffective in mitigating engagement in ESG Controversies and misconduct if ESG contracting reinforces managerial opportunism and leads to a (short-term) focus on quantified ESG metrics over wider (non-quantified) stakeholder considerations. We will develop arguments for both potential impacts of ESG contracting on ESG Controversies below and formulate testable hypotheses.

Proponents of ESG-linked pay argue that ESG contracting effectively aligns managerial interests with stakeholder concerns and, hence, incentivises managers to assume responsibility for enhancing stakeholder welfare and minimizing corporate actions harmful to various stakeholder groups. For instance, Flammer et al. (2019) argue that ESG contracting helps direct management's attention to stakeholders that are less salient but financially material to the firm in the long run, thereby strengthening corporate governance. Furthermore, Mahoney and Thorn (2006) argue that

the structure of executive compensation can be an effective tool in aligning executives' incentives with those of the ‘common good’. Consequently, ESG contracting may serve an important role in pre-empting and mitigating ESG Controversies if it incentivises managers to take actions to protect stakeholder interests that would otherwise be overlooked. These arguments align with an agency theory-based corporate governance model which considers the remuneration structure as an essential mechanism to mitigate agency problems (Holmstrom, 1979; Murphy, 1986). They also fit in with the principles of the optimal contracting theory, which advocates for payment structures that not only encourage good practices but also actively discourage adverse behaviours (Edmans & Gabaix, 2009). In the absence of appropriate compensation, managers might resort to non-action or seek less costly alternatives regarding the mitigation of ESG risks and controversies, given the typically higher costs, complexity, and efforts associated with ESG risk mitigation initiatives (Berrone & Gomez-Mejia, 2009). Therefore, linking adverse ESG outcomes to executive pay may not only serve to compensate managers for undertaking ESG initiatives but can also be expected to drive sincere efforts on their behalf in reducing the occurrence of negative ESG outcomes.

Maas and Rosendaal (2016) reinforce this viewpoint and further argue that connecting ESG performance to CEO pay enhances managerial accountability, deters passivity, and discourages opportunistic behaviour. This argument relies on the assumption that, by directly tying executive compensation to ESG targets, executives are held accountable for firms’ wider ESG outcomes, which include both the initiation of positive ESG policies and initiatives as well as the avoidance of ESG misconduct, as it stipulates areas of managerial responsibility via compensation arrangements. In line with this view of ESG contracting establishing enhanced managerial accountability, Al-Shaer and Zaman (2019) investigate the link between firms’ adoption of ESG contracting and the reliance on sustainability assurance. They interpret the positive association

between firms' likelihood to adopt ESG contracting and to seek external sustainability assurance as suggestive that ESG-contracting firms are more likely to monitor managements' behaviour and to hold them accountable for their ESG performance. Hence, if ESG contracting creates an increased sense of accountability of managers towards ESG outcomes, it might serve as an effective tool to mitigate the occurrence of ESG scandals and misconduct.

While the above arguments for a potential positive impact of ESG contracting on the mitigation of ESG Controversies emphasise the direct effect of the compensation structure on negative ESG outcomes, ESG contracting may also have indirect impacts on firms' wider corporate culture by serving as a signal to employees regarding the importance of mitigating ESG concerns and risks. For instance, Cohen et al. (2023) suggest that another agency –theory-based rationale for ESG contracting is that ESG metrics can be viewed as indicators of future risk exposure, including exposure to ESG misconduct and controversies. Hence, by addressing and improving ESG metrics, managers may be indirectly reducing the risks of future negative ESG outcomes. Similarly, if ESG contracting serves as a credible signal towards firms' stakeholder commitment which fosters a more stakeholder-oriented corporate culture, firms may face fewer ESG Controversies as employees internalise the consideration of stakeholder concerns. In line with this argument, Zaman (2024) finds that a strong corporate culture is significantly and negatively associated with stakeholder violations.

Considering the above arguments, under the premise that ESG contracting is consistent with optimal contracting theory, and genuinely reflects managerial and corporate commitment to stakeholder interests, it can be postulated that companies adopting ESG contracting will not only have superior ESG performance but also show reduced exposure to ESG Controversies. Hence, we propose the following hypothesis:

Hypothesis 1a (H1a). Firms with ESG contracting are associated with fewer ESG Controversies.

The above hypothesis relies on the assumptions that ESG contracting is optimally designed to align managerial interests and efforts with wider stakeholder interests and, therefore, incentivises managerial actions that foster long-term, substantive ESG processes and avoidance of negative ESG outcomes (Edmans & Gabaix, 2009). However, several studies question the overall efficacy of ESG contracting, citing inherent flaws and limitations in its current implementation (e.g. Kolk & Perego, 2014; Bebchuck & Tallarita, 2022; Liu et al., 2024). A primary critique focuses on a motivational crowding out effect of ESG contracting and a potential misalignment of incentives and short-termism among executives which is reinforced by the structure of ESG targets in compensation contracts.

One of the most vocal critics of ESG contracting are Bebchuck and Tallarita (2022) who underscore the narrow focus and skewed incentives created by the integration of ESG targets into executive compensation. They examine the specific metrics linked to each ESG dimension among S&P 100 companies and find that chosen metrics rarely cover the full spectrum of stakeholder interests but rather focus on selected aspects, which are more easily attainable and quantifiable. The authors argue that this narrow focus of ESG incentives, driven by the inherent constraints of incentive alignment, could lead to a skewed prioritization of corporate actions, with executives focusing on meeting ESG metrics superficially or manipulatively to achieve compensation targets. In addition, when executive compensation is tied to ESG metrics, there may be a tendency for executives to focus on short-term ESG outcomes that can be easily measured and rewarded, rather

than on long-term ESG efforts. While Bebchuk and Tallarita (2022) acknowledge the impracticality of comprehensively addressing the interests of all stakeholder groups, narrow and easily attainable ESG goals could incentivize managers to pursue these goals by sidelining broader or more complex stakeholder interests, which in turn can increase the risk of ESG Controversies and misconduct.

Another argument in support of ESG contracting not leading to a mitigation of ESG Controversies is based on the so-called Multitasking Problem (Gibbons & Roberts, 2012; Bebchuk & Tallarita, 2022). Assuming that managers have limited attention and face resource constraints (Shepherd et al., 2017), the Multitasking Problem implies that, when faced with multiple tasks, managerial efforts are disproportionately directed towards tasks based on the level of quantification and connection to compensation rather than importance. In the context of ESG contracting, the Multitasking Problem implies that managers may favour improving self-reported ESG performance linked to compensation targets over addressing more intricate ESG Controversies (Berrone & Gomez-Mejia, 2009). This could result in a paradox where reduced risks in compensated ESG areas are offset by escalated risks in neglected areas, thereby leading to zero or even negative net effects on overall ESG Controversies. Consequently, ESG contracting could be insufficient in driving substantial shifts in managerial behaviour regarding ESG misconduct.

The problems of ESG contracting could also be exacerbated by the design of current ESG contracting practices, which have been criticized for being opaque, subjective and difficult to monitor for outside parties such as investors, potentially reducing ESG contracting to mere rhetoric without substantive ESG progress (Berrone & Gomez-Mejia, 2009; Cohen et al., 2023). This aligns with Flammer et al. (2019)'s finding that the effectiveness of ESG contracting is lower when the associated agreements do not offer details about ESG targets and measurement. The challenge for

external parties to review the relevance of ESG-linked compensation raises concerns about whether these initiatives genuinely serve stakeholder interests or are merely aligned with managerial self-interest. Consequently, the limited informativeness and verifiability of such contracts may allow managers to receive compensation without meaningfully improving the firm's ESG practices, potentially contributing to the inefficacy of ESG contracting in mitigating ESG misconduct.

Based on the above arguments, ESG contracting might not serve as an effective tool to incentivise managers to mitigate ESG Controversies and misconduct, and in contrast, might lead to an increased occurrence of such incidences due to an increased short-term and opportunistic managerial focus on achieving compensation targets. Hence, we introduce the following alternative hypothesis:

Hypothesis 1b (H1b). Firms with ESG contracting are associated with more ESG Controversies.

Both hypotheses on the potential impact of ESG contracting on the occurrence of ESG Controversies are based on the assumption that executives have significant leeway in their managerial policies and that monetary incentives can explain why managers engage in different types of managerial actions. As such, we expect managerial power to be an important moderator of the link between ESG contracting and the occurrence of ESG Controversies. Firstly, more powerful CEOs are likely to have greater say and influence over the ESG policies that the firm implements, suggesting that their incentives are more significant in explaining ESG performance and outcomes. Secondly, more powerful managers are also expected to have more influence over

the design of their executive pay structures, including the implementation of ESG contracting and its evaluation (Bebchuk et al., 2002; Bebchuk & Fried, 2003, 2004).

These arguments align with the managerial power theory which postulates that managers may seek to consolidate their power by assuming key positions such as the chair of the board, fostering an insider-dominated board culture, and exerting influence over the compensation committee to tailor their own compensation contracts (Bebchuk & Fried, 2004; Kruger, 2009; Ittner et al., 1997). Bebchuk and Fried (2004) suggest that powerful and self-interested managers might prefer to decouple their compensation from their firm's financial performance. By subtly leveraging their power, managers may implement ESG contracting to legitimize their compensation and enhance shareholders' perceptions of them (Schlenker, 1980; Tedeschi & Reiss, 1981). Furthermore, since ESG metrics in compensation contracts are more easily manipulated and less straightforward to evaluate compared to financial performance metrics (Ittner et al., 1997), powerful managers may exploit ESG contracting to increase their compensation by incorporating vaguely defined or easily attainable CSR targets into their contracts (Courty & Marschke, 2004; Kolk & Perego, 2014), resulting in contracts that are lucrative for managers rather than promoting meaningful ESG actions. This view of the adoption of ESG contracting driven by powerful and opportunistic managers aligns with findings by Liu et al. (2024) that firms which adopt ESG contracting have higher stock price crash risk, suggesting that ESG contracting may be exploited by powerful and opportunistic managers as a means of diverting shareholder attention and concealing bad financial news. The managerial power theory can also be used to explain why ESG contracting has seen an increasing adoption after the financial crisis, when regular bonuses have come under increased scrutiny, as it offers managers an alternative means to extract rents (Kolk & Perego, 2014).

Lastly, even if the ESG metrics are clearly and objectively incorporated in the compensation contract, powerful managers could exert control over the implementation of ESG policies (Li et al., 2018) and leverage their managerial power to divert company's ESG policies towards the compensation-linked ESG goals, leaving less resources available for addressing other ESG dimensions which might increase ESG Controversies. Considering the above, we propose the following hypothesis:

Hypothesis 2 (H2). Managerial power moderates the impact of ESG contracting on the occurrence of ESG Controversies.

3 | RESEARCH DESIGN

3.1 | Sample selection and data collection

Our sample comprises the constituents of the S&P 1500 over the sample period 2009-2021. We start our sample in 2009 as the financial crisis has brought greater oversight over the traditional financial metrics linked to executive compensation and marks the emergence of ESG contracting (Kolk & Perego, 2014). To define our sample, we first gather ESG-related and governance-related data from LSEG EIKON (previously known as Refinitiv EIKON), which is then matched with information obtained from Compustat, including executive compensation sourced from ExecuComp and financial performance metrics. We exclude any firm-year observations with missing data on any of the above dimensions. The resulting dataset comprises 11,440 firm-year observations covering 1,378 unique firms.

To assess the relationship between the implementation of ESG contracting and a company's susceptibility to ESG Controversies, we use the ESG Controversies Score (*Controversies Score*),

provided by LSEG EIKON, as our main dependent variable. This approach aligns with methodologies employed in previous studies on ESG Controversies (Agnese et al., 2022; Aouadi & Marsat, 2018; Galletta & Mazzu, 2022; Treepongkaruna et al., 2022). The ESG Controversies Score, representing the company's exposure to ESG-related scandals and misconducts, varies from 0 to 100, with a higher score corresponding to a lower incidence of ESG Controversies; companies free of any reported controversies receive the maximum score of 100. The score is derived from third-party media reporting on 23 distinct ESG issues, and hence is not based on firms' self-reported data.

Our main independent variable of interest is ESG Contracting (*ESGContracting*), which is a binary indicator. It is assigned a value of one if a company has linked ESG or sustainability criteria to managerial remuneration, including for the CEO, executive directors, non-board executives, and other management entities within that year. If such an ESG-linked compensation scheme is not present for a firm in a given year, *ESGContracting* takes a value of zero. The indicator is based on data provided by LSEG EIKON, which reviews companies' annual proxy statements (SEC Form DEF 14A) to ascertain whether ESG factors are linked to executive compensation.

In our regression analyses, we control for firm, governance, and executive compensation characteristics to isolate the impact of ESG contracting on ESG Controversies. We use firm characteristics that have been identified in prior studies as potential factors that affect the likelihood of ESG Controversies, through changes of a firm's reputation, legitimacy, and identity (Aouadi & Marsat, 2018; Donaldson & Preston, 1995; Du et al., 2010; Maignan & Ralston, 2002; Palazzo & Scherer, 2006). For instance, firms with greater financial resources, which is reflected in their size, profitability, and liquidity, are generally believed to have better ESG policies

(Campbell, 2007; Orlitzky et al., 2003; Roberts, 1992; Wu, 2006;) and a higher capacity to address adverse ESG events (Li et al., 2019). In line with prior literature, we include the following set of control variables: size (the natural logarithm of total assets, *Log Total Asset*); valuation ratio (the book-to-market ratio, *Book-to-Market*); profitability (return on assets, *ROA*); leverage (total debt divided by total assets, *Leverage*); cash holdings (cash and short-term investments divided by total assets, *Cash*); and dividends (total dividends divided by net income, *Dividends*).

We source data on governance characteristics from LSEG EIKON and ExecuComp, and we follow previous studies in devising governance controls. For instance, Kruger (2009) has linked ESG negative events to poor governance, such as inadequate monitoring and high managerial power. Other studies emphasize the significance of internal board monitoring, external oversight, and managerial discretion as key factors affecting a firm's vulnerability to ESG Controversies (e.g., Cai et al., 2012; Li et al., 2019). Accordingly, we control for board size (the natural logarithm of the number of directors on the board; *Log Board Size*); internal monitoring (the percentage of independent directors, *Board Independence*), external monitoring (the proportion of firm ownership by institutional investors, *Institutional Ownership*; and the number of analysts following the firm, *Analysts*), insider ownership (the proportion of firm ownership by insiders, *Insider Ownership*), and managerial power (CEO serving as board chair, *CEO Duality*; and the number of years the executive has served as CEO, *CEO Tenure*). Additionally, we consider the gender composition of the board (the percentage of female directors, *Board Gender Diversity*) as previous studies indicate that female directors show higher attentiveness to ESG issues (e.g., Liu, 2018; Atif et al., 2021; Ginglinger & Raskopf, 2023) and are linked to a lower likelihood of misconduct and fraud (e.g., Cumming et al., 2015; Wahid, 2019).

We source data on executive compensation structures from ExecuComp. Flammer et al. (2019) suggest that boards may revise the entire remuneration package for executives when instituting ESG contracting. This indicates that the link between ESG contracting and ESG Controversies might be affected by changes in other aspects of executive compensation, such as salary, stock, and option awards. To address this potential confounding effect, we incorporate controls for the structure of executive compensation, in line with the methodology of Flammer et al. (2019). These controls are calculated at the firm-year level and include the following: average total compensation across all executives (*Log Total Compensation*); average percentage of cash compensation (*Cash Compensation*); average percentage of stock compensation (*Stock Compensation*); and the average percentage of option compensation (*Option Compensation*).

Detailed definitions of all variables, along with their respective sources, are outlined in Appendix S1.

3.2 | Model specification

To examine the association between ESG contracting and ESG Controversies, we employ the following fixed effect regression model:

$$Controversies\ Score_{i,t} = \beta_0 + \beta_1 ESG\ Contracting_{i,t-1} + \beta_2 X_{i,t-1} + Year\ FE_t + Firm\ FE_i + \epsilon_{i,t} \quad (1)$$

where i indexes firms; t indexes years; $Controversies\ Score_{i,t}$ is the dependent variable of interest of firm i at time t; $ESG\ Contracting_{i,t-1}$ is an indicator of whether the firm employed ESG contracting in the preceding year; $X_{i,t-1}$ is the covariates matrix of control variables measured in the preceding year; and $\epsilon_{i,t}$ is the error term. We include firm and year fixed effects

to isolate and control for specific characteristics inherent to each firm as well as to market wide changes over the years. All standard errors are clustered at the firm level to account for potential correlations in the error terms, and all variables (except for the indicators) are winsorised at 1st and 99th percentiles to mitigate the impact of outliers.

4 | Results

4.1 | Descriptive statistics

Panel A of Table 1 shows the annual distribution of S&P 1500 constituents adopting ESG contracting during our sample period, while Panel B details the industry-level distribution of these firms. Out of 11,440 firm-year observations, 32% pertain to firms engaged in ESG contracting. We observe an increase in ESG contracting adoption, rising from 110 firms (22%) in 2009 to 463 firms (36%) by 2021, echoing a growth trend also identified in recent studies on both US and global samples (Tsang et al., 2021; Cohen et al., 2022; Spierings, 2022). Consistent with Tsang et al. (2021), most of our sample's ESG contracting firms are over-presented in specific industries such as utilities where 77% of observations relate to ESG contracting firms, energy with 67% of observations indicating ESG contracting, and basic materials (49%, respectively).

[Insert Table 1 here]

In Table 2, Panel A we offer the descriptive statistics for the entire dataset. Panel B of Table 2 shows the differences between firms with ESG Contracting and firms without ESG Contracting. On average, our sample firms score 87.31 on the ESG Controversies scale. The standard deviation of 26.32 reflects a wide spectrum of firms with varying degrees of ESG Controversies exposure. Firms engaged in ESG contracting exhibit, on average, a lower ESG Controversies score of 82.38 compared to their non-contracting counterparts which show an average ESG Controversies score

of 89.63, indicating a higher incidence of negative ESG events (as reported by third-party media) for firms employing ESG contracting. In addition, this difference is statistically significant, providing first suggestive evidence that the adoption of ESG contracting may not be effective in reducing exposure to ESG Controversies.

[Insert Table 2 here]

Furthermore, Panel B of Table 2 reveals significant differences across various other dimensions between firms with and without ESG contracting. Firms that have adopted ESG contracting are, on average, larger, have higher valuations, carry more debt, and hold less cash. Regarding governance, despite having a larger board, ESG contracting firms exhibit better internal governance on average, as indicated by superior board independence and gender diversity, coupled with lower insider ownership and shorter CEO tenures. However, the external monitoring environment presents a mixed picture: ESG contracting firms have lower institutional ownership but a higher analyst following. Additionally, executives at ESG contracting firms generally receive higher total compensation with smaller proportions in cash and options but a larger share in stock compensation. These significant differences in the characteristics of firms with and without ESG contracting suggest that there might be structural differences between these firms potentially leading to an endogenous link between ESG contracting and ESG Controversies. We will employ a variety of approaches to address these endogeneity concerns in our analysis.

Appendix S2 presents the pairwise correlations among the variables used in this study, confirming some initial observations we discuss above. Consistent with our descriptive statistics, there is a negative correlation between ESG contracting and the ESG Controversies score.

Regarding the correlations between other variables in our study, no pair of variables has a correlation coefficient exceeding 58%.[8]

4.2 | Benchmark results on the impact of ESG contracting on ESG Controversies

In Table 3, we present our baseline regression results based on an estimation of equation (1). Column (1) shows the coefficient value for our independent variable of interest, *ESG Contracting*, without any controls. We find that firms which have adopted ESG contracting are associated with a significantly lower ESG Controversies score, meaning that they are involved in a higher number of ESG related controversies. From columns (2) to (4), we progressively incorporate various sets of control variables. Consistent with our initial findings, our results show that the average ESG contracting firm has an approximately 2 points lower ESG Controversies score after controlling for the set of firm, governance and compensation characteristics and that the inclusion of these additional controls does not seem to substantially affect the magnitude or statistical significance of the effect of ESG contracting on the ESG Controversies score. Overall, the results presented in columns (1) to (4) provide support for hypothesis H1b suggesting that ESG contracting firms engage in more incidents of ESG misconduct compared to their non-contracting counterparts. In contrast, our results do not align with the notion of ESG contracting serving as an effective tool to mitigate ESG Controversies (as proposed in H1a).

[Insert Table 3 here]

[8] In unreported tests, we have confirmed that none of the independent variables have a VIF exceeding 5, thus reducing concerns of potential multicollinearity between our variables.

While the main focus of our study is on the impact of ESG contracting on ESG Controversies, prior studies have established a positive link between firms' self-reported ESG performance score and the adoption of ESG contracting (Flammer et al., 2019; Ikram et al., 2019; Carter et al., 2023). Hence, to ensure that our findings are not a result of different sample selection effects as well as to further understand the broader impact of ESG contracting on firms' ESG practices, we also run our baseline model but instead of the ESG Controversies scores as our dependent variable we replace it with LSEG's ESG Score, which relies on firms' self-reported ESG efforts and captures firms' engagement in positive ESG policies, initiatives, and processes (Cheng et al., 2014). The results of this regression are reported in column (5) of Table 3. In line with prior studies, we find that the implementation of ESG contracting is associated with an increase in firms' ESG Score. Specifically, we find that ESG contracting firms display 1.61 points higher in ESG Score than non-contracting firms after accounting for our sets of control variables. Hence, it does not seem to be the case that our sample firms show different ESG dynamics compared to those firms in prior studies, reducing the concern that our results are driven by sample selection effects.

Taken together, the results presented in Table 3 are suggestive of managerial incentive misalignment and the Multitasking Problem as discussed in the hypothesis development of H1b, namely that the adoption of ESG contracting seems to direct managerial focus and efforts towards specific ESG dimensions, resulting in more opportunistic behaviour that is likely linked to a maximization of monetary incentives. Specifically, management seems to prioritize improvements in self-reported ESG performance over the mitigation of externally reported controversies.

Finally, we test hypothesis H2, which examines the influence of managerial power on the relation between ESG contracting and ESG Controversies. Previous studies suggest that the

relationship between managers and the board is often intertwined, highlighting the way powerful managers can exacerbate agency problems via compensation manipulation (Al-Shaer, et al., 2023; Bebchuk & Tallarita, 2022; Cohen et al., 2023). To evaluate this assertion in the context of ESG Controversies, we split our sample into groups based on the degree of managerial power, assessed through proxies such as CEO duality (*CEO Duality*) and CEO tenure (*CEO Tenure*). This segmentation choice is based on managers being considered powerful if they serve as both CEO and chair of the board and have a longer tenure in the CEO role (Al-Shaer et al., 2023). For CEO duality, we split firms into sub-samples based on whether the CEO also holds the role of the Chair of the Board, which suggests that they can exert greater power over the board, including compensation arrangements. For CEO Tenure, we split firms into sub-samples based on whether the firm's CEO's tenure is below the sample-median tenure (*Low CEO Tenure*) or above the sample-median tenure (*High CEO Tenure*). We present the results in Table 4.

[Insert Table 4 here]

We find the coefficient for *ESGContracting* to be significantly negative in cases where CEOs hold dual roles, shown in column (2), and have longer tenures, shown in column (4). This pattern indicates that managerial power does have a moderating impact on the relationship between ESG contracting and ESG Controversies, as predicted in H2. Specifically, it suggests that ESG-linked compensation leads to an increase in ESG Controversies only for powerful managers. These findings are in line with the arguments of the managerial power theory, suggesting that powerful CEOs are likely to exert substantial influence on the design of their compensation plan, including ESG contracting, thereby reducing its effectiveness in mitigating exposure to ESG misconduct. It also appears that opportunistic behaviour, exacerbated by the Multitasking Problem, is particularly

strong for powerful CEOs, likely because they are facing less oversight and challenge over their ESG practices.

4.3 | Endogeneity and further robustness tests

4.3.1 | Two-stage least squares regression model

In our benchmark model, we have addressed potential confounding factors by including a broad set of control variables and fixed effects in our model; yet there is a justifiable concern about endogeneity leading to a spurious relation between ESG contracting and ESG Controversies. This issue arises because the decision to link ESG factors to executive compensation may be endogenously determined by the board, and the ESG contracting effect may correlate with unobserved factors captured in the error term, thereby affecting our results.

To mitigate this endogeneity concern, we employ two additional procedures: (a) a two-stage least squares (2SLS) regression approach using an exogenous instrument, and (b) an entropy balancing approach. Focusing first on the 2SLS regression approach, the instrument we employ is defined as the total number of firms within the same state and industry as the firm in question that have adopted ESG contracting in a given year, excluding the firm itself. This instrument captures the state and industry trends in adopting ESG contracting, providing an exogenous variation that influences a firm's propensity to incorporate ESG contracting. Importantly, this instrument is not directly related to a firm's exposure to ESG Controversies, satisfying the exclusion restriction criteria and rendering it appropriate for our 2SLS regression analysis.

In the first-stage regression, we regress the ESG contracting indicator on the instrument using the following regression:

$$ESG\ Contracting_{i,t} = \beta_0 + \beta_1 IV_{i,t} + \beta_2 X_{i,t} + Year\ FE_t + Firm\ FE_i + \epsilon_{i,t} \quad (2)$$

where $IV_{i,t}$ equals to the total number of ESG contracting firms in the same state and industry in year *t*, excluding the firm *i* itself. The $X_{i,t}$ are the same as in equation (1). In the second-stage regression, we regress the ESG Controversies score on the predicted ESG contracting variable, derived from equation (2), in the preceding year with the following regression:

$$Controversies\ Score_{i,t} = \beta_0 + \beta_1 \widehat{ESG\ Contracting}_{i,t-1} + \beta_2 X_{i,t-1} + Year\ FE_t + Firm\ FE_i + \epsilon_{i,t} \quad (3)$$

Column (1) in Table 5 presents the outcome of the second stage regression. The results of the first stage regression are reported in Appendix S3.[9] Consistent with our baseline results in Table 3, the coefficient of the predicted ESG Contracting variable remains significantly negative, although at a lower significance level, supporting our H1b hypothesis.

[Insert Table 5 here]

4.3.2 | Entropy balancing approach

To further address endogeneity concerns arising from significant disparities between contracting and non-contracting firms, we implement entropy balancing. Entropy balancing, involves reweighting each firm-year observation in the control group (non-contracting firms) to align the distribution statistics (i.e., mean, variance, and skewness) between the treatment (contracting firms) and control group (Hainmueller, 2012). This technique differs from propensity score matching

[9] In the first-stage regression, the significant and positive coefficient of our instrumental variable indicates that firms are 1.4% more likely to engage in ESG contracting when influenced by other contracting firms within the same state and industry. The Cragg-Donald Wald F statistic is 60.89, surpassing the threshold set by Staiger and Stock (1994), thus our instrument qualifies as a "strong" instrument (see also Flammer et al., 2019).

(PSM) in that it utilizes all observations in the control group, rendering it less vulnerable to researcher discretion and statistical bias (McMullin & Schonberger, 2020; Burke, 2022). We apply entropy balancing to the same set of controls used in our baseline analysis. Appendix S4 shows the distribution of characteristics for both contracting and non-contracting firms before and after entropy balancing, confirming the efficacy of this method in achieving a balanced sample in terms of mean, variance, and skewness.

Column (2) in Table 5 presents the re-estimated baseline results on the entropy balanced sample. Consistent with results in Table 3, we find a significantly negative coefficient for *ESGContracting*. On average, the ESG Controversies score for contracting firms is about 3.4 points lower compared to their balanced counterparts, indicating a greater exposure to ESG misconduct among contracting firms. This suggests that our baseline results are not merely a consequence of inherent differences between ESG contracting and non-contracting firms.

4.3.3 | Additional controls

Our findings might be influenced by other factors, such as alternative forms of incentive alignment. For instance, linking executive compensation to total shareholder returns (TSR) might affect a company's ESG Controversies exposure as management may prioritize profit maximization over misconduct prevention (e.g., Lopez et al., 2007, Burke et al., 2019). A TSR-linked compensation package could therefore increase ESG Controversies. Conversely, compensation tied to long-term objectives might have the opposite effect, encouraging managers to consider the company's long-term objectives. However, Walker (2022) casts doubt on whether ESG contracting can be substituted by linking long-term corporate objectives to executive compensation.

To account for the possibility that it is not ESG contracting that is driving the impact on ESG Controversies but other features of executive compensation packages that are correlated with ESG contracting, we follow Tsang et al. (2021) and control for two alternative incentive alignment policies, which we collect from LSEG EIKON: Pay-for-performance sensitivity (coded as one if the CEO's pay is linked to TSR, *CEO Compensation Link to TSR*) and connection with long-term objectives (coded as one if executive remuneration is partially based on goals extending beyond two years, *Executive Compensation Link to LT Objectives*). The results of our baseline regression using an entropy-balanced sample with the addition of these two control variables are reported in Table 5, column (3). We find that these two compensation-related variables are not significant in explaining a firm's ESG Controversies score. More importantly, the effect of ESG contracting on ESG Controversies remains robust to the inclusion of these additional variables.

Moreover, we consider the potential impact of past ESG performance on current controversies. Previous studies have found that past good ESG performance may grant a "social license" for future misconducts, potentially explaining worse current ESG Controversies scores (Strike et al., 2006; Benabou & Tirole, 2010; Kotchen & Moon, 2012). To address this, we include the previous year's ESG Score as a control variable. Column (4) of Table 5 reports the results of this regression. The previous ESG Score does not seem to be significantly linked to firm's current ESG Controversies, and the impact of ESG contracting remains robust to controlling for prior ESG performance.

4.3.4 | Alternative measure for ESG Controversies

To ensure the robustness of our baseline findings, we explore an alternative measure for the ESG Controversies score. This consideration stems from criticism for the unregulated, opaque nature of

ESG-related ratings, and the significant discrepancies in ESG Scores among rating agencies (Amel-Zadeh & Serafeim, 2018; Mackintosh, 2018; Berg et al., 2020; Avramov et al., 2022). Instead of using alternatives to ESG Controversies from different vendors, we align with methodologies used in recent studies (Heese et al., 2022; Stubben & Welch, 2020; Zaman et al., 2021) and use the annual total count of corporate misconduct as reported by the Violation Tracker database. The Violation Tracker, developed by the Corporate Research Project of Good Jobs First organisation, is a comprehensive database that compiles information on corporate misconduct from various federal regulatory agencies, including the Department of Justice. It categorizes corporate misconduct incidents across several dimensions, including competition, consumer protection, employment, environment, financial, government contracting, healthcare, workplace safety, and miscellaneous. It is based on actual and confirmed cases of corporate violations of US regulation. This alternative metric provides a distinct and potentially more transparent approach to assessing corporate ESG misconduct.

It is important to note that not all violations in the Violation Tracker database relate to ESG issues. To focus on ESG-related incidents, we construct a count of ESG-related violations, including only those related to consumer protection, employment, environment, and workplace safety. Additionally, we conduct regressions for each ESG dimension separately to explore specific implications. Unlike the continuous ESG Controversies score, the violation count is discrete, with firm-years involved in misconduct assigned a total count of violations in the specified ESG dimensions and a value of zero for firm-years without any violation.

As the annual number of violation counts is, therefore, a non-negative integer, we follow the methodology in the literature and adapt our baseline model to a Poisson regression model (Hoi et al., 2016; Liu, 2018; Manner, 2010). This model regresses the violation count on the lagged

indicators of ESG contracting and control variables. Considering that most firm-years show no ESG-related violations, using firm fixed effects in the model is impractical, as it would treat zero misconduct instances as non-variable, singleton observations. To address this, we implement two solutions. First, we include industry fixed effects in our Poisson regression models, which helps to avoid singleton observations by capturing the variation across industry groups. Second, we employ a zero-inflated Poisson regression as an additional test. This approach is particularly useful in addressing instances where zero counts are not adequately explained by a standard Poisson distribution (Greene, 1994).

We apply the Poisson regression to our baseline model, using the entropy balanced sample to account for endogeneity concerns. We present the results in Table 6.

[Insert Table 6 here]

Consistent with our previous findings, ESG contracting is positively associated with a higher incidence in ESG-related violations, as shown in column (1). Looking at the sub-categories of violations, this effect seems to be driven by ESG-contracting firms showing increased violations in the areas of consumer protection (column (2)) and employment (column (3)), while no significant effect of ESG contracting is observed for environmental and safety violation counts. The zero-inflated Poisson regression yields similar results and is detailed in Appendix S5.

Overall, these findings suggest that our main results are not driven by the choice of ESG Controversies score but remain robust to an alternative and independent proxy for firms' ESG misconduct.

4.4 | Further moderation tests

4.4.1 | Internal governance

To summarise our analysis so far, we argue that our results are suggestive of the following transmission channel: ESG contracting may lead to managerial incentive misalignment, which could result in opportunistic managerial prioritization of quantified ESG metrics over broader ESG concerns, which, finally, allows for increased occurrences of ESG Controversies. However, an alternative explanation for our findings could be that instead of ESG contracting causing increased ESG Controversies, both ESG contracting and ESG Controversies are the result of firms' poor governance structures that allow managers to engage in more opportunistic, rent-seeking behaviours. To rule out this alternative explanation, we divide our sample into sub-samples based on firms' governance structure. In particular, we focus on board independence and board gender diversity. Both dimensions are associated with stronger internal monitoring and a lower occurrence of misconducts and scandals (Burke, 2022). Hence, if the significant effect of ESG contracting on ESG Controversies was solely driven by firms' poor governance, we would expect to find that the coefficient on ESG contracting is only significant in the sub-sample with lower board independence and with low gender diversity, while we would not expect a significant negative impact of ESG contracting on ESG Controversies in sub-samples with high board independence and board gender diversity.

The results of this sub-sample analysis are reported in columns (1) to (4) of Table 7. We find that the negative effect of ESG contracting on the ESG Controversies score is only significant in firms with above median board independence and above median gender diversity which is inconsistent with the explanation that the documented ESG contracting effect is a result of poor overall governance structures. While we can only speculate why the ESG Controversies increasing effect of ESG contracting is particularly pronounced in well-governed firms, it might be that these boards are overly focused on quantifiable ESG metrics and miss or inadequately scrutinize ESG

activities outside of compensation targets, leading, paradoxically, to a superficial compliance culture. Ikram et al. (2019), using a sample of S&P 500 firms, find that the likelihood of firms granting ESG-linked pay increases with better governance structures, which might lead the board to increasingly focus on monitoring the achievement of these compensation-linked targets.

4.4.2 | ESG-related governance mechanisms

A further alternative explanation of our findings might be that instead of overall governance structures, firms that adopt ESG contracting have inferior ESG practices and ESG-related governance structures, which increases the likelihood of ESG Controversies in these firms. Previous studies suggest that ESG-focused governance may serve a mediating role between ESG contracting and improved ESG performance, advocating for the simultaneous implementation of both mechanisms for better outcomes (Derchi et al., 2021; Radu & Smaili, 2022). On the flipside, the lack of ESG-focused governance might be the driving force behind the inefficiency of ESG contracting in mitigating ESG Controversies. To test this presumption, we perform an additional set of sub-sample tests, based on (a) whether firms issue a CSR report (columns (5) and (6) of Table 7), and (b) whether they have a CSR committee (columns (7) and (8) of Table 7). Contrary to expectations, we find that the coefficient for *ESGContracting* is significantly negative only in the sub-samples of firms that issue ESG reports, shown in column (6), and that have a CSR committee, shown in column (8), while the effect is insignificant for the other sub-samples. Hence, these results do not align with an explanation that our findings are the result of poor ESG-related governance mechanisms. While we leave it to future studies to further investigate these moderating effects of ESG-related governance mechanisms on the relation between ESG contracting and ESG Controversies, one potential explanation might be linked to the issuance of CSR reports and the

establishment of CSR committees also representing symbolic mechanisms that focus firms' and boards' attention away from broader ESG risks, giving rise to increased ESG Controversies. In line with this argument, prior studies question the actual impact of ESG-focused governance systems in supporting a firm's dedication to ESG and improving its ESG performance (Berrone & Gomez-Mejia, 2009; Michelon & Parbonetti, 2012; Michelon et al., 2015; Talbot & Boiral, 2015; Chams & Garcia-Blandon, 2019). For instance, Berrone and Gomez-Mejia (2009) view the establishment of a CSR committee more as a symbolic gesture than a substantive move. Rodrigue et al. (2013) find that the formation of environmental committees often serves to mitigate reputational risks rather than guide a firm's ESG strategy and operations. Moreover, Burke et al. (2019) argue that the diverse array of responsibilities undertaken by CSR committees may dilute their focus and diminish their operational effectiveness.

4.4.3 | ESG performance and sustainability sensitivity

Next, we examine the effects of ESG contracting on controversies under different ESG conditions, as these conditions could influence a firm's approach to ESG issues and organisational behaviour. Specifically, if ESG-linked compensation exacerbates the Multitasking Problem, i.e., favouring ESG performance improvement over ESG Controversies mitigation, we expect that the significant negative impact of *ESGContracting* will primarily appear only for firms with higher ESG Scores. To test this prediction, we divide our sample based on ESG performance, using the industry median ESG Score as a threshold to categorize firms into two groups with strong and weak self-reported ESG performance. We present the results in Table 7, columns (9) and (10). Although the *ESGContracting* coefficients remain negative and significant in both subsamples, the higher magnitude and significance of the coefficient in the high ESG performance sub-sample suggest

that the negative impact of *ESGContracting* on controversies is stronger for firms with better ESG performance. This is in line with explanations of our findings being the result of managerial multitasking problems and opportunistic prioritization of remuneration-enhancing ESG activities. Furthermore, these results are not consistent with an alternative explanation positing that our observed results are purely a selection outcome of poor ESG performers driving the results.

Finally, we consider the influence of industry-specific ESG backgrounds and behaviours, since firms in certain industries are more susceptible to negative ESG issues, and there is an industry-based preference for adopting ESG contracting as shown in Panel B of Table 1 (also documented in Al-Shaer and Zaman, 2019). Following prior studies (see for e.g. Patten 1991; Deegan & Gordon 1996; Patten 2002; Al-Shaer & Zaman, 2019), we classify firms operating in the oil and gas, chemical, mining, utilities, forest and paper products, beverage, tobacco, and aerospace and defence industries as sustainability-sensitive. This is based on the argument that firms in these industries have stronger motivations to maintain a positive social image, their operational activities have the potential to cause significant negative impacts on the environment and society, and, therefore, they rely more heavily on maintaining a social license to operate. To explore whether the impact of ESG contracting on ESG Controversies differs by the sustainability sensitivity of industries, we categorize our sample into firms from sustainability-sensitive and non-sustainability-sensitive industries and reapply our baseline model. The results, presented in columns (11) and (12) of Table 7, show a significantly negative relationship between ESG contracting and ESG Controversies for firms in sustainability-sensitive industries. In contrast, ESG contracting does not seem to significantly affect ESG Controversies scores for firms in non-sustainability-sensitive industries. This result can be interpreted within the context of the Multitasking Problem, as managers of sustainability-sensitive firms have potentially more to gain

by focusing resources on self-reported ESG performance, casting doubt on whether managers incentivized by ESG-linked compensation are genuinely committed to improving their company's ESG profile, which involves not only enhancing self-reported ESG performance but also actively mitigating ESG Controversies.

Taken together, these additional tests suggest that our results are unlikely driven by alternative explanations and instead are most aligned with arguments based on the managerial power and Multitasking Problem theories that opportunistic CEOs may use ESG-linked compensation targets to extract higher rent by symbolically improving their self-reported ESG performance without substantially addressing ESG outcomes, thus resulting in increased ESG Controversies and misconduct.

5 | Discussion and Conclusion

The integration of ESG factors into executive compensation has received significant interest across business, social, and academic circles. Faced with increasing pressure from practitioners and society for a broader implementation of ESG contracting (Ikram et al., 2019), a growing number of firms adopt this practice not only as a demonstration of their commitment to ESG principles (Maas, 2018) but also as a promise for future ESG improvements. The rapid expansion and growing importance of this organizational behaviour have prompted academics to explore its determinants and consequences, as evidenced in several influential studies (Flammer et al., 2019; Ikram et al., 2019; Derchi et al., 2021; Tsang et al., 2021; Radu & Smaili, 2022; Bebchuk & Tallarita, 2022).

Building on this body of research, our study goes beyond the commonly examined link between ESG contracting and self-reported ESG performance. We investigate the more complex

issue of the effect of ESG contracting on ESG misconduct. Using a sample of S&P 1500 constituents from 2009 to 2021, we find robust evidence that firms engaged in ESG contracting exhibit higher exposure to ESG Controversies, as reported by third-party media, compared to their non-contracting counterparts. In line with the managerial power theory (Ittner et al., 1997; Bebchuk & Fried, 2004), we observe that ESG contracting is more likely to exacerbate ESG Controversies when managers hold significant power, as proxied by holding dual roles, i.e., chairperson and CEO, and extended tenures. Our findings can be further interpreted within the context of the managerial Multitasking Problem, such that ESG contracting might exacerbate this problem, where opportunistic managers prioritize self-reported and likely more easily measurable and manipulable ESG dimensions linked to their compensation instead of addressing wider ESG risks, giving rise to increased ESG Controversies. Overall, our findings suggest that instead of serving as a mechanism to mitigate ESG Controversies, ESG-linked executive compensation has counter-effective impacts by reinforcing negative ESG outcomes.

Our results have several practical implications. While ESG contracting has been lauded as a significant advancement in aligning incentives with stakeholder interests and promoting real ESG impacts, our results suggest that this compensation innovation is not a panacea for addressing global ESG challenges. On the contrary, there is a risk that these incentives may lead to an opportunistic focus on merely meeting targets rather than fostering genuine ESG improvements. Therefore, we urge policymakers, boards, and investors to exercise caution and avoid uncritically promoting ESG contracting as a cure-all solution.

Furthermore, our results underscore the significant role of CEO power in amplifying the adverse incentives of ESG contracting, which can exacerbate the occurrence of ESG Controversies. This suggests critical implications for governance practices, particularly in reviewing and

potentially reducing the power of CEOs to curb opportunistic behaviours. A reassessment of CEO power dynamics is essential to mitigate the negative impacts associated with ESG-linked executive compensation.

Finally, our additional analyses reveal that both traditional governance mechanisms (board independence) and ESG-based governance tools (CSR reports, CSR committees) seem ineffective in mitigating the adverse impacts of ESG contracting on promoting ESG Controversies. In fact, our results suggest that the very systems that are associated with stronger governance structures might exacerbate the very problem by potentially diverting attention towards stipulated ESG metrics or reinforcing symbolic processes over substantial ESG outcomes.

Our study also faces several limitations which present opportunities for future research. While our study has documented intriguing dynamics between governance mechanisms and the link between ESG contracting and ESG Controversies, the scope of our current research did not allow for an in-depth investigation of these issues. The complexity and variability of governance frameworks across different contexts and industries present significant challenges that warrant further exploration. Future research could delve deeper into these dynamics, examining how various governance structures and practices interact with ESG-linked executive compensation to influence ESG outcomes. This would provide a more comprehensive understanding of the conditions under which ESG contracting either mitigates or exacerbates ESG Controversies. Additionally, our study did not account for the specific features of ESG-linked compensation contracts stipulated in executive compensation arrangements. The design characteristics of these contracts, such as the particular ESG targets set, the metrics used for evaluation, and the timeframes for achieving these targets, can vary widely and may significantly impact their effectiveness. Future research should focus on analysing these specific design features to

determine whether and how they contribute to the adverse impacts of ESG contracting on ESG Controversies. By identifying which aspects of contract design are most problematic, scholars and practitioners can develop more effective ESG-linked compensation strategies that genuinely promote sustainable and ethical corporate behaviour.

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TABLE 1 Sample Overview

Panel A: Yearly distribution of ESG contracting

Year	*ESG Contracting* = 1	*ESG Contracting* = 0	Total	%
2009	110	392	502	22%
2010	147	413	560	26%
2011	189	397	586	32%
2012	216	384	600	36%
2013	229	370	599	38%
2014	231	382	613	38%
2015	227	408	635	36%
2016	288	675	963	30%
2017	329	870	1,199	27%
2018	377	898	1,275	30%
2019	409	898	1,307	31%
2020	443	884	1,327	33%
2021	463	811	1,274	36%
Total	3,658	7,782	11,440	32%

Panel B: Table 1b: Industry distribution of ESG contracting

Sectors	*ESG Contracting* = 1	*ESG Contracting* = 0	Total	%
Utilities	407	123	530	77%
Energy	385	188	573	67%
Basic Materials	344	360	704	49%
Academic & Educational Services	25	27	52	48%
Consumer Non-Cyclicals	273	443	716	38%
Healthcare	381	776	1,157	33%
Industrials	504	1,201	1,705	30%
Real Estate	191	631	822	23%
Financials	380	1,282	1,662	23%
Consumer Cyclicals	406	1,450	1,856	22%
Technology	362	1,301	1,663	22%
Total	3,658	7,782	11,440	32%

Note: This table presents an overview of the number of sample firms that have adopted ESG contracting versus the sample firms that have not adopted ESG contracting. Panel A provides a distribution of sample firms by year. Panel B focuses on the distribution of sample firms by industry.

TABLE 2 Descriptive statistics

Panel A: Descriptive statistics of the full sample

Variable	Obs	Mean	Std. Dev.	Min	P25	Median	P75	Max
Controversies Score $_{i,t}$	11,440	87.308	26.316	3.333	95.633	100	100	100
ESG Contracting $_{i,t-1}$	11,440	0.32	0.466	0	0	0	1	1
Total Asset $_{i,t-1}$ *(in Million)*	11,440	27,120	70,620	235.9	2,235	6,271	19,170	526,200
Book-to-Market $_{i,t-1}$	11,440	0.465	0.349	-0.129	0.221	0.394	0.636	1.749
ROA $_{i,t-1}$	11,440	0.049	0.073	-0.238	0.014	0.043	0.084	0.278
Leverage $_{i,t-1}$	11,440	0.263	0.196	0	0.099	0.248	0.383	0.898
Cash $_{i,t-1}$	11,440	0.128	0.139	0.001	0.029	0.078	0.176	0.643
Dividends $_{i,t-1}$	11,440	0.374	0.826	-2.283	0	0.23	0.491	5.525
Total Compensation $_{i,t-1}$ *(in Thousand)*	11,440	4,268.307	3,358.375	520.358	2,055.566	3,298.228	5,353.431	20,034.516
Cash Compensation $_{i,t-1}$	11,440	0.264	0.146	0.056	0.165	0.227	0.319	0.831
Stock Compensation $_{i,t-1}$	11,440	0.355	0.192	0	0.226	0.349	0.482	0.835
Option Compensation $_{i,t-1}$	11,440	0.11	0.141	0	0	0.064	0.179	0.65
Insider Ownership $_{i,t-1}$	11,440	0.02	0.047	0	0.001	0.003	0.014	0.304
Institutional Ownership $_{i,t-1}$	11,440	0.843	0.148	0.312	0.763	0.877	0.964	1
Board Size $_{i,t-1}$	11,440	10.081	2.286	5	9	10	12	17
Board Independence $_{i,t-1}$	11,440	0.815	0.105	0.444	0.769	0.846	0.9	0.938
Board Gender Diversity $_{i,t-1}$	11,440	0.187	0.106	0	0.111	0.182	0.25	0.5
CEO Duality $_{i,t-1}$	11,440	0.646	0.478	0	0	1	1	1
CEO Tenure $_{i,t-1}$	11,440	8.231	7.195	0.521	2.997	6.003	11.267	35.022
Analysts $_{i,t-1}$	11,440	14.584	8.723	1	7	13	20	39

Panel B: Descriptive statistics of the sub-sample

	***ESG Contracting* = 1**		***ESG Contracting* = 0**			
	(1)		**(2)**		**(1) - (2)**	
Variable	**Mean**	**Std. Dev.**	**Mean**	**Std. Dev.**	**Diff**	**t-stat**
Controversies Score $_{i,t}$	82.379	30.119	89.625	23.978	-7.246***	(-12.772)
Total Asset $_{i,t-1}$ *(Million)*	38,030	80,110	21,990	65,060	16,030***	(10.576)
Book-to-Market $_{i,t-1}$	0.485	0.351	0.455	0.348	0.030***	(4.229)
ROA $_{i,t-1}$	0.048	0.072	0.05	0.073	-0.002	(-1.593)
Leverage $_{i,t-1}$	0.278	0.172	0.256	0.205	0.022***	(5.963)
Cash $_{i,t-1}$	0.107	0.119	0.138	0.146	-0.031***	(-12.142)
Dividends $_{i,t-1}$	0.386	0.807	0.369	0.835	0.017	(1.057)
Total Compensation $_{i,t-1}$ *(Thousand)*	5,024.514	3,543.212	3,912.844	3,207.082	1,111.670***	(16.124)
Cash Compensation $_{i,t-1}$	0.234	0.122	0.278	0.154	-0.043***	(-16.228)
Stock Compensation $_{i,t-1}$	0.376	0.171	0.344	0.2	0.032***	(8.821)
Option Compensation $_{i,t-1}$	0.097	0.121	0.116	0.15	-0.019***	(-7.225)
Insider Ownership $_{i,t-1}$	0.014	0.04	0.023	0.05	-0.009***	(-9.831)
Institutional Ownership $_{i,t-1}$	0.826	0.146	0.851	0.148	-0.025***	(-8.543)
Board Size $_{i,t-1}$	10.564	2.246	9.853	2.269	0.711***	(15.737)
Board Independence $_{i,t-1}$	0.839	0.091	0.803	0.109	0.035***	(18.170)
Board Gender Diversity $_{i,t-1}$	0.205	0.104	0.179	0.107	0.026***	(12.574)
CEO Duality $_{i,t-1}$	0.654	0.476	0.642	0.479	0.012	(1.233)
CEO Tenure $_{i,t-1}$	7.228	6.442	8.702	7.478	-1.474***	(-10.830)
Analysts $_{i,t-1}$	16.427	8.563	13.717	8.663	2.709***	(15.724)
Observations	3,658		7,782		11,440	

Note: This table presents descriptive statistics of the main variables employed in this study. Panel A provides the number of observations, the mean value, standard deviation, minimum and maximum as well as the 25th, 50th and 75th quintiles for each variable. Panel B presents a comparison of the mean and standard deviation of variables for firms employing ESG contracting (*ESG Contracting* = 1) and firms that do not employ ESG contracting (*ESG Contracting* = 0). The final two columns of Panel B report the difference in mean values between ESG contracting firms and non-ESG contracting firms as well as the corresponding t-statistics of a test of differences in means. All variables are defined in Appendix S1.

TABLE 3 Baseline results

Dependent variable	(1) *Controversies Score* $_{t}$	(2) *Controversies Score* $_{t}$	(3) *Controversies Score* $_{t}$	(4) *Controversies Score* $_{t}$	(5) *ESG Score* $_{t}$
ESG Contracting $_{i,t-1}$	-2.077**	-2.114**	-2.128**	-2.136**	1.612***
	(0.947)	(0.927)	(0.923)	(0.914)	(0.523)
Log Total Asset $_{i,t-1}$		-7.095***	-7.251***	-6.743***	3.762***
		(1.091)	(1.076)	(1.050)	(0.606)
Book-to-Market $_{i,t-1}$		-0.303	0.128	-0.044	-0.674
		(1.435)	(1.443)	(1.413)	(0.714)
ROA $_{i,t-1}$		12.616***	11.372**	12.080**	-0.038
		(4.680)	(4.695)	(4.709)	(2.244)
Leverage $_{i,t-1}$		2.381	2.692	2.542	-3.247*
		(2.946)	(2.948)	(2.892)	(1.844)
Cash $_{i,t-1}$		2.096	1.894	1.796	3.752*
		(3.741)	(3.721)	(3.738)	(2.073)
Dividends $_{i,t-1}$		-0.226	-0.219	-0.231	0.203*
		(0.329)	(0.329)	(0.326)	(0.121)
Log Total Compensation $_{i,t-1}$			0.341	0.534	-0.373
			(0.873)	(0.867)	(0.453)
Cash Compensation $_{i,t-1}$			-4.953	-3.961	-3.320*
			(3.468)	(3.459)	(1.742)
Stock Compensation $_{i,t-1}$			-6.608***	-6.083***	2.451**
			(2.229)	(2.270)	(1.182)
Option Compensation $_{i,t-1}$			-4.409	-3.995	1.429
			(2.852)	(2.860)	(1.570)
Insider Ownership $_{i,t-1}$				15.398	8.564
				(14.147)	(8.920)
Institutional Ownership $_{i,t-1}$				9.234**	-2.264
				(4.015)	(2.074)
Log Board Size $_{i,t-1}$				1.492	1.804
				(2.059)	(1.166)
Board Independence $_{i,t-1}$				-8.045**	11.983***
				(3.891)	(2.183)
Board Gender Diversity $_{i,t-1}$				6.240*	15.866***
				(3.763)	(2.145)
CEO Duality $_{i,t-1}$				-0.089	-2.111***
				(0.946)	(0.595)
CEO Tenure $_{i,t-1}$				-0.080	-0.040
				(0.060)	(0.030)
Analysts $_{i,t-1}$				-0.208**	-0.010
				(0.094)	(0.054)
Constant	87.972***	247.422***	249.774***	232.614***	-44.386***
	(0.303)	(24.447)	(27.961)	(26.521)	(13.989)
Observations	11,440	11,440	11,440	11,440	11,440
Adjusted R-squared	0.471	0.477	0.478	0.479	0.831
Year FE	YES	YES	YES	YES	YES
Firm FE	YES	YES	YES	YES	YES

Note: This table presents the regression results of equation (1) where the dependent variable is the *Controversies score* in columns (1) to (4) and the *ESG Score* in column (5). Heteroskedasticity-robust standard errors clustered at firm level are reported in the parentheses. *, ** and *** indicate significance at 10%, 5% and 1% level, respectively. All variables are defined in Appendix S1.

TABLE 4 Moderating effect of managerial power

	CEO is not the Chairman	CEO is the Chairman	Low CEO Tenure	High CEO Tenure
	(1)	(2)	(3)	(4)
Dependent variable	***Controversies Score*** $_{t}$	***Controversies Score*** $_{t}$	***Controversies Score*** $_{t}$	***Controversies Score*** $_{t}$
ESG Contracting $_{i,t-1}$	-2.079	-2.684**	-2.219	-4.848***
	(1.850)	(1.088)	(1.407)	(1.424)
Log Total Asset $_{i,t-1}$	-5.935***	-7.005***	-4.679***	-7.875***
	(1.928)	(1.306)	(1.546)	(1.918)
Book-to-Market $_{i,t-1}$	0.408	-0.573	2.062	-1.363
	(2.079)	(1.924)	(2.185)	(2.287)
ROA $_{i,t-1}$	2.196	13.256*	10.509	14.574*
	(6.160)	(7.177)	(7.373)	(7.539)
Leverage $_{i,t-1}$	-1.239	2.479	-2.912	6.992
	(4.345)	(3.783)	(4.896)	(4.618)
Cash $_{i,t-1}$	1.370	2.332	1.790	-1.045
	(5.578)	(4.971)	(5.521)	(6.125)
Dividends $_{i,t-1}$	-0.419	-0.157	-0.560	-0.041
	(0.438)	(0.450)	(0.549)	(0.394)
Log Total Compensation $_{i,t-1}$	1.852	0.222	-0.831	1.345
	(1.572)	(1.090)	(1.514)	(1.354)
Cash Compensation $_{i,t-1}$	3.416	-7.172	-9.657	-2.552
	(6.014)	(4.560)	(7.156)	(4.882)
Stock Compensation $_{i,t-1}$	-9.798**	-5.166*	-7.387*	-8.945**
	(3.928)	(2.892)	(4.115)	(3.539)
Option Compensation $_{i,t-1}$	-6.331	-2.110	-6.634	-6.370
	(4.821)	(3.721)	(5.009)	(4.895)
Insider Ownership $_{i,t-1}$	-11.637	21.923	21.198	12.522
	(32.740)	(16.585)	(19.777)	(23.609)
Institutional Ownership $_{i,t-1}$	8.683	5.602	15.450**	7.564
	(6.280)	(5.060)	(6.469)	(8.167)
Log Board Size $_{i,t-1}$	5.467	-1.792	8.043**	-2.296
	(3.804)	(2.669)	(3.220)	(3.609)
Board Independence $_{i,t-1}$	-14.304**	-8.933*	-7.869	-12.702
	(6.759)	(4.986)	(6.064)	(8.049)
Board Gender Diversity $_{i,t-1}$	4.186	5.545	5.052	5.189
	(6.825)	(4.815)	(6.104)	(6.508)
CEO Duality $_{i,t-1}$	0.000	0.000	0.795	-1.330
	(0.000)	(0.000)	(1.186)	(2.225)
CEO Tenure $_{i,t-1}$	0.049	-0.042	0.208	-0.139
	(0.117)	(0.072)	(0.188)	(0.232)
Analysts $_{i,t-1}$	-0.366**	-0.094	-0.391**	-0.227*
	(0.172)	(0.116)	(0.161)	(0.137)
Constant	194.921***	252.836***	189.304***	264.669***
	(44.586)	(34.238)	(41.331)	(44.326)
Observations	3,964	7,341	4,970	4,726
Adjusted R-squared	0.461	0.495	0.507	0.473
Year FE	YES	YES	YES	YES
Firm FE	YES	YES	YES	YES

Note: This table presents the results of sub-sample regressions where the sample is split depending on whether the CEO is also the chairman (*CEO Duality*) (columns (1) and (2)) and depending on whether the CEO's tenure (*CEO Tenure*) is below or above the sample median (columns (3) and (4)). The dependent variable is the *Controversies score*. Heteroskedasticity-robust standard errors clustered at firm level are reported in the parentheses. *, ** and *** indicate significance at 10%, 5% and 1% level, respectively. All variables are defined in Appendix S1.

TABLE 5 Endogeneity and robustness tests

	Second Step of 2SLS	Entropy Balancing	Control for Alternative Incentives	Control for ESG Score
	(1)	(2)	(3)	(4)
Dependent variable	***Controversies Score*** $_{t}$	***Controversies Score*** $_{t}$	***Controversies Score*** $_{t}$	***Controversies Score*** $_{t}$
ESG Contracting (Instrumented) $_{i,t-1}$	-29.275*			
	(16.051)			
ESG Contracting $_{i,t-1}$		-3.379***	-3.314***	-2.959***
		(1.081)	(1.097)	(1.142)
CEO Compensation Link to TSR $_{i,t-1}$			-0.141	
			(0.822)	
Executive Compensation Link to LT Objectives $_{i,t-1}$			-0.175	
			(1.075)	
ESG Score $_{i,t-1}$				-0.042
				(0.039)
Constant	235.72***	270.985***	266.024***	267.128***
	(28.989)	(30.151)	(30.661)	(32.682)
Observations	11,440	11,440	11,409	11,440
Adjusted R-squared	-	0.522	0.522	0.524
Controls	YES	YES	YES	YES
Year FE	YES	YES	YES	YES
Firm FE	YES	YES	YES	YES
Cragg-Donald Wald F statistic	60.891			

Note: This table presents the results of endogeneity tests. Columns (1) represents the results of a 2SLS procedure where ESG contracting is instrumented by the total number of firms within the same state and industry as the firm in question that have adopted ESG contracting in a given year, excluding the firm itself. Column (2) presents the results based on an entropy-balanced sample. Columns (3) and (4) include additional controls for other forms of incentives (*CEO Compensation Link to TSR* and *Executive Compensation Link to LT Objectives*) and *ESG Score* based on an entropy-balanced sample. The dependent variable is the *Controversies score*. Heteroskedasticity-robust standard errors clustered at firm level are reported in the parentheses. *, ** and *** indicate significance at 10%, 5% and 1% level, respectively. All variables are defined in Appendix S1.

TABLE 6 Alternative measure ESG controversies: ESG-related violations

Dependent variable	(1) *Total Violation Count $_t$ - ESG-related only*	(2) *Consumer Protection Count $_t$*	(3) *Employment Count $_t$*	(4) *Environmental Count $_t$*	(5) *Safety Count $_t$*
ESG Contracting $_{i,t-1}$	0.184**	0.218*	0.174*	0.114	0.121
	(0.081)	(0.117)	(0.098)	(0.099)	(0.087)
Log Total Asset $_{i,t-1}$	0.618***	0.768***	0.428***	0.596***	0.478***
	(0.056)	(0.110)	(0.069)	(0.063)	(0.062)
Book-to-Market $_{i,t-1}$	0.024	-0.240	-0.170	-0.029	-0.204
	(0.138)	(0.244)	(0.207)	(0.142)	(0.149)
ROA $_{i,t-1}$	0.616	-0.470	-0.460	0.443	0.262
	(0.464)	(1.323)	(0.700)	(0.605)	(0.491)
Leverage $_{i,t-1}$	0.055	-0.921	-0.167	0.359	-0.093
	(0.314)	(0.662)	(0.319)	(0.347)	(0.396)
Cash $_{i,t-1}$	-0.603	2.425***	-1.473***	-2.661***	-2.190***
	(0.748)	(0.747)	(0.570)	(0.675)	(0.530)
Dividends $_{i,t-1}$	0.008	-0.094*	0.110**	0.036	-0.007
	(0.025)	(0.051)	(0.050)	(0.028)	(0.033)
Log Total Compensation $_{i,t-1}$	-0.070	0.045	0.204	-0.221*	-0.038
	(0.089)	(0.168)	(0.134)	(0.131)	(0.108)
Cash Compensation $_{i,t-1}$	-0.090	0.376	0.261	-1.740***	0.055
	(0.338)	(0.562)	(0.572)	(0.654)	(0.475)
Stock Compensation $_{i,t-1}$	0.056	0.876*	-0.068	-0.317	-0.136
	(0.227)	(0.487)	(0.361)	(0.337)	(0.264)
Option Compensation $_{i,t-1}$	0.071	-0.136	0.353	-0.117	0.263
	(0.319)	(0.738)	(0.378)	(0.443)	(0.392)
Insider Ownership $_{i,t-1}$	-0.036	2.284	-1.414	0.597	0.026
	(1.036)	(1.929)	(1.502)	(1.044)	(1.106)
Institutional Ownership $_{i,t-1}$	0.061	1.296**	0.237	-0.393	-0.116
	(0.322)	(0.606)	(0.360)	(0.384)	(0.355)
Log Board Size $_{i,t-1}$	-0.128	0.021	-0.031	-0.062	0.004
	(0.187)	(0.369)	(0.278)	(0.233)	(0.242)
Board Independence $_{i,t-1}$	1.035***	0.556	0.123	0.982*	0.825*
	(0.388)	(0.685)	(0.507)	(0.545)	(0.429)
Board Gender Diversity $_{i,t-1}$	-0.794**	-0.203	0.490	-0.693*	-1.182***
	(0.364)	(0.712)	(0.506)	(0.409)	(0.385)
CEO Duality $_{i,t-1}$	0.115	-0.112	0.020	0.009	0.148*
	(0.076)	(0.155)	(0.096)	(0.104)	(0.087)
CEO Tenure $_{i,t-1}$	-0.002	0.002	-0.007	0.002	0.004
	(0.007)	(0.010)	(0.007)	(0.012)	(0.007)
Analysts $_{i,t-1}$	-0.002	0.003	0.016**	-0.023***	0.003
	(0.006)	(0.015)	(0.008)	(0.008)	(0.007)
Constant	-13.075***	-22.124***	-15.059***	-10.220***	-10.390***
	(1.243)	(2.502)	(2.027)	(2.015)	(1.470)
Observations	11,440	10,956	11,440	11,356	11,388
Pseudo R2	0.419	0.457	0.237	0.346	0.408
Year FE	YES	YES	YES	YES	YES
Industry FE	YES	YES	YES	YES	YES
Wald Chi2	532***	242.8***	266.1***	297.4***	296.6***

Note: This table presents the Poisson regression results where we replace our main dependent variable with the count of a firm's total ESG-related violations (column (1)), as well as the individual sub-components of the total ESG-related violations (columns (2) to (5)). Regressions are run using the entropy-balanced sample to account for potential endogeneity issues. Heteroskedasticity-robust standard errors clustered at firm level are reported in the parentheses. *, ** and *** indicate significance at 10%, 5% and 1% level, respectively. All variables are defined in Appendix S1.

TABLE 7 Moderation tests

	Low Board Independence	High Board Independence	Low Board Gender Diversity	High Board Gender Diversity
Dependent Variable: Controversies Score $_t$	(1)	(2)	(3)	(4)
ESG Contracting $_{i,t-1}$	-1.505	-4.512***	-2.395	-3.355**
	(1.423)	(1.451)	(1.479)	(1.582)
Constant	233.206***	280.076***	249.321***	197.818***
	(45.057)	(43.777)	(38.703)	(48.108)
Observations	4,943	4,716	5,239	4,448
Adjusted R-squared	0.473	0.482	0.391	0.537
Controls	YES	YES	YES	YES
Year FE	YES	YES	YES	YES
Firm FE	YES	YES	YES	YES

	Do not Issue CSR Report	Issue CSR Report	Do not Have CSR Committee	Have CSR Committee
Dependent Variable: Controversies Score $_t$	(5)	(6)	(7)	(8)
ESG Contracting $_{i,t-1}$	-1.092	-2.642*	-1.338	-2.509*
	(1.326)	(1.487)	(1.300)	(1.343)
Constant	193.278***	264.202***	211.469***	290.427***
	(36.059)	(46.719)	(36.850)	(48.047)
Observations	6,279	4,871	6,504	4,682
Adjusted R-squared	0.307	0.544	0.283	0.528
Controls	YES	YES	YES	YES
Year FE	YES	YES	YES	YES
Firm FE	YES	YES	YES	YES

	Low ESG Score	High ESG Score	Non-sustainability-sensitive	Sustainability-sensitive
Dependent Variable: Controversies Score $_t$	(9)	(10)	(11)	(12)
ESG Contracting $_{i,t-1}$	-2.350*	-3.361**	-1.134	-5.864***
	(1.388)	(1.392)	(1.024)	(1.968)
Constant	210.320***	248.202***	239.160***	228.040***
	(42.467)	(48.331)	(29.069)	(56.717)
Observations	4,826	4,887	9,510	1,930
Adjusted R-squared	0.295	0.527	0.492	0.426
Controls	YES	YES	YES	YES
Year FE	YES	YES	YES	YES
Firm FE	YES	YES	YES	YES

Note: This table presents the estimations for moderating role of different factors. In these sub-sample tests, the sample split is the industry median value for the following: *board independence* in columns (1) and (2); *board gender diversity* in columns (3) and (4); *ESG Score* in columns (9) and (10). The sample split is a dummy variable for the following: *CSR sustainability report* in columns (5) and (6); establishment of *CSR sustainability committee* in columns (7) and (8); *sustainability-sensitive industries* in columns (11) and (12). Heteroskedasticity-robust standard errors clustered at firm level are reported in the parentheses. *, ** and *** indicate significance at 10%, 5% and 1% level, respectively. All variables are defined in Appendix S1.

APPENDIX S1: VARIABLE DEFINITIONS

Variable	Definition	Source
ESG Contracting	An indicator that equals 1 if "a company has an ESG performance-oriented compensation policy, which includes remuneration for the CEO, executive directors, non-board executives and other management bodies based on ESG or sustainability factors". This data item is "Policy Executive Compensation ESG Performance".	LSEG
Controversies Score	The score that measures a company's exposure to environmental, social and governance controversies and negative events reflected in global media.	LSEG
ESG Score	The score that is an overall company score based on the self-reported information in the environmental, social and corporate governance pillars.	LSEG
Total Violation Count - ESG-related	The sum of violation counts related to consumer protection, employment, environment, and safety.	Violation Tracker
Log Total Asset	The natural log of firm's total asset	Compustat
Book-to-Market	Book value scaled by its market value.	Compustat
ROA	Net income scaled by total assets.	Compustat
Leverage	Total debt scaled by total assets.	Compustat
Cash	Cash and short-term investments scaled its assets.	Compustat
Dividends	Total dividends scaled by net income.	Compustat
Log Total Compensation	The natural log of firm's average total compensation across all executives.	ExecuComp
Cash Compensation	The firm's average percentage of cash compensation across all executives.	ExecuComp
Stock Compensation	The firm's average percentage of stock compensation across all executives.	ExecuComp
Option Compensation	The firm's average percentage of option compensation across all executives.	ExecuComp
Insider Ownership	Percentage of insider ownership.	LSEG
Institutional Ownership	Percentage of institutional ownership.	LSEG
Log Board Size	The natural log of the number of directors on the board.	LSEG
Board Independence	Percentage of independent directors on the board.	LSEG
Board Gender Diversity	Percentage of female on the board.	LSEG
CEO Duality	An indicator that equals 1 if the CEO simultaneously chair the board.	LSEG
CEO Tenure	The number of years the executive has been the CEO.	ExecuComp
Analysts	The number of sell-side analysts covering the firm's security.	LSEG

CEO Compensation Link to TSR	An indicator that equals 1 if a CEO's compensation is linked to total shareholder return (TSR).	LSEG
Executive Compensation Link to LT Objectives	An indicator that equals 1 if the management and board members remuneration partly linked to objectives or targets which are more than two years forward looking.	LSEG
CSR Sustainability Reporting	An indicator that equals 1 if a company publishes a separate CSR/Health and Safety/Sustainability report or publish a section in its annual report on CSR/Health and Safety/Sustainability.	LSEG
CSR Sustainability Committee	An indicator that equals 1 if a company has a board level or senior management committee responsible for decision making on CSR strategy	LSEG
Sustainability-Sensitive Industries	An indicator that equals 1 if a company is from sustainability-sensitive industries (i.e. Oil & Gas, Chemicals, Metals & Mining, Paper & Forest Products, Utilities, Beverages, Food & Tabacco, Aerospace and Defence).	LSEG

APPENDIX S2: PAIRWISE CORRELATIONS

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
(1) *Controversies Score* $_{i,t}$	1.000									
(2) *ESG Contracting* $_{i,t-1}$	-0.128***	1.000								
(3) *Log Total Assets* $_{i,t-1}$	-0.422***	0.219***	1.000							
(4) *Book-to-Market* $_{i,t-1}$	-0.022**	0.040***	0.265***	1.000						
(5) *ROA* $_{i,t-1}$	-0.003	-0.015	-0.095***	-0.373***	1.000					
(6) *Leverage* $_{i,t-1}$	0.010	0.052***	0.024**	-0.216***	-0.135***	1.000				
(7) *Cash* $_{i,t-1}$	-0.034***	-0.105***	-0.267***	-0.251***	0.134***	-0.265***	1.000			
(8) *Dividends* $_{i,t-1}$	0.003	0.010	0.063***	-0.014	0.008	0.141***	-0.126***	1.000		
(9) *Log Total Compensation* $_{i,t-1}$	-0.365***	0.182***	0.635***	-0.082***	0.097***	0.099***	0.015*	0.001	1.000	
(10) *Cash Compensation* $_{i,t-1}$	0.140***	-0.139***	-0.297***	0.149***	-0.086***	-0.129***	0.000	0.010	-0.637***	1.000
(11) *Stock Compensation* $_{i,t-1}$	-0.070***	0.078***	0.141***	0.021**	-0.076***	0.116***	0.013	0.059***	0.308***	-0.399***
(12) *Option Compensation* $_{i,t-1}$	-0.043***	-0.063***	-0.062***	-0.196***	0.077***	-0.027***	0.191***	-0.124***	0.093***	-0.130***
(13) *Insider Ownership* $_{t-1}$	0.076***	-0.085***	-0.207***	-0.022**	-0.009	-0.095***	0.121***	-0.022**	-0.204***	0.257***
(14) *Institutional Ownership* $_{i,t-1}$	0.186***	-0.079***	-0.217***	-0.028***	-0.004	0.106***	0.003	-0.030***	-0.023**	-0.104***
(15) *Log Board Size* $_{i,t-1}$	-0.234***	0.147***	0.575***	0.090***	-0.031***	-0.014	-0.189***	0.021**	0.370***	-0.194***
(16) *Board Independence* $_{i,t-1}$	-0.067***	0.157***	0.183***	-0.009	-0.023**	0.030***	-0.091***	-0.005	0.115***	-0.215***
(17) *Board Gender Diversity* $_{i,t-1}$	-0.097***	0.116***	0.197***	-0.049***	0.011	0.084***	-0.073***	0.020**	0.190***	-0.174***
(18) *CEO Duality* $_{i,t-1}$	-0.066***	0.011	0.122***	-0.041***	0.070***	-0.026***	-0.046***	0.010	0.092***	0.018*
(19) *CEO Tenure* $_{i,t-1}$	0.057***	-0.096***	-0.085***	-0.010	0.055***	-0.089***	0.071***	0.004	-0.064***	0.175***
(20) *Analysts* $_{i,t-1}$	-0.368***	0.145***	0.548***	-0.120***	0.122***	-0.030***	0.101***	-0.066***	0.592***	-0.374***

Variables	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)
(1) *Controversies Score* $_{i,t}$										
(2) *ESG Contracting* $_{i,t-1}$										
(3) *Log Total Assets* $_{i,t-1}$										
(4) *Book-to-Market* $_{i,t-1}$										
(5) *ROA* $_{i,t-1}$										
(6) *Leverage* $_{i,t-1}$										
(7) *Cash* $_{i,t-1}$										
(8) *Dividends* $_{i,t-1}$										
(9) *Log Total Compensation* $_{i,t-1}$										
(10) *Cash Compensation* $_{i,t-1}$										
(11) *Stock Compensation* $_{i,t-1}$	1.000									
(12) *Option Compensation* $_{i,t-1}$	-0.500***	1.000								
(13) *Insider Ownership* $_{t-1}$	-0.128***	-0.014	1.000							
(14) *Institutional Ownership* $_{i,t-1}$	0.173***	0.009	-0.305***	1.000						
(15) *Log Board Size* $_{i,t-1}$	0.002	-0.018*	-0.164***	-0.188***	1.000					
(16) *Board Independence* $_{i,t-1}$	0.115***	-0.011	-0.252***	0.165***	0.176***	1.000				
(17) *Board Gender Diversity* $_{i,t-1}$	0.149***	-0.079***	-0.113***	0.056***	0.172***	0.265***	1.000			
(18) *CEO Duality* $_{i,t-1}$	-0.098***	0.028***	0.064***	-0.092***	0.096***	-0.055***	-0.021**	1.000		
(19) *CEO Tenure* $_{i,t-1}$	-0.092***	0.021**	0.184***	-0.052***	-0.100***	-0.110***	-0.107***	0.150***	1.000	
(20) *Analysts* $_{i,t-1}$	0.189***	0.155***	-0.149***	-0.072***	0.312***	0.099***	0.110***	0.110***	-0.062***	1.000

APPENDIX S3: ENDOGENEITY AND FURTHER ROBUSTNESS TESTS (FIRST STAGE OF 2SLS)

	First Stage of 2SLS
	(1)
Dependent variable	***ESG Contracting*** $_{t}$
IV $_{i,t}$	0.014***
	(0.004)
Log Total Asset $_{i,t}$	0.010
	(0.017)
Book-to-Market $_{i,t}$	-0.047*
	(0.026)
ROA $_{i,t}$	-0.015
	(0.071)
Leverage $_{i,t}$	-0.006
	(0.053)
Cash $_{i,t}$	-0.028
	(0.064)
Dividends $_{i,t}$	0.002
	(0.004)
Log Total Compensation $_{i,t}$	-0.006
	(0.013)
Cash Compensation $_{i,t}$	-0.046
	(0.053)
Stock Compensation $_{i,t}$	-0.011
	(0.035)
Option Compensation $_{i,t}$	0.029
	(0.050)
Insider Ownership $_{i,t}$	-0.075
	(0.317)
Institutional Ownership $_{i,t}$	-0.134**
	(0.062)
Log Board Size $_{i,t}$	0.098
	(0.065)
Board Independence $_{i,t}$	-0.031
	(0.037)
Board Gender Diversity $_{i,t}$	0.223***
	(0.081)
CEO Duality $_{i,t}$	0.001
	(0.017)
CEO Tenure $_{i,t}$	-0.000
	(0.001)
Analysts $_{i,t}$	-0.002
	(0.002)
Constant	0.136
	(0.390)
Observations	11,443
Year FE	YES
Firm FE	YES
Adjusted R-squared	0.075
Cragg-Donald Wald F statistic: 60.891	

Note: This table presents the first stage results of a 2SLS. Columns (1) represents the first stage result of a 2SLS procedure where ESG contracting is instrumented by the total number of firms within the same state and industry as the firm in question that have adopted ESG contracting in a given year, excluding the firm itself. Heteroskedasticity-robust standard errors clustered at firm level are reported in the parentheses. *, ** and *** indicate significance at 10%, 5% and 1% level, respectively. All variables are defined in Appendix S1.

APPENDIX S4: ENTROPY BALANCING

	ESG Contracting = 1			*ESG Contracting* = 0		
Before	**mean**	**variance**	**skewness**	**mean**	**variance**	**skewness**
Log Total Asset	23.150	2.480	0.106	22.390	2.325	0.485
Book-to-Market	0.477	0.122	1.208	0.449	0.120	1.222
ROA	0.049	0.005	-0.230	0.051	0.005	-0.372
Leverage	0.284	0.030	0.572	0.260	0.043	0.734
Cash	0.108	0.014	1.922	0.139	0.021	1.581
Dividends	0.383	0.645	2.933	0.364	0.699	3.078
Log Total Compensation	15.220	0.470	-0.157	14.930	0.503	0.034
Percentage of Cash Compensation	0.232	0.015	1.787	0.276	0.024	1.470
Percentage of Stock Compensation	0.388	0.029	0.010	0.350	0.041	0.196
Percentage of Option Compensation	0.092	0.014	1.504	0.113	0.022	1.598
Insider Ownership	0.015	0.002	4.736	0.024	0.003	3.520
Institutional Ownership	0.829	0.021	-1.043	0.852	0.022	-1.335
Log Board Size	2.331	0.048	-0.439	2.258	0.055	-0.264
Board Independence	0.841	0.008	-1.612	0.805	0.012	-1.168
Board Gender Diversity	0.218	0.011	0.154	0.188	0.012	0.324
CEO Duality	0.641	0.230	-0.586	0.634	0.232	-0.554
CEO Tenure	7.235	41.980	1.832	8.683	56.470	1.417
Analysts	16.190	75.340	0.390	13.420	74.190	0.780

	ESG Contracting = 1			*ESG Contracting* = 0		
After	**mean**	**variance**	**skewness**	**mean**	**variance**	**skewness**
Log Total Asset	23.150	2.480	0.106	23.150	2.480	0.107
Book-to-Market	0.477	0.122	1.208	0.477	0.122	1.208
ROA	0.049	0.005	-0.230	0.049	0.005	-0.230
Leverage	0.284	0.030	0.572	0.284	0.030	0.572
Cash	0.108	0.014	1.922	0.108	0.014	1.922
Dividends	0.383	0.645	2.933	0.383	0.645	2.933
Log Total Compensation	15.220	0.470	-0.157	15.220	0.470	-0.156
Percentage of Cash Compensation	0.232	0.015	1.787	0.232	0.015	1.788
Percentage of Stock Compensation	0.388	0.029	0.010	0.387	0.029	0.010
Percentage of Option Compensation	0.092	0.014	1.504	0.092	0.014	1.504
Insider Ownership	0.015	0.002	4.736	0.015	0.002	4.736
Institutional Ownership	0.829	0.021	-1.043	0.829	0.021	-1.043
Log Board Size	2.331	0.048	-0.439	2.331	0.048	-0.438
Board Independence	0.841	0.008	-1.612	0.841	0.008	-1.611
Board Gender Diversity	0.218	0.011	0.154	0.218	0.011	0.154
CEO Duality	0.641	0.230	-0.586	0.641	0.230	-0.586
CEO Tenure	7.235	41.980	1.832	7.235	41.980	1.832
Analysts	16.190	75.340	0.390	16.190	75.340	0.390

APPENDIX S5: ENDOGENEITY AND FURTHER ROBUSTNESS TESTS (ZERO INFLATED POISSON)

Dependent variable	(1) *Total Violation Count $_t$ - ESG-related only*
ESG Contracting $_{i,t-1}$	0.167**
	(0.077)
Log Total Asset $_{i,t-1}$	0.477***
	(0.044)
Book-to-Market $_{i,t-1}$	0.095
	(0.125)
ROA $_{i,t-1}$	0.621
	(0.469)
Leverage $_{i,t-1}$	0.321
	(0.296)
Cash $_{i,t-1}$	0.380
	(0.658)
Dividends $_{i,t-1}$	-0.006
	(0.024)
Log Total Compensation $_{i,t-1}$	0.048
	(0.075)
Cash Compensation $_{i,t-1}$	0.410
	(0.291)
Stock Compensation $_{i,t-1}$	-0.056
	(0.201)
Option Compensation $_{i,t-1}$	-0.083
	(0.282)
Insider Ownership $_{i,t-1}$	-0.465
	(1.102)
Institutional Ownership $_{i,t-1}$	-0.083
	(0.294)
Log Board Size $_{i,t-1}$	-0.004
	(0.015)
Board Independence $_{i,t-1}$	0.916**
	(0.374)
Board Gender Diversity $_{i,t-1}$	-0.597
	(0.366)
CEO Duality $_{i,t-1}$	0.062
	(0.067)
CEO Tenure $_{i,t-1}$	0.000
	(0.007)
Analysts $_{i,t-1}$	-0.004
	(0.006)
Constant	-13.299***
	(1.226)
Observations	11,440
Year FE	YES
Industry FE	YES
Wald Chi2	1598.38***

Note: This table presents the Zero-inflated Poisson regression results where we replace our main dependent variable with the count of a firm's total ESG-related violations. Regressions are run using the entropy-balanced sample to account for potential endogeneity issues. Heteroskedasticity-robust standard errors clustered at firm level are reported in the parentheses. *, ** and *** indicate significance at 10%, 5% and 1% level, respectively. All variables are defined in Appendix S1.