

Essays on the impact of corporate ESG commitments

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Declaration

I declare that this is an original work based primarily on my own research, and I warrant that all citations of previous research, published or unpublished, have been duly acknowledged.



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Abstract

This thesis investigates the environmental, social, and governance (ESG) commitments made by companies and their actions. By surveying some of the most recently developed practices that companies have adopted to legitimise their ESG orientation, I critically evaluate the efficacy of these practices in shaping organisational behaviours in the realm of ESG throughout the three chapters of this thesis.

At first, I investigate the impact of signing the Business Roundtable Statement (BRS) on firms' subsequent ESG performance. My analysis reveals that firms signing the BRS exhibit a decline in ESG performance. Through the lens of the Prospective Moral Licensing framework, I interpret that signatory CEOs enhance their self-image by merely anticipating future moral actions, thereby diminishing their actual engagement in committed moral behaviours. I also complement my results with explorations of the boundary conditions under which the moral licensing effect is most pronounced.

Next, I examine the effectiveness of ESG-linked executive compensation in mitigating engagement in ESG Controversies. While I find that ESG-linked compensation is not generally effective in decreasing occurrences of ESG Controversies, this link is particularly strong for firms run by powerful CEOs. Taken together, my 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.

Finally, I assess how effective sustainability-linked loans (SLLs) are in promoting meaningful improvements in borrowers' ESG performance. Consistent with "sustainability washing" concerns, I find that SLL borrowers in general do not improve borrowers' ESG profiles. However, I find that the effectiveness of sustainability-linked loans is enhanced when there is a higher proportion of lead lenders with ESG-linked executive compensation in a loan syndicate. I attribute these findings to the need for stronger incentives for lenders to draft meaningful SLL contracts.

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1 INTRODUCTION

1.1 Background and Motivation for the Thesis

Throughout the past decade, there has been a growing consensus that the welfare of different stakeholders is essential to the development of companies, society, and countries, especially among Western developed economies. Stakeholder Theory, an ideology introduced by Edward Freeman in his book *Strategic Management: A Stakeholder Approach* in 1984, refers to a more inclusive form of capitalism in which businesses shift away from their shareholder-centric and profit-maximising focus and take into account the interests of all stakeholders, including their communities and the environment at large. Amid the growing concerns on different sustainability issues over the past decades, ranging from workplace inequality to environmental protection, the rising importance of this stakeholder-oriented ideology highlights the need for companies to recognise their responsibilities beyond merely serving their shareholders. This shift in business thinking has paved the way for the development of the ESG framework, which evaluates companies' efforts towards issues in the environmental, social, and governance dimensions. To date, while a large body of firms are embracing this framework and mobilising more resources to address challenges in the realm of sustainability, they often signal their ESG-related intentions and subsequent performance by making ESG commitments.

Companies take multifaceted approaches to making their ESG commitments, reflecting diverse orientations. For example, one of the largest ESG initiatives in the world is the United Nations Global Compact (UNGC), which contains 10 principles in the human rights, labour, environment, and anti-corruption dimensions.¹ From its launching date in 2000 with only 44 signatories, UNGC now has enlisted more than 20,000 business and 3,800 non-business participants across hundreds of countries. Signatories participating in the UNGC are committed to take ESG actions by incorporating the 10 principles into corporate decision-making and to spread the advocacy of conducting sustainable business activities to the public (Arevalo & Aravind, 2017). Another ESG commitment that is under the spotlight of media attention is *the Statement on the Purpose of a Corporation* by the Business Roundtable, which is widely

¹ See the website of UNGC for further information regarding the 10 principles: <https://unglobalcompact.org/what-is-gc/mission/principles>.

known as the Business Roundtable Statement (henceforth BRS). It was initially released by the Business Roundtable on 19 August 2019. 181 CEOs of publicly listed firms have signed the BRS and thereby declared their commitment towards delivering long-term value to all stakeholders, explicitly including customers, employees, suppliers, communities, and shareholders.²

Beyond joining different initiatives, ESG commitments could also be made in other forms of business activities. In addition to catering to stakeholders' needs and demands, companies are also urged to make more impactful and credible commitments by integrating more ESG issues into their business model and day-to-day operations (e.g. Cormier & Magnan, 2015; Radu & Francoeur, 2017; Rodrigue et al., 2013). This argument is supported by the growing number of firms adopting ESG-related governance mechanisms. By implementing more management tools dedicated to ESG issues, it signals that the company is committed to integrate its ESG orientation with its operations. For instance, according to The Centre for Audit Quality's survey in 2024 using data provided by ESGAUGE,³ up to 98% of the S&P 500 constituents have been releasing a standalone ESG report in 2022 to disclose their ESG commitments along with other ESG-related disclosure, while 70% of the constituents complement the release with external assurance. Implementing these practices could serve as a voluntary contract between reporting firms and stakeholders, enhancing credibility and transparency regarding ESG commitments and progress made (Christensen, 2016; Dhaliwal et al., 2011; Simnett et al., 2009). In addition, a survey from Ernst and Young (2022) reports that 11% of the S&P 500 constituents have established a separated corporate social responsibility (CSR) committee not only to provide overarching ESG-related knowledge and guidance to executives but also to closely scrutinise firms' ESG activities on a day-to-day basis (Berrone & Gomez-Mejia, 2009; Paine, 2014). Furthermore, the integration of ESG criteria into executive compensation arrangements (known as ESG contracting) has also become increasingly popular in recent years. Spierings (2022) reports that a growing number of S&P 500 companies are incorporating ESG measures along different dimensions, including diversity, equity and inclusion, climate change, carbon emission reduction, into incentive pay plans. This shall serve as a reward system for executives for

² The full Business Roundtable Statement can be accessed here: https://system.businessroundtable.org/app/uploads/sites/5/2023/02/WSJ_BRT_POC_Ad.pdf.

³ Details of the analysis are accessible via: <https://www.thecaq.org/sp-500-and-esg-reporting>.

achieving future-oriented ESG goals while managing business operations (Flammer et al., 2019; Tsang et al., 2021).

Interestingly, when creditors, as one of the key external stakeholders, faced heightened financial and reputational risks from doing business with poor ESG performing lenders (Houston & Shan, 2022), instead of requiring the borrowing firms to join certain ESG initiatives or adopting any internal ESG-related governance mechanisms, they developed different ESG-contingent financial products to mitigate these issues. The financial innovations not only serve as potential avenues for creditors' active ESG engagement and monitoring but also keep the borrowing firms committed to making meaningful ESG progress. For example, firms issuing green loans and/or green bonds could demonstrate their commitments to environmentally-friendly practices (Flammer, 2021; Kim et al., 2023). Both of these debt instruments are use-of-proceeds based, where issuing firms could only use the funds to finance specific green projects. Dursun-de Neef et al. (2023) and Flammer (2021) have identified that companies tend to perform better in the environmental aspect and have lower emissions when issuing more green loans and green bonds. To bring a wider impact on firms' ESG performance in overall, sustainability-linked loans (SLL) are one of the latest ESG-contingent innovations in the private debt market. SLLs are general purpose loans with borrowers' ESG metrics tied to the pricing terms (Kim et al., 2023). This contractual feature implies that, by issuing more SLLs, outsiders may perceive that companies would be financially motivated and more committed to their overall ESG agenda not only through the delivery of green projects but also in their overall business activities.

Amid the surge of different approaches to ESG commitments, together with rising stakeholder demand and sustainability concerns, companies appear to be racing to signal their commitment by adopting different ESG labels to distinguish themselves from their rivals and competitors (McWilliams et al., 2006). At the same time, growing anecdotal evidence shows that many companies are making commitments they cannot fulfil. This trend spans across industries and countries. For example, in 2023, major brands like H&M and Nike faced accusations of deceptive marketing regarding how environmentally-friendly and sustainable their products were.⁴ Similarly, in 2021, Samsung was revealed to have overstated its environmental commitments and

⁴ <https://www.reuters.com/legal/legalindustry/guidance-sustainable-claims-after-dismissal-hm-greenwashing-class-action-2023-06-02/>; <https://www.retaildive.com/news/nike-faces-lawsuit-greenwashing-claims/650282/>.

achievements in its ESG reports and on its websites.⁵ In 2022, KLM, an airline company headquartered in the Netherlands, was sued by the environmental organisation Fossielvrij for its “Fly Responsibly” marketing campaign, in which KLM pledged its commitment to “creating a more sustainable future” and reducing its emissions to net zero by 2050. Fossielvrij claimed that KLM was not making any substantial change in behaviour contributing to its environmental commitments.⁶ Similar cases can be found in the financial industry, where some well-known financial institutions exaggerate their ESG credentials and/or fail to comply with their commitments in ESG investing.⁷

Fuelled by this growing anecdotal evidence, important questions are being raised by the media, practitioners and academics about the authenticity of companies' ESG commitments: What are the real intentions behind corporate ESG commitments? Do companies genuinely follow through with their commitments and change their behaviour? Under what conditions are companies more (less) likely to act as promised? How can the sincerity and credibility of these commitments be improved? This thesis aims to address these questions by examining the effectiveness of ESG commitments in shaping organisational ESG practices.

⁵ <https://www.ft.com/content/9c1cdcb0-327c-4561-b0ce-1227d321b261>.

⁶ <https://climatecasechart.com/non-us-case/fossielvrij-nl-v-klm/>.

⁷ Bank of America, Citigroup and Santander: <https://www.ft.com/content/84196790-2030-44d7-988c-b6e3408f9b4b>; DWS Group, a German asset manager: <https://channels.ft.com/en/ft-moral-money/a-whistleblowers-greenwashing-allegations-and-the-impact-theyve-had/>.

1.2 Outline of the Thesis

The rest of the thesis is structured as follows. In Chapter 2, I present an overview of the existing literature related to ESG commitments and corporate ESG behaviours. I offer a summary of the background of ESG commitments, together with the arguments from the “bright side” and “dark side” of making ESG commitments. While the literature stream from the “bright side” often highlights that these commitments lead to meaningful actions advancing stakeholder interests and mitigating sustainability challenges, the “dark side” emphasises companies’ superficial adherence to these commitments and the discrepancies between their promises and actual actions.

Chapter 3 to 5 are the main body of this thesis, where I present the details of the three empirical chapters. Table 1.1 serves as an overview summarising the key findings, contributions and implications in various aspects. In Chapter 3, I investigate the impact of signing the BRS by CEOs on their firms’ ESG performance. After reviewing the background and existing literature on this statement, I introduce the theoretical framework of Prospective Moral Licensing, the main theory I use to develop the following arguments: (1) how the licensing effect applies in organisational contexts; (2) how Prospective Moral Licensing influences CEOs’ decision-making process; (3) the predictable patterns in signatories’ ESG performance under the Prospective Moral Licensing framework; and (4) the conditions in which the licensing effect is most likely to occur and be particularly pronounced. After developing testable hypotheses based on these arguments, I move on to explain the data and methodology for the empirical tests. My analyses mainly rely on a list of signatories manually extracted for each BRS update since the initial release of the statement on 19 August 2019. I source ESG data from the London Stock Exchange Group (LSEG) ESG database. Since signatories could sign the BRS on different dates, I apply the staggered Difference-in-Differences model to identify the treatment effect of signing the BRS on companies’ ESG performance scores. After conducting other robustness checks, I then assess how my main results are affected by other factors, especially related to the degree of board monitoring, the structure of executive compensation arrangements, as well as firms’ business activities. This chapter concludes with a summary and a discussion of the implications of my findings

In Chapter 4, I empirically analyse the relationship between ESG contracting and companies’ exposure to ESG controversies and misconduct. Based on a review of the existing literature, I develop testable hypotheses by applying relevant theories, including

the Optimal Contracting Theory, the Multitasking Problem, and Managerial Power theory. My arguments are mainly built around an important question: whether ESG contracting could effectively deter the occurrence of ESG controversies or potentially provide an incentive to shift managerial attention towards easily achievable ESG performance targets. With this motivation, I conduct my empirical analyses mainly using the ESG data provided by LSEG ESG database. While LSEG constructs the controversies score based on third-party media coverage over 23 distinct ESG issues, LSEG also provides an ESG contracting indicator based on a review of companies' annual proxy statements (SEC Form DEF 14A) to ascertain whether ESG factors are linked to executive compensation. Similar to Chapter 3, I move on to discuss my main results along with several robustness checks, as well as a set of sub-sample analyses examining the boundary conditions of my findings. I then conclude this chapter by offering concluding remarks and a discussion of my findings' implications.

While the analyses of Chapter 3 and 4 are conducted using a US sample, I employ a global setting in Chapter 5. This chapter is intended to explore the impact of issuing SLLs on the improvement of borrowers' ESG performance. While existing studies have addressed issues related to the transparency of the loan and the stringency of the ESG-contingent contracting terms, they have not fully explored the role of lenders in determining the effectiveness of SLLs. Building on this gap, I derive my research question and develop testable hypotheses from the lenders' perspective, arguing that ESG incentives among syndicate lead lenders can also determine the effectiveness of SLLs in advancing sustainable practices. After explaining the process of creating my loan dataset using Dealscan via LSEG's Loan Connector and the LSEG EIKON terminal, I report the main results and robustness checks for testing my hypotheses. Finally, I summarise my findings and discuss their implications.

Lastly, Chapter 6 presents a comprehensive conclusion and discusses the broader contributions and implications of this thesis.

Table 1.1: Overview of the thesis by chapter

	Chapter 3	Chapter 4	Chapter 5
<i>Title:</i>	The Impact of the Business Roundtable Statement on Companies' ESG Performance: A Moral Licensing Perspective	ESG-Linked Compensation and ESG Controversies: Evidence from US	Do Sustainability-Linked Loans Improve Borrowers' ESG Profile? The Moderating Role of Lead Lenders' ESG-Linked Compensation
<i>ESG Commitments:</i>	The signing of the Statement on the Purpose of a Corporation released by the Business Roundtable	The incorporation of ESG metrics into executive compensation	The issuance of sustainability-linked loans (SLLs)
<i>Key Theoretical Framework:</i>	Prospective Moral Licensing	Optimal Contracting Theory, Managerial Power Theory, Multitasking Problem	Sustainability Washing
<i>Sample:</i>	S&P 1500 constituents	S&P 1500 constituents	All loans that are (1) borrowed by public companies; (2) initiated and closed within the period from 1 January 2017 to 31 December 2021
<i>Results</i>	Signing the BRS causes a negative impact on signatories' ESG performance score The negative impact is more pronounced when companies are not considered as sustainability-sensitive, less exposed to brand image concerns, have fewer independent directors on the board, and executive compensation is not linked to ESG targets.	Linking ESG goals to executive compensation leads to a higher occurrence of ESG controversies and more ESG-related violations The negative impact is more pronounced when CEOs are more powerful	In general, the issuance of SLLs does not lead to significant change in borrowers' ESG performance score. When accounting for the moderating impact of the percentage of ESG-linked lead lenders in the loan syndicate, SLLs are associated with a positive impact on borrowers' ESG performance
<i>Contributions</i>	First to empirically identify the negative impact of signing the BRS on firms' subsequent ESG performance First to apply the Prospective Moral Licensing concept in the context of corporate ESG commitments	First to empirically examine the relation between linking ESG goals to executive compensation and companies' exposure to ESG controversies	First to empirically identify the moderating role of ESG-linked compensation of lead lenders on the relationship between SLL issuance and the evolution of borrowers' ESG profile

<i>Implications in Academia</i>	Adds to the existing body of research by exploring the ethical dimensions of CEOs' signing of the BRS and offering a conceptual understanding of the adverse effects of the BRS for stakeholder outcomes	Demonstrates the adverse effects of linking ESG goals to executive compensation	Offers new insights into the sustainability washing problem of SLLs from the lenders' perspective
<i>Implications for Companies</i>	Good governance that creates a stronger monitoring regime by having more independent directors on the board and ties executives' compensation directly to ESG goals is effective in reducing the occurrence of the Prospective Moral Licensing effect	A reassessment of CEO power dynamics is essential to mitigate the negative impacts associated with linking ESG goals to executive compensation Both traditional governance mechanisms (board Independence, board gender diversity) and ESG-based governance tools (ESG reports, ESG committees) seem ineffective in mitigating this adverse impact	Lead lenders' ESG incentives play an important role in the relationship between issuing SLLs and improvement in borrowers' ESG performance
<i>Implications for Policymakers / Regulators / Investors</i>	Findings raise caution when evaluating the potential of ESG commitments as a replacement of regulated actions, and instead encourages the consideration of the licensing effect of such corporate commitments	Raise caution to avoid uncritically promoting ESG contracting as a solution for all sustainability challenges society is facing, as there is a risk that these incentives may lead to an opportunistic focus on merely meeting targets rather than fostering genuine ESG improvements	Offers new insights into alleviating the sustainability washing problem in SLLs

2 LITERATURE REVIEW

2.1 Institutional background and existing debate of ESG commitments

The question of whether and why a company should commit to more sustainable business practices and advance stakeholder interests is a long-established debate in the academic literature. Levitt (1958) and Freeman (1970), key proponents of the Agency Theory and the ideology of Shareholder Capitalism, argued that businesses should concentrate exclusively on profit maximisation. Being committed to stakeholder interests could pull resources away from profitable projects to sustainability investments, leading to a reduction of shareholder value. However, companies nowadays are often urged to operate beyond their profit seeking motive and fiduciary duties to consider stakeholders' interests. Hence, upholding stakeholder-oriented commitments becomes a fairly common practice in the current business world.

Beyond the profit seeking motive, there are other reasons why companies make ESG-related commitments. According to a holistic review of Zerbini (2017), such practice is governed by a number of theories, including Stakeholder, Institutional, Resources-based, and Signalling Theory. While proponents of the Stakeholder Theory posit that taking and committing to an ESG stance is a compliance response to stakeholders' pressures and needs and to acknowledge the value stakeholders could bring to the firms (Jones, 1995), institutional theories believe that it is also a response to expectations and norms about sustainable behaviours set by institutional owners (Campbell, 2007). Resources-based scholars instead focus on the reputational gains of making ESG pledges, where companies aim at accumulating goodwill, competitive advantage and perhaps a social license over their rivals as strategic assets (Hart 1995; Reinhardt 1998; Russo & Fouts, 1997). More importantly, and building on these viewpoints, Zerbini (2017) proposed a potentially more fundamental motive for legitimising companies' ESG orientation: to send a signal to the market. Based on the Signalling Theory, companies taking an ESG stance could send information about their ethical and sustainable nature to their target audience, ensuring that the market participants are able to differentiate them from those that are not committed (McWilliams et al., 2006; Siegel & Vitaliano, 2007).

With these motives, a large body of literature is devoted to investigating the linkage between ESG commitments and corporate actions. On the “Bright Side”, when companies have honoured their commitments with actual change in actions, people often characterise these commitments as *substantive* (Ashforth & Gibbs, 1990) or label firms’ actions as “walking the talk” (Schons & Steinmeier, 2016). In this context, the literature often adopts a positive view of the development and implementation of ESG commitments, suggesting that companies are more likely to adhere to their promises and achieve tangible ESG outcomes. However, on the “Dark Side”, the literature adopts a more critical perspective, arguing that ESG commitments are often made merely to enhance image and reputation (i.e., symbolic). In this view, companies are more likely to “talk the talk” without delivering tangible improvements in ESG performance.

As there are many forms of actions being developed as signalling devices for firms’ ESG stance and orientation, together with the ongoing debate between the bright and the dark side, the relevant literature is so vast that studies and arguments are basically developed on a case-by-case basis, where researchers investigate only one commitment or one form of commitments with similar nature. Therefore, the rest of this chapter will follow the categorisation provided by Zerbini (2017) and Behnam and MacLean (2011) and introduce different forms of ESG commitments, as well as the arguments from the “Bright Side” and/or the “Dark Side” for some of most influential ESG commitments falling in each category.

Firstly, trustmarks are one form of commitments introduced by Zerbini (2017) and align with the certification-based and principle-based commitments under the framework of Behnam and MacLean (2011). Companies participating in certification-based initiatives are typically bounded by certain performance requirements or standards, which are verified by independent external auditors. Due to the clear-cut sanctions and ongoing scrutiny, certification-based initiatives are restrictive but offer greater credibility to the public regarding companies’ ESG stance. Typical examples span a wide spectrum within the ESG framework and include standards released by organisations like the International Organisation for Standardisation (ISO) and Social Accountability International (SAI), such as ISO14001 and SA8000. Principle-based initiatives, on the other hand, rely on ethical and social norms to establish ESG-related principles, which participants are expected to follow as part of their commitments in conducting business operations. It is worth noting that compliance for most of the principle-based initiatives is voluntary. Although these initiatives may have incorporated various levels of

monitoring, reporting, and accountability mechanisms, their key objectives are to promote ESG-friendly business actions and improve stakeholder welfare but not to set rules to mandatorily enforce the commitments made by the participants. Therefore, the debate in the existing literature largely centres on the effectiveness of principle-based initiatives in driving substantive ESG actions.

For instance, the UNGC is one of the most common commitments companies make. As introduced in Chapter 1, the UNGC promotes ten sustainability-focused principles related to human rights, labour, the environment, and anti-corruption. Arevalo and Aravind (2017), based on their survey conducted in Spain, emphasize that the UNGC has successfully promoted corporate citizenship among Spanish participants by improving their understanding and performance in environmental and social areas. Using a broader sample of the world's 2,000 largest companies, Bernhagen and Mitchell (2010) found that UNGC participants are more likely to be included in the Innovest list of the 100 "most sustainable corporations" and to adopt human rights policies, suggesting that the participants are more committed to various stakeholders and human right issues compared to non-participants. In the countries with the highest number of UNGC participants, which are Spain, France, and Japan, Ortas et al., (2015) identified local preferences in ESG performance improvements. While Spanish and French members tend to focus more on social and governance enhancements, Japanese members prioritise environmental issues compared to their local non-member counterparts. These findings are consistent with Brown et al., (2018), who concluded that joining the UNGC facilitates members' ESG improvements in both implicit (i.e. adopting more ESG-friendly norms, values and policies) and explicit (i.e. conducting more sustainable business operations) manners. However, some literature remains sceptical about the effectiveness of joining the UNGC. For example, Perez-Batres et al., (2012) identified that participants are more likely to implement symbolic rather than substantive codes of conduct. Berliner and Prakash (2015), in a study of roughly 3,000 US companies, found that while companies improved their environmental and human rights performance after joining UNGC, instances of significant concerns and misconduct in these two areas also increased. The authors conclude that UNGC participants are more likely to "shirk their responsibilities" by decoupling their commitments from substantive actions, due to the lack of effective monitoring and enforcement. They argue that many companies join the UNGC merely to gain goodwill and reputational benefits. Further critiques can also be found in the qualitative works of Sethi and Schepers (2014) and Behnam and MacLean (2011), who

highlight issues such as the low threshold for selecting participants, the absence of sanctions, and the overrepresentation of specific industry sectors. These critiques raise serious doubts about the effectiveness of joining the UNGC in promoting meaningful ESG improvements.

Besides UNGC, another principle-based initiative supported by the United Nations is the United Nations Principles for Responsible Investment (PRI), which aims at promoting responsible investment among 3,750+ signatories. By joining this initiative, signatories commit to incorporating the six PRI-developed principles into their investment practices and analyses. This includes undertaking more active ESG engagements, improving the ESG disclosure of their portfolio firms, and promoting an ESG-focused culture within the investment industry.⁸ However, existing studies examining whether PRI signatories adhere to these principles and act accordingly remain scant and offer mixed findings. For instance, Gibson Brandon et al. (2022) identified that, while non-US-domiciled signatories do invest in better ESG performing firms and improve their funds' ESG scores after signing the PRI, they do not find similar behavioural patterns among US-domiciled signatories. The authors suggest that the effectiveness of the principles in translate fund managers' commitments into substantive actions largely depends on (1) how fund managers are commercially incentivised to join the PRI; (2) the level of regulatory uncertainty surrounding ESG investing; and (3) the maturity of the ESG market. Consistent with this view, Kim and Yoon (2023) found that, overall, the ESG performance score at the fund level does not improve after signing the PRI. Liang et al. (2022) further observe that, instead of improving the fund level ESG performance score, signatories with low-ESG hedge funds are more likely to overstate the sustainability of their investment. These signatories tend to act opportunistically, committing regulatory and investment violations and engaging in suspicious trading activities. Collectively, the findings of these studies highlight concerns about greenwashing, suggesting that while investment firms may outwardly market their ESG orientation after joining the PRI, they often fail to follow through with their commitments and do not seem to incorporate ESG factors into investment decisions making or improve the ESG performance among firms within their fund portfolio.

Turning to the corporate disclosures category outlined by Zerbini (2017), these align with the reporting-based commitments discussed by Behnam and MacLean (2011),

⁸ See the website of PRI for further information: <https://www.unpri.org/about-us/about-the-pri>.

which focus on enhancing the transparency of ESG-related disclosures, addressing information asymmetries and promoting better information exchange between companies and their stakeholders. Zerbini (2017) adds that, in the context of ESG, disclosing more ESG-related information reflects a company's confidence in its sustainable practices and signals its commitment to stakeholders.

The Global Reporting Initiative (GRI) serves as a prime example. Recognised internationally as a leading guideline for standardising sustainability reporting (Mahoney et al., 2013), the GRI framework is followed by more than 500 organisations worldwide. Companies adhering to GRI standards are expected to provide standardised, transparent and comparable ESG disclosures on various topics, such as biodiversity, waste, emissions, diversity and equality.⁹ Therefore, stakeholders could effectively benchmark a GRI reporter's ESG activities and performance against others and this comparability is expected to motivate top management to improve ESG performance and enhance their ESG-friendly image (Luo & Tang, 2023). Some studies indicate that companies adopting the GRI standards in their standalone ESG reports have higher ESG performance scores (Mahoney et al., 2013) and greater carbon mitigation (Luo & Tang, 2023). However, the impact of GRI reporting on disclosure quality and content remains uncertain. While earlier studies support the effectiveness of GRI reporting in improving transparency (Adams, 2004; Ballou et al., 2006; Willis, 2003), others argue that adopting the GRI reporting framework is merely a form of greenwashing. For example, Moneva et al. (2006) and Bebbington et al. (2004) contend that the GRI guideline serves as a symbolic tool for companies to camouflage and legitimise their lack of sustainability. These authors also find a disconnect between the reported ESG information and actual practices. Later studies, such as Michelin et al. (2015), support this view, finding that GRI reports often contain diluted information and fail to provide clear insights into companies' ESG progress.

Lastly, in the context of ESG and ethics programs, Zerbini (2017) suggests that corporate leaders adopt various governance mechanisms to demonstrate their commitment to promoting sustainable business practices within their organisations (Weaver et al., 1999). This aligns with the vast literature reporting that a robust ESG-related governance environment can effectively promote promising ESG activities and

⁹ See the website of GRI for further information: <https://www.globalreporting.org/>.

performance (e.g. see Derchi et al., 2021; Rodrigue et al., 2013). According to Zerbini's summary, these ESG-related governance mechanisms include:

- (1) Ethics Officers, where companies could hire more ethical managers like a chief sustainability officer (CSO) (Deutsch 2007; Galbraith 2009), encourage more managers to become member of Ethics Officer Association (Chavez et al., 2001), or establish boards with more ESG-experienced directors;
- (2) Ethics Committees, where companies could establish a CSR committee not only to provide relevant knowledge and guidance to executives but also to closely scrutinise firms' ESG activities regarding day-to-day operations (Berrone & Gomez-Mejia, 2009; Paine; 2014);
- (3) Code of Ethics, where managers distribute ethical codes within the company to promote more ethical and sustainable behaviours (Adams et al., 2001; Colwell et al., 2011; Schwartz, 2002);
- (4) Training Programs, where companies provide ethical training sessions to promote an ethically friendly working environment (Shen & Benson, 2016; Weaver et al. 1999); and
- (5) Incentive Programs; where companies tie ESG criteria to executive compensation to financially incentivise greater ESG progress (Flammer et al., 2019; Kolk & Perego, 2014; Maas, 2018; Ikram et al., 2019).

From the governance literature, it is evident that a complex ESG-related governance environment is often built through the interplay of multiple governance mechanisms. Hence, companies' ESG commitments should be assessed not only based on the adoption of a single mechanism but also based on how these mechanisms synergistically work with each other to pursue their ESG agenda. For example, businesses may establish a CSR committee or hire a CSO to legitimise their ESG orientation (Dyllick & Muff, 2016; Patten, 2020). While many existing studies have found a positive relationship between the implementation of CSR committees and ESG performance in regions such as the US (Burke et al., 2019; Dixon-Fowler et al., 2017), the UK (Liao et al., 2015) and Australia (Biswas et al., 2018) by promoting ESG culture within firms, Fu et al. (2020) identify that hiring a CSO can significantly improve ESG performance as well as mitigate ESG concerns and misconducts. Fu et al. (2020) also posit that the interplay between hiring a CSO and forming a CSR committee has a greater mitigating effect on companies' exposure to negative ESG issues. Similar interactions are observed between CSR committees and ESG-linked compensation structures. While linking ESG criteria to executive compensation alone is helpful in providing financial incentives to

managers to pursue companies' ESG agenda (Flammer et al., 2019; Ikram et al., 2019; Cohen et al., 2023), CSR committees could also exert influence on companies' environmental and social performance via this mechanism (Radu & Smaili, 2022). In contrast, Derchi et al. (2021) identify that the presence of CSR committees and the release of ESG reports could magnify the impact of ESG-linked compensation on companies' ESG performance, implying that, while a CSR committee is capable of providing knowledge about how to effectively implement ESG-linked pay, information related to ESG-linked pay is also transparently disclosed in the ESG report to enhance scrutiny from outsiders. However, these findings are often challenged by literature arguing that these mechanisms are merely symbolic management tools. Studies documenting insignificant relationships between these mechanisms and substantive ESG improvements (e.g. Eberhardt-Toth, 2017; Rodrigue et al., 2013) suggest that companies use these mechanisms to meet stakeholders' expectations, avoid reputational risks, or enhance their image for greenwashing purposes (Peters & Romi, 2015).

2.2 Reflection on the existing literature and motivation of the thesis

Based on the literature review above, although there is already a large body of literature that encompasses a variety of ESG commitments and contributes to both the arguments from the bright and the dark side, I have identified several important research gaps that need further investigations and will be addressed in the three empirical chapters of this thesis.

First, when evaluating the authenticity of companies' ESG commitments, existing literature primarily focuses on whether companies substantively or symbolically follow through with their ESG commitments. However, little is known about the possibility that they might simultaneously undertake activities that contradict their commitments. For instance, companies could conduct business operations that do not align with the broader societal or environmental interests due to the costs and trade-offs incurred in the pursuit of their committed ESG goals. ESG initiatives could also be exploited as a disguise to potentially hide unethical practices. Therefore, more work is required to explore the disconnection between companies' ESG commitments and their underlying actions and potentially unveil the negative outcomes associated with these commitments. This

research gap is the primary motivation for the first and second empirical chapters (Chapters 3 and 4), in which I intend to contribute by revealing the negative outcomes of some stakeholder-oriented commitments, which are the signing of BRS and the adoption of the ESG-linked compensation scheme.

Second, the literature has yet to provide clear answers regarding what and how internal and external factors of a company could potentially interact with the commitments to shape ESG outcomes. These factors could play a rather complex role in determining how ESG commitments are implemented and sustained and there is little consensus on whether the companies are incentivised or discouraged by these factors to engage in substantive ESG actions. Thus, further research is needed to examine the boundary conditions of different ESG commitments with varying natures and mechanisms. To extend to the existing discourse, I conduct several moderating tests in all of the empirical chapters of this thesis to evaluate the impact of different internal and external factors on the relationship between companies' ESG commitments and their subsequent actions.

Finally, while the vast majority of the existing literature only pays attention to the behavioural outcomes within the committed firms themselves, an important research area that remains underexplored is the potential pathways through which the ESG commitments of external stakeholders are propagated in their relationships with the companies and whether they lead to meaningful changes in corporate practices. In light of this research gap, the third empirical chapter of this thesis (Chapter 5) aims to provide valuable insights into the lending relationships. I examine how the ESG commitment of lenders, as reflected by their adoption of ESG-linked compensation schemes, could affect the effectiveness of sustainable lending activities in improving borrowers' ESG performance.

3 The Impact of the Business Roundtable

Statement on Companies' ESG Performance: A Moral Licensing Perspective

3.1 Introduction

Environmental, Social, and Governance (ESG) reflects the extent to which a firm responds actively to demands from a broad range of stakeholders, including employees, customers, communities, and the physical environment (Carroll, 1979; Wood, 1991; McWilliams & Siegel, 2001; Mattingly & Berman, 2006). As corporate leaders are increasingly asked to express and demonstrate their commitment to ESG and wider stakeholder interests, several firms and corporate leaders publicise their determination to engage in ESG via signing up to voluntary commitments (Sethi & Schepers, 2014). One of the most significant recent public commitments by CEOs in this regard is the signing of the *Statement on the Purpose of a Corporation* by the Business Roundtable, which is widely known as the *Business Roundtable Statement* (henceforth BRS). In this statement, a group of more than 180 CEOs of some of the largest US corporations expressed their “fundamental commitment to all of my stakeholders... customers... employees... suppliers... the communities in which I work”, “mov[ing] away from shareholder primacy”.¹⁰ The signing of the BRS has been praised as a substantial turning point in the business world in several news outlets (e.g. Ignatius, 2019; Sorkin, 2019; Murray, 2019) and by academic voices (e.g. Firestone, 2019), as well as a credible signal towards a more stakeholder-oriented business conduct. However, others have questioned the impact of the BRS and criticised it as a primarily performative statement, with BRS signatory firms “not intend[ing] to bring about any material changes in how they treat stakeholders” (Bebchuk & Tallarita, 2022a).

I add to this literature by showing that the signing of the BRS not only failed to produce a meaningful improvement in stakeholder treatment, but it also led to a significant decline in BRS signatories’ commitment to stakeholders, as evidenced by their deteriorating ESG performance. Furthermore, I extend the existing literature on the

¹⁰ See the announcement of the BRS here: <https://www.businessroundtable.org/business-roundtable-redefines-the-purpose-of-a-corporation-to-promote-an-economy-that-serves-all-americans> .

impact of the BRS (e.g., Pierce, 2019; Bae et al., 2021; Bebhuk & Tallarita, 2022a; Raghunandan & Rajgopal, 2023) by framing my findings within the Moral Licensing framework, thereby integrating applied social psychology concepts to the business ethics literature. Moral licensing describes the process where prior good deeds (responsible behaviour) set the actor free to engage in subsequent irresponsible behaviour (Monin & Miller, 2001; Merritt et al., 2010). By applying the concept of Prospective Moral Licensing (Cascio & Plant, 2015), I can explain my paradoxical finding that BRS signatory firms reduce their ESG performance after signing the BRS. In essence, signatory CEOs earn moral credits merely by expressing a willingness to act morally through their voluntary commitment to stakeholder interests. Consequently, having already accumulated moral credits by signing the BRS, these CEOs feel less compelled to engage in ESG-enhancing activities, leading to a decline in their ESG efforts.

I then test the boundary conditions under which I expect the moral licensing effect to be most pronounced. Specifically, I focus on conditions where a firm's actual ESG performance is less material for their license to operate, where executives and CEOs are less closely monitored, and when engaging in moral licensing does not result in further personal costs to the CEOs. In line with my Moral Licensing framework, I find that BRS signatory firms reduce their ESG performance when they operate in industries that are not considered sustainability-sensitive and are less exposed to brand value concerns, when there are fewer independent directors on their boards, and when executive remuneration is not linked to ESG targets.

My study contributes to the business ethics and wider management literature in several meaningful ways. Firstly, I add to the literature on the role and impact of the BRS. While existing studies have criticised the BRS on several fronts - including its redundancy given the existing legal frameworks (Pierce, 2019), the absence of governance changes by signatories (Bebchuk & Tallarita, 2022a), and the lack of reductions in stakeholder violations by signatories (Raghunandan & Rajgopal, 2023) - these critiques suggest that CEOs' signing of the BRS is merely symbolic, serving as a gesture of conformity to social norms without actually leading to behavioural changes (Meyer & Rowan, 1977; Ashforth & Gibbs, 1990). To the best of my knowledge, I am the first to show that signing the BRS can lead to worse ESG performance, thereby producing an outcome counter to the stated goals in BRS. In addition, and uniquely within the literature on the BRS, I employ the theoretical framework of Prospective Moral Licensing to explain the underlying drivers for this potentially paradoxical finding. I also

utilise this framework to explore the boundary conditions under which signing the BRS is more likely to lead to negative ESG outcomes.

Secondly, I contribute to the relatively limited literature that applies the concept of Moral Licensing in the context of ESG at an organisational level (see Feldmann et al., 2022, and Bouzzine & Lueg, 2023, for overviews of this literature). Although Moral Licensing originated as a cognitive bias in psychology research, it has increasingly been integrated into the management and business ethics literature (Blanken et al., 2015; Greene & Low, 2014; Bolino et al., 2013). However, few studies have used it in the context of ESG. Notable exceptions are Ormiston and Wong (2013), List and Momeni (2021) and Liu et al (2024a). These studies analyse how firm's prior ESG engagement leads to increased socially irresponsible behaviour by managers (Ormiston & Wong, 2013; Liu et al., 2024a) and other employees (List & Momeni, 2021). My study extends this literature by showing that merely committing to future ESG-positive behaviour can trigger the moral licensing effect, resulting in worse ESG performance by these firms. As such, to the best of my knowledge, I provide the first application of the Prospective Moral Licensing framework (Cascio & Plant, 2015) in the context of ESG at the organisational level.

Finally, my study adds to the ongoing debate on the effectiveness of ESG-related commitments and particularly the role of voluntary commitments in enhancing stakeholder outcomes. Corporate voluntary commitments have increased significantly over recent years, especially those addressing climate related issues,¹¹ while their effectiveness remains relatively understudied (see Bolton & Kacperczyk, 2021, for a discussion of these initiatives and the broader literature). The BRS represents another form of voluntary ESG commitment addressing broader stakeholder outcomes. I contribute to the literature that highlights the limited effectiveness of such voluntary commitments, including climate-related initiatives (Bolton & Kacperczyk, 2021; Bingler et al., 2022, 2024) and investor-related commitments such as the Principles for Responsible Investment (PRI) (Bauckloh et al., 2021; Gibson Brandon et al., 2022; Kim & Yoon, 2023). While most existing studies suggest that these voluntary commitments are generally ineffective, I show that, for the case of the BRS, they can encourage adverse effects, leading to worse stakeholder outcomes. To the best of my knowledge, only one

¹¹ Corporate centred voluntary commitments include the SBTi, TCFD, and CDP, while one of the most prominent investors-focused voluntary commitments is the PRI.

other study finds such a detrimental effect (Bingler et al., 2024), showing that companies engaging in ‘cheap talk’ through corporate climate disclosures exhibit higher levels of carbon emissions growth and more negative environmental controversies. I add to this small but growing body of literature by documenting a similar negative effect for BRS signatories and by exploring the boundary conditions when these effects occur. As such, my results have important implications for regulators, policymakers, and the private sector in the design of corporate commitments intended to advance stakeholder outcomes.

The remainder of the study is structured as follows. Chapter 3.2 provides an overview of the Business Roundtable Statement and the existing literature on its impact. In Chapter 3.3, I introduce the Prospective Moral Licensing framework and develop testable hypotheses. Chapter 3.4 outlines my data and methodological approach, and Chapter 3.5 presents my results. In Chapter 3.6, I discuss my findings and their implications.

3.2 The Business Roundtable Statement: Background and Overview of Existing Research

On August 19, 2019, the Business Roundtable, a non-profit organisation, announced that 181 CEOs of US publicly listed firms had signed its new *Statement on the Purpose of a Corporation*, committing to delivering long-term value to all stakeholders, including customers, employees, suppliers, communities, and shareholders.¹² This Statement marked a significant shift for the Business Roundtable, which had, since its founding in 1978, advocated for shareholder primacy, i.e. the idea that corporations primarily exist to serve shareholders. The new Statement significantly deviated from its shareholder-centric focus by emphasizing a “fundamental commitment to all ... stakeholders”.¹³ Alex Gorsky, then-Chairman of the Board and Chief Executive Officer of Johnson & Johnson as well as Chair of the Business Roundtable Corporate Governance Committee, stated: “*This new statement better reflects the way corporations can and should operate today. It affirms the essential role corporations can play in improving my society when CEOs*

¹² Since its original release, the list of signatories has been updated at irregular frequencies as new signatories joined the group of BRS signatory firms.

¹³ The full Business Roundtable Statement can be accessed here: https://system.businessroundtable.org/app/uploads/sites/5/2023/02/WSJ_BRT_POC_Ad.pdf

*are truly committed to meeting the needs of all stakeholders.”*¹⁴ This personal commitment by CEOs towards the BRS is also illustrated by the fact that CEOs personally signed the statement. As a result, the signing of the BRS by a large group of CEOs has been hailed by some public media sources as a turning point in the adoption of ESG principles by corporations and a meaningful signal of their intention to actively advance the interests of stakeholders beyond just shareholders (Ignatius, 2019; Sorkin, 2019; Murray, 2019; Firestone, 2019).

However, while the BRS represents an aspirational statement on the principles that should govern its signatories' corporate conduct, it lacks explicit commitments, measurable targets, and requirements for CEOs to report on their ESG-related efforts or demonstrate how they are upholding the principles outlined in the BRS. As such, the BRS has faced criticism from various media outlets and academics, who have labelled it as “mostly for show” and empty rhetoric (e.g. Bebchuk & Tallarita, 2022a).

Pierce (2019) is among the first to question the necessity of the BRS, suggesting that signing it may not reflect a substantial change in firms' approach towards stakeholder treatment. In fact, Pierce posits that the BRS is redundant, arguing that under existing Delaware law and business judgement principles, CEOs and other corporate leaders already have the authority to “accomplish what the Statement intends to accomplish”. Pierce also contends that the BRS is overly abstract, potentially adding unnecessary complexity and confusion to corporate decision-making processes.

Among the strongest critics of the BRS, Bebchuk and Tallarita (2022a) argue that signing the BRS does “not bring any material changes in how [signatories] treat stakeholders” (Bebchuk & Tallarita, 2022a). After reviewing the BRS signatories' corporate governance guidelines and other relevant documentation, including shareholder proposals, bylaws, proxy statements, director compensation principles, and practices, Bebchuk and Tallarita (2022a) find that none of these firms made substantial changes to their corporate purpose declarations or implemented meaningful commitments to stakeholder interests following their adoption of the BRS.

Raghunandan and Rajgopal (2023) extend the examination of the BRS's impact beyond corporate governance to broader environmental and social dimensions by investigating the environmental and labour violation records as well the carbon emission

¹⁴ See the press release for the Business Roundtable statement, which can be accessed here: <https://www.businessroundtable.org/business-roundtable-redefines-the-purpose-of-a-corporation-to-promote-an-economy-that-serves-all-americans>

performance of BRS signatories. They find that, prior to signing the BRS, signatories had more environmental and labour violations, and higher carbon emissions than non-signatories. More strikingly, they find that signatories do not improve their violation records and emissions after signing the BRS, further casting doubt on the effectiveness of the BRS in driving meaningful improvements in ESG.

Researchers have broadened their investigation of the potential benefits of signing the BRS to areas beyond just improvement in ESG. Bae et al. (2021) investigate the behaviour of BRS signatories during a period of heightened stakeholder concerns, specifically the onset of the Covid-19 pandemic. The authors argue that stakeholder-oriented firms should exhibit superior stock performance as a result of protecting stakeholder interests during a healthcare and social crisis. However, a comparison of the performance of BRS signatory firms with non-signatories during the crisis reveals no significant shareholder gains for signatories, indicating that, despite their stated commitment to stakeholder interests, BRS signatories do not outperform non-signatory firms.

Overall, these studies suggest that firms' explicit declarations of commitment to advancing stakeholder interests by signing the BRS may be merely symbolic, failing to translate into tangible actions within their corporate governance frameworks or in their stakeholder engagement strategies. However, these studies do not investigate the underlying behavioural and moral motivations that may lead CEOs to disregard their stated commitments. In the following sub-chapter, I introduce the concept of Prospective Moral Licensing as a framework to explain the BRS's ineffectiveness in promoting positive ESG outcomes, and to explore why it may – paradoxically – encourage CEOs to engage in more irresponsible behaviour and reduce their efforts in advancing broader stakeholder interests.

3.3 Conceptual Framework and Hypothesis Development

The theoretical foundation of moral licensing was originally developed in the psychology literature, rooted in Nisan's (1990, 1991) Moral Balancing model. This model is based on the notion that individuals aim to maintain a moral equilibrium by reconciling their past behaviour with their moral self-image, offsetting 'good' deeds with 'bad' ones. Building on this framework, Monin and Miller (2001) developed the concept of Moral Licensing, describing the phenomenon where acts of virtue (responsible behaviour) grant

individuals a perceived licence to engage in subsequent irresponsible conduct. Merritt et al. (2010) explain this behaviour using the concepts of moral credits and moral credentials. While morally credentialed individuals may perceive their transgressions as less severe, moral credits can be viewed as an internal moral balance that increases with good deeds and decreases with bad ones. When individuals have accumulated moral credits through responsible behaviour, these moral credits allow them to engage in subsequent irresponsible conduct, without negatively affecting their moral self-image.¹⁵

Empirical evidence in the behavioural psychology literature supports the behavioural patterns of moral licensing (Zhong et al., 2010; Mazar & Zhong, 2010; Sachdeva et al., 2009), and the concept has increasingly been applied in organisational settings (Cain et al., 2005; Canace et al., 2023; Lin et al., 2016; Loewenstein et al., 2011; Ormiston & Wong, 2013; Rose et al., 2014). For example, Cain et al. (2005) and Loewenstein et al. (2011) demonstrate that corporate directors who disclose their conflicts of interest and relation to the CEO feel morally licensed to act in favour of the CEO at the expense of shareholder interests. Furthermore, Lin et al. (2016) show that corporate leaders exhibit more abusive supervisory behaviours after having gained moral credits from acting ethically. In the context of ESG, Ormiston and Wong (2013) show that past ESG positive actions tend to morally license CEOs to engage in less ethical stakeholder treatment in the future. More recent evidence by Liu et al. (2024a) demonstrates that previous strong ESG performance can induce moral licensing behaviour in the context of product recalls by reducing the likelihood of proactive product recalls and, thus, violating stakeholder expectations.

While the aforementioned studies collectively demonstrate that organisational behaviours could constitute moral licensing, they require firms and their leaders to have engaged, first, in morally good behaviour that, then, licenses subsequent transgressions. However, merely signing up to voluntary commitments such as the BRS does not represent morally good behaviour in itself, but rather an intention to act responsibly in the future. Therefore, I apply the concept of Prospective Moral Licensing, a special case

¹⁵ While Mullen and Monin (2016) discuss that in the Moral Licensing Framework there is a distinction between moral credits and moral credentials, they acknowledge that numerous empirical studies do not apply the differentiation. Given my empirical set-up, which is not based on experimental evidence, I am unable to distinguish as to whether the observed moral licensing effects are driven by actors establishing moral credits or moral credentials. This is in line with existing studies that test for moral licensing effects in an organisation setting in the context of ESG (e.g. Liu et al., 2024a). However, as Casio and Plant (2015) introduce their Prospective Moral Licensing framework using the concept of moral credits, I adopt their wording here. However, I acknowledge that my empirical set-up does not allow a differentiation between these two mechanisms.

of moral licensing, to contextualise BRS signatories' ESG performance after signing the BRS.

Prospective moral licensing, introduced by Cascio and Plant (2015),¹⁶ suggests that individuals may feel licenced to act less morally after “merely planning to engage in future moral behaviour.” In other words, Prospective Moral Licensing postulates that someone can gain the moral credits and a license to behave less morally by simply appearing moral through planning, anticipating, or committing to act morally in the future. Gollwitzer et al. (2009) and Cascio and Plant (2015) suggest that when individuals have already improved their self-image by simply anticipating moral behaviour in the future, they are less likely to “follow through with the plan”, consequently reducing the likelihood of actually performing the anticipated or committed moral acts in the future. At the organizational level, Prospective Moral Licensing differs from existing applications of moral licensing (e.g., Ormiston & Wong, 2013; Liu et al., 2024a) and suggests that corporate leaders can feel morally licensed without having engaged in past moral behaviour (e.g., via superior ESG performance), simply by signalling their commitment to act morally in the future. Consequently, these leaders may behave less morally, either by performing worse in ESG through fewer positive actions to meet stakeholder demands (Branco & Rodrigues, 2006) or by increasing their exposure to ESG misconduct through more negative actions that harm stakeholder interests (Lange & Washburn, 2012).

Two aspects of the BRS make it particularly susceptible to moral licensing: the costlessness of the initial moral act (i.e. the signing of the BRS) and the public nature of the moral commitment (see Mullen & Monin, 2016, for an overview of the factors leading to moral consistency or moral licensing). For instance, Gneezy et al. (2012) argue that the key factor driving moral consistency is the costliness of the initial prosocial behaviour. They argue that higher costs increase consistency by making the initial behaviour seem more reflective of one's values, leading individuals to internalise the commitment. On the other hand, the costlessness of the BRS commitment – both in terms of the requirements for signing and the lack of specific targets or reporting requirements for signatory CEOs – may lead to a lack of consistency in following through on their commitment and may encourage moral licensing behaviour (Mullen & Monin, 2016).

¹⁶ In Cascio and Plant (2015)'s original experiments, participants are asked to agree, either verbally or in writing, to perform a future moral act first and the authors then tested whether participants would express racial bias. The authors find more participants expressing racial bias as they feel morally licensed.

Moreover, Kristofferson et al. (2014) show that the private versus public nature of an initial moral act affects the likelihood of engaging in moral licensing. They found that moral acts performed in private are more likely to lead to consistent behaviour as they reflect people's genuine commitments. In contrast, the public nature of signing the BRS could lead to inconsistency and moral licensing, as individuals may feel they have already associated themselves with the prosocial behaviour,¹⁷ reducing their need to follow through with their commitments.

In summary, I argue that the signing of the BRS may lead to Prospective Moral Licensing by signatory firms' CEOs, resulting in a subsequent deterioration in the signatories' ESG performance. I therefore propose my first hypothesis:

Hypothesis 1 (H1). After signing the BRS, BRS signatories reduce their engagement in ESG policies.

To further shed light on the extent and way in which signing the BRS constitutes Prospective Moral Licensing, I investigate the boundary conditions under which the moral licensing effect is likely to manifest and be particularly pronounced.

I propose that the reduction in BRS signatories' engagement in ESG policies and initiatives after signing the BRS is moderated by how critical their relationship with stakeholders is for their license to operate and business success. Specifically, I focus on the sustainability-sensitive nature of certain industries, where firms are subject to heightened scrutiny from ESG-conscious market participants (Frooman, 1999; Patten, 1991). Examples of such industries include oil and gas, chemicals, metals and mining, paper and forest products, utilities, beverages, food and tobacco, and aerospace or defence sectors, which are particularly sensitive to ESG issues and face greater ESG risks.

Stakeholders are often sceptical of these companies' ESG activities (Du et al., 2010), leading to more intense scrutiny and pressure to legitimize their actions (Deegan & Gordon, 1996). Due to the nature of sustainability-sensitive industries, companies within these sectors are expected to be closely monitored by stakeholders, which may serve as a deterrent against moral licensing behaviour. Therefore, I argue that the

¹⁷ I note that the literature does not agree about the impact of the costliness and the public nature of the initial moral act regarding the likelihood of inducing moral licensing. For instance, Lasarov and Hoffmann (2020) argue in their conceptual model: "I expect that individuals - in public situations - are more likely to engage in moral licensing if the initial act was associated with higher observable costs and if they do not fear to appear hypocritical to the observers."

conditions within sustainability-sensitive industries act as a constraint on CEOs, discouraging them from engaging in moral licensing. This leads to my second hypothesis:

Hypothesis 2 (H2). The reduction in BRS signatories' engagement in ESG policies after signing the BRS is more pronounced for firms in industries that are not sustainability sensitive.

I further expect that a company's brand image may serve as another critical moderating factor. Brand image, defined as the general perceptions consumers hold about a brand (Keller, 1993; Van Riel & Fombrun, 2007), is particularly significant for firms in consumer goods industries. In these industries, brand image can substantially influence consumer purchasing decisions, as consumers often associate the value and quality of a product with the company's brand image (Richardson et al., 1994).

Corporate philanthropy and ESG activities are vital for firms that depend heavily on their brand image. Lev et al. (2010) highlight that socially responsible activities, such as corporate philanthropy, can improve brand image, thereby increasing consumer demand and positively affecting purchasing decisions. Flammer (2015) supports this notion, indicating that consumers are willing to pay a premium for goods produced by ethical companies, thus enhancing the benefits of ESG for companies selling to individual customers. Conversely, Yoon et al. (2006) argue that a company's brand image can suffer if consumers perceive a company's ESG motives and activities as insincere.

Hence, CEOs of firms operating in industries where brand image is critical to business success are expected to be less inclined to engage in moral licensing due to concerns of being perceived as hypocritical by consumers, which could jeopardise business success. Based on this reasoning, I propose the following hypothesis:

Hypothesis 3 (H3). The reduction in BRS signatories' engagement in ESG policies after signing the BRS is more pronounced for firms with lower brand awareness.

I extend my investigation to the impact of corporate governance on the proclivity to engage in moral licencing, with a particular focus on the role of board independence. A large body of literature suggests that ESG is closely linked to enhanced corporate governance structures (Ferrell et al., 2016). Strong corporate governance can promote ESG by fostering transparency, accountability, and ethical behaviour. Independent

directors, in particular, play a crucial role in strengthening corporate governance. Previous studies have shown that independent directors provide greater oversight (Fama & Jensen, 1983), reduce managers' opportunistic behaviours (Post et al., 2011), and encourage the development of ESG initiatives (Johnson & Greening, 1999). Jo and Harjoto (2011) further find that robust corporate governance and monitoring mechanisms, such as higher board independence, increase the likelihood of firms engaging in ESG activities.

Moreover, the board's internal monitoring role is critical to the implementation of certain ESG initiatives and commitments. For instance, Fuente et al. (2017) found that independent directors play a crucial monitoring role in the effective adoption of the Global Reporting Initiative (GRI) guidelines. Similarly, studies have highlighted the importance of internal governance in monitoring compliance with the United Nations Global Compact (UNGC), a voluntary initiative based on CEO commitments to universal sustainability principles (Sethi & Schepers 2014; Voegtlin & Pless, 2021).

Given the significant role of independent directors in enhancing corporate governance and promoting ESG, I predict that executives are held more accountable for their commitments made in the BRS and have less leeway to engage in morally questionable behaviours, when there is stronger oversight by a more independent board. This leads us to my fourth hypothesis:

Hypothesis 4 (H4). The reduction in BRS signatories' engagement in ESG policies and initiatives after signing the BRS is more pronounced for firms with fewer independent directors on their board.

Finally, I propose that CEOs' incentive alignment, particularly the linkage of executive compensation to ESG metrics, influences the relationship between signing of the BRS and subsequent ESG engagement. ESG-linked pay ties executive compensation to ESG metrics (Flammer et al., 2019). Similar to annual bonuses and long-term incentive plans that link compensation to financial performance indicators, ESG-linked pay financially incentivizes executives to pursue specific ESG goals and take on the associated risks (Berrone & Gomez-Mejia, 2009). Several studies suggest that ESG-linked pay positively

impacts companies' ESG engagement and performance (Cohen et al., 2023; Flammer et al., 2019; Maas, 2018).¹⁸

By tying compensation to ESG metrics, companies create a contractual mechanism that may align executive incentives with ESG commitments, encourages resource allocation towards implementing ESG initiatives, and holds executives accountable for achieving these goals. Consequently, failing to meet their ESG targets will result in personal costs to the CEO through lower executive compensation. In contrast, executives whose compensation is primarily based on conventional financial performance metrics, such as total shareholder return, may prioritize profit maximization at the expense of broader stakeholder interests. This focus can lead to less ethical behaviour, as documented by several studies (e.g., Burke et al., 2019; Burke, 2022; Lopez et al., 2007). Without the influence of ESG-linked pay, executives may be less motivated to uphold their ESG commitments, potentially leading to a decline in ESG engagement after signing the BRS.

Therefore, I predict that the implementation of ESG-linked pay affects the extent to which signing the BRS constitutes Prospective Moral Licensing. Specifically, firms that do not link executive compensation to ESG metrics are more likely to exhibit a reduction in ESG engagement after signing the BRS, as their executives are not financially incentivized to prioritize ESG goals, and, thus, do not suffer any personal costs from engaging in moral licensing behaviour. This leads us to my fifth and final hypothesis:

Hypothesis 5 (H5). The reduction in BRS signatories' engagement in ESG policies and initiatives after signing the BRS is more pronounced in firms where executive compensation is not tied to ESG metrics.

3.4 Methodology

3.4.1 Sample selection

To construct my sample, I start with all S&P 1500 firms over the period 2012 to 2022. I then identified which of these firms signed the BRS. The initial list of BRS signatories

¹⁸ I acknowledge that the findings in the literature are not uniform, with some studies documenting a 'dark side' to ESG-linked compensation, e.g. linking it to greater stock price crash risk (e.g. Liu et al., 2024b), or highlighting flawed incentives and managerial opportunism of ESG-linked compensation (e.g. Bebchuk & Tallarita, 2022b).

on August 19, 2019 comprise 181 CEOs. Since then, the list of signatories has been updated at irregular intervals.¹⁹ While most of the signatories remain on the list for the entire sample period, I observe two exceptions: Boeing Company and Bank of New York Mellon Corporation, which appeared on the initial list but were subsequently removed.²⁰ I keep these two companies in my sample but account for the periods in which they dropped from the list.²¹ I collect data on companies' ESG performance, governance and ownership characteristics for all S&P 1500 firms between 2012 and 2022 from the London Stock Exchange Group's EIKON terminal (LSEG EIKON; previously known as Refinitiv EIKON) and obtain financial data from the Compustat database. After excluding any observations with missing data in any of the above dimensions, the final sample consists of 11,708 firm-year observations covering 1,424 unique firms.

Table 1 provides an overview of my sample of BRS signatory firms by year (Panel A) and by industry affiliation (Panel B). From 2019 to 2022, the number of BRS signatories grows from 114 firms to 166 firms, representing 19% and 28% of the S&P 1500 sample firms, respectively. Panel B documents that BRS signatories are heavily concentrated in specific industries, mainly operating in the Industrials and Technology sectors, where they represent 19% and 18% of all firm-year observations, respectively.

[Insert Table 3.1 here]

3.4.2 Model specification

To test my main hypothesis, I employ a staggered difference-in-difference (DiD) model that tests for differences in the ESG performance between BRS signatories and non-signatories, pre- and post-signing of the BRS.²² I follow prior studies in the specification

¹⁹ After the initial announcement of the BRS on August 19, 2019, the list of BRS signatories has been updated in the following months within my sample period: September 2019; December 2019, February 2020, April 2020, June 2020, August 2020, September 2020, October 2020, February 2021, July 2021, April 2022, May 2022, July 2022, August 2022, September 2022, and October 2022.

²⁰ Boeing Company is one of the initial signatories and has stayed on the BRS until the August 2020 update, I therefore remove it from the group of BRS signatory firms from 2020 onwards. For Bank of New York Mellon Corporation, its CEO is on the initial BRS, drops out from the signatory list after September 2019 and rejoined the list in the October 2020 update.

²¹ In Chapter A.3.5, I check that my results are not driven by these two special cases. I confirm that my main results remain qualitatively similar when I exclude Boeing and Bank of New York Mellon from my sample.

²² My main regression specification is a staggered DiD model that includes all BRS signatories, i.e. both initial signatories and subsequent joiners, accounting for their time of signing the BRS. However, following Raghunandan and Rajgopal (2023), as a robustness test I also run a non-staggered DiD model that only accounts for the initial signatories and excludes all later signatories. The motivation for this specification is that later signatories may have different motivations for signing the BRS, e.g. they could have observed

of the DiD model (e.g., He et al., 2024; Wu et al., 2023; de Villiers et al., 2024), so that my DiD model can be expressed as follows:

$$ESG_{i,t} = \beta_0 + \beta_1 SignatoriesPost_{i,t-1} + \beta_2 Controls_{i,t-1} + Firm\ FE_i + Year\ FE_t + \epsilon_{i,t} \quad (3.1)$$

where i indexes firms and t indexes years. The coefficient of interest β_1 captures the treatment effect of signing the BRS on companies' ESG performance scores. I expect β_1 to be significantly negative if the signing of the BRS leads CEOs to reduce their ESG performance in the future, constituting Prospective Moral Licensing. I incorporate both firm and year fixed effects to account for the unobserved heterogeneity over time and across firms. I use robust standard errors clustered by firm, consistent with Adhikari (2016) and de Villiers et al. (2024).

Dependent Variable: Measures of firms' ESG performance

Following prior research (de Villiers et al., 2017; de Villiers et al., 2022; Liang & Renneboog, 2017; Michelon et al., 2015; Nguyen et al., 2019; de Villiers et al., 2024), I utilize the LSEG ESG database (previously known as Refinitiv and prior to that as Asset4) as my primary source for metrics on firms' ESG performance. The LSEG database covers firms that capture more than 70% of the global market capitalization and employs over 630 metrics to score companies on environmental, social and governance (ESG) dimensions. It is utilized by numerous studies in the field.²³ I use several dimensions of LSEG's ESG scores to measure a company's ESG performance.²⁴ I use the *ESG score* provided by LSEG as my first dependent variable of interest to measure firms' overall positive policies and actions on environmental (E), social (S) and governance (G) matters, with a higher score indicating better ESG performance. I also use the subdivided pillar scores for evaluating companies' performance in specific dimensions, including the *Environmental Score*, *Social Score*, and *Governance Score*. To construct these scores

that signing the BRS provides firms with a beneficial pro-social image without imposing significant costs on BRS signatories. I report the results of the non-staggered DiD specification in Chapter A.3.2.

²³ See Stellner et al. (2015); Aouadi and Marsat (2018); Hawn and Ioannou (2016); Ferrell et al., (2016); and Gonenc and Scholtens (2017).

²⁴ In this study, I use the terms ESG score and ESG performance synonymously. For the naming of my main dependent variable, I refer to ESG as this reflects the variable names of my ESG data source, London Stock Exchange Group's EIKON terminal (previously known as Refinitiv EIKON).

that measure companies' ESG performance, LSEG obtains ESG-related information by extracting and processing data from companies' own ESG disclosures, such as their self-reporting on ESG matters in annual reports, ESG reports, company websites, as well as SEC filings. To illustrate, the *Environmental Score* captures firms' performance along environmental dimensions, such as emissions reduction, innovation, and resource use. The *Social Score* includes community, human rights, product responsibility, and workforce dimensions, while the *Governance Score* covers categories involving management structure and compensation, shareholder rights and firms' ESG strategy.²⁵

In addition to these ESG performance metrics, I use the *Controversies Score* as my second dependent variable of interest to capture firms' involvement in ESG-related controversies and misconduct. The *Controversies Score* also ranges from 0 to 100, with a higher score indicating fewer ESG controversies. Companies without any controversies receive the maximum score of 100. It is important to note that the *Controversies Score* is qualitatively different to the ESG (pillar) scores as it is constructed using third-party sources, while the *ESG Score* and its sub-pillar scores are mainly based on self-reported information by the firm.

Main Independent variable: Indicator for BRS Signatories

My main explanatory variable *SignatoriesPost* is an indicator which takes the value of one once a CEO has signed the BRS. I identify CEOs' signing of the BRS by checking whether their name appears on the BRS signatories list in a given year. In other words, *SignatoriesPost* equals 1 if a company is on the list of BRS signatories in a given year. In my staggered DiD regression model, *SignatoriesPost* is lagged by 1 year to account for the delayed effect of signing the BRS on companies' ESG performance.²⁶

Control Variables

As CEOs' decision to sign the BRS as well as firms' ESG performance are likely linked to the characteristics of the firm, I control for variables related to firm performance, financial characteristics, governance quality, and ownership structure.

²⁵ For a detailed explanation of LSEG's ESG scores I refer to their methodological guide, available here: https://www.lseg.com/content/dam/data-analytics/en_us/documents/methodology/lseg-esg-scores-methodology.pdf.

²⁶ In my regression model, the standalone indicators *Signatories* and *Post* are omitted from the model as *Signatories* is absorbed by firm fixed effects and *Post* is omitted due to collinearity with the interaction term *SignatoriesPost*. My DiD regression specification is consistent with prior studies employing a staggered DiD model such as He et al. (2024) and de Villiers et al. (2024).

I source firms' financial and accounting information from Compustat. Prior literature has found that firms' ESG performance is linked to firm size and profitability, with larger and more profitable firms being more likely to engage in ESG activities (e.g. Campbell, 2007). In addition, more cash-rich firms are likely to have greater financial resources to engage in ESG, while firms' risk and leverage have also been found to affect their ESG performance (e.g. Orlitzky & Benjamin, 2001). Motivated by this literature, I include the following set of control variables in my regression model: profitability (return on assets, *ROA*), firms' cash holdings (Cash and Short-term Investment/Total Asset, *Cash*), leverage (Total Liabilities/Asset, *Liabilities*), valuation ratio (Market-to-Book, *MTB*), and firm size (logarithm of market capitalisation, *Log Market Cap*).

I obtain firms' governance information from LSEG EIKON. Specifically, I consider board size (logarithm of the number of directors on the board, *Log Board Size*), as findings in Taurigana et al. (2017) suggest that a firm's ESG performance, in particular environmental offenses, are linked to the size of a firm's board. I also account for firms' other board characteristics, such as board independence (percentage of independent directors on the board, *Board Independence*) as in Johnson and Greening (1999), and CEO power as measured by CEO-Chairman Duality, where the CEO is also the chairman of the board (*CEO Duality*). I include the gender mix on the board (percentage of female directors on the board, *Board Gender Diversity*) as another important control variable, motivated by findings in prior studies that firms with greater board gender diversity are more likely to engage in ESG practices (e.g., Bear et al., 2010; Harjoto et al., 2015; Manner, 2010; Matsa & Miller, 2013; Shaukat et al., 2016; Lu & Herremans, 2019; Gull et al., 2023).

Several studies have found that firms' ownership structure affects their engagement in ESG activities (e.g. Oh et al., 2011, 2017; Ferrell et al., 2016). I source information on the ownership structure from LSEG EIKON. Specifically, I measure the percentage of shares held by institutional investors (*Institutional Ownership*) as well as the percentage of shares held by insiders (*Insider Ownership*).

In my regression model, all control variables are lagged by one year. Chapter A.3.1 provides the definitions of all variables used in this study.

3.5 Results

3.5.1 Descriptive statistics

Table 3.2 presents the descriptive statistics of my variables. Panel A provides the summary statistics for the entire sample, while Panel B presents the differences between BRS signatories and non-signatories. Of the 11,708 firm-year observations in my sample, 15.3% belong to signatory firms. Turning to the ESG metrics, the average *ESG Score* across all firms is 49.21, with the standard deviation and distribution indicating a broad range of ESG performance within the sample. Among the different ESG pillars, firms tend to perform best on governance, with an average score of 56.47, and least well on environmental issues, with an average Environmental Score of 37.61. The *Controversies score* has an average value of 88.36 but the wide range, from a minimum of 3.06 to a maximum of 100, show significant variability in firms' performance regarding ESG related controversies and misconduct. Finally, looking at the remaining firm characteristics, the majority of firms in my sample are run by CEOs who also hold the chairman position of the board, indicating that these CEOs are able to exert more influence over firm policies and decision-making. In addition, the average firm has a board size of just under 10 board members, the majority of which being independent board members (81.9%). At the average firm, only 20.4% of the board members are female. Most sample firms are owned by institutional owners who hold an average of 85% of the firms' outstanding shares, while insider ownership represents only about 2% of the ownership structure.

Turning to Panel B, the table reports statistically significant differences in the characteristics of BRS signatories compared to non-signatories. Specifically, signatories show superior ESG performance, as indicated by their higher average *ESG Score* (65.76) than non-signatories (46.21). In addition, signatories have higher scores across all E, S and G sub-pillars. However, signatories exhibit a lower average *Controversies Score* (68.33) than non-signatories (91.98), suggesting that BRS signatories are involved in more ESG controversies. This finding is in line with results reported by Raghunandan and Rajgopal (2023) showing that BRS signatory firms have more environmental and social misconduct prior to signing the BRS, as evidenced by their environmental and labour violations.

BRS signatories and non-signatories also differ across other dimensions, including their financial characteristics, corporate governance profiles, and ownership

structure. On average, signatories are larger in size, have a higher market-to-book value, are more financially leveraged, and are more profitable. In terms of governance, signatories tend to have a larger board, with a higher proportion of independent directors and female board members. Signatories are also more likely to have CEOs who simultaneously occupy the chairman position, indicating that BRS signatory CEOs hold more managerial power. Furthermore, BRS signatory firms' ownership structure significantly differs from that of non-signatories, with lower ownership proportions by insiders and institutional investors. Overall, the highly significant differences between BRS signatory firms and non-signatories suggest that these groups represent inherently different types of firms, and I employ multiple approaches to address potential endogeneity concerns arising from such differences.

Panel C reports the yearly trend of the difference between signatories' and non-signatories' ESG score and Controversies score from 2016 (3 years before the BRS initial release year) to 2022 (3 years after the BRS initial release year). From columns (1) and (2), while signatories' average ESG score increases by 6.74 points from 2016 to 2022 (from 65.031 to 71.768), non-signatories demonstrate a more substantial improvement in their ESG performance (10.70 points; from 42.372 to 53.071), reducing signatories' outperformance from 22.60 to 18.70 points. Similarly, from columns (3) and (4), the difference between signatories' and non-signatories' exposure to ESG controversies is also enlarged (from -24.64 to -37.52) due to a larger drop in signatories' ESG controversies score over time. Overall, the yearly trend reported in Panel C of Table 3.2 could serve as the primary evidence that, in contrary to the expected improvements of stakeholder interests and welfare, the signing of BRS potentially exert a negative treatment effect on signatories' ESG profile.

[Insert Table 3.2 here]

Table 3.3 presents the pairwise correlations among the variables in my study. I confirm that no pair of variables has a correlation coefficient exceeding 60%, except for the correlation between the ESG score and its component pillar scores. To further address any concerns regarding multicollinearity in my models, I calculate the Variance Inflation Factor (VIF) for all independent variables in my model and find that none of these variables has a VIF indicator greater than 5, suggesting my results are not affected by multicollinearity.

[Insert Table 3.3 here]

3.5.2 Main results (Hypothesis 1)

Table 3.4 presents the results of my baseline staggered DiD regression model expressed in equation (3.1), estimating whether BRS signatories have changed their ESG performance after signing the BRS. Columns (1) through (5) examine different dimensions of ESG metrics as dependent variables: *ESG Score*, *Environmental Score*, *Social Score*, *Governance Score*, and *Controversies Score*. My results show that, across all five dimensions, the coefficients on *SignatoriesPost* are negative and statistically significant at the 1 % level, indicating that signatories reduce their ESG performance after having signed the BRS. Specifically, I find that overall ESG performance declines by approximately 5 points after signing, with a similar reduction in *Controversies Score*, indicating that the firm is involved in more ESG-related controversies. Turning to the sub-pillar scores, I find that BRS signatories seem to lower their efforts across all three ESG dimensions, with the largest effect observed in the *Environmental Score*, which deteriorates by approximately 7 points after the signing. These effects are economically meaningful. For instance, the reduction in *ESG Score* for signatories post-signing corresponds to a 7.72% decrease in their ESG performance.²⁷

Overall, the results presented in Table 3.4 provide support for hypothesis H1, suggesting that the signing of the BRS can induce Prospective Moral Licensing among signatories; the act of signing appears to grant CEOs a license to reduce subsequent efforts in improving stakeholder treatment.

[Insert Table 3.4 here]

Next, I explore the temporal effects on ESG performance surrounding the signing of the BRS. I do this for two reasons. First, it provides deeper understanding into the mechanisms of the moral licensing effect by examining whether the impact on ESG performance occurs immediately after signing or changes over time. Second, it ensures the validity of my DiD analysis by confirming whether the parallel trends assumption

²⁷ To illustrate my calculations further, the coefficient estimate on the *SignatoriesPost* variable in Column (1) of Table 3.4 is -5.078. Taking the average ESG Score for BRS signatories of 65.761 (taken from Panel B, Table 3.2), I calculate the percentage reduction in the ESG Score for BRS signatory firms after signing the BRS as -7.72%. Although signatories indeed have higher average ESG scores than their non-signatory counterparts, as shown in the descriptive statistics (65.761 vs 46.208 in Panel B of Table 3.2), the negative coefficients reported in Table 3.4 and 3.6 indicate a negative treatment effect of signing the BRS (as explained in p.43, para. 1). These two findings do not contradict to each other because, although signing the BRS leads to a negative impact on signatories' ESG scores when comparing to non-signatories, signatories could still have higher ESG scores on average.

holds between signatory and non-signatory firms prior to the signing of the BRS.²⁸ To test this, I replace the independent variable (*SignatoriesPost*) in Model (1) with a series of indicators that represent the years before and after signing the BRS. The adjusted regression model is as follows:

$$ESG_{i,t} = \beta_0 + \sum_{k=-5, k \neq -1}^3 \beta_k Signatories_{i,t+k}^k + \beta_2 Controls_{i,t-1} + Firm FE_i + Year FE_t + \epsilon \quad (3.2)$$

where $Signatories_{i,t+k}^k$ takes the value of 1 if the fiscal year of a firm-year observation is k years before or after the year that the signatories initially sign the BRS, and 0 otherwise, where $k=0$ is the year of signing the BRS. For example, $Signatories_{i,t-3}^{-3}$ indicates three years prior to the firm signing the BRS, while $Signatories_{i,t+3}^{+3}$ indicates three years after the firm has signed the BRS. If my data complies with the parallel trends assumption, all coefficients from β_{-5} to β_{-2} should be statistically insignificant.

Table 3.5 presents the results of model (3.2), and Figure 3.1 illustrates the dynamic impact of signing the BRS. In the interest of brevity, this analysis focuses only on the *ESG Score* and the *Controversies score* as main dependent variables.²⁹ I first discuss the results for the *ESG Score* in terms of the parallel trends assumption, before interpreting the temporal effects of moral licensing in the context of hypothesis H1. Examining the coefficients of the pre-signatory indicators (from $Signatories^{-5}$ to $Signatories^{-2}$), I find that none of these indicators are statistically significant when the ESG score is the dependent variable. This finding supports the parallel trends assumption, suggesting that prior to signing the BRS, signatory and non-signatory firms did not show differing trends in their ESG performance that could confound my findings. Therefore, the deleterious effect of BRS on ESG performance is triggered only after signing the BRS.

Next, I turn to the coefficients on the post-signatories indicators ($Signatories^0$ to $Signatories^{+3}$) which show how BRS signatories adjust their ESG performance after

²⁸ As per Lemmon and Roberts (2010: 568), the parallel trend assumption posits “...similar trends in the outcome variables during the pre-shock era for both treatment and control groups”. In other words, the parallel trend assumption ensures that signatory and non-signatory firms did not follow different trends in the main dependent variables prior to the signing of the BRS.

²⁹ In untabulated results, the parallel trends assumption is upheld when replacing the dependent variable with each of the standalone pillar scores.

signing the BRS. For the *ESG Score* as the dependent variable (column 1), all post-signatories indicators are negative and significant at the 1% level. Furthermore, the magnitude of the coefficient estimates increases over time, suggesting that the BRS signatories continue on a downward trajectory in their ESG performance after having signed the BRS. This effect is illustrated in Figure 3.1 which documents a clear reduction in firms' ESG score following the signing of the BRS.

For the *Controversies Score* as the dependent variable (column 2), I find a positive coefficient on the indicator *Signatories*⁻² and a negative coefficient on *Signatories*⁺³, both significant at the 1% level. This suggests that the parallel trends assumption is not fully satisfied. Specifically, although I find a negative and significant coefficient on *Signatories*⁺³, the reduction in *Controversies Score* observed in the baseline DiD results cannot be solely attributed to the licensing effect caused by the signing of BRS. This is because the result is likely biased by the pre-existing difference in *Controversies Score* between the treatment and control groups as indicated by the positive *Signatories*⁻² Coefficient.

Hence, it appears that the moral licensing effect of signing the BRS mainly operates through changes in positive ESG performance scores. This finding is reasonable, given that CEOs likely have greater discretion and power over the implementation of positive ESG policies and actions, as measured by the *ESG Score*, whereas their influence over avoiding ESG controversies may be more limited.

[Insert Table 3.5 here]

3.5.3 Endogeneity tests

As previously shown, BRS signatories are different from non-signatories across various firm, governance, and ownership characteristics (see Table 3.2, Panel B). As these differences may be correlated with both firms' ESG performance and their likelihood to sign the BRS, I need to address concerns around endogeneity and selection bias in my sample. As my main endogeneity test, I employ the propensity score matching (PSM) approach to account for observed and unobserved confounding factors (Rosenbaum & Rubin, 1983) when examining the causal treatment effects. The PSM approach addresses the concern that CEOs' decision to sign the BRS is non-random and likely linked to the firm's other observable characteristics. As a first step, I perform a probit regression to estimate a firm's propensity to sign the BRS based on its characteristics. Next, I match

BRS signatory firms (treated firms) with non-signatory firms (control firms) based on the estimated propensity scores.³⁰ Chapter A.3.3 reports the probit regression result along with diagnostic tests for the PSM to ensure the matched sample has with no significant differences in firm characteristics between the treated and control groups.

I re-estimate model (3.1) for the *ESG Score* and the *Controversies Score* as dependent variables using the PSM-matched sample and report my results in Table 3.6. Results with the *ESG Score* as dependent variable (reported in column (1)) show that my previously documented finding of a moral licensing effect remains robust: signing the BRS leads to a reduction in *ESG score*, with the effect being significant at the 5% level. I also find that the parallel trends assumption is satisfied when tested with the PSM-matched sample (see Chapter A.3.4, column (1)). However, the negative licensing effect on the *Controversies Score* is no longer present when accounting for observable differences between signatory firms and non-signatory firms, as suggested by the insignificant coefficient on *SignatoriesPost* documented in column (2) of Table 3.6.

I use alternative approaches to address endogeneity concerns, which I report in Chapter A.3.6. Specifically, I employ entropy balancing, which re-weights each firm-year observation in the control group (non-signatories) to align the distribution of their covariates (i.e., mean, variance and skewness) with that of the treatment group (Hainmueller, 2012). Unlike PSM, entropy balancing utilises all observations in the control group and is considered less susceptible to researcher discretion and statistical bias (McMullin & Schonberger, 2020). I balance on the same set of firm characteristics as used in the PSM. Panel A of Chapter A.3.6 shows the distribution of the characteristics of signatory and non-signatory firms before and after entropy balancing, confirming that the approach successfully re-weighted the control group observations to achieve a balanced sample in terms of mean, variance, and skewness. The results in Panel B of Chapter A.3.6 report a finding consistent with my observations in Table 6, i.e. the moral licensing effect on the *ESG Score* persists, albeit at a slightly lower level of statistical significance, while the effect on the *Controversies Score* remains insignificant.

[Insert Table 3.6 here]

In summary, these findings support hypothesis H1 by demonstrating that the moral licensing effect from signing the BRS leads to a decrease in efforts by BRS

³⁰ For the matching, I adopt the specifications using radius, a 0.001 caliper, common support, and matching with replacements.

signatories toward positive ESG policies and initiatives, as reflected on their *ESG Scores*. In contrast, I do not find strong evidence that signing the BRS grants signatories a license to engage in more ESG misconduct in the future.

3.5.4 Moderating effects (Hypothesis 2-5)

In this sub-chapter, I examine hypotheses H2 to H5 and investigate the potential moderating effects on the relationship between signing the BRS and companies' ESG performance. As my previous analysis indicated that the moral licensing effect is observed only for the positive ESG performance dimension, I focus the moderation analysis solely on the *ESG Score*. In addition, given the endogenous nature of the relationship between CEOs' signing and firms' ESG performance, I conduct the analysis on the PSM-matched sample.

Hypothesis H2 argues that the licensing effect of signing the BRS should be affected by whether companies operate in sustainability-sensitive industries. Given that sustainability-sensitive companies receive greater scrutiny from ESG-conscious stakeholders and have stronger motivations to legitimise their social license to operate, the negative effect of signing the BRS is expected to be more pronounced when companies are not sustainability-sensitive. I follow Al-Shaer and Zaman (2019) and classify companies as sustainability-sensitive if they operate in one of the following sectors: oil and gas, chemicals, metals and mining, paper and forest products, utilities, beverages, food and tobacco, and aerospace or defence.³¹ I split the sample into sustainability-sensitive and non-sensitive firms, and re-estimate model (1) over each sub-sample. The results, reported in Columns (1) and (2) of Table 3.7, align with my expectation under hypothesis H2. I find that the negative moral licensing effect of signing the BRS on the *ESG Score* is significant for companies operating in non-sustainability-sensitive industries. In contrast, for firms operating in sustainability-sensitive industries, I do not observe a reduction in ESG performance after signing the BRS, suggesting that moral licencing is not activated for firms where ESG efforts are more material to their business success and license to operate.

³¹ As the utilities sector is a broader industrial category, I use the four-digit TRBC Business Sector identification code select companies from this sector. For other narrower sectors (oil and gas, chemicals, metals and mining, paper and forest products, beverages, food and tobacco, and aerospace or defence sectors), I apply the six-digit TRBC Industry Group identification code.

Next, I test hypothesis H3, which posits that CEOs of companies whose business relies on their brand image are less likely to engage in Prospective Moral Licensing after signing the BRS. This is because organisational moral licensing behaviours could be perceived as corporate hypocrisy by consumers, potentially damaging companies' brand image. Following Flammer (2015) and Lev et al. (2010), I classify companies in the consumer-goods sectors as those prioritising their brand image. I then divide my sample into consumer-goods and non-consumer-goods companies,³² and re-estimate my baseline model in equation (1) for these two sub-samples. The results, presented in Columns (3) and (4) of Table 3.7, support hypothesis H3. Specifically, the significant moral licensing effect of signing the BRS is only observed for firms operating in non-consumer-goods sectors, where the brand image is less critical to consumer relations, while there is no significant effect for firms operating in consumer-good sectors. Taken together, the tests of hypotheses H2 and H3 suggest that the importance of sustainability considerations for a firm's license to operate, as well as the significance of brand image can serve as constraints for CEOs with regards to moral licensing behaviour.

Turning to the effects of internal governance, hypothesis H4 predicts that CEOs under stronger internal monitoring by independent directors are less likely to engage in moral licensing. Conversely, BRS signatories with weaker internal scrutiny may have more leeway to engage in moral licensing and lower their ESG performance after signing the BRS, as they are less likely to be held accountable for following through on their commitments. To test this, I use board independence as a measure for monitoring strength, and I divide the sample into two groups: those with above- and below-median board independence.³³ I then re-estimate model (1) for each sub-sample. Columns (5) and (6) of Table 3.7 show that the negative impact of signing the BRS on *ESG Scores* is significant only in firms with lower board independence. This finding suggests that having more independent boards to oversee managerial decisions could help prevent CEOs from both engaging in Prospective Moral Licensing and reducing their ESG activities, thereby supporting hypothesis H4.

Lastly, besides the internal monitoring role of independent directors, linking executive compensation to ESG goals may also be effective in holding CEOs accountable, thereby reducing their tendency to engage in moral licensing. As such,

³² I use a set of four-digit SIC codes to classify firms from consumer-goods sectors or other sectors. The details are reported in Chapter A.3.1.

³³ See Chapter A.3.1 for the definition of variables.

hypothesis H5 predicts that BRS signatories whose compensation is not linked to ESG metrics are more likely to engage in Prospective Moral Licensing, since this behaviour does not result in direct personal costs through reduced compensation. I source the ESG-linked pay indicator from the LSEG ESG database and perform an additional set of sub-sample tests based on whether companies have adopted ESG-linked pay. The results, reported in columns (7) and (8) of Table 3.7, show that the coefficient of *SignatoriesPost* is significantly negative only for firms without ESG-linked executive pay. In contrast, the insignificant coefficient for firms with ESG-linked pay suggests that linking executive compensation directly to ESG metrics may be an effective tool in restricting moral licensing tendencies among CEOs. Overall, these findings align with the prediction under hypothesis H5, indicating that linking executive compensation to ESG metrics provides a financial incentive for CEOs to avoid engaging in Prospective Moral Licensing, and it can deter them from reducing their subsequent ESG performance.

3.6 Summary

The signing of the BRS has garnered significant attention and has been widely praised as a catalyst for a major shift towards a stakeholder-oriented business focus (e.g. Ignatius, 2019; Sorkin, 2019; Murray, 2019), prompting scholars to explore its significance and impact (e.g., Pierce, 2019; Bae et al., 2021; Bebchuk & Tallarita, 2022a; Raghunandan & Rajgopal, 2023). Building upon this emerging research strand, I investigate the impact of CEOs' signing of the BRS on their firms' ESG performance, and I document several key findings. First, I show that the signing of the BRS is associated with a subsequent decline in the ESG performance of signatory firms, as reflected in their ESG scores. Second, I explore the boundary conditions of this negative effect. I find that internal governance structures, such as the level of board monitoring and the structure of executive compensation, as well as firms' business activities moderate the negative impact of CEOs' signing of the BRS. I frame my findings within the Prospective Moral Licensing framework (Cascio & Plant, 2015), arguing that signatory CEOs improve their self-image by simply anticipating future moral behaviour, reducing their motivation to deliver on their commitment and instead leading them to engage in less moral behaviour. As such, my study contributes to the existing body of research by exploring the ethical dimensions of signing the BRS, offering a conceptual understanding of its negative consequences for stakeholder outcomes.

Beyond extending the academic literature, my study has several important implications for policymakers and corporate decision makers. First, my study highlights a potential ‘dark side’ of the BRS as a voluntary corporate commitment to advancing stakeholder interests. As the world faces a variety of sustainability challenges, private actors are increasingly called upon to contribute towards addressing sustainability issues by reducing their negative impact on stakeholders and the environment, and, at the same time, by taking positive actions to improve stakeholder outcomes (Sethi & Schepers, 2014). Voluntary corporate commitments are often viewed as a promising approach to achieving ESG goals without requiring regulation or legal enforcement. However, my study underscores that these commitments may not only be ineffective but could also potentially encourage adverse effects, reducing firms’ contribution to stakeholder welfare. Therefore, policymakers should be cautious when considering these commitments as substitutes for regulated actions. Instead, policymakers should take into account the potential licensing effect of such corporate commitments and critically evaluate their true impact on stakeholder outcomes.

Secondly, my findings suggest that companies and corporate boards can reduce the occurrence of Prospective Moral Licensing, when voluntarily committing to positive stakeholder treatment, by implementing stronger monitoring mechanisms. This can be achieved by having a larger proportion of independent directors and by linking executive compensation directly to specific ESG goals. As such, my study highlights the critical role of corporate governance mechanisms regarding the effectiveness of ESG commitments, suggesting that these mechanisms should be evaluated in conjunction rather than in isolation.

While my study offers valuable insights for the business ethics literature and practical guidance for policymakers and corporate decision makers, it also has limitations. Specifically, my study is focused on one specific voluntary corporate commitment, the BRS, which has unique features, such as the public nature and costlessness of the commitment, which may render moral licensing behaviour more accessible to CEOs (Mullen & Monin, 2016). Hence, it is not clear whether my results can be extended to other corporate commitments. Instead, I see corporate commitments as a promising area for future research, such as investigating to what extent different features of commitments affect the likelihood of observing moral licensing behaviour or moral consistency. An extension of this emerging area will not only provide novel insights to the business ethics literature, but it would also offer important practical implications for

designing effective corporate voluntary commitments that genuinely advance stakeholder outcomes.

Table 3.1: Sample distribution

Panel A: Yearly distribution		
Year	Number of Signatories	%
2019	114	19%
2020	150	25%
2021	163	27%
2022	166	28%
Total	593	100%

Panel B: Industry distribution		
Industry	Number of Signatories	%
Industrials	113	19%
Technology	106	18%
Financials	86	15%
Consumer Cyclical	84	14%
Healthcare	58	10%
Basic Materials	40	7%
Utilities	34	6%
Consumer Non-Cyclical	33	6%
Energy	27	5%
Real Estate	12	2%
Academic & Educational Services	0	0%
Total	593	100%

Note: This table presents an overview of the number of signatories that have signed the BRS. Panel A provides a distribution by year. Panel B focuses on the distribution by industry.

Table 3.2: Descriptive statistics

Panel A: Descriptive statistics in full sample								
Variable	Obs	Mean	SD	Min	P25	Median	P75	Max
<i>Signatories_i</i>	11,708	0.153	0.36	0	0	0	0	1
<i>ESG Score_{i,t}</i>	11,708	49.205	18.693	11.226	34.233	48.212	64.258	87.505
<i>Environmental Score_{i,t}</i>	11,708	37.612	28.14	0	11.478	35.756	61.547	92.225
<i>Social Score_{i,t}</i>	11,708	50.59	20.963	10.127	33.523	49.318	66.934	93.427
<i>Governance Score_{i,t}</i>	11,708	56.469	20.575	7.24	41.128	58.421	72.9	93.254
<i>Controversies Score_{i,t}</i>	11,708	88.357	25.444	3.061	100	100	100	100
<i>ROA_{i,t-1}</i>	11,708	0.05	0.07	-0.214	0.013	0.042	0.082	0.28
<i>Liabilities_{i,t-1}</i>	11,708	0.615	0.223	0.107	0.467	0.613	0.772	1.246
<i>Cash_{i,t-1}</i>	11,708	0.129	0.141	0.001	0.028	0.078	0.176	0.648
<i>MTB_{i,t-1}</i>	11,708	3.858	7.845	-31.367	1.503	2.475	4.4	49.595
<i>Market Cap (Million)_{i,t-1}</i>	11,708	19,420	41,480	365.1	2,168	5,270	15,960	274,500
<i>Board Size_{i,t-1}</i>	11,708	9.981	2.273	5	8	10	11	16
<i>Board Independence_{i,t-1}</i>	11,708	0.819	0.102	0.444	0.778	0.846	0.9	0.938
<i>Board Gender Diversity_{i,t-1}</i>	11,708	0.204	0.11	0	0.125	0.2	0.273	0.5
<i>CEO Duality_{i,t-1}</i>	11,708	0.629	0.483	0	0	1	1	1
<i>Insider Ownership_{i,t-1}</i>	11,708	0.022	0.052	0	0.001	0.004	0.016	0.318
<i>Institutional Ownership_{i,t-1}</i>	11,708	0.845	0.149	0.315	0.763	0.882	0.966	1

Panel B: Descriptive statistics in sub-sample						
	(1) <i>Signatories_i = 1</i>		(2) <i>Signatories_i = 0</i>		(1) - (2)	
	Mean	SD	Mean	SD	Diff	t
<i>ESG Score_{i,t}</i>	65.761	14.998	46.208	17.702	19.553***	(49.359)
<i>Environmental Score_{i,t}</i>	62.744	22.749	33.062	26.58	29.682***	(49.499)
<i>Social Score_{i,t}</i>	64.185	18.927	55.072	20.553	9.113***	(18.517)
<i>Governance Score_{i,t}</i>	69.015	17.414	47.254	19.787	21.761***	(47.665)
<i>Controversies Score_{i,t}</i>	68.328	36.528	91.984	20.913	-23.655***	(-26.657)
<i>ROA_{i,t-1}</i>	0.061	0.061	0.048	0.071	0.013***	(8.401)
<i>Liabilities_{i,t-1}</i>	0.691	0.188	0.601	0.226	0.090***	(17.942)
<i>Cash_{i,t-1}</i>	0.126	0.113	0.129	0.145	-0.003	(-1.051)
<i>MTB_{i,t-1}</i>	4.688	9.907	3.708	7.402	0.979***	(3.992)
<i>Market Cap (Million)_{i,t-1}</i>	64,290	74,330	11,290	24,520	53,000***	(29.917)
<i>Board Size_{i,t-1}</i>	11.545	2.014	9.698	2.201	1.847***	(35.229)
<i>Board Independence_{i,t-1}</i>	0.858	0.078	0.812	0.104	0.045***	(21.407)
<i>Board Gender Diversity_{i,t-1}</i>	0.242	0.096	0.197	0.11	0.045***	(17.721)
<i>CEO Duality_{i,t-1}</i>	0.699	0.459	0.616	0.486	0.082***	(6.921)
<i>Insider Ownership_{i,t-1}</i>	0.006	0.024	0.025	0.054	-0.020***	(-25.050)
<i>Institutional Ownership_{i,t-1}</i>	0.798	0.129	0.853	0.151	-0.056***	(-16.333)
Observations	1,795		9,913		11,708	

Panel C: Yearly distribution of ESG score and Controversies score in sub-sample								
<i>ESG Score</i>					<i>Controversies Score</i>			
	(1) <i>Signatories_i = 1</i>	(2) <i>Signatories_i = 0</i>	(1) - (2)		(3) <i>Signatories_i = 1</i>	(4) <i>Signatories_i = 0</i>	(3) - (4)	
Year	Mean	Mean	Diff	t	Mean	Mean	Diff	t
2016	65.031	42.372	22.659***	17.474	70.256	94.896	-24.640***	-8.932
2017	66.866	41.842	25.024***	20.801	76.686	95.409	-18.723***	-7.094
2018	67.595	43.001	24.594***	20.585	71.309	95.574	-24.265***	-8.741
2019	69.181	45.958	23.223***	20.906	73.262	94.133	-20.871***	-7.617
2020	70.624	49.252	21.372***	19.984	73.634	94.087	-20.453***	-7.284
2021	71.387	51.524	19.863***	20.141	69.807	93.244	-23.436***	-8.506
2022	71.768	53.071	18.697***	20.015	47.605	85.125	-37.520***	-12.608

Table 3.3: Pairwise correlation

Variables	VIF	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)
(1) <i>ESG Score</i> _{<i>i,t</i>}		1.000																
(2) <i>Environmental Score</i> _{<i>i,t</i>}		0.860	1.000															
(3) <i>Social Score</i> _{<i>i,t</i>}		0.886	0.745	1.000														
(4) <i>Governance Score</i> _{<i>i,t</i>}		0.657	0.375	0.345	1.000													
(5) <i>Controversies Score</i> _{<i>i,t</i>}		-0.279	-0.303	-0.281	-0.089	1.000												
(6) <i>Signatories</i> _{<i>i</i>}	1.36	0.377	0.380	0.374	0.160	-0.335	1.000											
(7) <i>ROA</i> _{<i>i,t-1</i>}	1.16	0.061	0.054	0.071	0.018	-0.020	0.069	1.000										
(8) <i>Liabilities</i> _{<i>i,t-1</i>}	1.26	0.130	0.117	0.102	0.075	-0.104	0.145	-0.199	1.000									
(9) <i>Cash</i> _{<i>i,t-1</i>}	1.15	-0.089	-0.112	-0.016	-0.131	-0.033	-0.008	0.142	-0.294	1.000								
(10) <i>MTB</i> _{<i>i,t-1</i>}	1.05	0.038	0.036	0.065	-0.027	-0.022	0.045	0.142	-0.036	0.133	1.000							
(11) <i>Log Market Cap</i> _{<i>i,t-1</i>}	1.84	0.570	0.593	0.554	0.230	-0.430	0.493	0.243	0.132	-0.028	0.145	1.000						
(12) <i>Log Board Size</i> _{<i>i,t-1</i>}	1.48	0.350	0.358	0.310	0.158	-0.225	0.282	-0.031	0.319	-0.187	-0.003	0.468	1.000					
(13) <i>Board Independence</i> _{<i>i,t-1</i>}	1.21	0.367	0.254	0.281	0.367	-0.065	0.161	-0.015	0.128	-0.082	0.010	0.192	0.204	1.000				
(14) <i>Board Gender Diversity</i> _{<i>i,t-1</i>}	1.13	0.400	0.329	0.335	0.290	-0.128	0.147	0.025	0.146	-0.058	0.042	0.226	0.172	0.261	1.000			
(15) <i>CEO Duality</i> _{<i>i,t-1</i>}	1.05	-0.004	0.070	0.037	-0.134	-0.045	0.061	0.073	0.021	-0.035	0.009	0.126	0.083	-0.081	-0.035	1.000		
(16) <i>Insider Ownership</i> _{<i>i,t-1</i>}	1.33	-0.205	-0.199	-0.181	-0.142	0.069	-0.139	-0.005	-0.108	0.137	0.021	-0.226	-0.193	-0.259	-0.120	0.103	1.000	
(17) <i>Institutional Ownership</i> _{<i>i,t-1</i>}	1.29	0.019	-0.046	0.010	0.082	0.182	-0.134	0.013	-0.115	-0.017	-0.016	-0.121	-0.121	0.199	0.068	-0.092	-0.345	1.000

Note: This table presents correlation coefficients between our main variables. All variables are defined in Table A.3.1.

Table 3.4: Baseline DiD

<i>Dependent variable</i>	<i>(1) ESG Score_{it}</i>	<i>(2) Environmental Score_{it}</i>	<i>(3) Social Score_{it}</i>	<i>(4) Governance Score_{it}</i>	<i>(5) Controversies Score_{it}</i>
<i>SignatoriesPost_{it-1}</i>	-5.078*** (0.742)	-7.084*** (1.201)	-4.394*** (0.932)	-3.522*** (1.000)	-5.030*** (1.677)
<i>ROA_{it-1}</i>	-2.054 (2.347)	-6.258* (3.407)	-2.115 (2.765)	0.472 (3.182)	16.912*** (4.503)
<i>Liabilities_{it-1}</i>	-2.710* (1.560)	-0.260 (2.378)	-2.600 (1.874)	-2.344 (2.215)	-0.509 (2.800)
<i>Cash_{it-1}</i>	-0.655 (1.986)	-0.720 (2.834)	0.253 (2.293)	-1.998 (2.836)	10.004*** (3.565)
<i>MTB_{it-1}</i>	-0.024* (0.013)	-0.014 (0.018)	-0.026* (0.015)	-0.023 (0.018)	0.070** (0.033)
<i>Log Market Cap_{it-1}</i>	1.122*** (0.375)	2.366*** (0.595)	1.393*** (0.436)	0.319 (0.494)	-2.293*** (0.728)
<i>Log Board Size_{it-1}</i>	1.973* (1.038)	3.370** (1.712)	1.762 (1.245)	1.007 (1.518)	-1.573 (2.063)
<i>Board Independence_{it-1}</i>	12.578*** (2.089)	3.166 (3.177)	4.583* (2.552)	30.139*** (3.117)	-4.569 (3.722)
<i>CEO Duality_{it-1}</i>	-1.258** (0.530)	0.484 (0.800)	0.016 (0.647)	-4.598*** (0.731)	0.111 (0.902)
<i>Board Gender Diversity_{it-1}</i>	14.851*** (1.971)	17.520*** (3.225)	7.152*** (2.465)	24.106*** (2.997)	4.138 (3.774)
<i>Insider Ownership_{it-1}</i>	-1.367 (8.293)	0.685 (15.110)	-6.015 (10.022)	3.974 (10.619)	13.943 (15.682)
<i>Institutional Ownership_{it-1}</i>	-2.427 (2.021)	-8.295** (3.242)	-4.919** (2.340)	5.383* (3.047)	12.139*** (3.592)
Constant	11.088 (8.872)	-22.016 (13.924)	16.171 (10.347)	17.530 (12.053)	133.997*** (17.391)
Observations	11,708	11,708	11,708	11,708	11,708
Adjusted R-squared	0.844	0.832	0.820	0.673	0.468
Year FE	YES	YES	YES	YES	YES
Firm FE	YES	YES	YES	YES	YES

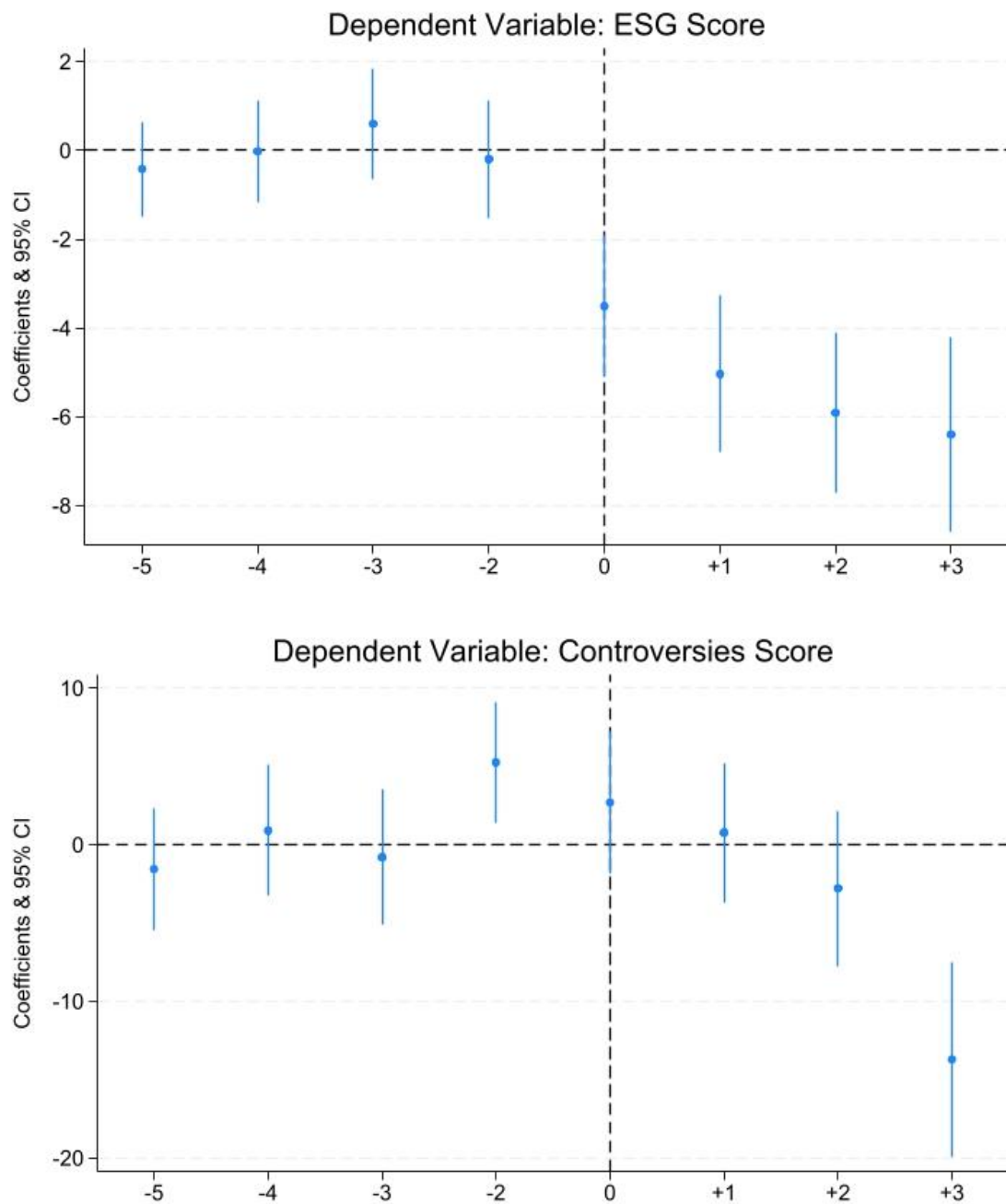
Note: This table presents the regression results of equation (3.1) examining the impact of signing the BRS on companies' ESG. The dependent variables are ESG score in column (1), Environmental score in column (2), Social score in column (3), Governance score in column (4) and Controversies score in column (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 Table A.3.1.

Table 3.5: Parallel trends test

<i>Dependent variable</i>	<i>(1) ESG Score_{it}</i>	<i>(2) Controversies Score_{it}</i>
<i>Signatories</i> ⁻⁵	-0.414 (0.543)	-1.542 (1.997)
<i>Signatories</i> ⁻⁴	-0.015 (0.579)	0.903 (2.129)
<i>Signatories</i> ⁻³	0.604 (0.635)	-0.791 (2.206)
<i>Signatories</i> ⁻²	-0.192 (0.679)	5.261*** (1.980)
<i>Signatories</i> ⁰	-3.506*** (0.808)	2.713 (2.306)
<i>Signatories</i> ⁺¹	-5.033*** (0.897)	0.785 (2.260)
<i>Signatories</i> ⁺²	-5.909*** (0.913)	-2.780 (2.535)
<i>Signatories</i> ⁺³	-6.397*** (1.116)	-13.696*** (3.183)
Constant	11.380 (8.870)	136.505*** (17.392)
Observations	11,708	11,708
Adjusted R-squared	0.845	0.470
Controls	YES	YES
Year FE	YES	YES
Firm FE	YES	YES

Note: This table presents the regression results of equation (3.2) examining the dynamic impact of signing the BRS on companies' ESG in the parallel trends test. The dependent variables are ESG score in column (1) and Controversies score in column (2). 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 Table A.3.1.

Figure 3.1: Parallel trends



Note: These figures present the coefficients on the pre- and post-signatories indicators expressed in equation (3.2) and shown in Table 3.5. The x-axis shows the years pre- and post-signing of the BRS. With the year 0 representing the time of signing. The points represent the coefficient values, and the vertical bars represent the 95% confidence intervals.

Table 3.6: PSM DiD

<i>Dependent variable</i>	<i>(1) ESG Score_{it}</i>	<i>(2) Controversies Score_{it}</i>
<i>SignatoriesPost_{it-1}</i>	-2.204** (0.914)	2.943 (2.297)
<i>ROA_{it-1}</i>	-8.538 (5.400)	34.271*** (12.834)
<i>Liabilities_{it-1}</i>	-3.017 (3.029)	2.595 (7.139)
<i>Cash_{it-1}</i>	0.244 (3.638)	7.034 (11.032)
<i>MTB_{it-1}</i>	-0.016 (0.015)	0.066 (0.069)
<i>Log Market Cap_{it-1}</i>	2.016** (0.853)	0.564 (1.732)
<i>Log Board Size_{it-1}</i>	2.497 (2.059)	0.201 (5.599)
<i>Board Independence_{it-1}</i>	17.474*** (4.276)	-6.215 (11.131)
<i>CEO Duality_{it-1}</i>	-1.145 (1.019)	-0.688 (2.124)
<i>Board Gender Diversity_{it-1}</i>	10.846*** (4.004)	10.389 (10.715)
<i>Insider Ownership_{it-1}</i>	-12.025 (26.456)	140.708** (64.678)
<i>Institutional Ownership_{it-1}</i>	-6.824 (4.962)	18.518 (13.798)
Constant	0.131 (20.730)	44.863 (45.901)
Observations	9,625	9,625
Adjusted R-squared	0.810	0.499
Year FE	YES	YES
Firm FE	YES	YES

Note: This table presents the regression results of equation (3.1) examining the impact of signing the BRS on companies' ESG on a PSM-matched sample. The dependent variables are ESG score in column (1) and Controversies score in column (2). 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 Table A.3.1.

Table 3.7: Moderating tests

	Non-sustainability-sensitive industries	Sustainability-sensitive industries	Non-consumer-goods industries	Consumer-goods industries
	(1)	(2)	(3)	(4)
<i>Dependent variable</i>	<i>ESG Score_{it}</i>	<i>ESG Score_{it}</i>	<i>ESG Score_{it}</i>	<i>ESG Score_{it}</i>
<i>SignatoriesPost_{it-1}</i>	-2.864*** (1.034)	1.434 (1.733)	-2.576** (1.154)	-1.081 (1.352)
Constant	12.240 (23.162)	-34.278 (33.478)	-25.774 (27.180)	59.854** (27.979)
Observations	7,959	1,666	6,656	2,964
Adjusted R-squared	0.812	0.816	0.787	0.862
Controls	YES	YES	YES	YES
Year FE	YES	YES	YES	YES
Firm FE	YES	YES	YES	YES

	Low Board Independence	High Board Independence	Not ESG linked	ESG linked
	(5)	(6)	(7)	(8)
<i>Dependent variable</i>	<i>ESG Score_{it}</i>	<i>ESG Score_{it}</i>	<i>ESG Score_{it}</i>	<i>ESG Score_{it}</i>
<i>SignatoriesPost_{it-1}</i>	-4.071** (1.740)	-1.128 (0.993)	-2.863** (1.400)	-1.533 (1.069)
Constant	-23.476 (37.225)	23.256 (21.687)	8.467 (26.126)	17.985 (24.724)
Observations	4,911	4,418	6,300	3,155
Adjusted R-squared	0.829	0.819	0.825	0.814
Controls	YES	YES	YES	YES
Year FE	YES	YES	YES	YES
Firm FE	YES	YES	YES	YES

Note: This table presents the regression results of equation (3.1) examining the moderating impact of different factors in the effect of signing the BRS on companies' ESG. The analysis is conducted on a PSM-matched sample. The dependent variables are ESG score in column (1) and (3), and Controversies score in column (2) and (4). 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 Table A.3.1.

APPENDIX for CHAPTER 3

Table A.3.1: Variable definitions

Variables	Definitions	Database
<u>Dependent Variable</u>		
<i>ESG Score</i>	An overall company score based on the self-reported information in the environmental, social and corporate governance pillars.	LSEG
<i>Environmental Score</i>	A score that measures a company's impact on living and non-living natural systems, including the air, land and water, as well as complete ecosystems.	LSEG
<i>Social Score</i>	A score that measures a company's capacity to generate trust and loyalty with its workforce, customers and society, through its use of best management practices.	LSEG
<i>Governance Score</i>	A score that measures a company's systems and processes, which ensure that its board members and executives act in the best interests of its long-term shareholders.	LSEG
<i>Controversies Score</i>	A score that measures a company's exposure to environmental, social and governance controversies and negative events reflected in global media.	LSEG
<u>Dependent Variable</u>		
<i>SignatoriesPost</i>	Indicator that equals 1 if a firm is a signatory of the Business Roundtable Statement on the Purpose of a Corporation.	Business Roundtable
<u>Other Variables</u>		
<i>ROA</i>	Income before extraordinary items divided by total assets.	Compustat
<i>Liabilities</i>	Total liabilities divided by total assets.	Compustat
<i>Cash</i>	Cash and short-term investments divided by total assets.	Compustat
<i>MTB</i>	Market value divided by its book value.	Compustat
<i>Log Market Value</i>	Log of the firm's market value.	Compustat
<i>Log Board Size</i>	Log of the number of directors on the board.	LSEG
<i>Board Independence</i>	Percentage of non-executive directors on the board.	LSEG
<i>CEO Duality</i>	Indicator equals 1 if CEO is also the chairman of the board.	LSEG
<i>Board Gender Diversity</i>	Percentage of female directors on the board.	LSEG
<i>Institutional Ownership</i>	Percentage owned by institutions.	LSEG
<i>Insider Ownership</i>	Percentage owned by insiders.	LSEG
<i>Sustainability-sensitive industry</i>	Indicator equals 1 if a company is operating in the oil and gas, chemicals, metals and mining, paper and forest products, utilities, beverages, food and tobacco, or aerospace and defence sectors	Al-Shaer and Zaman (2019)

<i>Consumer-goods industry</i>	Indicator equals 1 if a company is operating in the consumer goods sectors, which correspond to the following four-digit SIC codes: 0000–0999, 2000–2399, 2500–2599, 2700–2799, 2830–2869, 3000–3219, 3420–3429, 3523, 3600–3669, 3700–3719, 3751, 3850–3879, 3880–3999, 4813, 4830–4899, 5000–5079, 5090–5099, 5130–5159, 5220–5999, 7000–7299, 7400–9999.	Lev et al. (2010)
<i>ESG-linked</i>	Indicator equals 1 if a company has an ESG performance-oriented compensation policy, which includes remuneration for CEO, executive directors, non-board executives, and other management bodies based on ESG or sustainability factors.	LSEG

Table A.3.2: Conventional DiD

<i>Dependent variable</i>	<i>(1) ESG Score_t</i>	<i>(2) Controversies Score_t</i>
<i>Signatories (201908)_i</i>	6.254*** (1.284)	-9.546*** (2.014)
<i>Signatories_i x Post (201908)_{t-1}</i>	-2.788*** (0.840)	-3.237* (1.907)
<i>ROA_{i,t-1}</i>	-13.929*** (3.358)	33.447*** (4.927)
<i>Liabilities_{i,t-1}</i>	0.109 (1.495)	-2.839 (1.781)
<i>Cash_{i,t-1}</i>	-5.657*** (2.192)	-6.015** (2.902)
<i>MTB_{i,t-1}</i>	-0.122*** (0.030)	0.120*** (0.041)
<i>Log Market Cap_{i,t-1}</i>	5.952*** (0.289)	-5.761*** (0.436)
<i>Log Board Size_{i,t-1}</i>	6.879*** (1.447)	1.289 (1.610)
<i>Board Independence_{i,t-1}</i>	36.197*** (3.025)	0.140 (3.394)
<i>CEO Duality_{i,t-1}</i>	-1.170** (0.593)	0.889 (0.640)
<i>Board Gender Diversity_{i,t-1}</i>	28.354*** (3.051)	-5.440* (3.078)
<i>Insider Ownership_{i,t-1}</i>	-0.387 (6.796)	9.037 (6.369)
<i>Institutional Ownership_{i,t-1}</i>	1.840 (2.132)	16.504*** (2.644)
Constant	-135.896*** (6.292)	203.694*** (8.059)
Observations	11,290	11,290
Adjusted R-squared	0.495	0.252
Year FE	YES	YES
Industry FE	YES	YES

Note: This table presents the conventional DID regression results examining the impact of signing the BRS on companies' ESG. I exclude all the subsequent signatories who sign the BRS after Aug 19, 2019. The Signatories take the value of 1 if a firm is the initial BRS signatory. Post equals to 1 for all firm-year observations dated after Aug 19, 2019. The dependent variables are ESG score in column (1) and Controversies score in column (2). 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 Table A.3.1.

Table A.3.3: PSM

Panel A: Probit regression					
<i>Dependent variable</i>		<i>(1)</i> <i>Signatories_i</i>			
<i>ROA</i>		-1.756***			
		(0.565)			
<i>Liabilities</i>		0.937***			
		(0.275)			
<i>Cash</i>		-0.136			
		(0.438)			
<i>MTB</i>		-0.003			
		(0.003)			
<i>Log Market Cap</i>		0.598***			
		(0.055)			
<i>Log Board Size</i>		0.741***			
		(0.266)			
<i>Board Independence</i>		1.864***			
		(0.712)			
<i>CEO Duality</i>		-0.064			
		(0.101)			
<i>Board Gender Diversity</i>		2.125***			
		(0.483)			
<i>Insider Ownership</i>		-4.423			
		(2.855)			
<i>Institutional Ownership</i>		-0.955**			
		(0.445)			
Constant		-18.087***			
		(1.495)			
Observations		11,569			
Pseudo R2		0.394			
Year FE		YES			
Industry FE		YES			

Panel B: PSM diagnostic test					
Dependent variable		Mean		t-test	
		Treated	Control	t	p
<i>ROA</i>	Unmatched	0.061	0.050	6.2	0
	Matched	0.059	0.056	1.25	0.212
<i>Liabilities</i>	Unmatched	0.698	0.606	16.41	0
	Matched	0.694	0.701	-0.98	0.33
<i>Cash</i>	Unmatched	0.123	0.126	-0.89	0.373
	Matched	0.115	0.111	1.05	0.296
<i>MTB</i>	Unmatched	4.830	3.718	5.43	0
	Matched	4.576	4.466	0.3	0.767
<i>Log Market Cap</i>	Unmatched	24.289	22.328	60.65	0
	Matched	24.043	24.045	-0.03	0.975
<i>Log Board Size</i>	Unmatched	2.433	2.254	31.64	0
	Matched	2.421	2.418	0.4	0.687
<i>Board Independence</i>	Unmatched	0.863	0.819	17.84	0
	Matched	0.862	0.861	0.28	0.777
<i>CEO Duality</i>	Unmatched	0.687	0.612	6.11	0
	Matched	0.683	0.689	-0.33	0.741
<i>Board Gender Diversity</i>	Unmatched	0.257	0.217	14.5	0
	Matched	0.252	0.251	0.32	0.75
<i>Insider Ownership</i>	Unmatched	0.006	0.025	-15.33	0
	Matched	0.006	0.007	-1.15	0.25
<i>Institutional Ownership</i>	Unmatched	0.801	0.860	-16.43	0
	Matched	0.819	0.825	-1.53	0.127

Note: This table reports additional statistics from the PSM analysis reported in Table 3.6. Panel A reports the regression results for the estimation of the propensity score. Panel B compares the matched and unmatched samples across the matching characteristics.

Table A.3.4: PSM parallel trends test

<i>Dependent variable</i>	<i>(1) ESG Score _t</i>	<i>(2) Controversies Score _t</i>
<i>Signatories</i> ⁻⁵	0.199 (0.752)	-1.005 (2.893)
<i>Signatories</i> ⁻⁴	0.535 (0.757)	-1.875 (3.080)
<i>Signatories</i> ⁻³	0.696 (0.694)	-2.947 (3.043)
<i>Signatories</i> ⁻²	0.582 (0.767)	2.833 (2.538)
<i>Signatories</i> ⁰	-1.814** (0.852)	3.067 (2.990)
<i>Signatories</i> ⁺¹	-2.496** (1.010)	3.611 (2.839)
<i>Signatories</i> ⁺²	-2.807** (1.155)	3.186 (3.405)
<i>Signatories</i> ⁺³	-1.927 (1.443)	3.956 (4.682)
Constant	0.867 (20.679)	42.869 (45.591)
Observations	9,625	9,625
Adjusted R-squared	0.811	0.500
Controls	YES	YES
Year FE	YES	YES
Firm FE	YES	YES

Note: This table presents the regression results of equation (3.2) examining the dynamic impact of signing the BRS on companies' ESG in the parallel trends test on the PSM-matched sample. The dependent variables are ESG score in column (1) and Controversies score in column (2). 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 Table A.3.1.

Table A.3.5: Additional robustness tests

<i>Dependent variable</i>	Baseline		PSM	
	(1) <i>ESG Score_t</i>	(2) <i>Controversies Score_t</i>	(3) <i>ESG Score_t</i>	(4) <i>Controversies Score_t</i>
<i>SignatoriesPost_{i,t-1}</i>	-5.064*** (0.748)	-5.136*** (1.687)	-1.458* (0.877)	3.484 (2.276)
<i>ROA_{i,t-1}</i>	-2.095 (2.348)	16.811*** (4.506)	-9.898* (5.657)	42.446*** (12.416)
<i>Liabilities_{i,t-1}</i>	-2.708* (1.561)	-0.435 (2.802)	-3.786 (3.077)	1.163 (6.701)
<i>Cash_{i,t-1}</i>	-0.657 (1.987)	9.965*** (3.566)	0.816 (3.884)	5.159 (9.972)
<i>MTB_{i,t-1}</i>	-0.026** (0.013)	0.072** (0.034)	-0.019 (0.015)	0.129* (0.072)
<i>Log Market Cap_{i,t-1}</i>	1.122*** (0.375)	-2.273*** (0.728)	2.082** (0.918)	-0.841 (1.802)
<i>Log Board Size_{i,t-1}</i>	1.917* (1.040)	-1.583 (2.068)	1.536 (2.057)	-3.104 (5.441)
<i>Board Independence_{i,t-1}</i>	12.579*** (2.092)	-4.397 (3.722)	17.867*** (4.069)	-5.747 (10.526)
<i>CEO Duality_{i,t-1}</i>	-1.275** (0.532)	0.151 (0.904)	-2.067** (0.918)	0.910 (2.047)
<i>Board Gender Diversity_{i,t-1}</i>	14.936*** (1.972)	4.137 (3.781)	11.426*** (3.959)	12.463 (10.759)
<i>Insider Ownership_{i,t-1}</i>	-1.496 (8.290)	14.096 (15.681)	-17.128 (23.370)	165.520*** (57.653)
<i>Institutional Ownership_{i,t-1}</i>	-2.541 (2.027)	11.956*** (3.599)	-9.295* (4.984)	20.243 (14.280)
Constant	11.280 (8.872)	133.601*** (17.410)	3.526 (22.391)	82.519* (48.672)
Observations	11,686	11,686	9,661	9,661
Adjusted R-squared	0.844	0.464	0.811	0.528
Year FE	YES	YES	YES	YES
Firm FE	YES	YES	YES	YES

Note: This table presents the regression results of equation (3.1) examining the impact of signing the BRS on companies' ESG on a PSM-matched sample, excluding Boeing Company and Bank of New York Mellon Corporation. The dependent variables are ESG score in columns (1) and (3) and Controversies score in column (2) and (4). 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 Table A.3.1.

Table A.3.6: Entropy balancing

Panel A: Diagnostic test						
<i>Before</i>						
	mean	Treat variance	skewness	mean	Control variance	skewness
<i>ROA</i>	0.062	0.004	0.375	0.049	0.005	-0.055
<i>Liabilities</i>	0.693	0.036	0.036	0.603	0.051	0.098
<i>Cash</i>	0.124	0.012	1.530	0.128	0.021	1.735
<i>MTB</i>	4.637	101.200	1.467	3.665	55.050	1.852
<i>Log Market Cap</i>	24.240	1.540	-0.226	22.250	1.606	0.422
<i>Log Board Size</i>	2.431	0.032	-0.639	2.246	0.054	-0.353
<i>Board Independence</i>	0.860	0.006	-1.829	0.814	0.011	-1.278
<i>CEO Duality</i>	0.692	0.213	-0.830	0.608	0.238	-0.442
<i>Board Gender Diversity</i>	0.251	0.010	0.152	0.208	0.013	0.219
<i>Insider Ownership</i>	0.006	0.001	8.650	0.026	0.003	3.523
<i>Institutional Ownership</i>	0.799	0.017	-0.661	0.854	0.023	-1.369
<i>After</i>						
	mean	Treat variance	skewness	mean	Control variance	skewness
<i>ROA</i>	0.062	0.004	0.375	0.062	0.004	0.375
<i>Liabilities</i>	0.693	0.036	0.036	0.693	0.036	0.036
<i>Cash</i>	0.124	0.012	1.530	0.124	0.012	1.531
<i>MTB</i>	4.637	101.200	1.467	4.636	101.200	1.467
<i>Log Market Cap</i>	24.240	1.540	-0.226	24.240	1.540	-0.222
<i>Log Board Size</i>	2.431	0.032	-0.639	2.431	0.032	-0.637
<i>Board Independence</i>	0.860	0.006	-1.829	0.860	0.006	-1.826
<i>CEO Duality</i>	0.692	0.213	-0.830	0.691	0.213	-0.829
<i>Board Gender Diversity</i>	0.251	0.010	0.152	0.251	0.010	0.153
<i>Insider Ownership</i>	0.006	0.001	8.650	0.006	0.001	8.649
<i>Institutional Ownership</i>	0.799	0.017	-0.661	0.799	0.017	-0.660

Panel B: Entropy Balanced DID		
<i>VARIABLES</i>	(1) <i>ESG Score_{it}</i>	(2) <i>Controversies Score_{it}</i>
<i>SignatoriesPost_{i,t-1}</i>	-1.681* (0.863)	3.053 (2.057)
Constant	-23.594 (22.763)	70.230* (42.205)
Observations	11,708	11,708
Adjusted R-squared	0.809	0.558
Controls	YES	YES
Year FE	YES	YES
Firm FE	YES	YES

Note: This table presents the regression results of equation (3.1) examining the impact of signing the BRS on companies' ESG on an entropy-balanced sample. The dependent variables are ESG score in column (1) and Controversies score in column (2). 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 Table A.3.1.

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

4.1 Introduction

“I 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,³⁴ 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*.³⁵ 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 my study, I investigate the link between ESG contracting and firm’s likelihood of engaging in ESG Controversies.³⁶

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.³⁷ 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 renewable energy sources

³⁴ See Hill (2021) <https://www.ft.com/content/c1d0e4d5-b42f-4287-8bfe-319f31a7acbe>.

³⁵ I 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 ESG contracting and ESG-linked executive compensation.

³⁶ I follow Klein and 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.

³⁷ 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).

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.³⁸

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 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

³⁸ 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).

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. (2024b) 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 ESG 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),³⁹ and ESG contracting might be seen as a solution to curbing such instances of corporate wrongdoing (Walker, 2022).

In my study, I focus on the understudied link between firms' adoption of ESG contracting and the occurrence of ESG Controversies. Specifically, I 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. My 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 – I 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 my findings as indicative of strategic, rent-seeking behaviour by managers with ESG-linked pay packages, I 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). My 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. My findings also hold when I 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, my 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.

³⁹ 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.

My research contributes to the literature in several meaningful ways. To the best of my knowledge, I am 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),⁴⁰ I 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, I 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. I therefore add a new dimension to the literature that documents the ‘dark side’ of ESG contracting (e.g., Liu et al., 2024b) by focusing on ESG-based negative outcomes instead of stock-market based indicators such as stock price crash risk.

Relatedly, I 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, 2022b), 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, 2022b). My study aligns with 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, I 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.

⁴⁰ 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>)

In line with the above, my 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 Chapter 4.2, I develop hypotheses on the association between ESG contracting and ESG Controversies. In Chapter 4.3, I elaborate on the research design, while Chapter 4.4 presents the empirical results and robustness checks. I discuss my study's implications and offer concluding remarks in Chapter 4.5.

4.2 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; Godfrey et 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. I 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. I 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, I 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, 2022b; Liu et al., 2024b). 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 (2022b) 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 prioritisation 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 (2022b) 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, 2022b). 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, I 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, I 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 ESG 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. (2024b) 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, I propose the following hypothesis:

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

4.3 Research Design

4.3.1 Sample selection and data collection

My sample comprises the constituents of the S&P 1500 over the sample period 2009-2021. I start my 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 my sample, I 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. I 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, I use the ESG Controversies Score (*Controversies Score*), provided by LSEG EIKON, as my 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.

My main independent variable of interest is ESG contracting (*ESG Contracting*), 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, *ESG Contracting* 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 my regression analyses, I control for firm, governance, and executive compensation characteristics to isolate the impact of ESG contracting on ESG Controversies. I 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, I 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*).

I source data on governance characteristics from LSEG EIKON and ExecuComp, and I 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, I 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, I 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).

I 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, I 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 Table A.4.1.

4.3.2 Model specification

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

$$\begin{aligned}
 \text{Controversies Score}_{i,t} & \quad (4.1) \\
 &= \beta_0 + \beta_1 \text{ESGContracting}_{i,t-1} + \beta_2 X_{i,t-1} + \text{Year FE}_t \\
 &+ \text{Firm FE}_i + \epsilon_{i,t}
 \end{aligned}$$

where i indexes firms; t indexes years; *Controversies Score* _{i,t} is the dependent variable of interest of firm i at time t ; *ESGContracting* _{$i,t-1$} 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. I 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.

4.4 Results

4.4.1 Descriptive statistics

Panel A of Table 4.1 shows the annual distribution of S&P 1500 constituents adopting ESG contracting during my 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. I 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 my 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 4.1 here]

In Table 4.2, Panel A I offer the descriptive statistics for the entire dataset. Panel B of Table 4.2 shows the differences between firms with ESG Contracting and firms without ESG Contracting. On average, my 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 4.2 here]

Furthermore, Panel B of Table 4.2 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. I will employ a variety of approaches to address these endogeneity concerns in my analysis.

Table A.4.2 presents the pairwise correlations among the variables used in this study, confirming some initial observations I discuss above. Consistent with my descriptive statistics, there is a negative correlation between ESG contracting and the ESG Controversies score. Regarding the correlations between other variables in my study, no pair of variables has a correlation coefficient exceeding 58%.⁴¹

4.4.2 Benchmark results on the impact of ESG contracting on ESG Controversies

In Table 4.3, I present my baseline regression results based on an estimation of equation (4.1). Column (1) shows the coefficient value for my independent variable of interest, *ESGContracting*, without any controls. I 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), I progressively incorporate various sets of control variables. Consistent with my initial findings, my 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, my results do not align with the notion of ESG contracting serving as an effective tool to mitigate ESG Controversies (as proposed in H1a).

⁴¹ In unreported tests, I have confirmed that none of the independent variables have a VIF exceeding 5, thus reducing concerns of potential multicollinearity between my variables.

[Insert Table 4.3 here]

While the main focus of my 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 my 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, I also run my baseline model but instead of the ESG Controversies scores as my dependent variable I 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 4.3. In line with prior studies, I find that the implementation of ESG contracting is associated with an increase in firms' ESG Score. Specifically, I find that ESG contracting firms display 1.61 points higher in ESG Score than non-contracting firms after accounting for my sets of control variables. Hence, it does not seem to be the case that my sample firms show different ESG dynamics compared to those firms in prior studies, reducing the concern that my results are driven by sample selection effects.

Taken together, the results presented in Table 4.3 are suggestive of managerial incentive misalignment and the Multitasking Problem as discussed in the hypothesis development of H1b. To be specific, the adoption of ESG contracting seems to direct managerial focus and efforts disproportionately towards specific ESG dimensions. This situation is likely stemming from the imbalance structure of ESG-linked compensation, which put substantial focus on measurable or self-reported ESG metrics over more complicated or externally validated ESG misconduct, resulting in more opportunistic behaviour such as to prioritise improvements in self-reported ESG metrics over the mitigation of externally reported controversies. These findings are economically significant as they highlight a behavioural pattern that could potentially be explained by Agency Theory and Multitasking Problem. As rational agents of a company, managers often perform a trade-off - maximising their personal utility at the expense of less tangible but critical outcomes. From the results presented in Table 4.3, such trade-off is manifested by the increase in ESG score and the reduction in ESG Controversies score. The observed prioritisation of self-reported metrics could also stem from the lower costs and effort required to improve internal reporting mechanisms of ESG disclosures,

compared to preventing or mitigating ESG controversies discovered by third parties, which often require more significant resource allocation and long-term strategic changes.

Finally, I 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, 2022b; Cohen et al., 2023). To evaluate this assertion in the context of ESG Controversies, I split my 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, I 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, I 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*). I present the results in Table 4.4.

[Insert Table 4.4 here]

I 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.

4.4.3 Endogeneity and further robustness tests

Two-stage least squares regression model

In my benchmark model, I have addressed potential confounding factors by including a broad set of control variables and fixed effects in my 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 my results.

To mitigate this endogeneity concern, I 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, as Ioannou and Serafeim (2012) suggest that a company's ESG policy is largely influenced by the ESG policy or practices of other companies within the same industry-state pair, the instrument I 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 while excluding the firm itself, as motivated by Aouadi and Marsat (2018), El Ghoul et al. (2016) and Kim et al. (2014). 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 my 2SLS regression analysis.

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

$$ESGContracting_{i,t} = \beta_0 + \beta_1 IV_{i,t} + \beta_2 X_{i,t} + Year FE_t + Firm FE_i + \epsilon_{i,t} \quad (4.2)$$

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 (4.1). In the second-stage regression, I regress the ESG Controversies score on the predicted ESG contracting variable, derived from equation (2), in the preceding year with the following regression:

$$\begin{aligned}
& \text{Controversies Score}_{i,t} & (4.3) \\
& = \beta_0 + \beta_1 \widehat{ESGContracting}_{i,t-1} + \beta_2 X_{i,t-1} + \text{Year FE}_t \\
& + \text{Firm FE}_i + \epsilon_{i,t}
\end{aligned}$$

Column (1) in Table 4.5 presents the outcome of the second stage regression. The results of the first stage regression are reported in Table A.4.3.⁴² Consistent with my baseline results in Table 4.3, the coefficient of the predicted ESG Contracting variable remains significantly negative, although at a lower significance level, supporting my H1b hypothesis.

[Insert Table 4.5 here]

Entropy balancing approach

To further address endogeneity concerns arising from significant disparities between contracting and non-contracting firms, I 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 (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). I apply entropy balancing to the same set of controls used in my baseline analysis. Table A.4.4 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 4.5 presents the re-estimated baseline results on the entropy balanced sample. Consistent with results in Table 4.3, I 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 my

⁴² In the first-stage regression, the significant and positive coefficient of my 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 my instrument qualifies as a "strong" instrument (see also Flammer et al., 2019).

baseline results are not merely a consequence of inherent differences between ESG contracting and non-contracting firms.

Additional controls

My 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 prioritise 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, I follow Tsang et al. (2021) and control for two alternative incentive alignment policies, which I 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 my baseline regression using an entropy-balanced sample with the addition of these two control variables are reported in Table 4.5, column (3). I 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, I 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, I include the previous year's ESG Score as a control variable. Column (4) of Table 4.5 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.

Alternative measure for ESG Controversies

To ensure the robustness of my baseline findings, I 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, I 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, I construct a count of ESG-related violations, including only those related to consumer protection, employment, environment, and workplace safety. Additionally, I 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, I follow the methodology in the literature and adapt my 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, I implement two solutions. First, I include industry fixed effects in my Poisson regression models, which helps to avoid

singleton observations by capturing the variation across industry groups. Second, I 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).

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

[Insert Table 4.6 here]

Consistent with my 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 Table A.4.5.

Overall, these findings suggest that my 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.

4.4.4 Further moderation tests

Internal governance

To summarise my analysis so far, I argue that my results are suggestive of the following transmission channel: ESG contracting may lead to managerial incentive misalignment, which could result in opportunistic managerial prioritisation of quantified ESG metrics over broader ESG concerns, which, finally, allows for increased occurrences of ESG Controversies. However, an alternative explanation for my 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, I divide my sample into sub-samples based on firms' governance structure. In particular, I 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, I 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 I 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 4.7. I 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 I 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.

ESG-related governance mechanisms

A further alternative explanation of my 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, I perform an additional set of sub-sample tests, based on (a) whether firms issue a ESG report (columns (5) and (6) of Table 4.7), and (b) whether they have a ESG committee (columns (7) and (8) of Table 4.7). Contrary to expectations, I 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 ESG 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 my findings are the

result of poor ESG-related governance mechanisms. While I 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 ESG reports and the establishment of ESG 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 ESG 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 ESG committees may dilute their focus and diminish their operational effectiveness.

ESG performance and sustainability sensitive

Next, I 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, I expect that the significant negative impact of *ESGContracting* will primarily appear only for firms with higher ESG Scores. To test this prediction, I divide my 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. I present the results in Table 4.7, 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 subsample suggest that the negative impact of *ESGContracting* on controversies is stronger for firms with better ESG performance. This is in line with explanations of my findings being the result of managerial multitasking problems and opportunistic prioritisation of remuneration-enhancing ESG activities. Furthermore, these results are not consistent

with an alternative explanation positing that my observed results are purely a selection outcome of poor ESG performers driving the results.

Finally, I 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 4.1 (also documented in Al-Shaer & Zaman, 2019). Following prior studies (see for e.g. Patten 1991; Deegan & Gordon 1996; Patten 2002; Al-Shaer & Zaman, 2019), I 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, I categorize my sample into firms from sustainability-sensitive and non-sustainability-sensitive industries and reapply my baseline model. The results, presented in columns (11) and (12) of Table 4.7, 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 my 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.

[Insert Table 4.7 here]

4.5 Summary

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; Bebhuk & Tallarita, 2022b).

Building on this body of research, my study goes beyond the commonly examined link between ESG contracting and self-reported ESG performance. I 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, I 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; Bebhuk & Fried, 2004), I 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. My findings can be further interpreted within the context of the managerial Multitasking Problem, such that ESG contracting might exacerbate this problem, where opportunistic managers prioritise 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, my 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.

My 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, my 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, I urge policymakers, boards, and

investors to exercise caution and avoid uncritically promoting ESG contracting as a cure-all solution.

Furthermore, my 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, my additional analyses reveal that both traditional governance mechanisms (board independence) and ESG-based governance tools (ESG reports, ESG committees) seem ineffective in mitigating the adverse impacts of ESG contracting on promoting ESG Controversies. In fact, my 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.

My study also faces several limitations which present opportunities for future research. While my study has documented intriguing dynamics between governance mechanisms and the link between ESG contracting and ESG Controversies, the scope of my 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, my 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.

Table 4.1: Sample Overview

Panel A: Yearly distribution of ESG contracting				
Year	<i>ESG Contracting = 1</i>	<i>ESG Contracting = 0</i>	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: Industry distribution of ESG contracting				
Sectors	<i>ESG Contracting = 1</i>	<i>ESG Contracting = 0</i>	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 4.2: Descriptive statistics

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

Panel B: Descriptive statistics of the sub-sample						
Variable	ESG Contracting = 1		ESG Contracting = 0		(1) - (2)	
	(1) Mean	Std. Dev.	(2) Mean	Std. Dev.	Diff	t-stat
<i>Controversies Score</i> _{<i>i,t</i>}	82.379	30.119	89.625	23.978	-7.246***	(-12.772)
<i>Total Asset</i> _{<i>i,t-1</i>} (Million)	38,030	80,110	21,990	65,060	16,030***	(10.576)
<i>Book-to-Market</i> _{<i>i,t-1</i>}	0.485	0.351	0.455	0.348	0.030***	(4.229)
<i>ROA</i> _{<i>i,t-1</i>}	0.048	0.072	0.05	0.073	-0.002	(-1.593)
<i>Leverage</i> _{<i>i,t-1</i>}	0.278	0.172	0.256	0.205	0.022***	(5.963)
<i>Cash</i> _{<i>i,t-1</i>}	0.107	0.119	0.138	0.146	-0.031***	(-12.142)
<i>Dividends</i> _{<i>i,t-1</i>}	0.386	0.807	0.369	0.835	0.017	(1.057)
<i>Total Compensation</i> _{<i>i,t-1</i>} (Thousand)	5,024.514	3,543.212	3,912.844	3,207.082	1,111.670***	(16.124)
<i>Cash Compensation</i> _{<i>i,t-1</i>}	0.234	0.122	0.278	0.154	-0.043***	(-16.228)
<i>Stock Compensation</i> _{<i>i,t-1</i>}	0.376	0.171	0.344	0.2	0.032***	(8.821)
<i>Option Compensation</i> _{<i>i,t-1</i>}	0.097	0.121	0.116	0.15	-0.019***	(-7.225)
<i>Insider Ownership</i> _{<i>i,t-1</i>}	0.014	0.04	0.023	0.05	-0.009***	(-9.831)
<i>Institutional Ownership</i> _{<i>i,t-1</i>}	0.826	0.146	0.851	0.148	-0.025***	(-8.543)
<i>Board Size</i> _{<i>i,t-1</i>}	10.564	2.246	9.853	2.269	0.711***	(15.737)
<i>Board Independence</i> _{<i>i,t-1</i>}	0.839	0.091	0.803	0.109	0.035***	(18.170)
<i>Board Gender Diversity</i> _{<i>i,t-1</i>}	0.205	0.104	0.179	0.107	0.026***	(12.574)
<i>CEO Duality</i> _{<i>i,t-1</i>}	0.654	0.476	0.642	0.479	0.012	(1.233)
<i>CEO Tenure</i> _{<i>i,t-1</i>}	7.228	6.442	8.702	7.478	-1.474***	(-10.830)
<i>Analysts</i> _{<i>i,t-1</i>}	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 Table A.4.1.

Table 4.3: Baseline results

Dependent variable	(1) <i>Controversies Score_t</i>	(2) <i>Controversies Score_t</i>	(3) <i>Controversies Score_t</i>	(4) <i>Controversies Score_t</i>	(5) <i>ESG Score_t</i>
<i>ESG Contracting</i> _{<i>i,t-1</i>}	-2.077** (0.947)	-2.114** (0.927)	-2.128** (0.923)	-2.136** (0.914)	1.612*** (0.523)
<i>Log Total Asset</i> _{<i>i,t-1</i>}		-7.095*** (1.091)	-7.251*** (1.076)	-6.743*** (1.050)	3.762*** (0.606)
<i>Book-to-Market</i> _{<i>i,t-1</i>}		-0.303 (1.435)	0.128 (1.443)	-0.044 (1.413)	-0.674 (0.714)
<i>ROA</i> _{<i>i,t-1</i>}		12.616*** (4.680)	11.372** (4.695)	12.080** (4.709)	-0.038 (2.244)
<i>Leverage</i> _{<i>i,t-1</i>}		2.381 (2.946)	2.692 (2.948)	2.542 (2.892)	-3.247* (1.844)
<i>Cash</i> _{<i>i,t-1</i>}		2.096 (3.741)	1.894 (3.721)	1.796 (3.738)	3.752* (2.073)
<i>Dividends</i> _{<i>i,t-1</i>}		-0.226 (0.329)	-0.219 (0.329)	-0.231 (0.326)	0.203* (0.121)
<i>Log Total Compensation</i> _{<i>i,t-1</i>}			0.341 (0.873)	0.534 (0.867)	-0.373 (0.453)
<i>Cash Compensation</i> _{<i>i,t-1</i>}			-4.953 (3.468)	-3.961 (3.459)	-3.320* (1.742)
<i>Stock Compensation</i> _{<i>i,t-1</i>}			-6.608*** (2.229)	-6.083*** (2.270)	2.451** (1.182)
<i>Option Compensation</i> _{<i>i,t-1</i>}			-4.409 (2.852)	-3.995 (2.860)	1.429 (1.570)
<i>Insider Ownership</i> _{<i>i,t-1</i>}				15.398 (14.147)	8.564 (8.920)
<i>Institutional Ownership</i> _{<i>i,t-1</i>}				9.234** (4.015)	-2.264 (2.074)
<i>Log Board Size</i> _{<i>i,t-1</i>}				1.492 (2.059)	1.804 (1.166)
<i>Board Independence</i> _{<i>i,t-1</i>}				-8.045** (3.891)	11.983*** (2.183)
<i>Board Gender Diversity</i> _{<i>i,t-1</i>}				6.240* (3.763)	15.866*** (2.145)
<i>CEO Duality</i> _{<i>i,t-1</i>}				-0.089 (0.946)	-2.111*** (0.595)
<i>CEO Tenure</i> _{<i>i,t-1</i>}				-0.080 (0.060)	-0.040 (0.030)
<i>Analysts</i> _{<i>i,t-1</i>}				-0.208** (0.094)	-0.010 (0.054)
Constant	87.972*** (0.303)	247.422*** (24.447)	249.774*** (27.961)	232.614*** (26.521)	- 44.386*** (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 (4.1) 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 Table A.4.1.

Table 4.4: Moderating effect of managerial power

	CEO is not the Chairman	CEO is the Chairman	Low CEO Tenure	High CEO Tenure
Dependent variable	(1) <i>Controversies Score_t</i>	(2) <i>Controversies Score_t</i>	(3) <i>Controversies Score_t</i>	(4) <i>Controversies Score_t</i>
<i>ESG Contracting_{i,t-1}</i>	-2.079 (1.850)	-2.684** (1.088)	-2.219 (1.407)	-4.848*** (1.424)
<i>Log Total Asset_{i,t-1}</i>	-5.935*** (1.928)	-7.005*** (1.306)	-4.679*** (1.546)	-7.875*** (1.918)
<i>Book-to-Market_{i,t-1}</i>	0.408 (2.079)	-0.573 (1.924)	2.062 (2.185)	-1.363 (2.287)
<i>ROA_{i,t-1}</i>	2.196 (6.160)	13.256* (7.177)	10.509 (7.373)	14.574* (7.539)
<i>Leverage_{i,t-1}</i>	-1.239 (4.345)	2.479 (3.783)	-2.912 (4.896)	6.992 (4.618)
<i>Cash_{i,t-1}</i>	1.370 (5.578)	2.332 (4.971)	1.790 (5.521)	-1.045 (6.125)
<i>Dividends_{i,t-1}</i>	-0.419 (0.438)	-0.157 (0.450)	-0.560 (0.549)	-0.041 (0.394)
<i>Log Total Compensation_{i,t-1}</i>	1.852 (1.572)	0.222 (1.090)	-0.831 (1.514)	1.345 (1.354)
<i>Cash Compensation_{i,t-1}</i>	3.416 (6.014)	-7.172 (4.560)	-9.657 (7.156)	-2.552 (4.882)
<i>Stock Compensation_{i,t-1}</i>	-9.798** (3.928)	-5.166* (2.892)	-7.387* (4.115)	-8.945** (3.539)
<i>Option Compensation_{i,t-1}</i>	-6.331 (4.821)	-2.110 (3.721)	-6.634 (5.009)	-6.370 (4.895)
<i>Insider Ownership_{i,t-1}</i>	-11.637 (32.740)	21.923 (16.585)	21.198 (19.777)	12.522 (23.609)
<i>Institutional Ownership_{i,t-1}</i>	8.683 (6.280)	5.602 (5.060)	15.450** (6.469)	7.564 (8.167)
<i>Log Board Size_{i,t-1}</i>	5.467 (3.804)	-1.792 (2.669)	8.043** (3.220)	-2.296 (3.609)
<i>Board Independence_{i,t-1}</i>	-14.304** (6.759)	-8.933* (4.986)	-7.869 (6.064)	-12.702 (8.049)
<i>Board Gender Diversity_{i,t-1}</i>	4.186 (6.825)	5.545 (4.815)	5.052 (6.104)	5.189 (6.508)
<i>CEO Duality_{i,t-1}</i>	0.000 (0.000)	0.000 (0.000)	0.795 (1.186)	-1.330 (2.225)
<i>CEO Tenure_{i,t-1}</i>	0.049 (0.117)	-0.042 (0.072)	0.208 (0.188)	-0.139 (0.232)
<i>Analysts_{i,t-1}</i>	-0.366** (0.172)	-0.094 (0.116)	-0.391** (0.161)	-0.227* (0.137)
Constant	194.921*** (44.586)	252.836*** (34.238)	189.304*** (41.331)	264.669*** (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 Table A.4.1.

Table 4.5: Endogeneity and robustness tests

	Second Step of 2SLS	Entropy Balancing	Control for Alternative Incentives	Control for ESG Score
	(1)	(2)	(3)	(4)
Dependent variable	<i>Controversies Score_t</i>	<i>Controversies Score_t</i>	<i>Controversies Score_t</i>	<i>Controversies Score_t</i>
<i>ESG Contracting (Instrumented)</i> $i_{i,t-1}$	-29.275* (16.051)			
<i>ESG Contracting</i> $i_{i,t-1}$		-3.379*** (1.081)	-3.314*** (1.097)	-2.959*** (1.142)
<i>CEO Compensation Link to TSR</i> $i_{i,t-1}$			-0.141 (0.822)	
<i>Executive Compensation Link to LT Objectives</i> $i_{i,t-1}$			-0.175 (1.075)	
<i>ESG Score</i> $i_{i,t-1}$				-0.042 (0.039)
Constant	235.72*** (28.989)	270.985*** (30.151)	266.024*** (30.661)	267.128*** (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 Table A.4.1.

Table 4.6: Alternative measure ESG controversies: ESG-related violations

Dependent variable	(1) <i>Total Violation Count_t - ESG-related only</i>	(2) <i>Consumer Protection Count_t</i>	(3) <i>Employment Count_t</i>	(4) <i>Environmental Count_t</i>	(5) <i>Safety Count_t</i>
<i>ESG Contracting_{i,t-1}</i>	0.184** (0.081)	0.218* (0.117)	0.174* (0.098)	0.114 (0.099)	0.121 (0.087)
<i>Log Total Asset_{i,t-1}</i>	0.618*** (0.056)	0.768*** (0.110)	0.428*** (0.069)	0.596*** (0.063)	0.478*** (0.062)
<i>Book-to-Market_{i,t-1}</i>	0.024 (0.138)	-0.240 (0.244)	-0.170 (0.207)	-0.029 (0.142)	-0.204 (0.149)
<i>ROA_{i,t-1}</i>	0.616 (0.464)	-0.470 (1.323)	-0.460 (0.700)	0.443 (0.605)	0.262 (0.491)
<i>Leverage_{i,t-1}</i>	0.055 (0.314)	-0.921 (0.662)	-0.167 (0.319)	0.359 (0.347)	-0.093 (0.396)
<i>Cash_{i,t-1}</i>	-0.603 (0.748)	2.425*** (0.747)	-1.473*** (0.570)	-2.661*** (0.675)	-2.190*** (0.530)
<i>Dividends_{i,t-1}</i>	0.008 (0.025)	-0.094* (0.051)	0.110** (0.050)	0.036 (0.028)	-0.007 (0.033)
<i>Log Total Compensation_{i,t-1}</i>	-0.070 (0.089)	0.045 (0.168)	0.204 (0.134)	-0.221* (0.131)	-0.038 (0.108)
<i>Cash Compensation_{i,t-1}</i>	-0.090 (0.338)	0.376 (0.562)	0.261 (0.572)	-1.740*** (0.654)	0.055 (0.475)
<i>Stock Compensation_{i,t-1}</i>	0.056 (0.227)	0.876* (0.487)	-0.068 (0.361)	-0.317 (0.337)	-0.136 (0.264)
<i>Option Compensation_{i,t-1}</i>	0.071 (0.319)	-0.136 (0.738)	0.353 (0.378)	-0.117 (0.443)	0.263 (0.392)
<i>Insider Ownership_{i,t-1}</i>	-0.036 (1.036)	2.284 (1.929)	-1.414 (1.502)	0.597 (1.044)	0.026 (1.106)
<i>Institutional Ownership_{i,t-1}</i>	0.061 (0.322)	1.296** (0.606)	0.237 (0.360)	-0.393 (0.384)	-0.116 (0.355)
<i>Log Board Size_{i,t-1}</i>	-0.128 (0.187)	0.021 (0.369)	-0.031 (0.278)	-0.062 (0.233)	0.004 (0.242)
<i>Board Independence_{i,t-1}</i>	1.035*** (0.388)	0.556 (0.685)	0.123 (0.507)	0.982* (0.545)	0.825* (0.429)
<i>Board Gender Diversity_{i,t-1}</i>	-0.794** (0.364)	-0.203 (0.712)	0.490 (0.506)	-0.693* (0.409)	-1.182*** (0.385)
<i>CEO Duality_{i,t-1}</i>	0.115 (0.076)	-0.112 (0.155)	0.020 (0.096)	0.009 (0.104)	0.148* (0.087)
<i>CEO Tenure_{i,t-1}</i>	-0.002 (0.007)	0.002 (0.010)	-0.007 (0.007)	0.002 (0.012)	0.004 (0.007)
<i>Analysts_{i,t-1}</i>	-0.002 (0.006)	0.003 (0.015)	0.016** (0.008)	-0.023*** (0.008)	0.003 (0.007)
Constant	-13.075*** (1.243)	-22.124*** (2.502)	-15.059*** (2.027)	-10.220*** (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 I replace my 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 Table A.4.1.

Table 4.7: Moderation tests

	Low Board Independence	High Board Independence	Low Board Gender Diversity	High Board Gender Diversity
<i>Dependent Variable:</i> <i>Controversies Score_{it}</i>	(1)	(2)	(3)	(4)
<i>ESG Contracting_{it-1}</i>	-1.505 (1.423)	-4.512*** (1.451)	-2.395 (1.479)	-3.355** (1.582)
Constant	233.206*** (45.057)	280.076*** (43.777)	249.321*** (38.703)	197.818*** (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 ESG Report	Issue ESG Report	Do not Have ESG Committee	Have ESG Committee
<i>Dependent Variable:</i> <i>Controversies Score_{it}</i>	(5)	(6)	(7)	(8)
<i>ESG Contracting_{it-1}</i>	-1.092 (1.326)	-2.642* (1.487)	-1.338 (1.300)	-2.509* (1.343)
Constant	193.278*** (36.059)	264.202*** (46.719)	211.469*** (36.850)	290.427*** (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
<i>Dependent Variable:</i> <i>Controversies Score_{it}</i>	(9)	(10)	(11)	(12)
<i>ESG Contracting_{it-1}</i>	-2.350* (1.388)	-3.361** (1.392)	-1.134 (1.024)	-5.864*** (1.968)
Constant	210.320*** (42.467)	248.202*** (48.331)	239.160*** (29.069)	228.040*** (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: *ESG sustainability report* in columns (5) and (6); establishment of *ESG 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 Table A.4.1.

APPENDIX for CHAPTER 4

Table A.4.1: Variable definitions

Variable	Definition	Source
<u>Dependent Variable</u>		
<i>Controversies Score</i>	The score that measures a company's exposure to environmental, social and governance controversies and negative events reflected in global media.	LSEG
<i>ESG Score</i>	The score that is an overall company score based on the self-reported information in the environmental, social and corporate governance pillars.	LSEG
<i>Total Violation Count - ESG-related</i>	The sum of violation counts related to consumer protection, employment, environment, and safety.	Violation Tracker
<u>Independent Variable</u>		
<i>ESG Contracting</i>	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
<u>Other Variables</u>		
<i>Log Total Asset</i>	The natural log of firm’s total asset	Compustat
<i>Book-to-Market</i>	Book value scaled by its market value.	Compustat
<i>ROA</i>	Net income scaled by total assets.	Compustat
<i>Leverage</i>	Total debt scaled by total assets.	Compustat
<i>Cash</i>	Cash and short-term investments scaled its assets.	Compustat
<i>Dividends</i>	Total dividends scaled by net income.	Compustat
<i>Log Total Compensation</i>	The natural log of firm’s average total compensation across all executives.	ExecuComp
<i>Cash Compensation</i>	The firm’s average percentage of cash compensation across all executives.	ExecuComp
<i>Stock Compensation</i>	The firm’s average percentage of stock compensation across all executives.	ExecuComp
<i>Option Compensation</i>	The firm’s average percentage of option compensation across all executives.	ExecuComp
<i>Insider Ownership</i>	Percentage of insider ownership.	LSEG
<i>Institutional Ownership</i>	Percentage of institutional ownership.	LSEG
<i>Log Board Size</i>	The natural log of the number of directors on the board.	LSEG
<i>Board Independence</i>	Percentage of independent directors on the board.	LSEG
<i>Board Gender Diversity</i>	Percentage of female on the board.	LSEG

<i>CEO Duality</i>	An indicator that equals 1 if the CEO simultaneously chair the board.	LSEG
<i>CEO Tenure</i>	The number of years the executive has been the CEO.	ExecuComp
<i>Analysts</i>	The number of sell-side analysts covering the firm's security.	LSEG
<i>CEO Compensation Link to TSR</i>	An indicator that equals 1 if a CEO's compensation is linked to total shareholder return (TSR).	LSEG
<i>Executive Compensation Link to LT Objectives</i>	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
<i>ESG Sustainability Reporting</i>	An indicator that equals 1 if a company publishes a separate ESG/Health and Safety/Sustainability report or publish a section in its annual report on ESG/Health and Safety/Sustainability.	LSEG
<i>ESG Sustainability Committee</i>	An indicator that equals 1 if a company has a board level or senior management committee responsible for decision making on ESG strategy	LSEG
<i>Sustainability-Sensitive Industries</i>	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 & Tobacco, Aerospace and Defence).	LSEG

Table A.4.2: Pairwise correlations

Variables	VIF	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)
(1) <i>Controversies Score</i> _{it}		1.000																			
(2) <i>ESG Contracting</i> _{it-1}	1.14	-0.128	1.000																		
(3) <i>Log Total Assets</i> _{it-1}	3.80	-0.422	0.219	1.000																	
(4) <i>Book-to-Market</i> _{it-1}	1.68	-0.022	0.040	0.265	1.000																
(5) <i>ROA</i> _{it-1}	1.29	-0.003	-0.015	-0.095	-0.373	1.000															
(6) <i>Leverage</i> _{it-1}	1.33	0.010	0.052	0.024	-0.216	-0.135	1.000														
(7) <i>Cash</i> _{it-1}	1.44	-0.034	-0.105	-0.267	-0.251	0.134	-0.265	1.000													
(8) <i>Dividends</i> _{it-1}	1.06	0.003	0.010	0.063	-0.014	0.008	0.141	-0.126	1.000												
(9) <i>Log Total Compensation</i> _{it-1}	3.31	-0.365	0.182	0.635	-0.082	0.097	0.099	0.015	0.001	1.000											
(10) <i>Cash Compensation</i> _{it-1}	2.24	0.140	-0.139	-0.297	0.149	-0.086	-0.129	0.000	0.010	-0.637	1.000										
(11) <i>Stock Compensation</i> _{it-1}	2.21	-0.070	0.078	0.141	0.021	-0.076	0.116	0.013	0.059	0.308	-0.399	1.000									
(12) <i>Option Compensation</i> _{it-1}	1.89	-0.043	-0.063	-0.062	-0.196	0.077	-0.027	0.191	-0.124	0.093	-0.130	-0.500	1.000								
(13) <i>Insider Ownership</i> _{t-1}	1.30	0.076	-0.085	-0.207	-0.022	-0.009	-0.095	0.121	-0.022	-0.204	0.257	-0.128	-0.014	1.000							
(14) <i>Institutional Ownership</i> _{it-1}	1.35	0.186	-0.079	-0.217	-0.028	-0.004	0.106	0.003	-0.030	-0.023	-0.104	0.173	0.009	-0.305	1.000						
(15) <i>Log Board Size</i> _{it-1}	1.58	-0.234	0.147	0.575	0.090	-0.031	-0.014	-0.189	0.021	0.370	-0.194	0.002	-0.018	-0.164	-0.188	1.000					
(16) <i>Board Independence</i> _{it-1}	1.31	-0.067	0.157	0.183	-0.009	-0.023	0.030	-0.091	-0.005	0.115	-0.215	0.115	-0.011	-0.252	0.165	0.176	1.000				
(17) <i>Board Gender Diversity</i> _{it-1}	1.24	-0.097	0.116	0.197	-0.049	0.011	0.084	-0.073	0.020	0.190	-0.174	0.149	-0.079	-0.113	0.056	0.172	0.265	1.000			
(18) <i>CEO Duality</i> _{it-1}	1.08	-0.066	0.011	0.122	-0.041	0.070	-0.026	-0.046	0.010	0.092	0.018	-0.098	0.028	0.064	-0.092	0.096	-0.055	-0.021	1.000		
(19) <i>CEO Tenure</i> _{it-1}	1.11	0.057	-0.096	-0.085	-0.010	0.055	-0.089	0.071	0.004	-0.064	0.175	-0.092	0.021	0.184	-0.052	-0.100	-0.110	-0.107	0.150	1.000	
(20) <i>Analysts</i> _{it-1}	2.00	-0.368	0.145	0.548	-0.120	0.122	-0.030	0.101	-0.066	0.592	-0.374	0.189	0.155	-0.149	-0.072	0.312	0.099	0.110	0.110	-0.062	1.000

Note: This table presents correlation coefficients between our main variables. All variables are defined in Table A.4.1.

Table A.4.3: Endogeneity and further robustness tests (first stage of 2SLS)

Dependent variable	First Stage of 2SLS
	(1) <i>ESG Contracting_t</i>
<i>IV_{i,t}</i>	0.014*** (0.004)
<i>Log Total Asset_{i,t}</i>	0.010 (0.017)
<i>Book-to-Market_{i,t}</i>	-0.047* (0.026)
<i>ROA_{i,t}</i>	-0.015 (0.071)
<i>Leverage_{i,t}</i>	-0.006 (0.053)
<i>Cash_{i,t}</i>	-0.028 (0.064)
<i>Dividends_{i,t}</i>	0.002 (0.004)
<i>Log Total Compensation_{i,t}</i>	-0.006 (0.013)
<i>Cash Compensation_{i,t}</i>	-0.046 (0.053)
<i>Stock Compensation_{i,t}</i>	-0.011 (0.035)
<i>Option Compensation_{i,t}</i>	0.029 (0.050)
<i>Insider Ownership_{i,t}</i>	-0.075 (0.317)
<i>Institutional Ownership_{i,t}</i>	-0.134** (0.062)
<i>Log Board Size_{i,t}</i>	0.098 (0.065)
<i>Board Independence_{i,t}</i>	-0.031 (0.037)
<i>Board Gender Diversity_{i,t}</i>	0.223*** (0.081)
<i>CEO Duality_{i,t}</i>	0.001 (0.017)
<i>CEO Tenure_{i,t}</i>	-0.000 (0.001)
<i>Analysts_{i,t}</i>	-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 Table A.4.1.

Table A.4.4: Entropy balance

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

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

Note: This table presents the additional statistics from the entropy-balanced analysis. Panel A reports the difference of distribution between the treatment and control group before balancing. Panel B compares between the treatment and control group after balancing. All variables are defined in Table A.3.1.

Table A.4.5: Endogeneity and further robustness tests (zero inflated poisson)

Dependent variable	(1) <i>Total Violation Count_{it} - ESG-related only</i>
<i>ESG Contracting</i> _{it-1}	0.167** (0.077)
<i>Log Total Asset</i> _{it-1}	0.477*** (0.044)
<i>Book-to-Market</i> _{it-1}	0.095 (0.125)
<i>ROA</i> _{it-1}	0.621 (0.469)
<i>Leverage</i> _{it-1}	0.321 (0.296)
<i>Cash</i> _{it-1}	0.380 (0.658)
<i>Dividends</i> _{it-1}	-0.006 (0.024)
<i>Log Total Compensation</i> _{it-1}	0.048 (0.075)
<i>Cash Compensation</i> _{it-1}	0.410 (0.291)
<i>Stock Compensation</i> _{it-1}	-0.056 (0.201)
<i>Option Compensation</i> _{it-1}	-0.083 (0.282)
<i>Insider Ownership</i> _{it-1}	-0.465 (1.102)
<i>Institutional Ownership</i> _{it-1}	-0.083 (0.294)
<i>Log Board Size</i> _{it-1}	-0.004 (0.015)
<i>Board Independence</i> _{it-1}	0.916** (0.374)
<i>Board Gender Diversity</i> _{it-1}	-0.597 (0.366)
<i>CEO Duality</i> _{it-1}	0.062 (0.067)
<i>CEO Tenure</i> _{it-1}	0.000 (0.007)
<i>Analysts</i> _{it-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 I replace my 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 Table A.4.1.

5 Do Sustainability-Linked Loans Improve Borrowers' ESG Profile? The Moderating Role of Lead Lenders' ESG-Linked Compensation

5.1 Introduction

Improving firms' environmental, social, and governance (ESG) performance becomes one of the most important elements of corporate strategies nowadays amid the growing pressures from different stakeholders (see Krueger et al., 2020). Such pressures are not only extended to influence banks' operations but also passed along to the borrowing companies in lending relationships. Media coverage in recent years has focused the spotlight on the ESG practices of banks, challenging banks to take up their responsibility to promote sustainability in a wider corporate landscape by steering their clients toward more sustainable operations. For example, Reuters (2024) reports that multiple big banks in Canada have been accused of making empty claims about their sustainable lending activities and their impact on borrowers' carbon emissions. Marsh and White (2024) and Mirza (2024) state that UBS and Barclays are often asked to pull back their financing for carbon-intensive clients. In the face of these challenges, growing evidence suggests that banks today often set goals to being more accountable for their borrowers' ESG profiles through sustainable lending activities.⁴³

One of the most popular forms of sustainable financing that helps banks to achieve this objective is to issue green loans and/or green bonds. These debt instruments are use-of-proceeds based, which means that they are only able to channel funds to finance firms' specific ESG projects. While this form of sustainable financing is inevitably limited in a narrow set of industries (Kim et al., 2023), recently another loan instrument called sustainability-linked loans (SLLs) has been globally recognised as a more general avenue for lenders to propagate their ESG objectives in lending relationships. Unlike green loans and green bonds which are issued to finance specific green projects, SLLs have general use-of-proceeds, which means that companies could use SLLs to finance their general

⁴³ For example, HSBC aims to achieve the net-zero targets in both its operations and supply chain by 2030 and to help borrowers from its lending portfolio to gradually transit away from high-carbon activities by 2050 (<https://www.hsbc.com/who-I-am/my-climate-strategy>); Similarly, Morgan Stanley is focused on mobilising US\$1 trillion in sustainable lending activities by 2030 while pursuing net-zero financed emissions in the most carbon-intensive sectors of its lending portfolio (i.e., auto manufacturing, energy and power) by 2050 (<https://www.morganstanley.com/about-us/sustainability-at-morgan-stanley>).

business operations. In addition to this, SLLs also differentiate themselves from other regular bonds and loans by having their contracting terms (i.e. loan spreads) linked to borrowers' ESG performance metrics. That being said, borrowers could potentially enjoy an interest discount by achieved the linked ESG goals. Therefore, with an effective set of ESG-contingent terms in the loan contracts, SLLs could play a pivotal role in incentivising borrowers' commitments to improve their ESG profile, which makes the issuance of SLLs one of the most popular sources of sustainable financing accessible to firms in recent years (Kim et al., 2023). However, some emerging studies (Aleszczyk et al., 2024; Du et al., 2023; Kim et al., 2023) are sceptical about the effectiveness of SLLs in inducing meaningful improvements in corporate ESG and argue that issuing SLLs could be a form of "sustainability washing", where SLLs are not as effective as they should be in terms of incentivising borrowers to improve their ESG performance. To investigate this "sustainability washing" claim, I first follow the existing studies and empirically test the impact of SLLs on the evolution of the borrowers' ESG performance over a 1-year window starting from the loan initiation year. By assembling a dataset comprising syndicated loan facilities originated and closed from 2017 to 2021 using Dealscan via LSEG Loan Connector and LSEG EIKON, I find that SLLs are not significantly associated with the change of borrowers' ESG performance. This observation is robust when comparing to a matched control loan group with similar lenders, borrowers and loan characteristics, suggesting that SLLs do not provide a novel source of incentives to borrowers to drive genuine ESG improvements.

While these results are indicative of "sustainability washing", I proceed to disentangle the potential reason for this concern. Although Kim et al. (2023) and Aleszczyk et al. (2024) have suggested that low transparency regarding the loan details and the lack of financially material terms are the leading causes of the concern, I posit another cause, which is the lack of incentives among the lead lenders in a syndicate to create contracting structures of these loan facilities that aim to improve borrowers' ESG profiles. For instance, I measure such incentives by examining the percentage of lead lenders that have in place ESG-linked executive compensation structures, i.e. their executives' compensation is tied to some ESG criteria. Motivated by financial incentives to pursue specific ESG agendas (Flammer et al., 2019), ESG-linked banks may integrate ESG goals not only within their own operations but also in the volume of sustainable

financing and the ESG performance of their borrowers.⁴⁴ Hence, if a syndicate coordinating SLLs comprises only a few ESG-linked lead banks, it is likely that the syndicate will have less incentive to shape the ESG profile of their clients through the inclusion of effective ESG-related terms in the loan contract, potentially increasing the risk of 'sustainability washing' in SLLs. Therefore, I collect more information about the lenders from LSEG EIKON and test the moderating role of the percentage of ESG-linked lead lenders in a syndicate on the relationship between the SLL issuance and the evolution of borrowers' ESG performance. As conjectured, I find consistent and robust evidence that the borrowers of SLLs show greater improvements in their ESG profiles when a higher proportion of the syndicate's lead lenders have ESG-linked executive pay. Overall, my findings suggest that the composition of the lending syndicate is key in maintaining an effective design and enforcement of the SLLs.

I contribute to the extant literature in several meaningful ways. The emerging literature studying SLLs aims at answering the open question of whether and how banks use leverage to affect corporate ESG profiles (Houston & Shan, 2022). By analysing how SLLs are negotiated, how material the ESG-contingent terms are, and whether the details of the loans are disclosed, researchers conjecture about whether issuing SLLs would credibly signal ESG-friendly practices across borrowers (Aleszczyk et al., 2024; Du et al., 2023; Kim et al., 2023). However, the lenders' impact on SLLs remains unexplored under the current development of this literature strand. Coincidentally, prior studies investigating ESG-linked pay are predominately based on a sample of publicly listed firms and focus on justifying companies' commitment towards ESG, evidenced by their ESG performance and other firm-level outcomes (Cohen et al., 2023; Flammer et al., 2019; Maas, 2018; Ikram et al., 2019, Tsang et al., 2021). To the best of my knowledge, no study to date has investigated the role and impact of ESG-linked pay in the banking sector and specifically in the context of SLLs. My study is the first to bridge these two strands of literature by extending the application of ESG-linked pay to the lender-borrower relationships in the context of the global sustainable lending market. I fill an important and meaningful gap in the literature by shedding light on the interplay between lead lenders' ESG incentives, the issuance of SLLs and their impact on borrowers' ESG improvements. As such, my findings also contribute to the broader and longstanding

⁴⁴ More detailed examples regarding how banks link their ESG targets to executive compensation will be given in Chapter 5.2.

literature on the direct engagement and influence of banks in promoting sustainable practices among borrowers (Houston & Shan, 2022; Kacperczyk & Peydro, 2022; Nini et al., 2012).

In addition, this study provides practical implications to policymakers and regulators related to the “sustainability washing” concern of SLLs (Aleszczyk et al., 2024; FCA, 2023; Kim et al., 2023). Not only do I confirm this pitfall as documented in these studies, but I also provide a new and more fundamental pathway to address this issue from the lenders’ viewpoint. This study posits that the misalignment of the financial incentives of lead lenders’ executives to improve borrowers’ ESG profile could perhaps be the primary cause of SLLs being superficially enforced. Therefore, while Aleszczyk et al. (2024) and Kim et al. (2023) have recommended that the efficacy of SLLs could be improved by making more thorough disclosure regarding the contracting details and including financially material ESG terms in the loan contracts, I contribute by identifying that increasing the proportion of ESG-linked lead lenders is also helpful in terms of alleviating the “sustainability washing” concern of SLL.

The paper is structured as follows. Chapter 5.2 provides an overview of the institutional background of SLLs and develops testable hypotheses. Chapter 5.3 introduces my data and methodology, while Chapter 5.4 presents my main results together with some additional robustness checks. Chapter 5.5 concludes and discusses implications and limitations of my findings.

5.2 Institutional Background and Hypothesis Development

SLLs are privately negotiated loans which, as governed by the Sustainability-Linked Loan Principles,⁴⁵ enable lenders and borrowers to set loan pricing terms contingent on the borrowers' ESG performance (Kim et al., 2023). During the negotiation process, lead lending banks could include covenants that reduce or increase borrowers’ interest rates if borrowers meet or fail to meet certain ESG performance objectives ranging from ESG scores assigned by external rating agencies to greenhouse gas emissions and employee health and safety goals (Aleszczyk et al., 2024; Du et al., 2023).⁴⁶ In contrast to the more

⁴⁵According to Du et al. (2023), the principles are developed by multiple associations participating in the global syndicated loan markets, such as Loan Market Association (LMA), Asia Pacific Loan Market Association (APLMA), Loan Syndications and Trading Association (LSTA).

⁴⁶In the example of Crown Holdings quoted by Kim et al. (2023), the SLL loan spread will increase (decrease) by certain basis points once the company’s Sustainability ESG ratings have been reduced

widely known green, social and sustainable loans, SLLs are general purpose loans which are designed to incentivize borrowers to improve their ESG performance throughout their general operations but not only in specific ESG-related projects.

In light of these contractual innovations, some prior studies have found that SLLs should improve borrowers' ESG performance (Carrizosa & Ghosh, 2023; Dursun-de Neef et al., 2023). For instance, Dursun-de Neef et al. (2023) identify that, as the pricing terms of SLLs are benchmarked against some predetermined ESG criteria, SLLs provide sufficient financial incentives to effectively motivate borrowers to make meaningful improvements in their ESG profiles. The authors also find that SLLs cause a more pronounced impact on ESG performance in overall when compared to green loans, which purposefully finance specific green projects or activities to affect only the environmental dimension of ESG metrics. This observation implies that, since SLLs do not have any use-of-proceeds restrictions, the ESG-contingent terms of SLLs are able to incentivise borrowers to take ESG performance into considerations not only when they are engaging in specific green projects but also when they are conducting general business operations. Similar conclusions have been observed by Carrizosa and Ghosh (2023), who document that borrowers' ESG performance is significantly improved after the origination of SLLs, although they find a lower economic magnitude of the effect than Dursun-de Neef et al. (2023).

However, despite the aforementioned promises of SLLs, both the media and practitioners from the debt market remain sceptical over the current design and credibility of SLLs to lead to meaningful and effective ESG-related impact. They suspect that the issuance of SLLs is a form of "sustainability washing", where borrowers may set superficial or easily achievable ESG targets that do not lead to significant environmental or social benefits, thereby misleading stakeholders about the true impact of their sustainable lending activities. For instance, Kim et al (2023) argue that, because most SLL negotiations are private, undisclosed, and not subject to regulatory scrutiny sustainability-linked label of certain loans are effectively "empty" promises. As to the authors, the lack of sufficient public review, coupled with unambitious and easily reachable sustainability objectives, means that SLL contracts often lack stringent penalties. Hence, SLLs may not be as effective as they should be in terms of incentivising

(improved) at any point of time during the loan period. Another example of SLL could be found in Table A.5.1.

borrowers to improve their ESG performance. This view aligns with Carrizosa and Ghosh's (2023) perspective, which suggests that the impact and effectiveness of the incentives provided by SLLs depend on whether the contracts and borrowers' ESG progress are reported and audited.

In addition, Aleszczyk et al. (2024) argue that the borrowers' ex-ante ESG performance profile is not related to the materiality and rigor of the sustainability key performance indicators (KPIs) incorporated in SLLs. This echoes the FCA (2023)'s concerns about lenders and borrowers setting superficial, easily achievable and “not robust” targets. Additionally, Du et al. (2023) note that the economic benefits, such as lower interest rates, for achieving better ESG performance remain minimal for SLL borrowers. As a result, Du et al. (2023) present mixed findings on the impact of SLLs on ESG ratings from different vendors, contrary to the findings of Carrizosa and Ghosh (2023) and Dursun-de Neef et al. (2023). Taking the arguments on both sides into account, I hypothesize that:

Hypothesis 1 (H1). SLLs do not improve borrowers' ESG performance.

In addition to the low transparency and stringency of the SLL contracting terms, another reason that may cause the aforementioned “sustainability washing” concerns of SLLs could be the lacking incentives for the lead lenders to improve borrowers' ESG. This view is supported by Du et al. (2023), who argue that banks issuing SLLs may enhance their reputation and social capital, potentially leading to increased deposits and loan volumes, irrespective of the borrowers' ESG outcomes. As SLL lenders could have already gained the reputational and operational benefits from the mere act of issuing SLLs, these lenders would then be less incentivized to design effective terms in the loan contracts to facilitate progress made by borrowers toward improving their ESG performance.

In this study, I examine whether the adoption of ESG-linked pay is impactful in terms of enhancing lenders' incentives to improve borrowers' ESG performance, potentially ensuring the effectiveness of SLLs, and mitigating the “sustainability washing” concerns of SLLs. To be specific, ESG-linked pay is defined as an incentive alignment policy which ties executives' compensation to contractually defined ESG factors (Flammer et al., 2019). Implementing this mechanism could ensure that top management has a personal financial motive to achieve the linked goals and potentially reflect the

company's genuine commitment to ESG, as existing literature has found that firms with ESG-linked executive pay perform better along different ESG dimensions over time (e.g., Cohen et al., 2023; Flammer et al., 2019).⁴⁷

From the banks' perspective, prior studies have found that borrowers with poor ESG profiles can increase the banks' risk of negative stakeholder reactions, adverse publicity, and greater regulatory scrutiny.⁴⁸ Consequently, banks may link the volume of sustainable financing and borrowers' ESG progress to executive compensation. The purpose is to financially motivate the ESG-linked bankers to support borrowers towards reaching their ESG goals by providing more sustainability-linked financial resources. In fact, several major banks have ESG-linked compensation structures in place. For example, HSBC explicitly states in their proxy statement that compensation would be assessed based on whether their top managers “facilitate financing to help clients with their transition to net zero” (HSBC, 2023). Specifically, HSBC has tied 25% of long-term incentive awards to the goal of increasing sustainable financing to USD 641 billion from 2024 to 2026, effectively doubling the targets set for 2021 to 2023. Deutsche Bank aligns its compensation system with the objective of increasing sustainable financing and investments to EUR 315 billion, disclosing a detailed Net Zero Transition plan and setting targets for further reducing carbon emissions from borrowers in four carbon intense industries (Deutsche Bank, 2022). Similarly, UBS executives are rewarded not only for reducing lending exposure to companies in the power generation, iron and steel, cement, and fossils fuels sectors but also for increasing sustainable financing and investments to USD 292.3 billion (UBS, 2023). BNP Paribas also incentivizes its executives to boost the volume of sustainable finance to “support their clients towards a low-carbon economy” (BNP Paribas, 2022).

Collectively, the adoption of ESG-linked compensation among lead lenders of SLLs could play an important role in determining the effectiveness of these loans. By aligning the financial interests of bank executives with borrowers' ESG outcomes, ESG-linked pay may incentivize lenders to support and advance borrowers' ESG agendas. Therefore, in the context of SLLs, a higher proportion of ESG-linked lead lenders within

⁴⁷ I acknowledge that the findings in the literature are not uniform, with some studies documenting a ‘dark side’ to ESG-linked compensation, e.g. linking it to greater stock price crash risk (e.g. Liu et al., 2024b), or highlighting flawed incentives and managerial opportunism of ESG-linked compensation (e.g. Bebhuck & Tallarita, 2022b).

⁴⁸ See Hoepner et al. (2024); Goss and Roberts (2011); Hasan et al. (2017); Homanen (2018); Houston and Shan (2022).

a syndicate is expected to more effectively tailor ESG targets to specific borrowers and set financially material and granular loan terms, thereby promoting meaningful and tangible improvements in borrowers' ESG profiles. Given the above arguments, I hypothesize that:

Hypothesis 2 (H2). The impact of SLLs on borrowers' ESG performance is stronger when a greater proportion of lead lenders have their compensation linked to ESG targets.

5.3 Data and Sample Selection

5.3.1 Sample

To assemble a dataset to test my hypotheses, I extract loan-level data from Dealscan via LSEG Loan Connector (previously known as Refinitiv Loan Connector). This database includes all syndicated loans that are initiated and closed in the period from 1 January 2017 to 31 December 2021. I follow existing studies (Aleszczyk et al., 2024; Du et al., 2023; Kim et al., 2023) and conduct my analyses at loan facility level instead of loan package level, since Dealscan categorises SLLs with the “Sustainable Linked Loans” flag at facility level and the lending syndicates are also formed at facility level (Kim et al., 2023).⁴⁹ Furthermore, as each syndicated loan is considered by Dealscan as a relationship between a borrower and a group of lenders, I first obtain the identifier of the borrowers and the company names of the lenders for each loan along with some loan characteristics information such as the loan amount, maturity, type and other terms. By hand-matching the banks' names with their corresponding identifiers, I then gather relevant ESG-related data from the LSEG ESG database and financial performance metrics from LSEG EIKON. I merge this data with my population of loan facilities. By excluding any observations with missing data on any of the above dimensions, the resulting dataset consists of 8,239 loan facilities initiated across 64 different countries, of which 541 loans are classed as SLLs.

⁴⁹ Loan packages are comprised of one or multiple loan facilities. As Dealscan categorises SLLs at facility level, it means that loan packages could include a mixture of SLLs and non-SLLs facilities, which could be syndicated by different lenders (Kim et al., 2023).

5.3.2 Model specification

To examine the evolution of borrowers' ESG profile under the influence of SLLs (H1) and the moderating impact of lead lenders with ESG-linked compensation on the above relationship (H2), I follow prior studies (Aleszczyk et al., 2024; Houston & Shan., 2022; Kim et al., 2023) and employ the following facility-level ordinary least squares (OLS) models:

$$\text{Borrower ESG Change}_{i,t,t+1} \quad (5.1)$$

$$\begin{aligned} &= \beta_0 + \beta_1 \text{SLL}_{i,j,t} + \beta_2 \text{Lead Lenders ESG Change}_{j,t,t+1} \\ &+ \beta_3 \text{Lead Lenders ESG}_{j,t} + \beta_4 \text{Borrower ESG}_{i,t} + \beta_5 X_{i,j,t} \\ &+ \beta_6 Z_{i,t} + \text{Loan Initiation Year FE} \\ &+ \text{Borrower Industry FE} + \text{Borrower Country FE} + \epsilon \end{aligned}$$

$$\text{Borrower ESG Change}_{i,t,t+1} \quad (5.2)$$

$$\begin{aligned} &= \beta_0 + \beta_1 \text{SLL}_{i,j,t} + \beta_2 \text{Pct ESG Linked Lead Lenders}_{j,t} \\ &+ \beta_3 \text{SLL}_{i,j,t} \times \text{Pct ESG Linked Lead Lenders}_{j,t} \\ &+ \beta_4 \text{Lead Lenders ESG Change}_{j,t,t+1} \\ &+ \beta_5 \text{Lead Lenders ESG}_{j,t} + \beta_6 \text{Borrower ESG}_{i,t} + \beta_7 X_{i,j,t} \\ &+ \beta_8 Z_{i,t} + \text{Loan Initiation Year FE} \\ &+ \text{Borrower Industry FE} + \text{Borrower Country FE} + \epsilon \end{aligned}$$

where i indexes borrowers, j indexes lenders, t indexes the loan initiation year. Equation (1) represents my benchmark regression model that tests H1, while equation (2) is used to examine the moderating impact of lead lenders' ESG-linked pay on this relation, expressed in H2.

In all models, fixed effects are included to capture borrowers' industry, country and the loan initiation year to account for the unobserved heterogeneity along these dimensions. I use robust standard errors clustered at the borrower level.

Dependent variable

To measure borrowers' ESG profiles, I utilize the LSEG ESG database as my primary source for ESG metrics. The LSEG database covers more than 70% of the global market capitalization of companies and employs over 630 metrics to score companies on

environmental, social and governance dimensions. To construct these scores that measure companies' ESG performance, LSEG obtains ESG-related information by extracting and processing data from companies' own ESG disclosure, such as their self-reporting on ESG matters in annual reports, CSR report, company websites, as well as SEC and other regulatory filings. These scores are utilized by numerous studies in the field to measure firms' ESG performance.⁵⁰ To assess whether borrowers improve their ESG performance upon receiving an SLL, I use the change in borrowers' ESG score (*Borrower ESG Change_{i,t,t+1}*) from the loan initiation date (t) to one year later ($t+1$) as my dependent variable. This metric measures the evolution in borrowers' policies and actions related to environmental (E), social (S) and governance (G) matters.

Main independent variables

My main independent variable of interest is $SLL_{i,j,t}$, an indicator variable that equals one if a loan facility is an SLL. As moderator variable I define *Pct ESG Linked Lead Lenders_{j,t}* which measures the percentage of lead lenders that have ESG-linked executive compensation structures in place in the loan initiation year (t). This variable is constructed based on information sourced from the LSEG ESG database.⁵¹ I follow Houston and Shan (2022) to identify the lead lenders in a syndicate if they carry the role of 'administration agent', 'agent', 'arranger', or 'lead manager'. Hence, it is possible for some loan facilities to have multiple lead lenders in a syndicate.

Control variables

Moving on to the control variables, I realise that the lead lenders' ESG performance could drive a spurious correlation between *Borrower ESG Change_{i,t,t+1}*, $SLL_{i,j,t}$, and *Pct ESG Linked Lead Lenders_{j,t}*, as Houston and Shan (2022) have identified that banks' ESG profiles and changes in their ESG profiles significantly determine whether borrowers improve their own ESG performance after borrowing from the banks. Therefore, I first control for the evolution of lead lenders' ESG score from the loan initiation year (t) to one year after ($t+1$), expressed in the variable *Lead Lenders ESG*

⁵⁰ See Stellner et al. (2015); Aouadi and Marsat (2018); Hawn and Ioannou (2016); Ferrell et al., (2016); Al-Shaer and Zaman (2019); and Gonenc and Scholtens (2017).

⁵¹ To measure the presence of ESG-linked executive compensation among lenders, I utilize the ESG contracting indicator variable in the LSEG ESG database which is a dummy variable that equals one if a bank links its executives' compensation to ESG criteria.

$Change_{j,t,t+1}$, and their absolute ESG score in the loan initiation year (t), defined as *Lead Lenders ESG_{j,t}*, to account for these effects.

Furthermore, I recognize the possibility that borrowers with poorer ESG ratings may show improvements over time compared to those with higher ratings (i.e. path dependence). This raises a concern that, when banks issue SLLs to borrowers with lower ESG ratings, it becomes challenging to determine whether observed improvements in borrowers' ESG performance are attributable to the effective incentives of the SLLs or to the borrowers' inherent potential for ESG rating growth. Hence, I control for borrowers' ESG score (*Borrower ESG_{i,t}*) in the loan initiation year (t) to alleviate the path dependency concern and ensure an effective comparison of the ESG change among borrowers with a similar level of ESG ratings.

In addition, I also include other controls, where $X_{i,j,t}$ contains different loan characteristics at the loan initiation year, including the natural logarithm of the loan facility amount (*Log Loan Amount_{i,j,t}*), the natural logarithm of the loan maturity (*Log Number of Years to Maturity_{i,j,t}*), a dummy variable indicating whether the loan is an amendment (*Loan Amendment_{i,j,t}*), a dummy variable indicating whether the loan includes covenants (*Loan Covenants_{i,j,t}*), and a dummy variable indicating whether the loan includes a revolving tranche (*Revolving Loan_{i,j,t}*).

$Z_{i,t}$ captures different financial characteristics of the borrower measured in the loan initiation year (t), including the natural logarithm of total assets (*Borrowers Size_{i,t}*), the return on assets (*Borrowers ROA_{i,t}*), and borrowers' leverage computed as total liabilities to total assets (*Borrowers Leverage_{i,t}*).

Table A.5.2 provides an overview of all variable definitions and sources. All continuous variables are winsorised at the 1% level.

5.4 Results

5.4.1 Descriptive statistics

Table 5.1 provides an overview of the development of SLLs during the period from 2017 to 2021. Panel A reports an increasing trend of SLL issuances, growing rapidly from less than 0.2% of my sample of syndicated loans in 2017 to 18.6% in 2021. Companies that borrow via SLLs have also raised a total of \$500 billion over my sample period, where the total loan amount has evolved from \$2 billion in 2017 to \$283 billion in 2021. In

terms of the industry composition presented in Panel B, the SLL borrowers in my sample are not operating in a specific sector group classified by The Reference data Business Classification (TRBC) economic groups but are rather broadly distributed across industries, ranging from the utilities sector, where SLLs make up 19% of loan facilities in my sample, to the healthcare sector, where they represent 4%, respectively. This widespread use of SLLs is consistent with the fact that these loans have a general use-of-proceeds, where borrowers could use the proceeds to finance business operations with general purposes instead of some specific sustainability-related projects. Next, I consider the geographical breakdown of the SLLs reported in Panel C. While a total of 77 SLL facilities are issued to borrowers in the US and Canada, 263 facilities are lent to companies located in Western European countries (i.e. Spain, France, Germany, United Kingdom, Netherlands, Switzerland, Belgium, Ireland, Portugal, Austria, Luxembourg), which jointly cover around 63% of all SLLs in my sample. This shows that the current development of SLLs is still concentrated in Western economies rather than propagated broadly around the world.

[Insert Table 5.1 here]

Table 5.2 reports the descriptive statistics for all variables used in this study. Panel A shows that borrowers generally perform worse in terms of their ESG performance compared to the lead lenders. While the average borrower has an ESG score of 52.49, the average ESG score for the lead lenders is 78.9. Furthermore, borrowers experience an average increase of 2.39 points in their ESG scores after obtaining the loan. Combined with the fact that approximately two-thirds (74.6%) of the lead lenders in a syndicate have ESG-linked compensation, this suggests that lead lenders, with their superior ESG policies and greater incentives to enhance ESG, are more likely to encourage borrowers to improve their ESG profiles after entering a lending relationship. However, I will more formally test this hypothesis in my regression setting.

When comparing SLLs with other loan facilities in my sample, Panel B of Table 5.2 reports that SLLs are issued by syndicates with a higher proportion of lead lenders with ESG-linked pay and higher ESG score. These lenders also tend to issue SLLs to borrowers with higher ESG score. This observation is consistent with the findings of Kim et al. (2023) that borrowers and lenders with a superior ESG ratings are more likely to self-select into SLL contracts. However, my descriptive results indicate that SLL borrowers experience a lower growth in ESG scores after the loan issuance compared to non-SLL borrowers. This may potentially suggest that SLLs provide insignificant

incentives to the borrowers to make substantial ESG improvements. Furthermore, SLLs in general are larger in loan size, have longer maturity, are less likely to be amended and include covenants, and are more likely to be labelled as revolving credit facilities. The borrowers of SLLs also tend to be larger in size, less profitable and more financially leveraged.

[Insert Table 5.2 here]

Table 5.3 presents the pairwise correlations across the variables in my study. I confirm that no pair of variables has a correlation coefficient exceeding 60%, except for the correlation between the ESG score and its pillar scores. To further alleviate any concerns regarding multicollinearity in my models, I calculated the Variance Inflation Factor (VIF) for all independent variables in my model and find that none of these variables displays a VIF indicator of more than 5, suggesting my results do not suffer from multicollinearity.

[Insert Table 5.3 here]

5.4.2 Main results

Table 5.4 presents my baseline regression results based on an estimation of equations (5.1) and (5.2). In column (1), I run model (5.1) without controls; and in column (2), I include all controls including lead lenders' ESG characteristics, loan characteristics, as well as borrowers' ESG and financial characteristics. I find that the coefficient on my main variable of interest ($SLL_{i,j,t}$) is insignificant in column (2), although it is negative and marginally significant at the 10% level in column (1). Hence, after controlling for the confounding effects of lender, borrower and loan characteristics, borrowing via SLLs is not associated with any change in borrowers' ESG score over the subsequent year. These results show support for hypothesis H1 suggesting that SLLs seem to provide insignificant financial incentives to facilitate improvements in borrowers' ESG performance.

In columns (3) and (4), I estimate model (5.2) by including my moderator, the percentage of lead lenders with ESG-linked executive compensation (*Pct ESG Linked Lead Lenders_{j,t}*), and its interaction with the SLL indicator. I report results with and without controls, respectively. The coefficients on the interaction term ($SLL_{i,j,t} \times Pct\ ESG\ Linked\ Lead\ Lenders_{j,t}$) in both columns are positive and significant at the 5% level. These results demonstrate that a higher percentage of lead lenders with ESG-linked pay

positively moderates the relationship between SLLs and the evolution of borrowers' ESG scores. Therefore, I find support for hypothesis H2 that more ESG-linked lead lenders in a syndicate could reinforce and enhance the ESG-contingent incentives incorporated in the SLL loan contracts, leading to a positive impact on borrowers' ESG policies and performance.

[Insert Table 5.4 here]

5.4.3 Robustness checks

To summarise my analysis so far, my results suggest that the ESG-contingent pricing terms of SLLs create insignificant impact on borrowers' ESG improvement and, by providing SLL lead lenders with proper ESG incentives, linking their executives' compensation to ESG factors appears to be an effective channel to restore and strengthen the effectiveness of SLLs. However, these findings could be affected by other factors and one of them is the influence of COVID-19. For instance, according to Bae et al., (2021) the pandemic has significantly drawn the focus of governments and market participants on corporates' ESG considerations and performance. Many countries have also placed social and environmental issues at the forefront of their recovery plans. Especially in Europe, the European Parliament has reaffirmed its commitment to the European Green Deal, a policy framework introduced in December 2019 with the goal of achieving climate neutrality in Europe by 2050. Given the heightened attention to and demand for better ESG performance, banks could be pressurised and more incentivised to steer borrowers' ESG behaviours and performance by issuing SLLs. Hence, one could argue that the effectiveness of SLLs is more pronounced during the pandemic. To test this argument, I divide the sample into pre-crisis (2017 to 2019) and during-crisis period (2020 to 2021) and re-estimate model (5.1) and (5.2) over each sub-sample. The results, reported in columns (1) and (3) of Table 5.5, show insignificant relationship between SLL issuance and borrowers' ESG improvement, suggesting that the ESG-contingent terms of SLLs are ineffective regardless of the sample period or whether governments' and investors' attention on ESG are heightened or not. Columns (2) and (4) of Table 5.5 also report that the presence of pandemic does not moderate the impact of ESG-linked compensation among lead lenders on the above relationship, although the coefficient of the interaction term in column (4) shows a lower level of significance.

In addition, Panel C in Table 5.1 reports that 3,410 out of 8,239 loans in my sample are originated from US. Given that they occupy around 41% of the sample, one might argue that my baseline findings are substantially driven by US loans. To test this argument, I re-estimate model (5.1) and (5.2) over a sample without loans originated from US and report the result in columns (5) and (6) of Table 5.5. The results show similar patterns to my baseline results, suggesting that my baseline findings are not biased by the large proportion of US loans in the sample.

[Insert Table 5.5 here]

Furthermore, in my baseline results, I have included a broad set of control variables and fixed effects to account for possible confounding factors on the relationship between changes in borrowers' ESG scores and the SLL status of a loan. However, since the decision to issue SLLs could be endogenously determined by the borrowers, lenders and/or loan characteristics, this raises concerns that the effect of SLLs could correlate with unobserved factors captured in the error term, thereby driving a spurious correlation between SLLs and the evolution of borrowers' ESG score.

To alleviate the endogeneity concern arising from the structural disparity between SLLs and non-SLLs as shown in Panel B of Table 5.2, I first apply propensity score matching (PSM) and identify a control loan group. First, I perform a probit model to estimate the propensity of a loan facility being an SLL as a function of all controls and fixed effects specified in model (5.1). Then, I utilise the estimated propensity score to match SLLs with non-SLLs. For the matching, I adopt the one-to-four nearest neighbour specification within a distance ("caliper") of 0.05 with common support and replacements. Table A.5.3 reports the diagnostic test of the PSM, confirming that a matched sample has been achieved with no statistically significant differences observed in all controls between SLLs and matched non-SLLs. By re-estimating models (5.1) and (5.2) using the matched sample of loan facilities, results are reported in columns (1) and (2) of Table 5.6. Similar to my baseline results, I observe that SLL issuance is not significantly associated with a change in borrowers' ESG score. However, this relationship is positively moderated by having a higher proportion of lead lenders with ESG-linked in the syndicate, as shown by the positive and significant interaction term ($SLL_{i,j,t} \times Pct\ ESG\ Linked\ Lead\ Lenders_{j,t}$), which is significant at the 1% level. This significant moderating impact is robust after I switch the percentage of ESG-linked lead lenders to a dummy variable indicating whether the syndicate has at least one lead lender with ESG-linked pay. The results of this robustness test are reported in column (3) of Table 5.6.

Furthermore, in my main specifications, I use the percentage of ESG-linked lead lenders to assess the strength of incentives among syndicate members to improve borrowers' ESG profiles through sustainable lending, as it is unclear which ESG-linked lead lender dictates the lending relationship and influences the SLL negotiation process. However, would the results change if I only consider loan facilities with a single unique lead lender? I address this robustness concern in column (4) of Table 5.6. Specifically, I construct a sub-sample within my PSM-matched sample that only contains loan facilities with a single lead lender in the syndicate, and then re-estimate my regression model based on this sub-sample. In this subsample, the interaction term $SLL_{i,j,t} \times ESG \text{ Linked Lead Lender Indicator}_{j,t}$ remains positive and significant at 1% level.

[Insert Table 5.6 here]

Another robustness check pertains to the evolution of borrowers' ESG profiles. In my main specifications, I use the change in borrowers' overall ESG score from the loan initiation year to one year after. I provide additional tests by examining the change in sub-pillar scores for the environmental ($Borrowers \text{ Env Change}_{i,t, t+1}$), social ($Borrowers \text{ Soc Change}_{i,t, t+1}$), and governance ($Borrowers \text{ Gov Change}_{i,t, t+1}$) dimensions. I re-estimate my models (1) and (2) using these sub-pillar-based metrics as dependent variables, conducting these analyses on the same matched sample of loan facilities. Table 5.7 reports my findings under this approach. From columns (1) to (3), I confirm that my results related to hypothesis H1 are robust, as in all specifications the issuance of SLLs does not lead to a significant change in borrowers' ESG score across all dimensions. In addition, the interaction term $SLL_{i,j,t} \times ESG \text{ Linked Lead Lender Indicator}_{j,t}$ remains positive and significant when looking at the environmental and governance sub-pillars (see results in columns (4) and (6)), but becomes insignificant in column (5), where the social dimension is considered. These results suggest that the percentage of lead lenders with ESG-linked pay specifically strengthens the environmental and governance incentives incorporated in the SLL loan contracts.

[Insert Table 5.7 here]

5.5 Summary

The development of the ESG lending market has been evolving rapidly and received ongoing attention in business and academic circles, especially after the release and propagation of sustainability-linked loans in 2017. SLLs are widespread across a broad

range of industries particularly in Western countries due to the unique feature of this debt instrument, such as the general use-of-proceeds and ESG-contingent terms. In light of the contractual innovations of SLLs, some emerging studies have started examining the materiality of SLLs' contracting terms (Aleszczyk et al., 2024) and how effective SLLs are in facilitating borrowers' ESG improvements (Carrizosa & Ghosh, 2023; Du et al., 2023; Dursun-de Neef et al., 2023; Kim et al., 2023). Building on these studies, I first examine the impact of issuing SLLs on the evolution of borrowers' ESG performance using a sample of global loan facilities initiated and closed within the period from 2017 to 2021. Consistent with the findings of Kim et al. (2023) and Du et al. (2023), I find robust evidence that SLLs do not enhance borrowers' ESG performance after the loan initiation.

While existing literature mainly attributes “sustainability washing” concerns of SLL to the low public transparency, loose regulatory scrutiny and immaterial contractual details of SLLs, my study goes beyond these perspectives by investigating whether lending banks are incentivised to improve borrowers' ESG profiles through sustainable lending activities, which could help restore and strengthen the effectiveness of SLLs. I find that such ESG incentives across lead lenders in a syndicate, proxied by the percentage of lead lenders that have adopted ESG-linked pay, play a positive moderating role in the relationship between the issuance of SLLs and the evolution of borrowers' ESG performance. Overall, my findings suggest a novel channel for mitigating the “sustainability washing” concern of SLLs and, therefore, offer important practical implications to the global private debt market and sustainable corporate finance, when it comes to the effective implementation of SLLs.

My results have several practical implications. My findings corroborate the “sustainability washing” claims raised by researchers and practitioners in the private debt market, indicating that the SLLs are not effective enough to motivate borrowers to improve their ESG profiles (Du et al., 2023; Kim et al., 2023). This suggests critical implications to stakeholders when evaluating firms' ESG commitments. As SLLs was released on 2017 and the ESG loosely lending market is still far from being mature, the SLL lending process could still be scrutinised by regulatory bodies. Nowadays, neither the lenders nor the borrowers have the obligations to disclose any details related to the negotiation process or the loan terms. As such, despite the SLLs' contractual innovations, my findings highlight how ineffective SLLs are in terms improving borrowers' ESG profile and corroborate the “sustainability washing” concerns of SLLs, where companies

borrow SLLs simply for enhancing their image and reputation in the stakeholders' mind. Therefore, stakeholders should apply cautions to the sustainability-washing potentials when firms adopting a newly released practice to pledge their ESG commitments.

Also, my findings also provide important implications to the top management of the banks. I urge the bankers not only to complement the issuance of SLLs with the adoption of ESG-linked pay but also to form a syndicate with other ESG-linked lead lenders. By shedding lights on the potential benefits of the complementarity between SLLs and ESG-linked pay, I believe that enhancing lenders' incentives to promote borrowers' ESG profiles could help alleviating the transparency and stringency issues of SLLs suggested by Kim et al. (2023) and Aleszczyk et al. (2024) and ensuring the effective implementation and enforcement of the ESG-contingent terms.

Lastly, my study also brings meaningful implications to the policymakers and regulators. While these parties should enforce more rules and regulations to consolidate the ESG lending market and apply tighter monitoring over the ESG lending behaviours, my study sheds light on the risk that SLL could become a symbolic tool if lenders have lack of incentives to promote borrowers' ESG profiles. Therefore, it is crucial for the policymakers and regulators to perhaps establish some independent monitoring and verification mechanisms to assess the alignment of interests between SLL lenders and borrowers as well as to verify the authenticity of the ESG improvements led by SLLs.

This study also faces several limitations which present opportunities for future research. Firstly, as SLLs have only emerged in 2017 as a new sustainable lending innovation, my findings may only reflect the effectiveness of SLLs at the early stages. Considering the positive trend of regulatory scrutiny, ESG disclosure requirements, and attention from the market participants over time, future research could re-examine the efficacy of SLL issuance in improving borrowers' ESG profiles in a more developed landscape.

In addition, my study's analyses are largely constrained by the availability of data from the vendor. The limited ESG track record for private companies and banks restricts my ability to provide a more comprehensive understanding of SLL lending practices. To this extent, this study focuses primarily on public companies and banks with available ESG data around the loan initiation date. Future research could benefit from using databases with broader ESG coverage across the private sector.

Finally, since my study involves the construction of a novel dataset to examine the lending relationships between SLL borrowers and lead lenders with ESG-linked pay,

my empirical analyses is limited to a cross-sectional design, with each loan facility represented by a single observation from the year of initiation. This limitation may introduce uncertainty in drawing casual inferences between the variables used in my study. As such, I recommend that future research adopt a longitudinal design, where empirical analyses are conducted at the borrower level to explore how changes in borrowers' loan portfolios affect their ESG ratings over time.

Table 5.1: Overview of SLL issuance

Panel A: Yearly distribution					
Year	Total Amount of SLLs (USD Million)	SLLs $t=1$	SLLs $t=0$	Total	%
2017	2,260	3	1,699	1,702	0.18%
2018	33,900	28	1,729	1,757	1.59%
2019	79,400	81	1,517	1,598	5.07%
2020	97,200	113	1,370	1,483	7.62%
2021	283,000	316	1,383	1,699	18.60%
Total	495,760	541	7,698	8,239	6.57%

Panel B: Industry distribution					
		SLLs $t=1$	SLLs $t=0$	Total	%
Utilities		70	308	378	19%
Consumer Non-Cyclicals		60	552	612	10%
Basic Materials		58	707	765	8%
Industrials		95	1,357	1,452	7%
Financials		49	712	761	6%
Real Estate		41	714	755	5%
Consumer Cyclicals		69	1,220	1,289	5%
Energy		27	544	571	5%
Technology		47	973	1,020	5%
Healthcare		25	591	616	4%
Academic & Educational Services		0	20	20	0%
Total		541	7,698	8,239	7%

Panel C: Country distribution									
	SLLs $t=1$	SLLs $t=0$	Total	%		SLLs $t=1$	SLLs $t=0$	Total	%
Spain	64	126	190	34%	Ireland	7	63	70	10%
United States	59	3,351	3,410	2%	Singapore	7	31	38	18%
France	51	223	274	19%	Portugal	5	3	8	63%
Germany	45	222	267	17%	Austria	4	24	28	14%
United Kingdom	43	564	607	7%	Malaysia	4	7	11	36%
Italy	37	101	138	27%	Thailand	4	13	17	24%
					United Arab				
Turkey	27	125	152	18%	Emirates	4	19	23	17%
Netherlands	22	67	89	25%	Denmark	3	26	29	10%
Finland	20	51	71	28%	Guernsey	3	12	15	20%
Australia	19	427	446	4%	China (Mainland)	2	162	164	1%
Canada	18	606	624	3%	Luxembourg	2	25	27	7%
Taiwan	16	77	93	17%	Russia	2	31	33	6%
Sweden	12	136	148	8%	Brazil	1	18	19	5%
Switzerland	11	77	88	13%	Faroe Islands	1	2	3	33%
Belgium	9	17	26	35%	Iceland	1	2	3	33%
Mexico	9	40	49	18%	Jersey	1	8	9	11%
New Zealand	9	125	134	7%	Poland	1	29	30	3%
Norway	9	89	98	9%	South Korea	1	12	13	8%
Hong Kong	8	113	121	7%	Others	0	674	674	0%

Note: This table presents an overview of the SLLs in the sample. Panel A provides the distribution of SLL issuance by year. Panel B and Panel C focus on the distribution by industry and by country.

Table 5.2: Descriptive statistics

Panel A: Descriptive statistics in full sample								
Variable	Obs	Mean	SD	Min	P25	Median	P75	Max
<i>Borrowers ESG Change</i> $_{i,t,t+1}$	8,239	2.386	6.161	-10.251	-1.699	1.497	5.495	23.259
<i>SLLs</i> $_{i,j,t}$	8,239	0.066	0.248	0	0	0	0	1
<i>Pct ESG Linked Lead Lenders</i> $_{j,t}$	8,239	0.746	0.358	0	0.571	1	1	1
<i>Lead Lenders ESG Change</i> $_{i,t,t+1}$	8,239	-0.064	4.253	-21.157	-2.244	-0.305	1.671	14.284
<i>Lead Lenders ESG</i> $_{j,t}$	8,239	78.9	8.622	37.305	75.616	81.25	84.174	94.633
<i>Loan Amount (USD Million)</i> $_{i,j,t}$	8,239	766.5	1,047.918	4.343	150	370	900	5,008
<i>Number of Years to Maturity</i> $_{i,j,t}$	8,239	3.989	1.841	0.51	3	4.71	5.003	12.008
<i>Loan Amendment</i> $_{i,j,t}$	8,239	0.431	0.495	0	0	0	1	1
<i>Loan Covenants</i> $_{i,j,t}$	8,239	0.203	0.402	0	0	0	0	1
<i>Revolving Tranche</i> $_{i,j,t}$	8,239	0.516	0.5	0	0	1	1	1
<i>Borrowers ESG</i> $_{i,t}$	8,239	52.486	20.102	9.025	36.698	53.467	68.691	89.529
<i>Borrowers Total Assets (USD Million)</i> $_{i,t}$	8,239	23,520	44,410	76.028	2,067	6,005	20,390	237,000
<i>Borrowers ROA</i> $_{i,t}$	8,239	0.064	0.059	-0.142	0.031	0.055	0.09	0.259
<i>Borrowers Leverage</i> $_{i,t}$	8,239	0.643	0.199	0.146	0.513	0.64	0.779	1.21

Panel B: Descriptive statistics by SLLs and non-SLLs						
	SLLs $\iota = 1$		SLLs $\iota = 0$		Difference	
	(1) Mean	SD	(2) Mean	SD	(1) – (2)	t
<i>Borrowers ESG Change</i> $_{i,t,t+1}$	1.039	5.002	2.48	6.223	-1.442***	(-6.367)
<i>Pct ESG Linked Lead Lenders</i> $_{j,t}$	0.832	0.243	0.739	0.364	0.093***	(8.283)
<i>Lead Lenders ESG Change</i> $_{i,t,t+1}$	-1.911	5.016	0.066	4.163	-1.977***	(-8.955)
<i>Lead Lenders ESG</i> $_{j,t}$	79.864	6.969	78.832	8.723	1.032**	(3.268)
<i>Loan Amount (USD Million)</i> $_{i,j,t}$	916.5	1,130	756	1,041	160.5**	(3.208)
<i>Number of Years to Maturity</i> $_{i,j,t}$	4.185	1.413	3.975	1.867	0.210**	(3.255)
<i>Loan Amendment</i> $_{i,j,t}$	0.336	0.473	0.438	0.496	-0.101***	(-4.791)
<i>Loan Covenants</i> $_{i,j,t}$	0.083	0.276	0.212	0.408	-0.128***	(-10.063)
<i>Revolving Tranche</i> $_{i,j,t}$	0.658	0.475	0.506	0.5	0.152***	(7.193)
<i>Borrowers ESG</i> $_{i,t}$	68.624	14.829	51.352	19.937	17.271***	(25.518)
<i>Borrowers Total Assets (USD Million)</i> $_{i,t}$	27,990	46,290	23,210	44,260	4,785*	(2.331)
<i>Borrowers ROA</i> $_{i,t}$	0.059	0.052	0.065	0.06	-0.006*	(-2.359)
<i>Borrowers Leverage</i> $_{i,t}$	0.665	0.186	0.642	0.2	0.023**	(2.751)
Observations	541		7,698		8,239	

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 SLL loan facilities ($SLLs = 1$) and non-SLL loan facilities ($SLLs = 0$). The final two columns of Panel B report the difference in mean values between SLLs and non-SLLs as well as the corresponding t-statistics of a test of differences in means. All variables are defined in Table A.5.2.

Table 5.3: Pairwise correlation

Variables	VIF	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
(1) <i>Borrowers ESG Change</i> $_{i,t,t+1}$		1.000													
(2) <i>SLLs</i> $_{i,j,t}$	1.09	-0.058	1.000												
(3) <i>Pct ESG Linked Lead Lenders</i> $_{j,t}$	1.17	-0.001	0.064	1.000											
(4) <i>Lead Lenders ESG Change</i> $_{j,t,t+1}$	1.12	0.020	-0.115	-0.022	1.000										
(5) <i>Lead Lenders ESG</i> $_{j,t}$	1.29	0.011	0.030	0.307	-0.284	1.000									
(6) <i>Log Loan Amount</i> $_{i,j,t}$	1.71	-0.027	0.047	-0.045	-0.005	0.119	1.000								
(7) <i>Log Number of Years to Maturity</i> $_{i,j,t}$	1.11	0.032	0.048	-0.035	0.014	-0.001	-0.005	1.000							
(8) <i>Loan Amendment</i> $_{i,j,t}$	1.19	-0.011	-0.051	0.112	-0.009	0.166	0.055	0.133	1.000						
(9) <i>Loan Covenants</i> $_{i,j,t}$	1.12	0.027	-0.079	0.041	0.020	0.074	0.103	0.135	0.255	1.000					
(10) <i>Revolving Tranche</i> $_{i,j,t}$	1.17	-0.013	0.076	0.121	-0.030	0.159	0.063	0.187	0.275	0.097	1.000				
(11) <i>Borrowers ESG</i> $_{i,t}$	1.56	-0.272	0.213	-0.018	-0.066	0.068	0.366	-0.156	-0.088	-0.097	-0.013	1.000			
(12) <i>Borrowers Size</i> $_{i,t}$	2.34	-0.087	0.078	-0.179	-0.017	-0.065	0.581	-0.180	-0.110	-0.067	-0.126	0.548	1.000		
(13) <i>Borrowers ROA</i> $_{i,t}$	1.08	0.019	-0.023	0.002	0.033	0.070	0.092	0.091	0.092	0.094	0.085	0.024	-0.112	1.000	
(14) <i>Borrowers Leverage</i> $_{i,t}$	1.15	-0.042	0.028	-0.092	0.017	-0.041	0.176	-0.059	-0.016	0.022	-0.134	0.175	0.342	-0.080	1.000

Note: This table presents correlation coefficients between our main variables. All variables are defined in Table A.5.2.

Table 5.4: Baseline results

Dependent variable	(1) <i>Borrowers</i> <i>ESG Change</i> _{<i>t, t+1</i>}	(2) <i>Borrowers</i> <i>ESG Change</i> _{<i>t, t+1</i>}	(3) <i>Borrowers</i> <i>ESG Change</i> _{<i>t, t+1</i>}	(4) <i>Borrowers</i> <i>ESG Change</i> _{<i>t, t+1</i>}
<i>SLLs</i> _{<i>i,j,t</i>}	-0.584* (0.349)	0.071 (0.335)	-3.277*** (1.238)	-2.772** (1.168)
<i>Pct ESG Linked Lead Lenders</i> _{<i>j,t</i>}			0.484 (0.347)	0.344 (0.344)
<i>SLLs</i> _{<i>i</i>} x <i>Pct ESG Linked Lead Lenders</i> _{<i>j,t</i>}			3.240** (1.457)	3.420** (1.371)
<i>Lead Lenders ESG Change</i> _{<i>j,t,t+1</i>}		-0.038 (0.026)		-0.041 (0.026)
<i>Lead Lenders ESG</i> _{<i>j,t</i>}		0.006 (0.013)		0.001 (0.014)
<i>Log Loan Amount</i> _{<i>i,j,t</i>}		0.245** (0.097)		0.252*** (0.096)
<i>Log Number of Years to Maturity</i> _{<i>i,j,t</i>}		-0.037 (0.144)		-0.040 (0.145)
<i>Loan Amendment</i> _{<i>i,j,t</i>}		-0.411* (0.220)		-0.405* (0.220)
<i>Loan Covenants</i> _{<i>i,j,t</i>}		0.035 (0.269)		0.017 (0.269)
<i>Revolving Tranche</i> _{<i>i,j,t</i>}		0.021 (0.149)		0.024 (0.149)
<i>Borrowers ESG</i> _{<i>i,t</i>}		-0.117*** (0.007)		-0.117*** (0.007)
<i>Borrowers Size</i> _{<i>i,t</i>}		0.392*** (0.106)		0.393*** (0.104)
<i>Borrowers ROA</i> _{<i>i,t</i>}		2.258 (1.740)		2.252 (1.741)
<i>Borrowers Leverage</i> _{<i>i,t</i>}		-0.547 (0.574)		-0.542 (0.575)
Constant	2.424*** (0.102)	-5.242** (2.289)	2.063*** (0.286)	-5.272** (2.271)
Observations	8,239	8,239	8,239	8,239
Adjusted R-squared	0.049	0.134	0.051	0.135
Year FE	YES	YES	YES	YES
Industry FE	YES	YES	YES	YES
Country FE	YES	YES	YES	YES

Note: This table presents the regression results where the dependent variable is the *Borrowers ESG Change* in columns (1) to (4). Columns (1) and (2) report the result of equation (5.1) while columns (3) and (4) report the result of equation (5.2). Heteroskedasticity-robust standard errors clustered at borrower level are reported in the parentheses. *, ** and *** indicate significance at 10%, 5% and 1% level, respectively. All variables are defined in Table A.5.2.

Table 5.5: Baseline results - Subsample

Dependent variable	2017 to 2019		2020 to 2021		Excluded US	
	(1)	(3)	(2)	(4)	(5)	(6)
	<i>Borrowers ESG Change</i> $t, t+1$	<i>Borrowers ESG Change</i> $t, t+1$	<i>Borrowers ESG Change</i> $t, t+1$	<i>Borrowers ESG Change</i> $t, t+1$	<i>Borrowers ESG Change</i> $t, t+1$	<i>Borrowers ESG Change</i> $t, t+1$
<i>SLLs_{ij,t}</i>	0.154 (0.703)	-7.165*** (2.695)	0.525 (0.389)	-1.695 (1.180)	0.408 (0.374)	-2.516** (1.215)
<i>Pct ESG Linked Lead Lenders_{ij,t}</i>		0.362 (0.408)		-0.827 (0.680)		0.219 (0.477)
<i>SLLs_i x Pct ESG Linked Lead Lenders_{ij,t}</i>		9.414*** (3.358)		2.617* (1.384)		3.610** (1.457)
<i>Lead Lenders ESG Change_{j,t+1}</i>	-0.041 (0.037)	-0.045 (0.037)	-0.024 (0.034)	-0.024 (0.034)	-0.051* (0.029)	-0.052* (0.029)
<i>Lead Lenders ESG_{j,t}</i>	0.022 (0.016)	0.018 (0.017)	-0.005 (0.022)	0.004 (0.024)	-0.003 (0.015)	-0.008 (0.017)
<i>Log Loan Amount_{ij,t}</i>	0.298** (0.135)	0.308** (0.132)	0.100 (0.115)	0.096 (0.115)	0.231** (0.100)	0.240** (0.100)
<i>Log Number of Years to Maturity_{ij,t}</i>	-0.276 (0.192)	-0.276 (0.192)	0.223 (0.207)	0.200 (0.208)	-0.108 (0.172)	-0.117 (0.171)
<i>Loan Amendment_{ij,t}</i>	-0.540* (0.310)	-0.515* (0.311)	-0.144 (0.298)	-0.145 (0.297)	-0.764** (0.300)	-0.773*** (0.299)
<i>Loan Covenants_{ij,t}</i>	-0.069 (0.345)	-0.088 (0.346)	0.421 (0.425)	0.438 (0.425)	-0.007 (0.465)	-0.028 (0.464)
<i>Revolving Tranche_{ij,t}</i>	0.232 (0.191)	0.227 (0.191)	-0.320 (0.226)	-0.311 (0.225)	-0.081 (0.205)	-0.075 (0.204)
<i>Borrowers ESG_{it}</i>	-0.117*** (0.009)	-0.117*** (0.009)	-0.112*** (0.011)	-0.112*** (0.011)	-0.115*** (0.009)	-0.115*** (0.009)
<i>Borrowers Size_{it}</i>	0.434*** (0.145)	0.441*** (0.142)	0.326** (0.147)	0.320** (0.147)	0.263** (0.123)	0.265** (0.123)
<i>Borrowers ROA_{it}</i>	1.129 (2.491)	1.073 (2.494)	2.824 (2.460)	2.839 (2.457)	5.397** (2.383)	5.377** (2.385)
<i>Borrowers Leverage_{it}</i>	-1.379* (0.726)	-1.426* (0.730)	0.539 (0.899)	0.486 (0.895)	0.346 (0.758)	0.313 (0.757)
Constant	-7.389** (3.133)	-7.632** (3.108)	-1.787 (3.142)	-1.491 (3.145)	-1.891 (2.790)	-1.857 (2.759)
Observations	5,055	5,055	3,178	3,178	4,828	4,828
Adjusted R-squared	0.139	0.141	0.139	0.140	0.163	0.165
Year FE	YES	YES	YES	YES	YES	YES
Industry FE	YES	YES	YES	YES	YES	YES
Country FE	YES	YES	YES	YES	YES	YES

Note: This table presents the regression results where the dependent variable is the *Borrowers ESG Change* in columns (1) to (6). Columns (1) and (2) report the result of equation (5.1) and (5.2) from 2017 to 2019 (pre-crisis) while columns (3) and (4) report the result from 2020 to 2021 (during-crisis). Columns (5) and (6) report the result without loans originated from US. Heteroskedasticity-robust standard errors clustered at borrower level are reported in the parentheses. *, ** and *** indicate significance at 10%, 5% and 1% level, respectively. All variables are defined in Table A.5.2.

Table 5.6: Robustness checks - Alternative measurement and model specification

Dependent variable	(1) <i>Borrowers</i> <i>ESG Change</i> $_{t,t+1}$	(2) <i>Borrowers</i> <i>ESG Change</i> $_{t,t+1}$	(3) <i>Borrowers</i> <i>ESG Change</i> $_{t,t+1}$	(4) <i>Borrowers</i> <i>ESG Change</i> $_{t,t+1}$
<i>SLLs</i> $_{i,j,t}$	0.359 (0.438)	-5.382*** (1.825)	-6.530*** (2.463)	-7.807*** (1.819)
<i>Pct ESG Linked Lead Lenders</i> $_{j,t}$		1.676 (1.340)		
<i>SLLs</i> $_{i,t}$ x <i>Pct ESG Linked Lead Lenders</i> $_{j,t}$		6.932*** (2.214)		
<i>ESG Linked Lead Lenders Indicator</i> $_{j,t}$			1.670 (1.283)	0.417 (1.545)
<i>SLLs</i> $_{i,t}$ x <i>ESG Linked Lead Lenders Indicator</i> $_{j,t}$			7.203*** (2.570)	10.009*** (2.045)
<i>Lead Lenders ESG Change</i> $_{j,t,t+1}$	-0.075 (0.080)	-0.088 (0.078)	-0.103 (0.073)	-0.129 (0.093)
<i>Lead Lenders ESG</i> $_{j,t}$	-0.015 (0.078)	-0.116** (0.056)	-0.088* (0.051)	0.019 (0.049)
<i>Log Loan Amount</i> $_{i,j,t}$	-0.551** (0.244)	-0.509** (0.239)	-0.657*** (0.233)	0.322 (0.406)
<i>Log Number of Years to Maturity</i> $_{i,j,t}$	0.329 (0.651)	0.025 (0.646)	-0.130 (0.658)	-0.478 (0.678)
<i>Loan Amendment</i> $_{i,j,t}$	1.766* (0.987)	1.512 (1.006)	1.691* (0.990)	0.258 (1.092)
<i>Loan Covenants</i> $_{i,j,t}$	0.659 (1.162)	-0.669 (1.175)	0.352 (1.102)	-0.630 (0.977)
<i>Revolving Tranche</i> $_{i,j,t}$	-0.750* (0.407)	-0.659* (0.370)	-0.803** (0.383)	-1.518* (0.911)
<i>Borrowers ESG</i> $_{i,t}$	-0.191*** (0.029)	-0.175*** (0.028)	-0.173*** (0.027)	-0.167*** (0.032)
<i>Borrowers Size</i> $_{i,t}$	1.028*** (0.379)	1.072*** (0.391)	1.026*** (0.384)	0.268 (0.447)
<i>Borrowers ROA</i> $_{i,t}$	5.355 (5.367)	2.046 (4.776)	2.743 (4.573)	-2.941 (6.333)
<i>Borrowers Leverage</i> $_{i,t}$	0.516 (1.568)	0.516 (1.486)	0.526 (1.459)	-3.509 (2.565)
Constant	1.670 (8.841)	6.257 (7.661)	7.876 (7.233)	3.629 (9.832)
Observations	1,439	1,439	1,439	486
Adjusted R-squared	0.770	0.786	0.787	0.930
Year FE	YES	YES	YES	YES
Industry FE	YES	YES	YES	YES
Country FE	YES	YES	YES	YES

Note: This table presents the results of robustness tests where the dependent variable is the *Borrowers ESG Change*. Column (1) represents the results of equation (5.1) based on a PSM sample. Column (2) presents the results of equation (5.2) based on the sample PSM sample. In column (3), the moderator is changed from *Pct ESG Linked Lenders* to *ESG Linked Lenders Indicator*, which equals 1 if there are at least one lead lenders that are ESG-linked. Column (4) reports the results based on the PSM-matched sample that only contains loan facilities with a single lead lender in the syndicate. 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 Table A.5.2.

Table 5.7: Robustness checks – Alternative dependent variables

Dependent variable	(1) <i>Borrowers Env Change</i> $_{i,t}$ +1	(2) <i>Borrowers Soc Change</i> $_{i,t}$ +1	(3) <i>Borrowers Gov Change</i> $_{i,t}$ +1	(4) <i>Borrowers Env Change</i> $_{i,t}$ +1	(5) <i>Borrowers Soc Change</i> $_{i,t}$ +1	(6) <i>Borrowers Gov Change</i> $_{i,t}$ +1
<i>SLLs</i> $_{i,j,t}$	-0.308 (0.637)	0.291 (0.619)	1.047 (0.774)	-7.792*** (2.864)	-3.707 (2.612)	-4.649* (2.551)
<i>Pct ESG Linked Lead Lenders</i> $_{j,t}$				-1.570 (2.129)	5.388** (2.161)	-0.444 (2.818)
<i>SLLs</i> $_{i,t}$ x <i>Pct ESG Linked Lead Lenders</i> $_{j,t}$				9.114*** (3.511)	4.741 (3.118)	6.921** (3.081)
<i>Lead Lenders ESG Change</i> $_{i,t,t+1}$	0.120 (0.112)	-0.164 (0.129)	-0.161 (0.168)	0.100 (0.108)	-0.170 (0.122)	-0.176 (0.173)
<i>Lead Lenders ESG</i> $_{i,t}$	0.260** (0.108)	-0.122 (0.109)	-0.122 (0.076)	0.179** (0.084)	-0.250*** (0.085)	-0.193** (0.090)
<i>Log Loan Amount</i> $_{i,j,t}$	-0.939*** (0.336)	-0.642 (0.417)	-0.053 (0.344)	-0.905*** (0.341)	-0.589 (0.414)	-0.023 (0.334)
<i>Log Number of Years to Maturity</i> $_{i,j,t}$	-0.539 (0.702)	0.586 (0.867)	0.601 (1.050)	-0.808 (0.730)	0.233 (0.866)	0.371 (1.029)
<i>Loan Amendment</i> $_{i,j,t}$	2.398* (1.247)	1.937 (1.582)	0.680 (1.328)	2.163* (1.288)	1.651 (1.573)	0.482 (1.340)
<i>Loan Covenants</i> $_{i,j,t}$	-1.981 (1.478)	2.772 (2.129)	0.738 (2.069)	-3.116** (1.546)	1.178 (2.192)	-0.245 (2.035)
<i>Revolving Tranche</i> $_{i,j,t}$	-0.512 (0.573)	-1.234** (0.580)	-0.188 (0.639)	-0.446 (0.573)	-1.113** (0.551)	-0.127 (0.608)
<i>Borrowers ESG</i> $_{i,t}$	-0.115*** (0.037)	-0.237*** (0.039)	-0.206*** (0.042)	-0.101*** (0.035)	-0.217*** (0.037)	-0.193*** (0.043)
<i>Borrowers Size</i> $_{i,t}$	0.456 (0.488)	1.375** (0.603)	0.887 (0.564)	0.487 (0.507)	1.436** (0.603)	0.916 (0.575)
<i>Borrowers ROA</i> $_{i,t}$	20.536*** (7.714)	9.993 (7.031)	-15.775*** (5.741)	17.659** (7.117)	6.075 (6.418)	-18.252*** (5.824)
<i>Borrowers Leverage</i> $_{i,t}$	3.365 (2.396)	-1.584 (2.207)	-0.647 (2.568)	3.232 (2.406)	-1.435 (2.086)	-0.722 (2.582)
Constant	-5.398 (12.039)	8.954 (12.568)	4.222 (12.274)	0.732 (10.943)	11.979 (11.070)	8.857 (12.538)
Observations	1,439	1,439	1,439	1,439	1,439	1,439
Adjusted R-squared	0.825	0.735	0.491	0.830	0.746	0.496
Year FE	YES	YES	YES	YES	YES	YES
Industry FE	YES	YES	YES	YES	YES	YES
Country FE	YES	YES	YES	YES	YES	YES

Note: This table presents the results of robustness tests where the dependent variable is the *Borrowers Env Change* (columns (1) and (4)), *Borrowers Soc Change* (columns (2) and (5)) and *Borrowers Gov Change* (columns (3) and (6)), which are the change of borrowers' standalone environmental, social, and governance scores. Columns (1) to (3) represent the results of equation (5.1) based on a PSM sample. Column (4) to (6) present the results of equation (5.2) based on the sample PSM sample.

APPENDIX for CHAPTER 5

Table A.5.1: Example of SLL

	Details
<i>Borrower:</i>	Accor SA
<i>Product:</i>	A multi-currency senior unsecured revolving credit facility
<i>Date of Announcement:</i>	2 June 2018
<i>Notional:</i>	€1,200m
<i>Maturity:</i>	5 years with two potential 1-year extensions
<i>Interest:</i>	Reference currency index + credit-based margin + premium/discount based on ESG rating
<i>Counterparties:</i>	Relationship banks, led by BNP Paribas
<i>Documentation Agent and Sustainable Coordinator:</i>	BNP Paribas
<i>Positive Incentive:</i>	Discount or premium on margin indexed on average of ESG scores. One another condition includes introduction of an additional margin adjustment parameter linked to Accor's ASG score
<i>Credit Rating Agencies:</i>	S&P and Fitch
<i>ESG Rating Agencies:</i>	Sustainalytics

Table A.5.2: Variable definition

Variables	Description	Source
<u>Dependent Variable</u>		
<i>Borrowers ESG Change</i>	The change in the borrower's ESG score from the loan initiation year to one year after.	LSEG
<u>Independent Variables</u>		
<i>SLLs</i>	A dummy variable equals to one if the loan is sustainability-linked, and zero otherwise.	DealScan
<i>Pct of ESG Linked Lead Lenders</i>	The percentage of lead lenders that have linked their executives' compensation to ESG factors.	LSEG
<i>ESG Linked Lead Lenders Indicator</i>	A dummy variable equals to one if at least one of the lead lenders in the syndicate have linked their executives' compensation to ESG factors.	LSEG
<u>Control Variables</u>		
<i>Lead Lenders ESG Change</i>	The change of average ESG score among lead lenders from the loan initiation year to one year after.	LSEG
<i>Lead Lenders ESG</i>	The average ESG score among lead lenders.	LSEG
<i>Log Loan Amount</i>	The natural logarithm of loan amount (in USD).	DealScan
<i>Log Number of Years to Maturity</i>	The natural logarithm of loan maturity (in years).	DealScan
<i>Loan Amendment</i>	A dummy variable equals to one if a loan was amended via pricing change, extension of maturity, financial covenant changes, etc, and zero otherwise.	DealScan
<i>Loan Covenants</i>	A dummy variable equals to one if a loan includes a covenant, and zero otherwise.	DealScan
<i>Revolving Tranche</i>	A dummy variable equals to one if the tranche is a revolving credit facility, and zero otherwise.	DealScan
<i>Borrowers ESG</i>	Borrower's ESG score.	LSEG
<i>Borrowers Size</i>	The natural logarithm of total assets (in USD) of a borrower.	LSEG
<i>Borrowers ROA</i>	Earnings before interest and tax to total assets of a borrower.	LSEG
<i>Borrowers Leverage</i>	Total liabilities to total assets of a borrower.	LSEG

Table A.5.3: PSM

Panel A: Probit regression	
Dependent variable	(1) <i>SLLs_t</i>
<i>Lead Lenders ESG Change_{j,t,t+1}</i>	-0.012 (0.010)
<i>Lead Lenders ESG_{j,t}</i>	0.009 (0.007)
<i>Log Loan Amount_{i,j,t}</i>	0.045 (0.039)
<i>Log Number of Years to Maturity_{i,j,t}</i>	0.512*** (0.071)
<i>Loan Amendment_{i,j,t}</i>	-0.065 (0.095)
<i>Loan Covenants_{i,j,t}</i>	-0.056 (0.142)
<i>Revolving Tranche_{i,j,t}</i>	0.432*** (0.075)
<i>Borrowers ESG_{i,t}</i>	0.018*** (0.004)
<i>Borrowers Size_{i,t}</i>	0.027 (0.044)
<i>Borrowers ROA_{i,t}</i>	0.688 (0.778)
<i>Borrowers Leverage_{i,t}</i>	-0.031 (0.318)
Constant	-7.739*** (1.192)
Observations	7,510
Pseudo R2	0.419
Year FE	YES
Industry FE	YES
Country FE	YES

Panel B: Diagnostic test						
Variable	Unmatched			Matched		
	Treated	Control	t	Treated	Control	t
<i>Lead Lenders ESG Change</i>	-1.911	0.066	-10.52***	-1.887	-1.581	-1.03
<i>Lead Lenders ESG</i>	79.864	78.832	2.69***	79.882	80.317	-0.98
<i>Log Loan Amount</i>	19.913	19.659	4.25***	19.905	19.869	0.43
<i>Log Number of Years to Maturity</i>	1.346	1.228	4.37***	1.345	1.378	-1.08
<i>Loan Amendment</i>	0.336	0.438	-4.6***	0.335	0.349	-0.49
<i>Loan Covenants</i>	0.083	0.212	-7.2***	0.084	0.079	0.28
<i>Revolving Tranche</i>	0.658	0.506	6.88***	0.656	0.648	0.28
<i>Borrowers ESG</i>	68.624	51.352	19.77***	68.525	68.899	-0.41
<i>Borrowers Size</i>	23.108	22.602	7.09***	23.098	23.140	-0.47
<i>Borrowers ROA</i>	0.059	0.065	-2.11**	0.059	0.064	-1.32
<i>Borrowers Leverage</i>	0.665	0.642	2.58***	0.664	0.675	-0.97

Note: This table reports additional statistics from the PSM analysis reported in Table 5.5. Panel A reports the regression results for the estimation of the propensity score. Panel B compares the matched and unmatched samples across the matching characteristics.

6 Conclusions

6.1 Summary of findings and contributions of the thesis

Throughout the past decades, there has been an ongoing trend for businesses to adopt various practices to showcase their determination to become more stakeholder-oriented. While these practices could possibly serve as credible signals of companies' commitment to engage more with ESG-related activities, catering to stakeholders' interests, there is broad scepticism about whether companies strategically exploit their ESG commitments for other purposes, such as building image and reputation, obtaining competitive advantages over their competitors, or even concealing and directing stakeholders' attention away from other unethical behaviours. In this thesis, I aimed at extending the existing debate to some of the popular and newly developed practices that companies have adopted to demonstrate their commitments to ESG activities. Each empirical chapter (Chapters 3, 4 and 5) is designed to answer the following important questions: (1) Do companies act in accordance with their commitments? (2) If not, how do their actions and commitments disconnect or contradict each other? (3) In what situations do companies follow through or not with their commitments?

Chapter 3 investigates one of the most recent principle-based ESG commitments made to the public: the signing of BRS. While existing studies have found that signing this statement has merely symbolic impact on reshaping and improving corporate ESG practices (Bae et al., 2021; Bebhuk & Tallarita, 2022a; Raghunandan & Rajgopal., 2023), I am the first to provide evidence that the signing of BRS could lead to significant reductions in ESG performance. In line with the theoretical framework of Prospective Moral Licensing, the findings could be interpreted as the BRS-signatory CEOs having obtained moral credits from simply announcing their intentions to act ethically. In consequence, they feel licensed to not follow through with their commitments made in the BRS and, therefore, perform less well in CSR after signing. The tendency for the signatories to engage in Prospective Moral Licensing is also stronger when doing so does not materially affect how they operate, (i.e., they operate in an industry that is not considered as sustainability-sensitive and that is less exposed to brand value concerns, there are fewer independent directors on firms' boards of directors, and their executive remuneration is not linked to ESG targets.

Chapter 4 focuses on the impact of the adoption of ESG-linked compensation on ESG controversies and misconduct. While this mechanism is designed to financially incentivise CEOs to make meaningful ESG improvements, I identify that while the companies implementing this policy have greater improvements in ESG performance over time, they also exhibit higher exposure to ESG controversies than their counterparts. This counter-intuitive impact on negative ESG outcomes is more pronounced when CEOs are powerful, as predicted by the Managerial Power Theory. Surprisingly, I find that the negative impact of ESG-linked compensation on Controversies is present for companies under conditions of strong board monitoring, orientation towards CSR policies, and higher exposure to sustainability issues. Overall, the findings of this chapter are aligned with the argument based on the Multitasking Problem Theory, implying that opportunistic and powerful managers are able to prioritize self-reported, more easily measurable and manipulable ESG dimensions linked to their compensation instead of addressing wider ESG issues.

Chapter 5 brings a new angle to the ESG commitment literature by examining how lenders adopting the ESG-linked compensation scheme use their sustainable lending activities, i.e. issuing Sustainability-Linked Loans to shape borrowing firms' ESG profiles. I find evidence consistent with existing studies, proclaiming that the issuance of SLLs is likely to be a “sustainability washing” practice and that SLL borrowers are not effectively motivated by the ESG-contingent terms in the loan contract to improve their ESG profiles. This outcome could be due to lenders' executives lacking commitment in facilitating borrower ESG improvements through SLLs. However, I identify that a higher proportion of ESG-linked lead lenders in a syndicate could mitigate the “sustainability washing” concern by increasing the effectiveness of SLLs.

Overall, my thesis makes several important contributions to the existing literature. One important contribution is shedding light on the “dark side” of the latest innovations designed to hold companies committed to their ESG agenda. As introduced earlier in Chapter 2, literature on this front mainly criticises that some ESG commitments are merely “cheap talk” and likely result in corporate inaction. What is more, the results of this thesis extend the academic discourse to the possibility that ESG commitments could either be made solely to promote stakeholder benefits or may not function as expected, thus leading to corporate behaviours that contradict the intended outcomes of the commitments. As shown in Chapters 3 and 4, I provide a first set of evidence of negative ESG outcomes led by the signing of BRS and the implementation of ESG-linked

compensation. I argue that, while companies could sign the BRS with the aim of obtaining the moral license to act less morally in the future or link ESG metrics to executive compensation, may instead induce managers to decrease efforts towards CSR activities

At the same time, the findings of this thesis also make a meaningful contribution to understanding the role of the internal governance environment in the implementation of ESG commitments. Although the vast governance literature has highlighted the importance of “good governance” in enhancing the effectiveness and authenticity of ESG commitments, I add to this literature stream by exploring whether improving governance could serve as a potential pathway to mitigate the pitfalls of ESG commitments. For instance, my findings show that increasing the monitoring intensity by hiring more independent directors and adopting ESG-linked compensation could prevent companies from engaging in moral licensing activities through signing the BRS (Chapter 3). In addition, lenders may benefit from borrowers having ESG-linked compensation for their executives, as it could alleviate the “sustainability washing” concerns of sustainable lending (Chapter 5). However, the implementation of ESG-linked compensation presents challenges that may not be easy to mitigate. For example, I find that a stronger governance structure, as reflected by the presence of traditional and ESG-based mechanisms, is ineffective in diverting managers’ attention back to resolving the more important and pressing ESG issues (Chapter 4). These insights challenge the conventional viewpoint that better governance necessarily leads to effective implementation of ESG initiatives and substantive ESG outcomes.

More broadly, this thesis also highlights the importance of industry-specific factors in shaping corporate behaviours. I provide evidence that the effectiveness of different ESG commitments could vary significantly across different industry contexts. The findings in Chapter 4 show that, however, ESG-linked compensation induces managers to shift resources from pre-empting these controversies to improving self-reported ESG performance. This industry nature not only exposes the observed limitations of ESG-linked compensation but also exacerbates the Multitasking Problem. In contrast, Chapter 3 reports that the negative moral licensing effect of signing the BRS on corporate ESG performance is more pronounced when companies are not operating in sustainability-sensitive and consumer-goods industries, as these two firm categories are subject to more scrutiny from ESG-conscious market participants and dependent on stakeholders’ perceptions for their brand image.

6.2 Implications

In addition to its academic contribution, this thesis also provides a wide range of implications for companies, policymakers, regulators, and society in general. For companies, ESG initiatives are increasingly considered a cornerstone of modern business strategy. Evolving from principle-based initiatives like the BRS to some incentive mechanisms such as ESG-linked compensation and issuance of SLLs, different innovations are actively developed to not only showcase companies' commitments to ESG activities but also help stakeholders to track whether companies are genuinely adhering to their commitments. While providing a contemporary view to businesses of the evolving landscape of corporate accountability in the realm of ESG, this thesis urges companies to take into account the true costs when making ESG commitments. Making empty promises or showing contradictions between commitments and actions could be viewed as corporate hypocrisy and damage their reputation and image in stakeholders' minds. In addition, this thesis also underscores some of the unintended consequences and limitations of traditional and ESG-related governance structures. Such limitations should inform the design of internal governance environments to support the adoption and fulfilment of meaningful ESG commitments.

This thesis also urges policymakers and regulators to exercise caution when evaluating the prospects of ESG commitments as a replacement for regulated actions. Since companies enjoy greater discretion in how much effort they put into fulfilling their promises after taking voluntary ESG initiatives, this discretion, while offering greater flexibility to the committed firms, also opens the possibility for misusing these approaches to obtain valuable reputation and legitimisation or pursue other non-ESG purposes. Therefore, one of the key takeaways of this thesis is that, by highlighting the adverse impact led by companies' ESG pledges, policymakers and regulators should pay more attention to designing a regulatory environment that reduces the ambiguity of how companies demonstrate their commitment to ESG, critically evaluate whether companies genuinely adhere to their commitments, and foster a culture of corporate accountability in the ESG realm such that ESG commitments could serve their intended purposes to promote meaningful progress.

More broadly, this thesis calls for stakeholders to exercise caution before endorsing ESG commitments made by companies. Although taking an ESG stance is

often lauded as an important signal of a company committing to ESG, stakeholders should look beyond the promises on the surface and examine whether companies address the ESG issues, putting substantive efforts in ESG activities, and improving their overall ESG profiles in a meaningful way.

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