

Copyright Undertaking

This thesis is protected by copyright, with all rights reserved.

By reading and using the thesis, the reader understands and agrees to the following terms:

1. The reader will abide by the rules and legal ordinances governing copyright regarding the use of the thesis.
2. The reader will use the thesis for the purpose of research or private study only and not for distribution or further reproduction or any other purpose.
3. The reader agrees to indemnify and hold the University harmless from and against any loss, damage, cost, liability or expenses arising from copyright infringement or unauthorized usage.

IMPORTANT

If you have reasons to believe that any materials in this thesis are deemed not suitable to be distributed in this form, or a copyright owner having difficulty with the material being included in our database, please contact lbsys@polyu.edu.hk providing details. The Library will look into your claim and consider taking remedial action upon receipt of the written requests.

GREEN OR BLUE? THE EFFECT OF SUSTAINABILITY COMMITTEES ON

ESG DECOUPLING

QIU WEITE

PhD

The Hong Kong Polytechnic University

2023

The Hong Kong Polytechnic University

School of Accounting and Finance

Green or Blue? The Effect of Sustainability Committees on ESG Decoupling

QIU Weite

A thesis submitted in partial fulfilment of the requirements for the degree of Doctor of

Philosophy

May 2023

CERTIFICATE OF ORIGINALITY

I hereby declare that this thesis is my own work and that, to the best of my knowledge and belief, it reproduces no material previously published or written, nor material that has been accepted for the award of any other degree or diploma, except where due acknowledgement has been made in the text.

_____ (Signed)

QIU Weite _____ (Name of student)

Abstract

This research examines the effect of having a sustainability committee on firms' ESG decoupling. As corporate sustainability becomes more and more important for firms' operation, stakeholders also pay attention to whether firms' claims on sustainable development are in accordance with their actual business practice. As a board level governance mechanism, whether the sustainability committee has impacts on the external and internal ESG actions is interesting and necessary to explore. Previous studies on sustainability committee are mainly based on small samples of large firms over a short sample period. Based on a large sample of 2,759 US listed firms covering different industrial sectors over the 2002 to 2021 period, I find that sustainability committees increase the overall ESG decoupling. Following analyses on the decomposed decoupling measures reveal that such committees reduce the environmental decoupling but increase the social and governance decoupling, indicating the potential bluewashing side effects. I adopt the alternative decoupling measures, propensity score matching process, and the Heckman two-stage method to ensure the robustness of the main findings. Three cross-sectional tests are performed. The positive relationship between ESG decoupling and sustainability committees is stronger for firms with a higher level of analyst coverage and weaker for firms having a higher level of institutional ownership. Additionally, the positive association between social decoupling and sustainability committees is more pronounced for firms with higher media coverage related to ESG issues.

Acknowledgments

I would like to express my sincere gratitude to all those who help me in completing this thesis.

First and foremost, I would like to show my deepest gratitude to my chief supervisor, Prof. Qiang Wu, who guided me through the whole stage of the writing of this thesis. As a PhD candidate, I have many questions about accounting research, teaching, and career planning to ask him, but he always explains them to me patiently no matter how busy he is. In fact, without his constant encouragement and support, the completion of this thesis would have been impossible. I am grateful to Prof. Wu for being particularly helpful and supportive during these semesters. His enthusiasm for academic research, his profound scholarship, critical thinking and unselfish help to his students set me a good example for my future career of accounting research and teaching.

My deep gratitude also goes to my co-supervisors, Prof. C. S. Agnes Cheng and Dr. Cheng Zeng. During the first two years of my PhD study, Prof. Cheng takes time from her busy schedule to teach me fundamental skills in doing academic research and instructs me in accomplishing my MPhil thesis. I have benefited a lot from her guidance and suggestions on research and career development. As an energetic and precise scholar, Dr. Zeng always remind me of pushing myself to be excellent. Without his careful instruction on a variety of research tactics and methodology, I may take many wrong paths during these semesters.

I have owed my thanks to all academic faculties in the School of Accounting and Finance of the Hong Kong Polytechnic University who have taught and inspired me during PhD study. Not only do they teach me knowledge of accounting research, but they also set up examples of how to be a person of wisdom and integrity.

I am grateful to all my friends and classmates who have shown enthusiasm and kindness during my study in the Hong Kong Polytechnic University. Many of them have shown lovely personalities as well as cooperative spirits in both research and daily lives.

In the end, I would like to express my heartfelt thanks to my parents, for expertly and unconditionally preparing everything behind the scenes, which have enabled me to successfully and exceedingly finish my thesis in an unprecedented way.

Table of Contents

Introduction.....	8
Literature review and hypothesis development	15
Sample Construction and Empirical Methodology	23
Empirical Results and Implications	27
Conclusion	34
Reference	35
Empirical Results Tables.....	39
Appendix A: Variable Definitions.....	56
Appendix B: Sample Distribution.....	58

Introduction

This study attempts to investigate the association between ESG decoupling and the presence of sustainability committees. I define ESG decoupling as the gap between firms' talks and claims about ESG activities and their actual implementation of sustainable practices. In this study, a sustainability committee is a board committee mainly responsible for advising or monitoring a firm's strategy and operation related to CSR or ESG issues. Corporate sustainability is becoming increasingly important for firms' operation. In the 1970s, the environmental related costs for US firms have increased substantially, and companies have to take these costs into consideration for their busy strategy (Clarkson, Li, Richardson, and Vasvari, 2011). Firms mitigating the negative effect from environmental costs on operation can obtain sustainable competitive advantages (Porter and Linde, 1995; Nehrt, 1996). According to the article published in Forbes (2014), corporate sustainability not only deals with environmental problems but also concerns about working conditions, safety procedures, and other aspects nowadays. Traditionally, the shareholder theory indicates that maximizing the shareholder value is the goal of the management team (Friedman, 1970). Current corporations need to maintain sustainable development by addressing challenges from the environmental concerns like climate change and pollution, and other global issues emerging recently, such as supply chain uncertainty and public health emergency (Covid-19 Pandemic). Moreover, conducting CSR activities meets the expectations of different parties and improves a firm's overall relationship with a variety of stakeholders (Porter and Kramer, 2011; Dyck, Lins, Roth, and Wagner, 2019), which is

consistent with the stakeholder theory raised by Freeman (Freeman, 2010).

However, problems have also emerged from the global trend of corporate sustainability. Firms' talks and claims on CSR or ESG are not necessarily consistent with their actual practice, which is the ESG decoupling. Prior study indicates that the gap between firm's sustainability discourse and its practice is persisting (Cho, Laine, Roberts, and Rodrigue, 2015). For instance, firms could strategically engage in symbolic ESG activities, such as advertising the greenness of their operation (greenwashing), to grab the benefits from the increasing demand for environmentally friendly products and services from consumers and capital market (Delmas and Burbano, 2011). An example of firm-level greenwashing is the "Ecomagination" campaign launched by General Electric in 2004. The firm claims the work in the environmental arena while it simultaneously lobbied to fight new clean air EPA requirements. For bluewashing practice, a report shows that 40% of firm members of the United Nation Global Compact, an organization promoting CSR and sustainable development, do not use its principles to make policy reforms (McKinsey & Company, 2004). Such practice, once discovered, has negative effects on customers and investors' confidence in the socially responsible firms.

Realizing the potential negative impacts of ESG decoupling on operation and public reputation, firms start to set up sustainability committees to guide the sustainable development. These committees usually have names like CSR committee, ESG committee, or public responsibility committee. It is a tool designed to ensure the accountability and transparency of a firm's sustainable development. According to

Miller and Serafeim's (2014) survey study on large firms (over 10,000 employees) operating globally, the sustainability committees emerge from different stages of company's transformation towards sustainable development. Based on the authors' interview on related personnels, the potential reasons for creating such governance mechanisms over sustainable development vary, such as complying regulations, improving energy usage efficiency, or innovating and reframing the corporate identity. Scholars examining this unique committee mainly focus on its impact on different aspects of ESG performance, and most existing studies document positive effects of the sustainability committees. For example, Dixon-Fowler, Ellstrand, and Johnson (2017) find that having an environmental committee is positively associated with corporate environmental performance. Liao, Luo, and Tang (2015) show that a firm having a board with higher gender diversity, more independent directors, or an environmental committee is more likely to make voluntary disclosure of greenhouse gas emissions. A more detailed literature review is provided in the next part. Although previous research provides some insights of the relationship between sustainability committees and corporate social performance, most of the studies use a small sample of large firms over a relatively short sample period. More importantly, the possible side effects of such committees on ESG practices are under-investigated.

Given the importance of corporate sustainability and the increasing popularity of having sustainability committee on the board, my study attempts to provide a more comprehensive picture of how sustainability committees interact with ESG activities using a large sample of US public firms from 2002 to 2021. Existing study shows that

both the external factors such as regulations and internal factors affect a firm's decision on setting up a sustainability committee (Chu, Li, and Zou, 2022). Before investigating the association between sustainability committees and ESG decoupling, I first look into how ESG performance, firm characteristics, and board characteristics affect the probability of having a sustainability committee. On the one hand, the monitoring function of a sustainability committee could reduce the agency costs by preventing managers from conducting symbolic ESG practice such as greenwashing that harms shareholders' value in long run (Jensen and Meckling, 1976). This argument predicts that firms with poor current ESG performance are more likely to set up a sustainability committee in the near future. On the other hand, firms frequently engaging in CSR are more easily to reach personnel with related experience and knowledge so that it is less costly to set up such committee (Chu et al., 2022). From this perspective, firms with better ESG performance are more likely to have a sustainability committee. The determinant analysis supports the second conjecture. Moreover, larger board size, higher board independence, and more female directors sitting on board also positively affect the probability, which is consistent with the implications of prior research on CSR (e.g., Zhang, Zhu, and Ding, 2013; Harjoto, Laksmana, and Lee, 2015).

To fulfill the main analysis, I utilize the committee information from the BoardEx database and use keyword searching and manually checking methods to identify firms having sustainability committees. I follow Hawn and Ioannou's (2016) method to construct the ESG decoupling measures. The calculation of the measures relies on data collected from the Refinitiv ESG database (formerly Thomson Reuters Asset4). The

database provides firm-year information of ESG activities. Hawn and Ioannou (2016) classify all the activities into external and internal parts. The decoupling measure reflects the difference between a firm's external and internal actions related to corporate sustainability. External actions are mainly corporate disclosure and claims on sustainability, while internal actions refer to the policies or other substantive ESG practice. Generally, a high level of decoupling indicates that the firm communicates positively with limited substantive actions. To provide a more comprehensive picture of the analysis, I also decompose the overall measure into environmental (E), social (S), and governance (G) decoupling measures. The baseline test shows that having a sustainability committee is positively associated with the overall ESG decoupling. Further tests on the decomposed decoupling measures reveal that the positive association comes from social and governance decoupling, while the committee negatively affects the environmental decoupling. Besides examining different categories of decoupling, I directly check the relationship between the sustainability committees and the external claims and internal practice. The result shows that external claims on ESG are positively and significantly associated with the presence of the committee, indicating that firms with such committees engage in more communication or disclosure. More interestingly, the sustainability committee positively affects both external and internal actions of environment but only positively affects the external claims on social and governance issues. In summary, the above empirical findings suggest that firms improve their environmental performance but also increase symbolic social and governance claims after having sustainability committees, suggesting the

bluewashing behavior.

I conduct a set of tests to verify the robustness of the baseline findings. To ensure that the decoupling measures are normalized between 0 and 1, I calculate the alternative overall decoupling measures as well as the decomposed measures using different methods following prior studies, and the results and implications are consistent. Moreover, I perform propensity score matching for firms with such committee and firms never having one within the sample period to address the potential systematic difference between these two groups of firms. The main results and implications still hold for the matching sample analysis. In addition, the sample selection process in the study drops a substantial number of observations when merging sample firms' fundamental data (from Compustat and BoardEx) with ESG data, which could result in the sample selection bias. To address this concern, I use the Heckman two-stage method, and the results are robust.

Additionally, several tests are performed to explore cross-sectional variations of the positive association between ESG decoupling and the sustainability committees. I mainly investigate the cross-sectional variations resulting from analyst coverage, institutional ownership, and media coverage. They are all important stakeholders concerning firms' operation but may have different attitudes toward sustainable development. Adhikari (2016) suggests that a firm's CSR performance is negatively associated with the analyst coverage. Using the analyst data from the IBES, I find that the positive association between the presence of a sustainability committee and the CSR decoupling is more pronounced for firms with higher level of analyst coverage. Existing

studies show that institutional investors positively affect corporate social responsibilities (Dyck et al., 2019). Using the ownership data from the FactSet database, I show that the positive relationship between the presence of a sustainability committee and the ESG decoupling is less pronounced for firms with higher institutional ownership. Additionally, public attention or scrutiny could affect a firm's decision on ESG activities. Cahan, Chen, Chen, and Nguyen (2015) show that firms manage their media reputation through conducting ESG activities. To examine this possibility, I collect data of media coverage related to ESG issue from the RepRisk database and perform the test. The results show that the positive association between the sustainability committee and the social decoupling is more pronounced for firms with higher risk exposure to the media. The results for all cross-sectional tests are consistent with the predictions.

My study contributes to existing literature in several aspects. Firstly, I document the potential dark side of a type of corporate governance mechanism, the sustainability committee, on increasing the overall ESG decoupling by conducting more bluewashing practice based on a large sample of US firms. Previous research examining such corporate governance mechanism mainly finds its positive impacts on ESG or CSR performance using small samples of large firms belonging to the major stock indices around the world. A few existing studies use large samples to investigate the determinants and consequences of CSR committees based on international settings (Chu et al., 2022; Gull, Hussain, Khan, Khan, and Saeed, 2022). Compared with their studies, my study avoids the potential confounding effects resulting from different

institutional settings. Using a sample of US listed firms also allows me to explore the cross-sectional variations of the main effects, providing a more complete picture of the effectiveness of the sustainability committee. More importantly, I separately explore the effect of sustainability committees on three categories of ESG decoupling as well as the external and internal actions and find that firms adopt different strategies on these activities. Additionally, prior study indicates that director's expertise can have negative effects on related firm performance (Minton, Taillard, and Williamson, 2014). Since directors with CSR or ESG expertise are sitting on sustainability committees, I contribute to the director's expertise literature by showing the positive association between board members with ESG expertise and ESG decoupling.

The rest of the study is organized as follows. Section 2 summarizes the previous literature and develops testable hypothesis. Section 3 describes the sample selection process and empirical methodology. Section 4 presents and explains the empirical results and implications. Section 5 concludes the study.

Literature review and hypothesis development

Board structure and function of board committees

Previous studies focusing on the board structure and the function of different board committees are systematic and massive. Board structure is a function of costs and benefits of monitoring and advising (Linck, Netter, and Yang, 2008). Prior study indicates that board effectiveness is achieved by board committees, and important decisions of the board are initiated at the committee level (Kesner, 1988; Jiraporn, Singh, and Lee, 2009). Specifically, the committee structure, committee's membership

composition, and other committee's characteristics have significant effects on firm's behavior and performance. For instance, Klein (1998) finds that the percentage of inside directors on finance and investment committees has positive effects on financial and stock performance for the S&P 500 firms, and more inside directors on these two committees is associated with higher abnormal stock return on the proxy mailing date. Klein (2002) shows that audit committee independence is negatively related to abnormal accruals. After the Sarbanes-Oxley Act (SOX) comes into effect, Krishnan (2005) finds that higher audit committee quality, measured in size, independence, and expertise, is associated with less internal control problems. Similarly, Goh (2009) suggests that audit committee quality is associated with the timeliness in the remediation of material weaknesses in internal control. The above brief summary of the literature provides a general view of the associations between different board committees and corporate operations.

The effectiveness of sustainability committee on corporate social performance

Existing studies examining the effectiveness of sustainability committee focus on several aspects. A stream of literature investigating the association between sustainability committees and corporate social performance documents mixed findings. For instance, Rodrigue, Magnan, and Cho (2013) study environmentally sensitive large firms in US and find no significant association between environmental governance mechanism including the existence of environmental committee and environmental performance measured by regulatory compliance, pollution prevention, and environmental investment. On the other hand, Dixon-Fowler, Ellstrand, and Johnson

(2017) find that board environmental committee positively affects the corporate environmental performance for the S&P 500 firms, and the positive effect is more pronounced with the presence of a senior-level environmental manager. Hussain, Rigoni, and Orij (2018) investigate the association between corporate governance and the sustainability performance defined by the GRI (Global Reporting Initiative) framework for 100 US firms from the high-performance Global Fortune 2013 list, showing that the sustainability committee at board is positively associated with the social and environmental performance. Burke, Hoitash, and Hoitash (2019) examine the relationship between heterogeneity of sustainability committee and corporate social performance for US firms, suggesting that associations between sustainability committees and corporate social performance are stronger if committees focusing on a specific stakeholder group are paired with relevant performance outcomes. Similar studies have also been conducted based on international settings. For example, Chu et al. (2022) utilize a large sample of worldwide firms and find that CSR committees are effective on reducing the risk of incurring negative CSR issues. Martín and Herrero (2020) focus on a sample of European Union-based companies and find that gender diversity of the board and existence of CSR committees have positive impacts on the environmental performance.

Sustainability committee and CSR disclosure and assurance

Another stream of literature examines the effect of sustainability committee on CSR or environmental disclosure and the usage of CSR assurance. For instance, Liao, Luo, and Tang (2015) investigate the effect of corporate board's characteristics on the

voluntary disclosure of greenhouse gas emissions for 329 largest UK firms, suggesting that a board with higher gender diversity, more independent directors, or environmental committee tends to be more ecologic transparent. Helfaya and Moussa (2017) explore the impact of board's CSR strategy and orientation on the quantity and quality of environmental sustainability disclosure in UK listed firms, finding that existence of a CSR committee and issuance of a stand-alone CSR report are positively and significantly associated with environmental sustainability disclosure. Bradbury, Jia, and Li (2022) examine the association between CSR committee and the external assurance of CSR report for Australian companies, showing that the effectiveness of CSR committee, measured in composition, authority, resources, and diligence angles, is positively associated with the external assurance.

Environmental disclosure and greenwashing

As firms' practice on CSR and ESG attracts more attention from the public, providing corresponding disclosure on the corporate social performance is more common (Cho, Laine, Roberts, and Rodrigue, 2015). Before the emerging public concern on ESG decoupling, previous research on the relationship between environmental performance and environmental disclosures documents mixed results. For instance, early studies based on small samples of large US firms find no significant relation between firm's environmental performance and the regulated environmental disclosures on the annual report and 10K filings (Ingram and Frazier, 1980; Wiseman, 1982). Patten (2002) addresses the limitation of these early studies in measurements and sample selection and shows a negative association between environmental

performance and environmental disclosure. More recently, Clarkson, Li, Richardson, and Vasvari (2008) argue that the negative association documented by previous studies could be self-evident since negative environmental issues should be reported in the regulated channels. Instead, they find that the environmental performance is positively related to discretionary environmental disclosures based on the GRI guidelines for a sample of US firms in the five most polluted industries. In addition, Cho, Guidry, Hageman, and Patten (2012) study a sample of environmentally sensitive US firms and find a negative association between the environmental performance and voluntary environmental disclosures and reputation, and a positively relation between environmental disclosures and reputation. Their findings indicate that extensive environmental disclosure will mediate the effect of poor environmental performance on environmental reputation.

As a typical type of ESG decoupling, greenwashing has become an interest to the public in the recent decade. A greenwashing firm will selectively disclose the positive part of the environmental activity but hide the information related to activity harming the environment. According to the study conducted by Delmas and Burbano (2011), drivers of greenwashing include three different levels: external, organizational, and individual. External drivers include non-market factors, such as regulation, media monitoring, and activist, and market factors such as demand from investors and consumers and competition. Organization drivers include firm characteristics, incentive structure and culture, intra-firm communication, and organizational inertia. Individual drivers include psychological factors such as optimistic bias. Existing studies on the

determinant of greenwashing mainly focus on external and organizational levels. For instance, Lyon and Maxwell (2011) show that greater activist pressure deters greenwash but could induce firms that are not fully informed about the environmental impacts of their actions to disclose less about their environmental performance. Roulet and Touboul (2015) investigate the effect of cultural beliefs in the virtues of liberalism on the likelihood of greenwashing based on international settings, finding that firms in countries having stronger virtues of competition are more likely to greenwash, and that firms in countries with the virtues of individual responsibility are more likely to conduct substantive actions. Moreover, Marquis, Toffel, and Zhou (2016) find that environmentally damaging firms and firms operating in countries with higher levels of scrutiny and stronger global norms are less likely to engage in selective disclosure. Zhang (2022) examines international large-cap companies across 47 countries, showing that financial constraint is positively associated with greenwashing, and that the association is more pronounced for high leveraged firms.

Current studies also explore how regulations in different countries affect the practice of greenwashing. Using a sample of firms from 12 countries, Mateo-M´arquez, Gonz´alez-Gonz´alez, and Zamora-Ramírez (2022) show that the number of regulations related to climate change has negative effects on the likelihood of firms to engage in greenwashing, and that stringent climate-related regulations have negative impacts on greenwashing. Grewal, Richardson, and Wang (2022) examine the impact of mandatory carbon reporting on selective disclosure of environmental information based on UK institutional settings, finding that the regulation leads to a decline in firms’ selective

carbon disclosure, and that firms also reduce carbon emissions after the regulation. In addition, prior literature investigates the association between CSR activities and corporate greenwashing. For example, Mahoney, Thorne, Cecil, and LaGore (2013) examine the relationship between standalone CSR reports and greenwashing based on a sample of US public firms, finding that firms that voluntarily issue standalone CSR reports generally have higher CSR performance scores, rejecting the greenwashing explanation. Similarly, Uyar, Karaman, and Kilic (2020) study the global logistics sector, finding that companies with greater CSR performance are more likely to publish a CSR report and companies with greater CSR performance are more likely to publish a higher number of CSR reports, also rejecting the greenwashing explanation.

Hypothesis development

The association between ESG decoupling and sustainability committees can be argued in the following perspectives. On the one hand, literature discussed above shows that sustainability committees in general improve ESG performance, mitigate CSR risk, and increases CSR disclosure. These findings to some extent support the legitimacy theory that firms continue to make their efforts to meet public expectations on sustainable development. Specifically, a board with higher connectedness to CSR directors is more likely to have a CSR committee (Chu et al., 2022). Burke et al. (2019) show that sustainability committee targeting on a specific type of stakeholder is associated with the relevant CSR performance stronger. With CSR directors sitting on board, sustainability committees strengthen a board's oversight and monitoring function and improves a firm's CSR engagement (Hussain et al., 2018). Moreover, Du

(2015) finds that greenwashing is negatively associated with the cumulative abnormal return around the exposure of greenwashing in Chinese capital market. Since the board is mainly responsible for shareholders' interests, the sustainability committee should prevent managers from taking such symbolic ESG actions. Based on above reasoning, sustainability committees with ESG experts should reduce the ESG decoupling, and I state the first hypothesis as follows:

H1A: The presence of a sustainability committee is negatively associated with a firm's CSR decoupling.

On the other hand, directors with relevant ESG knowledge could be more capable of manipulating the information disclosed to the public. A previous study suggests that directors with financial expertise of US banks increased the risk taking before the financial crisis, resulting in poor performance of bank holding firms after the crisis (Minton et al., 2014). Based on this finding, firms with sustainability committees could also strategically provide more ESG disclosure beyond the actual practice when facing increasing public attention to sustainability. Moreover, ESG decoupling could be affected by different categories of ESG activities. With limited resources, firms may put more efforts on activities closely or directly related to profits generation such as energy usage efficiency but only provide disclosure of their vision for improving social or governance performance, which is difficult to be verified in short term by the public. In addition, corporate governance mechanism could have no significant effects on firms' ESG activities. Rodrigue et al. (2013) find no significant association between sustainability committees and environmental performance for environmentally

sensitive large US firms. Executives conduct sustainability projects without consultation, and disagreement between boards and senior management is rare (Schwartz-Ziv and Weisbach, 2013). Considering the above reasoning, I state the second hypothesis as follows:

H1B: The presence of a sustainability committee is positively associated with a firm's ESG decoupling.

Sample Construction and Empirical Methodology

Sample construction

I examine the main research question of this study based on the public listed firms in the US capital market. I start the sample selection process with the BoardEx database. The summary data of the BoardEx provides information on board committee composition, directors' personal details, and other board characteristics. I clean and aggregate the necessary board information into firm-year level and then merge the data with the Compustat database through the linking table provided by WRDS to acquire the firms' financial data. This procedure provides me with an initial sample of 69,097 firm-year observations starting from 2002 to 2021. The sample period starts in 2002 since the coverage of the BoardEx database becomes more complete after 2001. In the next step, I collect the ESG related data from the Refinitiv ESG database. This database provides worldwide firm level information on the ESG practice and performance and is broadly used in current research (e.g., Dyck et al., 2019). An alternative database is the MSCI ESG (formerly KLD) database, which provides firm level information on the strengths and weaknesses of CSR performance. This database mainly covers listed

firms in the US capital market. However, the external and internal ESG actions cannot be directly identified from the MSCI ESG database for generating the ESG decoupling measure. I merge the initial sample with the ESG data from Refinitiv database using the CUSIP code and get the sample for baseline empirical analysis, which includes 20,038 firm-year observations for 2,759 unique firms. This merging step leads to a drop of around 50,000 firm-year observations, which could result in sample selection bias. Heckman two-stage test will be applied to deal with this concern. For the cross-sectional tests on the analyst coverage, institutional ownership, and media coverage of ESG issue, I collect the data to construct the conditioning variables from the IBES, FactSet, and RepRisk databases. The sample selection process is presented in Table 1.

[Insert Table 1]

Regression models and empirical measurements

The regression analyses of this study are organized as follows. I will first test the determinants of having a sustainability committee. After the determinant analysis, I conduct the baseline test on the association between sustainability committees and the ESG decoupling, and a set of following tests will be performed to ensure the robustness of the main results. In addition, cross-sectional tests will be included. I construct the regression models below for each step of the regression analyses.

$$\text{Log}[p(SC_{i,t+1})|(1 - p(SC_{i,t+1}))] = \alpha_0 + \alpha_n \text{Determinants}_{i,t} \quad (1)$$

$$DE_ESG_{i,t} = \beta_0 + \beta_1 SC_{i,t} + \beta_m \text{Controls}_{i,t} + \beta_n \text{Fixed Effects}_{i,t} + \varepsilon_{i,t} \quad (2)$$

Equation (1) is a logistic regression model testing the likelihood that a firm will have a sustainability committee in year $t+1$. The determining factors in this model

include variables capturing ESG performance, firms' fundamental characteristics, and board characteristics. Equation (2) is the regression model examining the effect of sustainability committees on ESG decoupling. SC is the key independent variable in the equation (2). It is an indicator variable equal to one if the given firm i has a sustainability committee on the board in year t , and zero otherwise. I follow several steps to identify the sustainability committees. I start with the BoardEx committee detail database and collect a list of all names for the board committees. There is no uniform name for a sustainability committee. I thereby combine the keyword searching and manually checking methods together to screen the name list of the committees. For the selection of keywords, I follow the methodology of Fu et al. (2020), which investigates the effect of chief sustainability officers on corporate social performance. After these procedures, 206 different names for sustainability committees have been identified in total. Usually, these names include similar keywords such as corporate responsibility, sustainability, environment, and social.

DE_ESG is the key dependent variable in the equation (2). I construct both the overall ESG decoupling and three decomposed decoupling measures (environmental, social, and governance). The calculation method follows Hawn and Ioannou's (2016) study and use the data from the Refinitiv ESG database. The Refinitiv ESG driver and outcome database provides a set of firm-year binary variables (coded as 1 or 0) indicating whether a firm engage in a given ESG activity. Based on this dataset, Hawn and Ioannou (2016) collect and classify 26 external and 25 internal actions, and the detailed information of external and internal actions can be acquired from their online

appendix¹. These external and internal actions correspond with each other. Due to the data availability, my study adopts 21 external and 20 internal actions. Specifically, “whether the company has a CSR committee” belongs to internal actions in Hawn and Ioannou’s (2016) original settings. I remove this item to prevent mechanical correlation between the dependent and independent variables that may bias the implication of the main results. To get the overall ESG decoupling, I first add up the external and internal actions separately and then normalize the sums using the natural logarithm of total assets. The ESG decoupling equals the difference between external index and internal index. For the decomposed decoupling measures, I identify external and internal actions for each type of activity and then repeat the same process. The formula for the calculation process is shown below.

$$DE_ESG_{i,t} = \frac{\text{Sum of external actions}_{i,t}}{\text{Firm size}_{i,t}} - \frac{\text{Sum of internal actions}_{i,t}}{\text{Firm size}_{i,t}}$$

For the control variables, I include a set of firm characteristics that could affect the ESG performance and are used by the existing studies (e.g., Chu et al., 2022): firm size (natural logarithm of total assets) to capture economic scale; leverage (total liabilities to total assets ratio) and cash flows from operation to capture financial situation; return on assets to capture profitability; sales growth and book-to-market ratio to capture growth opportunities; and net property, plant, and equipment to capture the investment. I also add a set of board characteristics including board size, CEO duality, the ratio of independent directors, and the ratio of female directors. To control the time-

¹<https://onlinelibrary.wiley.com/action/downloadSupplement?doi=10.1002%2Fsmj.2464&file=smj2464-sup-0001-AppendixS1.docx>

invariant factors such as business model, industry membership, and corporate culture, year fixed effects and firm fixed effects are adopted in the regression model. I also use the robust standard errors to address the concern of heteroscedasticity. The detailed variable definitions are reported in Appendix A. All continuous variables are winsorized at the 1% and 99% levels.

Empirical Results and Implications

Summary statistics

I present the descriptive statistics and the pairwise correlation matrix in Table 2 and Table 3. In the Panel A of Table 2, the mean value of variable *SC* is 0.126, suggesting that 12.6 percent of firm-year observations (in total 2,521) have a sustainability committee. This percentage is comparable with the existing studies based on international samples including US firms (e.g., Chu et al., 2022). Specifically, there are 416 out of 2,759 unique firms setting up such committees within the sample period, and the detailed yearly and industrial sector distributions of firms having the committee is presented in Appendix B of the study. The average values of four decoupling measures are negative, and this is consistent with the implication documented by Hawn and Ioannou (2016). Panel B and Panel C of Table 2 separately report the statistics for firms having sustainability committees and firms never having one. On average, firms establishing such committees within the sample period have better ESG performance measured by the ESG score collected from the Refinitiv database. In the correlation matrix in Table 3, similar implications can be inferred from the first column.

[Insert Table 2 and Table 3]

Regression analyses and results

I first report the determinant analysis on having a sustainability committee in Table 4. Panel A shows the regression coefficients for all selected determining factors. In column one, the ESG score is a firm-level ESG performance measure collected by the Refinitiv based on verifiable disclosure in the public domain. The result shows that firms with better ESG performance are more likely to have a sustainability committee in the next year. The marginal effect analysis in Panel B suggests that a one-unit increase in ESG score is associated with 14.8 percent increase in the probability of having a sustainability committee. Within my sample, this result indicates that firms with the ESG score at 75th percentile are 3.65 percent more likely to have a sustainability committee than those with the ESG score at 25th percentile. For other determinants, the probability of having such committees is positively associated with board size, board independence, and the ratio of female directors, and these findings are consistent with the prior studies on the determinants of CSR performance (e.g., Zhang et al., 2013; Harjoto et al., 2015). Column two replaces the overall ESG score with three separate scores of ESG activities also collected from the Refinitiv database to provide further understandings on the drivers of the committee. The third and fourth columns report results including year and industry fixed effects, and the implications are consistent.

[Insert Table 4]

Table 5 presents the baseline analysis on the effect of sustainability committees on firms' ESG decoupling. The regression coefficient of variable *SC* is positive and

significant at 1 percent level in column one, suggesting that sustainability committees potentially increase the gap between a firm's external and internal ESG actions. Columns two to four present the results for the effect of sustainability committees on environmental, social, and governance decoupling. The regression coefficient of *SC* is negative and significant at 10 percent level in column two but positive and significant at 1 percent level in the third and fourth columns. At this stage, the regression results initially suggest that the positive association between the overall ESG decoupling, and the presence of sustainability committees is mainly driven by the social and governance decoupling. In the next step, I explore whether the positive relationship between ESG decoupling and sustainability committee results from increase in external actions or decrease in internal actions or both. I regress the overall and the separate categories of external and internal actions on the sustainability committees and report the results in Table 6. In columns one and two, sustainability committees only positively affects the overall external actions. In the remaining columns, the external and internal environmental actions and the external social and governance actions are positively and significantly associated with the sustainability committees, while the internal social actions are negatively associated with the sustainability committees. In summary, findings in Table 5 and Table 6 support the argument that firms having sustainability committees put more efforts and resources on environmental issues, which is closely related to profits generation. In the meanwhile, social and governance activities are relatively abstract and are not easy to be verified compared with environmental actions such as energy usage efficiency or pollution control. With limited resources, firms

having sustainability committees choose to talk more beyond actual practice in social and governance aspects, indicating the potential negative impacts of such governance mechanism on increasing bluewashing practice.

[Insert Table 5 and Table 6]

I perform several tests to ensure the robustness of the baseline findings. Hawn and Ioannou's (2016) original external and internal indexes are normalized between 0 and 1. Due to the difference in testing sample, a few observations in this study have external and internal indexes larger than 1. Two alternative calculation methods are applied. The first method is replacing the original scaler (natural logarithm of total assets) for the sum of actions with the number of total items (21 for external and 20 for internal). The other method is using the min-max feature scaling (unity-based normalization) to adjust the sum of actions, and the yearly minimum and maximum value of the sum of actions are adopted. Both alternative methods bring the decoupling measures into the range from 0 to 1 and have been used by prior research (e.g., Hussain et al., 2018). The formulas for these two calculation methods are presented below. The results for using the dependent variables calculated by alternative methods are present in Table 7 and Table 8. Although the magnitudes of the coefficients for variable SC are slightly different from those in baseline tests, the signs, significance, and the implications of the coefficients are consistent.

$$DE_ESG_{i,t}^{a1} = \frac{\text{Sum of external actions}_{i,t}}{\text{Number of items}_{i,t}^E} - \frac{\text{Sum of internal actions}_{i,t}}{\text{Number of items}_{i,t}^I}$$

$$\text{External Index}_{i,t}^{a2} = \frac{\text{Sum of external actions}_{i,t} - \text{Minimum}_t^E}{\text{Maximum}_t^E - \text{Minimum}_t^E}$$

$$Internal\ Index_{i,t}^{a2} = \frac{Sum\ of\ internal\ actions_{i,t} - Minimum_t^l}{Maximum_t^l - Minimum_t^l}$$

$$DE_ESG_{i,t}^{a2} = External\ Index_{i,t}^{a2} - Internal\ Index_{i,t}^{a2}$$

[Insert Table 7 and Table 8]

Moreover, it is possible that the main findings are driven by the systematic difference between firms having sustainability committees and those never (comparing apples with oranges). To mitigate this concern, I adjust the testing sample by first dropping firms having such committees for the whole sample period and perform the propensity score matching (PSM) for these two groups of firms in the adjusted sample. I perform both 1 to 3 and 1 to 4 matching, and the results for two PSM samples are reported in Table 9 and Table 10. The implication of findings in these two tables is consistent with that of the baseline results.

[Insert Table 9 and Table 10]

In addition, the main findings could be affected by the potential selection bias of the sample. The sample selection process of my study could result in a nonrandom sample affecting the effectiveness of empirical analysis. To address this concern, I perform the Heckman two-stage test (Heckman, 1979). For the selection model, I repeat the determinant analysis for having a sustainability committee by adding one more exogenous variable into the model, which is the yearly industry mean value of the ESG score. This variable affects the likelihood of having a sustainability committee but does not necessarily influence a firm's ESG decoupling behavior. I then include the inverse Mills ratio generated from the selection model into the baseline regression model and

repeat the test. The results are reported in Table 11. The findings in the main model is consistent with the baseline results.

[Insert Table 11]

I perform a set of tests to investigate the cross-sectional variations of the association between ESG decoupling and sustainability committees. Adhikari (2016) finds that analyst coverage is negatively associated with the CSR performance. The author explains that sell-side analysts usually do not view CSR as value maximizing factor. Higher analyst coverage could thereby force managers to terminate some CSR projects having negative NPV in the short term, which may lead to decrease in internal ESG actions. I utilize the analyst coverage data from the IBES and examine how analyst following affects the relationship between ESG decoupling and the sustainability committees. The results in Table 12 show that the coefficients for the interaction term $SC * Analyst$ are significantly positive in column one, three, and four, suggesting that the positive relationship between decoupling and the sustainability committees is stronger for firms with higher level of analyst following. The finding is consistent with the implication of Adhikari's (2016) study.

[Insert Table 12]

Dyck et al. (2019) show that institutional investors positively affect firms' environmental and social performance. Institutional investors care about the long-term performance of the firms. The authors argue that institutional holders from countries with stronger social norms promote ESG activities. Moreover, companies in countries with stronger global norms are less likely to conduct selective disclosure (Marquis et

al., 2016). Higher institutional ownership may reduce the symbolic actions in ESG. I follow the methodology of Ferreira and Matos (2008) and use the summary ownership data from the FactSet database to perform the second cross-sectional analysis. The results in Table 13 show that the coefficients for the interaction term $SC * IO\%$ are significantly negative in column one, two, and three, suggesting that the positive association between ESG decoupling and the sustainability committees is less pronounced for firms having higher level of institutional ownership.

[Insert Table 13]

In addition, Cahan et al. (2015) find that firms manage their media image through engaging in CSR activities and show that socially responsible firms receive favorable media coverage. To examine how the media coverage affect the relationship between ESG decoupling and sustainability, I use the RepRisk Index (RRI) collected from the RepRisk database. RRI captures the firm level media coverage related to ESG issues, and the value of the index range from 0 to 100. The higher the RRI, the higher the risk of exposure to the media. Since the original RRI is collected by month, I calculate both the yearly mean value and the yearly maximum value of the RRI for each firm-year. I then take the natural logarithm of both mean and maximum values and scale them using the firm size. The regression results for the media coverage test are presented in Table 14. The coefficients for the interaction terms $SC * RRI_Mean$ and $SC * RRI_Max$ in Panel A and Panel B are both significantly positive in column three, suggesting that the positive association between social decoupling and the sustainability committees is stronger for firms with higher media exposure related to ESG issues.

Conclusion

In this study, I mainly investigate the effect of sustainability committees on the ESG decoupling. As sustainable development becomes increasingly essential for firms, practitioners and scholars also pay more attention to the consistency of firms' external and internal actions related to ESG. Using a sample of 2,759 unique US listed firms over the 2002 to 2021 period, I find that the ESG decoupling is positively related to the sustainability committees. Further tests on decomposed decoupling measures find that sustainability committees improve firms' environmental performance but increase the firms' symbolic actions in social and governance aspects, indicating the potential bluewashing behavior. The main findings are robust and consistent in tests using decoupling measures calculated by alternative methods, PSM samples, and Heckman two-stage method. I examine the cross-sectional variations of the main effects on analyst coverage, institutional ownership, and media coverage related to ESG issues, and the findings of cross-sectional tests are consistent with the evidence documented by the prior studies. There could be alternative explanations for the main findings of this study. Generally, ESG activities could take a long term to affect a firm's performance. After setting up sustainability committees, firms may signal their willingness of sustainable development to the public by providing disclosure ahead of actual practice. Therefore, future research can further examine if the ESG decoupling will diminish a few years after the presence of sustainability committees.

Reference

- Adhikari, B. K. (2016). Causal effect of analyst following on corporate social responsibility. *Journal of Corporate Finance*, 41, 201-216.
- Bradbury, M., Jia, J., & Li, Z. (2022). Corporate social responsibility committees and the use of corporate social responsibility assurance services. *Journal of Contemporary Accounting & Economics*, 18(2), 100317.
- Burke, J. J., Hoitash, R., & Hoitash, U. (2019). The heterogeneity of board-level sustainability committees and corporate social performance. *Journal of Business Ethics*, 154, 1161-1186.
- Cahan, S. F., Chen, C., Chen, L., & Nguyen, N. H. (2015). Corporate social responsibility and media coverage. *Journal of Banking & Finance*, 59, 409-422.
- Cho, C. H., Guidry, R. P., Hageman, A. M., & Patten, D. M. (2012). Do actions speak louder than words? An empirical investigation of corporate environmental reputation. *Accounting, organizations and society*, 37(1), 14-25.
- Cho, C. H., Laine, M., Roberts, R. W., & Rodrigue, M. (2015). Organized hypocrisy, organizational façades, and sustainability reporting. *Accounting, organizations and society*, 40, 78-94.
- Chu, J., Li, X., & Zou, Y. (2022). *Corporate social responsibility committee: international evidence*. Working Paper.
- Clarkson, P. M., Li, Y., Richardson, G. D., & Vasvari, F. P. (2008). Revisiting the relation between environmental performance and environmental disclosure: An empirical analysis. *Accounting, organizations and society*, 33(4-5), 303-327.
- Clarkson, P. M., Li, Y., Richardson, G. D., & Vasvari, F. P. (2011). Does it really pay to be green? Determinants and consequences of proactive environmental strategies. *Journal of accounting and public policy*, 30(2), 122-144.
- Delmas, M. A., & Burbano, V. C. (2011). The drivers of greenwashing. *California management review*, 54(1), 64-87.
- Dixon-Fowler, H. R., Ellstrand, A. E., & Johnson, J. L. (2017). The role of board environmental committees in corporate environmental performance. *Journal of Business Ethics*, 140, 423-438.
- Du, X. (2015). How the market values greenwashing? Evidence from China. *Journal of Business Ethics*, 128, 547-574.
- Dyck, A., Lins, K. V., Roth, L., & Wagner, H. F. (2019). Do institutional investors drive corporate social responsibility? International evidence. *Journal of financial economics*, 131(3), 693-714.

- Forbes. (2014). What do Chief Sustainability Officers do? Retrieved from <http://www.forbes.com/sites/hbsworkingknowledge/2014/10/08/what-do-chief-sustainability-officers-do/#40a446dc1a96>.
- Freeman, R. E. (2010). *Strategic management: A stakeholder approach*. Cambridge University Press.
- Friedman, M. (1970). A Friedman doctrine: The social responsibility of business is to increase its profits. *The New York Times Magazine*, 13(1970), 32-33.
- García Martín, C. J., & Herrero, B. (2020). Do board characteristics affect environmental performance? A study of EU firms. *Corporate Social Responsibility and Environmental Management*, 27(1), 74-94.
- Goh, B. W. (2009). Audit Committees, Boards of Directors, and Remediation of Material Weaknesses in Internal Control. *Contemporary Accounting Research*, 26: 549-579.
- Grewal, J., Richardson, G. D., & Wang, J. (2022). The Effect of Mandatory Carbon Reporting on Greenwashing. *Available at SSRN*.
- Gull, A. A., Hussain, N., Khan, S. A., Khan, Z., & Saeed, A. (2022). Governing corporate social responsibility decoupling: The effect of the governance committee on corporate social responsibility decoupling. *Journal of Business Ethics*, 1-26.
- Hawn, O., & Ioannou, I. (2016). Mind the gap: The interplay between external and internal actions in the case of corporate social responsibility. *Strategic management journal*, 37(13), 2569-2588.
- Helfaya, A., & Moussa, T. (2017). Do board's corporate social responsibility strategy and orientation influence environmental sustainability disclosure? UK evidence. *Business Strategy and the Environment*, 26(8), 1061-1077.
- Hussain, N., Rigoni, U., & Orij, R. P. (2018). Corporate governance and sustainability performance: Analysis of triple bottom line performance. *Journal of business ethics*, 149, 411-432.
- Ingram, R. W., & Frazier, K. B. (1980). Environmental performance and corporate disclosure. *Journal of accounting research*, 614-622.
- Jiraporn, P., Singh, M., & Lee, C. I. (2009). Ineffective corporate governance: Director busyness and board committee memberships. *Journal of Banking & Finance*, 33(5), 819-828.
- Jensen, M. C., & Meckling, W. H. (1976). Theory of the firm: Managerial behavior, agency costs and ownership structure. *Journal of financial economics*, 3(4), 305-360.

- Kesner, I. F. (1988). Directors' characteristics and committee membership: An investigation of type, occupation, tenure, and gender. *Academy of Management journal*, 31(1), 66-84.
- Klein, A. (1998). Firm performance and board committee structure. *The journal of law and Economics*, 41(1), 275-304.
- Klein, A. (2002). Audit committee, board of director characteristics, and earnings management. *Journal of accounting and economics*, 33(3), 375-400.
- Krishnan, J. (2005). Audit committee quality and internal control: An empirical analysis. *The accounting review*, 80(2), 649-675.
- Liao, L., Luo, L., & Tang, Q. (2015). Gender diversity, board independence, environmental committee and greenhouse gas disclosure. *The British accounting review*, 47(4), 409-424.
- Linck, J. S., Netter, J. M., & Yang, T. (2008). The determinants of board structure. *Journal of financial economics*, 87(2), 308-328.
- Lyon, T. P., & Maxwell, J. W. (2011). Greenwash: Corporate environmental disclosure under threat of audit. *Journal of economics & management strategy*, 20(1), 3-41.
- Mahoney, L. S., Thorne, L., Cecil, L., & LaGore, W. (2013). A research note on standalone corporate social responsibility reports: Signaling or greenwashing?. *Critical perspectives on Accounting*, 24(4-5), 350-359.
- Marquis, C., Toffel, M. W., & Zhou, Y. (2016). Scrutiny, norms, and selective disclosure: A global study of greenwashing. *Organization Science*, 27(2), 483-504.
- Mateo-Márquez, A. J., González-González, J. M., & Zamora-Ramírez, C. (2022). An international empirical study of greenwashing and voluntary carbon disclosure. *Journal of Cleaner Production*, 363, 132567.
- McKinsey & Company. (2004). Assessing the Global Compact's Impact. Retrieved from https://d306pr3pise04h.cloudfront.net/docs/news_events%2F8.1%2Fimp_ass.pdf.
- Miller, M. A., & Burbano, V. C. (2011). The drivers of greenwashing. *California management review*, 54(1), 64-87.
- Minton, B. A., Taillard, J. P., & Williamson, R. (2014). Financial expertise of the board, risk taking, and performance: Evidence from bank holding companies. *Journal of Financial and Quantitative Analysis*, 49(2), 351-380.
- Nehrt, C. (1996). Timing and intensity effects of environmental investments. *Strategic management journal*, 17(7), 535-547.

- Patten, D. M. (2002). The relation between environmental performance and environmental disclosure: a research note. *Accounting, organizations and Society*, 27(8), 763-773.
- Porter, M. E., & Kramer, M. R. (2011). Creating shared value. *Harvard Business Review*, 89, 62–77.
- Porter, M. E., & Linde, C. V. D. (1995). Toward a new conception of the environment-competitiveness relationship. *Journal of economic perspectives*, 9(4), 97-118.
- Rodrigue, M., Magnan, M., & Cho, C. H. (2013). Is environmental governance substantive or symbolic? An empirical investigation. *Journal of Business Ethics*, 114, 107-129.
- Roulet, T. J., & Touboul, S. (2015). The intentions with which the road is paved: Attitudes to liberalism as determinants of greenwashing. *Journal of Business Ethics*, 128, 305-320.
- Schwartz-Ziv, M., & Weisbach, M. S. (2013). What do boards really do? Evidence from minutes of board meetings. *Journal of financial economics*, 108(2), 349-366.
- Uyar, A., Karaman, A. S., & Kilic, M. (2020). Is corporate social responsibility reporting a tool of signaling or greenwashing? Evidence from the worldwide logistics sector. *Journal of Cleaner Production*, 253, 119997.
- Wiseman, J. (1982). An evaluation of environmental disclosures made in corporate annual reports. *Accounting, organizations and society*, 7(1), 53-63.
- Zhang, D. (2022). Are firms motivated to greenwash by financial constraints? Evidence from global firms' data. *Journal of international financial management & accounting*, 33(3), 459-479.

Empirical Results Tables

Table 1 Sample selection process

Selection Process	Firm-year Obs.	Num. of unique firms
US listed firms covered by the BoardEx universe over 2002 to 2021	90,852	9,542
Less: unable to be merged with Compustat to get financial data	-21,755	-1,862
Less: unable to be merged with Refinitiv ESG	-49,059	-4,921
Sample for main analysis	20,038	2,759

Table 2 Summary statistics of variables in main analysis

This table reports summary statistics for the full sample, sample firms having sustainability committee, and sample firms not having one. The sample period is 2002-2021. All continuous variables are winsorized at the 1% and 99% levels. Variable definitions are provided in the Appendix.

Panel A: Full sample						
Variable	N	Mean	p50	p25	p75	sd
SC	20,038	0.126	0.000	0.000	0.000	0.332
ESG Score	20,038	0.380	0.354	0.246	0.493	0.175
DE_ESG	20,038	-0.904	-0.875	-1.148	-0.631	0.392
DE_E	20,038	-0.075	0.000	-0.144	0.000	0.140
DE_S	20,038	-0.079	-0.093	-0.213	0.000	0.198
DE_G	20,038	-0.749	-0.708	-0.939	-0.501	0.327
Ind_Envrn	20,038	0.482	0.000	0.000	1.000	0.500
CFO	20,038	0.045	0.069	0.015	0.116	0.156
Firm Size	20,038	8.174	8.181	7.015	9.384	1.820
Leverage	20,038	0.605	0.606	0.439	0.782	0.249
ROA	20,038	0.012	0.035	0.006	0.079	0.153
Sales Growth	20,038	0.133	0.067	-0.014	0.175	0.409
BTM	20,038	0.458	0.371	0.194	0.639	0.395
Net PPE	20,038	0.233	0.142	0.050	0.348	0.238
Board Size	20,038	2.243	2.303	2.079	2.398	0.261
CEO Duality	20,038	0.171	0.000	0.000	0.000	0.376
Board Independence	20,038	0.820	0.857	0.727	0.917	0.146
Female Director	20,038	0.182	0.167	0.111	0.250	0.113

Panel B: Firms having sustainability committee						
Variables	N	Mean	p50	p25	p75	sd
SC	4,689	0.538	1.000	0.000	1.000	0.499
ESG Score	4,689	0.461	0.456	0.317	0.599	0.182
DE_ESG	4,689	-0.745	-0.712	-0.966	-0.487	0.354
DE_E	4,689	-0.116	-0.101	-0.221	0.000	0.150
DE_S	4,689	-0.052	0.000	-0.174	0.092	0.183
DE_G	4,689	-0.577	-0.533	-0.722	-0.400	0.243
Ind_Envrn	4,689	0.596	1.000	0.000	1.000	0.491
CFO	4,689	0.081	0.083	0.049	0.125	0.089
Firm Size	4,689	9.233	9.234	8.160	10.316	1.575
Leverage	4,689	0.630	0.633	0.510	0.742	0.189
ROA	4,689	0.041	0.043	0.015	0.082	0.091
Sales Growth	4,689	0.079	0.049	-0.029	0.139	0.276
BTM	4,689	0.468	0.398	0.233	0.617	0.360
Net PPE	4,689	0.352	0.266	0.111	0.591	0.273
Board Size	4,689	2.357	2.398	2.197	2.485	0.231
CEO Duality	4,689	0.247	0.000	0.000	0.000	0.431
Board Independence	4,689	0.863	0.900	0.800	0.929	0.123
Female Director	4,689	0.197	0.182	0.111	0.273	0.111
Panel C: Firms not having sustainability committee						
Variables	N	Mean	p50	p25	p75	sd
SC	15,349	0.000	0.000	0.000	0.000	0.000
ESG Score	15,349	0.356	0.329	0.233	0.454	0.164
DE_ESG	15,349	-0.953	-0.925	-1.190	-0.677	0.390
DE_E	15,349	-0.063	0.000	-0.126	0.000	0.135
DE_S	15,349	-0.088	-0.101	-0.225	0.000	0.201
DE_G	15,349	-0.801	-0.769	-0.990	-0.555	0.332
Ind_Envrn	15,349	0.447	0.000	0.000	1.000	0.497
CFO	15,349	0.034	0.064	0.012	0.114	0.169
Firm Size	15,349	7.850	7.862	6.737	8.981	1.765
Leverage	15,349	0.598	0.594	0.412	0.797	0.264
ROA	15,349	0.003	0.031	0.002	0.078	0.167
Sales Growth	15,349	0.149	0.073	-0.009	0.186	0.441
BTM	15,349	0.455	0.360	0.180	0.647	0.406
Net PPE	15,349	0.197	0.118	0.037	0.279	0.214
Board Size	15,349	2.208	2.197	2.079	2.398	0.259
CEO Duality	15,349	0.148	0.000	0.000	0.000	0.355
Board Independence	15,349	0.806	0.833	0.714	0.909	0.151
Female Director	15,349	0.177	0.167	0.111	0.250	0.113

Table 3 Pairwise correlation matrix

This table reports the pairwise coefficient estimates of variables for main analysis. The sample period is 2002-2021. All continuous variables are winsorized at the 1% and 99% levels. Variable definitions are provided in the Appendix.

		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)
(1)	SC	1.000																	
(2)	ESG Score	0.2717*	1.000																
(3)	DE_ESG	0.1678*	0.2363*	1.000															
(4)	DE_E	-0.1834*	-0.4156*	0.1345*	1.000														
(5)	DE_S	0.0741*	0.0895*	0.5603*	-0.0339*	1.000													
(6)	DE_G	0.2353*	0.4083*	0.7931*	-0.2487*	0.0900*	1.000												
(7)	Ind_Envrn	0.0945*	0.0510*	-0.1409*	-0.1706*	0.0313*	-0.1136*	1.000											
(8)	CFO	0.0777*	0.1952*	0.2829*	-0.1478*	-0.017	0.4048*	-0.0792*	1.000										
(9)	Firm Size	0.2594*	0.4529*	0.6794*	-0.1853*	0.1350*	0.8106*	-0.1730*	0.3442*	1.000									
(10)	Leverage	0.0776*	0.1105*	0.1939*	-0.009	0.0309*	0.2186*	-0.2806*	-0.0606*	0.3183*	1.000								
(11)	ROA	0.0627*	0.1986*	0.2959*	-0.1314*	-0.004	0.4053*	-0.1030*	0.9760*	0.3602*	-0.0470*	1.000							
(12)	Sales Growth	-0.0694*	-0.1159*	-0.0764*	0.0926*	0.0330*	-0.1533*	0.0433*	-0.1238*	-0.1534*	-0.0986*	-0.1140*	1.000						
(13)	BTM	0.007	-0.0782*	0.0627*	0.0441*	-0.024	0.0690*	-0.1064*	-0.0342*	0.1314*	-0.0901*	-0.029	-0.1096*	1.000					
(14)	Net PPE	0.2160*	0.0791*	0.0775*	-0.1273*	-0.0345*	0.1685*	-0.002	0.1616*	0.1193*	-0.008	0.0642*	-0.0839*	0.0916*	1.000				
(15)	Board Size	0.2204*	0.3644*	0.4244*	-0.1434*	0.0796*	0.5209*	-0.0980*	0.1701*	0.6369*	0.2828*	0.1874*	-0.1178*	0.0361*	0.0385*	1.000			
(16)	CEO Duality	0.0867*	0.0701*	0.1815*	-0.016	0.0300*	0.2049*	-0.0293*	0.0833*	0.2438*	0.1229*	0.0921*	-0.0617*	0.002	0.0405*	0.2034*	1.000		
(17)	Board Independence	0.1713*	0.3425*	-0.021	-0.1502*	0.002	0.0393*	0.1040*	0.003	0.1520*	0.0779*	0.004	-0.0712*	-0.025	0.0309*	0.1300*	0.0565*	1.000	
(18)	Female Director	0.1383*	0.3811*	-0.0321*	-0.1797*	-0.1516*	0.1296*	-0.0646*	0.0307*	0.1472*	0.1033*	0.0392*	-0.0486*	-0.0712*	-0.014	0.1685*	-0.003	0.2606*	1.000

* p<0.01

Table 4 Determinant analysis of having sustainability committees

This table reports the logistic regression results for the determinant analysis of having sustainability committees. The sample period is 2002-2021. The standard errors are corrected for heteroskedasticity. The reported numbers are coefficient estimates and t-statistics (in parentheses). ***, **, and * denote statistical significance at the 1%, 5%, and 10% levels based on two-sided tests, respectively. All continuous variables are winsorized at the 1% and 99% levels. Appendix provides variable definitions.

Panel A: Results for logistic regression				
	(1) SC _{t+1}	(2) SC _{t+1}	(3) SC _{t+1}	(4) SC _{t+1}
ESG Score	1.540*** (9.20)		1.512*** (8.13)	
Envrn Score		1.311*** (8.90)		1.412*** (8.71)
Corpgov Score		1.618*** (7.91)		1.600*** (7.49)
Social Score		-0.00136 (-0.01)		-0.116 (-0.69)
Ind_Envrn	1.052*** (18.43)	0.840*** (13.75)	1.747*** (5.34)	1.750*** (5.27)
CFO	0.0988 (0.12)	-0.379 (-0.47)	0.655 (0.68)	-0.0434 (-0.05)
Firm Size	0.244*** (11.46)	0.141*** (5.98)	0.281*** (11.02)	0.179*** (6.43)
Leverage	0.664*** (5.49)	0.768*** (6.25)	0.599*** (4.22)	0.581*** (4.04)
ROA	-0.345 (-0.41)	-0.135 (-0.16)	-0.598 (-0.62)	-0.184 (-0.20)
Sales Growth	-0.636*** (-4.84)	-0.489*** (-3.81)	-0.538*** (-4.70)	-0.419*** (-3.73)
BTM	0.163** (2.56)	0.249*** (3.84)	0.271*** (3.49)	0.262*** (3.31)
Net PPE	2.476*** (22.79)	2.304*** (20.72)	0.857*** (4.30)	0.785*** (3.90)
Board Size	1.551*** (10.91)	1.410*** (9.57)	1.593*** (9.99)	1.458*** (8.89)
CEO Duality	0.0668 (1.10)	0.0889 (1.45)	0.0418 (0.63)	0.0658 (0.99)
Board Independence	1.914*** (9.37)	1.595*** (7.53)	2.293*** (10.07)	2.003*** (8.47)
Female Director	2.306*** (9.11)	2.165*** (8.50)	1.684*** (5.72)	1.548*** (5.16)
N	17275	17257	17022	17022
pseudo R-sq	0.218	0.235	0.287	0.301
Year FE.	No	No	Yes	Yes
Ind FE.	No	No	Yes	Yes

t statistics in parentheses

* p<0.1 ** p<0.05 *** p<0.01

Panel B: Marginal effects of key variables of interests						
	dy/dx	Delta-Method SE	z	P>z	[95% Conf. Interval]	
ESG Score	0.148	0.016	9.21	0.000	0.117	0.180
Envrn Score	0.124	0.014	8.91	0.000	0.097	0.151
Corpgov Score	0.153	0.019	7.97	0.000	0.115	0.191
Social Score	0.000	0.015	-0.01	0.993	-0.030	0.029

Table 5 The effect of sustainability committees on ESG decoupling

This table reports the OLS regression results for the effect of sustainability committees on ESG decoupling. The sample period is 2002-2021. The standard errors are corrected for heteroskedasticity. The reported numbers are coefficient estimates and t-statistics (in parentheses). ***, **, and * denote statistical significance at the 1%, 5%, and 10% levels based on two-sided tests, respectively. All continuous variables are winsorized at the 1% and 99% levels. Appendix provides variable definitions.

	(1) DE_ESG	(2) DE_E	(3) DE_S	(4) DE_G
SC	0.0668*** (6.30)	-0.00972* (-1.71)	0.0527*** (7.65)	0.0238*** (4.30)
CFO	-0.158** (-2.12)	-0.00409 (-0.13)	-0.100** (-2.19)	-0.0563 (-1.03)
Firm Size	0.101*** (20.20)	-0.000811 (-0.36)	-0.00976*** (-2.92)	0.111*** (36.89)
Leverage	-0.0109 (-0.68)	0.0115* (1.69)	-0.00454 (-0.43)	-0.00946 (-0.95)
ROA	0.206*** (2.89)	0.0277 (0.93)	0.0763* (1.73)	0.101* (1.91)
Sales Growth	0.0154*** (3.46)	0.00174 (1.11)	0.0147*** (5.00)	-0.00250 (-0.85)
BTM	0.00165 (0.22)	0.00909*** (2.63)	-0.00789 (-1.62)	0.000874 (0.21)
Net PPE	-0.0264 (-0.76)	0.0172 (1.20)	-0.0483** (-2.17)	0.00694 (0.32)
Board Size	-0.0447*** (-3.09)	-0.0118* (-1.77)	-0.0213** (-2.23)	-0.00985 (-1.21)
CEO Duality	-0.0103 (-1.44)	-0.00255 (-0.71)	-0.00168 (-0.37)	-0.00625* (-1.69)
Board Independence	-0.111*** (-6.34)	-0.00810 (-0.99)	-0.0120 (-1.01)	-0.0899*** (-8.82)
Female Director	-0.428*** (-15.73)	-0.0343*** (-2.68)	-0.448*** (-23.87)	0.0562*** (3.56)
N	19896	19896	19896	19896
adj. R-sq	0.747	0.560	0.545	0.884
Year FE.	Yes	Yes	Yes	Yes
Firm FE.	Yes	Yes	Yes	Yes

t statistics in parentheses

* p<0.1 ** p<0.05 *** p<0.01

Table 6 Effect of sustainability committee on external and internal ESG actions

This table reports the OLS regression results for the effect of sustainability committees on external and internal ESG actions. The sample period is 2002-2021. The standard errors are corrected for heteroskedasticity. The reported numbers are coefficient estimates and t-statistics (in parentheses). ***, **, and * denote statistical significance at the 1%, 5%, and 10% levels based on two-sided tests, respectively. All continuous variables are winsorized at the 1% and 99% levels. Appendix provides variable definitions.

	(1) External	(2) Internal	(3) EX_E	(4) IN_E	(5) EX_S	(6) IN_S	(7) EX_G	(8) IN_G
SC	0.0692*** (5.78)	0.00865 (0.74)	0.0121** (2.56)	0.0227*** (3.64)	0.0319*** (4.82)	-0.0192*** (-3.03)	0.0254*** (6.58)	0.00340 (0.84)
CFO	-0.187** (-2.33)	-0.0356 (-0.42)	-0.0410 (-1.35)	-0.0402 (-1.11)	-0.110*** (-2.62)	0.00180 (0.04)	-0.0267 (-0.90)	0.0264 (0.57)
Firm Size	0.000118 (0.02)	-0.102*** (-18.69)	0.0106*** (5.22)	0.0112*** (4.09)	-0.0165*** (-5.82)	-0.00572* (-1.92)	0.00614*** (3.46)	-0.104*** (-42.64)
Leverage	-0.0135 (-0.78)	-0.00529 (-0.29)	0.000675 (0.10)	-0.0109 (-1.27)	-0.000640 (-0.07)	0.00368 (0.38)	-0.0191*** (-3.47)	-0.00894 (-1.11)
ROA	0.108 (1.39)	-0.0941 (-1.16)	0.0250 (0.84)	-0.000518 (-0.01)	0.0684* (1.68)	-0.00950 (-0.21)	0.0106 (0.37)	-0.0873* (-1.96)
Sales Growth	-0.00674 (-1.53)	-0.0219*** (-4.39)	-0.00483*** (-3.10)	-0.00641*** (-3.05)	0.000872 (0.37)	-0.0147*** (-5.14)	-0.00320** (-2.36)	-0.000842 (-0.33)
BTM	-0.0256*** (-3.30)	-0.0292*** (-3.72)	-0.00477 (-1.59)	-0.0134*** (-3.25)	-0.0113*** (-2.76)	-0.00347 (-0.82)	-0.0103*** (-4.12)	-0.0111*** (-3.33)
Net PPE	0.0582* (1.69)	0.0787** (2.12)	0.0208 (1.57)	-0.000114 (-0.01)	0.0266 (1.45)	0.0687*** (3.39)	0.0119 (1.01)	0.00409 (0.23)
Board Size	0.0686*** (4.50)	0.109*** (7.03)	0.0164*** (2.79)	0.0282*** (3.53)	0.0269*** (3.28)	0.0471*** (5.57)	0.0220*** (4.23)	0.0305*** (4.76)
CEO Duality	-0.00146 (-0.19)	0.00905 (1.20)	-0.00614** (-2.03)	-0.00380 (-0.95)	0.00337 (0.81)	0.00416 (1.03)	0.00159 (0.61)	0.00736*** (2.74)
Board Independence	0.0455** (2.49)	0.153*** (7.93)	0.00797 (1.13)	0.0152 (1.54)	0.0258*** (2.60)	0.0382*** (3.56)	0.0103 (1.62)	0.0989*** (12.18)
Female Director	0.221*** (7.76)	0.661*** (22.41)	0.0879*** (7.78)	0.122*** (8.17)	0.0886*** (5.73)	0.541*** (32.26)	0.0466*** (4.77)	-0.00622 (-0.50)
N	19896	19896	19896	19896	19896	19896	19896	19896
adj. R-sq	0.764	0.801	0.694	0.741	0.736	0.731	0.682	0.905
Year FE.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Firm FE.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

t statistics in parentheses * p<0.1 ** p<0.05 *** p<0.01

Table 7 Robustness test using alternative dependent variable measures (1)

This table reports the OLS regression results for robustness test using alternative dependent variable measures (replace original scaler with the number of total items). The sample period is 2002-2021. The standard errors are corrected for heteroskedasticity. The reported numbers are coefficient estimates and t-statistics (in parentheses). ***, **, and * denote statistical significance at the 1%, 5%, and 10% levels based on two-sided tests, respectively. All continuous variables are winsorized at the 1% and 99% levels. Appendix provides variable definitions.

	(1) DE_ESG ^{a1}	(2) DE_E ^{a1}	(3) DE_S ^{a1}	(4) DE_G ^{a1}
SC	0.0287*** (6.23)	-0.0220*** (-2.74)	0.0500*** (5.94)	0.0675*** (7.25)
CFO	-0.0734*** (-2.76)	-0.00908 (-0.22)	-0.102** (-2.02)	-0.0977 (-1.42)
Firm Size	-0.00889*** (-4.47)	-0.0151*** (-4.67)	-0.0364*** (-9.54)	0.0216*** (4.96)
Leverage	0.000259 (0.04)	0.0229** (2.43)	0.000214 (0.02)	-0.0363*** (-2.65)
ROA	0.0607** (2.36)	0.0503 (1.26)	0.0861* (1.76)	0.0366 (0.54)
Sales Growth	0.00509*** (3.55)	0.00355* (1.66)	0.0156*** (5.29)	-0.00487 (-1.41)
BTM	-0.000581 (-0.20)	0.0148*** (3.09)	-0.00295 (-0.54)	-0.0159** (-2.57)
Net PPE	-0.00956 (-0.74)	0.0284 (1.40)	-0.0823*** (-3.26)	0.00931 (0.32)
Board Size	-0.0144** (-2.49)	-0.0150 (-1.57)	-0.0400*** (-3.60)	0.0146 (1.15)
CEO Duality	-0.00259 (-0.84)	-0.00376 (-0.71)	-0.00361 (-0.64)	0.00110 (0.17)
Board Independence	-0.0457*** (-6.71)	-0.0112 (-0.97)	-0.0302** (-2.25)	-0.0832*** (-5.45)
Female Director	-0.180*** (-16.96)	-0.0581*** (-3.28)	-0.619*** (-29.16)	0.0496** (2.10)
N	19896	19896	19896	19896
adj. R-sq	0.524	0.610	0.559	0.672
Year FE.	Yes	Yes	Yes	Yes
Firm FE.	Yes	Yes	Yes	Yes

t statistics in parentheses

* p<0.1 ** p<0.05 *** p<0.01

Table 8 Robustness test using alternative dependent variable measures (2)

This table reports the OLS regression results for robustness test using alternative dependent variable measures (using min-max feature scaling method). The sample period is 2002-2021. The standard errors are corrected for heteroskedasticity. The reported numbers are coefficient estimates and t-statistics (in parentheses). ***, **, and * denote statistical significance at the 1%, 5%, and 10% levels based on two-sided tests, respectively. All continuous variables are winsorized at the 1% and 99% levels. Appendix provides variable definitions.

	(1) DE_ESG ^{a2}	(2) DE_E ^{a2}	(3) DE_S ^{a2}	(4) DE_G ^{a2}
SC	0.0189*** (3.66)	-0.0253*** (-3.07)	0.0466*** (5.61)	0.0638*** (6.21)
CFO	-0.0780** (-2.53)	-0.0133 (-0.31)	-0.106** (-2.12)	-0.106 (-1.38)
Firm Size	-0.00536** (-2.41)	-0.0103*** (-3.08)	-0.0356*** (-9.39)	0.0217*** (4.58)
Leverage	0.00189 (0.29)	0.0256*** (2.63)	-0.00350 (-0.31)	-0.0313** (-2.06)
ROA	0.0663** (2.22)	0.0525 (1.25)	0.0905* (1.87)	0.0410 (0.55)
Sales Growth	0.00312* (1.94)	0.00198 (0.90)	0.0155*** (5.27)	-0.00516 (-1.32)
BTM	0.00425 (1.28)	0.0171*** (3.47)	-0.00310 (-0.57)	-0.0126* (-1.85)
Net PPE	-0.00467 (-0.32)	0.0313 (1.45)	-0.0692*** (-2.76)	0.00176 (0.05)
Board Size	-0.0160** (-2.44)	-0.0126 (-1.28)	-0.0372*** (-3.39)	0.00615 (0.44)
CEO Duality	-0.00146 (-0.42)	-0.00422 (-0.76)	-0.00287 (-0.52)	-0.000935 (-0.13)
Board Independence	-0.0502*** (-6.50)	-0.00767 (-0.64)	-0.0285** (-2.14)	-0.119*** (-7.04)
Female Director	-0.199*** (-16.80)	-0.0436** (-2.38)	-0.617*** (-29.35)	0.0455* (1.75)
N	19896	19896	19896	19896
adj. R-sq	0.494	0.580	0.572	0.603
Year FE.	Yes	Yes	Yes	Yes
Firm FE.	Yes	Yes	Yes	Yes

t statistics in parentheses

* p<0.1 ** p<0.05 *** p<0.01

Table 9 Robustness test using PSM sample (1 to 3 matching)

This table reports the OLS regression results for robustness test using 1 to 3 PSM sample. The sample period is 2002-2021. The standard errors are corrected for heteroskedasticity. The reported numbers are coefficient estimates and t-statistics (in parentheses). ***, **, and * denote statistical significance at the 1%, 5%, and 10% levels based on two-sided tests, respectively. All continuous variables are winsorized at the 1% and 99% levels. Appendix provides variable definitions.

	(1) DE_ESG	(2) DE_E	(3) DE_S	(4) DE_G
SC	0.0231* (1.72)	-0.0205*** (-2.92)	0.0268*** (3.00)	0.0163** (2.28)
CFO	-0.415*** (-2.77)	0.0321 (0.49)	-0.317*** (-3.22)	-0.138 (-1.63)
Firm Size	0.0833*** (9.28)	-0.00578 (-1.34)	0.000525 (0.09)	0.0879*** (17.45)
Leverage	0.0135 (0.44)	0.00844 (0.55)	-0.00853 (-0.42)	0.0147 (0.81)
ROA	0.358** (2.52)	-0.0217 (-0.36)	0.264*** (2.90)	0.122 (1.51)
Sales Growth	0.00893 (0.81)	0.0117** (2.20)	0.00689 (0.96)	-0.00939 (-1.33)
BTM	-0.00668 (-0.47)	0.0154** (2.06)	-0.0208** (-2.32)	-0.000979 (-0.13)
Net PPE	0.0345 (0.63)	-0.00707 (-0.26)	-0.0439 (-1.16)	0.0824*** (2.68)
Board Size	-0.0346 (-1.36)	-0.0155 (-1.22)	-0.0146 (-0.87)	-0.00767 (-0.56)
CEO Duality	-0.0130 (-1.17)	-0.00367 (-0.62)	-0.00143 (-0.20)	-0.00772 (-1.29)
Board Independence	-0.114*** (-3.57)	-0.00261 (-0.16)	-0.0102 (-0.48)	-0.0951*** (-5.35)
Female Director	-0.437*** (-9.00)	-0.0695*** (-2.81)	-0.394*** (-11.95)	0.0288 (1.09)
N	6704	6704	6704	6704
adj. R-sq	0.685	0.529	0.498	0.827
Year FE.	Yes	Yes	Yes	Yes
Firm FE.	Yes	Yes	Yes	Yes

t statistics in parentheses

* p<0.1 ** p<0.05 *** p<0.01

Table 10 Robustness test using PSM sample (1 to 4 matching)

This table reports the OLS regression results for robustness test using 1 to 4 PSM sample. The sample period is 2002-2021. The standard errors are corrected for heteroskedasticity. The reported numbers are coefficient estimates and t-statistics (in parentheses). ***, **, and * denote statistical significance at the 1%, 5%, and 10% levels based on two-sided tests, respectively. All continuous variables are winsorized at the 1% and 99% levels. Appendix provides variable definitions.

	(1) DE_ESG	(2) DE_E	(3) DE_S	(4) DE_G
SC	0.0279** (2.10)	-0.0192*** (-2.76)	0.0311*** (3.52)	0.0159** (2.25)
CFO	-0.395*** (-2.75)	0.0164 (0.26)	-0.292*** (-3.12)	-0.125 (-1.55)
Firm Size	0.0864*** (10.44)	-0.00440 (-1.13)	-0.000311 (-0.06)	0.0903*** (19.19)
Leverage	0.0203 (0.70)	0.00890 (0.63)	0.0000272 (0.00)	0.0123 (0.73)
ROA	0.355*** (2.61)	-0.000841 (-0.01)	0.253*** (2.92)	0.107 (1.37)
Sales Growth	0.00659 (0.68)	0.00924* (1.95)	0.00715 (1.08)	-0.00912 (-1.46)
BTM	-0.00505 (-0.38)	0.0139** (2.03)	-0.0127 (-1.48)	-0.00593 (-0.83)
Net PPE	0.0131 (0.25)	-0.0113 (-0.44)	-0.0575 (-1.58)	0.0780*** (2.63)
Board Size	-0.0225 (-0.95)	-0.0135 (-1.15)	-0.0118 (-0.75)	0.000188 (0.01)
CEO Duality	-0.00780 (-0.74)	-0.00182 (-0.33)	0.00253 (0.38)	-0.00845 (-1.49)
Board Independence	-0.129*** (-4.33)	-0.000493 (-0.03)	-0.0260 (-1.31)	-0.0963*** (-5.80)
Female Director	-0.430*** (-9.39)	-0.0632*** (-2.71)	-0.388*** (-12.44)	0.0262 (1.04)
N	7659	7659	7659	7659
adj. R-sq	0.685	0.533	0.498	0.830
Year FE.	Yes	Yes	Yes	Yes
Firm FE.	Yes	Yes	Yes	Yes

t statistics in parentheses

* p<0.1 ** p<0.05 *** p<0.01

Table 11 Robustness test for sample selection bias: Heckman two-stage method

This table reports the OLS regression results for robustness test for sample selection bias using Heckman two-stage method. The sample period is 2002-2021. The standard errors are corrected for heteroskedasticity. The reported numbers are coefficient estimates and t-statistics (in parentheses). ***, **, and * denote statistical significance at the 1%, 5%, and 10% levels based on two-sided tests, respectively. All continuous variables are winsorized at the 1% and 99% levels. Appendix provides variable definitions.

	Selection		Main Model		
	SC	DE_ESG	DE_E	DE_S	DE_G
ESG Score	0.812*** (8.80)				
Ind_Mean.ESG	1.108*** (4.89)				
SC		0.0635*** (6.03)	-0.0138** (-2.51)	0.0524*** (7.60)	0.0248*** (4.50)
Inverse Mills Ratio		0.231*** (9.93)	0.282*** (25.31)	0.0232 (1.45)	-0.0710*** (-5.54)
Ind_Envrn	0.547*** (18.24)				
CFO	0.331 (0.73)	-0.0905 (-1.21)	0.0781** (2.56)	-0.0936** (-2.03)	-0.0770 (-1.41)
Firm Size	0.145*** (13.05)	0.133*** (22.38)	0.0380*** (13.92)	-0.00658 (-1.61)	0.101*** (29.17)
Leverage	0.371*** (5.90)	0.0628*** (3.59)	0.101*** (13.36)	0.00285 (0.24)	-0.0321*** (-2.97)
ROA	-0.350 (-0.76)	0.139* (1.95)	-0.0533* (-1.80)	0.0697 (1.57)	0.121** (2.29)
Sales Growth	-0.134*** (-2.64)	-0.0124** (-2.37)	-0.0322*** (-15.67)	0.0119*** (3.39)	0.00603* (1.82)
BTM	0.0463 (1.36)	0.00701 (0.93)	0.0156*** (4.60)	-0.00735 (-1.50)	-0.000774 (-0.18)
Net PPE	1.331*** (22.44)	0.222*** (5.23)	0.320*** (17.18)	-0.0234 (-0.82)	-0.0693*** (-2.79)
Board Size	0.781*** (10.57)	0.110*** (5.19)	0.177*** (17.83)	-0.00584 (-0.41)	-0.0573*** (-4.94)
CEO Duality	0.0697** (2.09)	0.00198 (0.28)	0.0124*** (3.51)	-0.000452 (-0.10)	-0.0100*** (-2.64)
Board Independence	1.091*** (10.33)	0.113*** (3.98)	0.265*** (19.80)	0.0105 (0.53)	-0.159*** (-10.01)
Female Director	1.115*** (8.64)	-0.175*** (-4.69)	0.274*** (15.69)	-0.423*** (-16.52)	-0.0213 (-0.99)
N	20038	19896	19896	19896	19896
pseudo R-sq	0.229				
adj R-sq		0.749	0.581	0.545	0.884
Year FE.	No	Yes	Yes	Yes	Yes
Firm FE.	No	Yes	Yes	Yes	Yes

t statistics in parentheses

* p<0.1 ** p<0.05 *** p<0.01

Table 12 Cross-sectional analysis on analyst coverage

This table reports the OLS regression results for cross-sectional analysis on analyst coverage. The sample period is 2002-2021. The standard errors are corrected for heteroskedasticity. The reported numbers are coefficient estimates and t-statistics (in parentheses). ***, **, and * denote statistical significance at the 1%, 5%, and 10% levels based on two-sided tests, respectively. All continuous variables are winsorized at the 1% and 99% levels. Appendix provides variable definitions.

	(1) DE_ESG	(2) DE_E	(3) DE_S	(4) DE_G
SC	-0.0253 (-1.12)	-0.00483 (-0.38)	-0.0227 (-1.55)	0.00182 (0.15)
Analyst	-0.0129*** (-3.42)	0.00000710 (0.00)	-0.00592** (-2.37)	-0.00754*** (-3.61)
SC * Analyst	0.0365*** (4.66)	-0.00193 (-0.44)	0.0298*** (5.92)	0.00873** (2.07)
CFO	-0.161** (-2.17)	-0.00365 (-0.12)	-0.105** (-2.29)	-0.0555 (-1.02)
Firm Size	0.104*** (20.45)	-0.000825 (-0.36)	-0.00868*** (-2.58)	0.112*** (37.11)
Leverage	-0.00987 (-0.62)	0.0114* (1.67)	-0.00307 (-0.29)	-0.00986 (-0.99)
ROA	0.209*** (2.94)	0.0273 (0.91)	0.0811* (1.83)	0.0998* (1.89)
Sales Growth	0.0149*** (3.37)	0.00175 (1.12)	0.0144*** (4.92)	-0.00272 (-0.92)
BTM	0.00205 (0.27)	0.00905*** (2.62)	-0.00746 (-1.54)	0.000872 (0.21)
Net PPE	-0.0281 (-0.81)	0.0171 (1.19)	-0.0483** (-2.18)	0.00520 (0.24)
Board Size	-0.0402*** (-2.77)	-0.0120* (-1.79)	-0.0183* (-1.91)	-0.00814 (-0.99)
CEO Duality	-0.00977 (-1.38)	-0.00256 (-0.72)	-0.00134 (-0.30)	-0.00606 (-1.64)
Board Independence	-0.109*** (-6.26)	-0.00811 (-0.99)	-0.0113 (-0.96)	-0.0891*** (-8.75)
Female Director	-0.426*** (-15.67)	-0.0344*** (-2.69)	-0.447*** (-23.85)	0.0566*** (3.58)
N	19896	19896	19896	19896
adj. R-sq	0.747	0.560	0.546	0.884
Year FE.	Yes	Yes	Yes	Yes
Firm FE.	Yes	Yes	Yes	Yes

t statistics in parentheses

* p<0.1 ** p<0.05 *** p<0.01

Table 13 Cross-sectional analysis on institutional ownership

This table reports the OLS regression results for cross-sectional analysis on institutional ownership. The sample period is 2002-2020 due to data availability. The standard errors are corrected for heteroskedasticity. The reported numbers are coefficient estimates and t-statistics (in parentheses). ***, **, and * denote statistical significance at the 1%, 5%, and 10% levels based on two-sided tests, respectively. All continuous variables are winsorized at the 1% and 99% levels. Appendix provides variable definitions.

	(1) DE_ESG	(2) DE_E	(3) DE_S	(4) DE_G
SC	0.162*** (3.56)	0.0469** (2.09)	0.0916*** (3.46)	0.0289 (1.42)
IO%	-0.0424* (-1.84)	0.0341*** (3.32)	-0.0731*** (-4.82)	-0.00633 (-0.45)
SC * IO%	-0.125** (-2.31)	-0.0736*** (-2.69)	-0.0583* (-1.80)	-0.00243 (-0.10)
CFO	-0.185** (-2.13)	-0.0408 (-1.16)	-0.121** (-2.39)	-0.0258 (-0.41)
Firm Size	0.0927*** (16.60)	-0.00361 (-1.43)	-0.00477 (-1.32)	0.0999*** (30.94)
Leverage	-0.0289* (-1.69)	0.00468 (0.62)	-0.0106 (-0.94)	-0.0144 (-1.36)
ROA	0.227*** (2.71)	0.0629* (1.85)	0.103** (2.11)	0.0611 (1.00)
Sales Growth	0.0116** (2.48)	0.00271 (1.55)	0.00852*** (2.78)	-0.000769 (-0.24)
BTM	-0.000360 (-0.04)	0.00806** (2.14)	-0.00667 (-1.28)	-0.000958 (-0.22)
Net PPE	-0.0284 (-0.75)	0.0227 (1.43)	-0.0477** (-2.05)	-0.000126 (-0.01)
Board Size	-0.0480*** (-3.12)	-0.00585 (-0.82)	-0.0214** (-2.13)	-0.0187** (-2.17)
CEO Duality	-0.00761 (-1.02)	-0.00184 (-0.49)	-0.000339 (-0.07)	-0.00575 (-1.51)
Board Independence	-0.124*** (-6.71)	-0.00805 (-0.92)	-0.0132 (-1.07)	-0.101*** (-9.49)
Female Director	-0.420*** (-14.17)	-0.0273* (-1.92)	-0.421*** (-21.25)	0.0277 (1.62)
N	17657	17657	17657	17657
adj. R-sq	0.755	0.563	0.568	0.891
Year FE.	Yes	Yes	Yes	Yes
Firm FE.	Yes	Yes	Yes	Yes

t statistics in parentheses

* p<0.1 ** p<0.05 *** p<0.01

Table 14 Cross-sectional analysis on ESG related media coverage

This table reports the OLS regression results for cross-sectional analysis on ESG related media coverage. The sample period is 2007-2020 due to data availability. The standard errors are corrected for heteroskedasticity. The reported numbers are coefficient estimates and t-statistics (in parentheses). ***, **, and * denote statistical significance at the 1%, 5%, and 10% levels based on two-sided tests, respectively. All continuous variables are winsorized at the 1% and 99% levels. Appendix provides variable definitions.

Panel A: Yearly Mean Value of RRI				
	(1) DE_ESG	(2) DE_E	(3) DE_S	(4) DE_G
SC	0.0373* (1.78)	0.0112 (0.93)	0.000895 (0.06)	0.0222** (2.07)
RRI_Mean	-0.0241 (-1.42)	-0.0138* (-1.68)	-0.0164 (-1.41)	0.00231 (0.24)
SC * RRI_Mean	0.0571 (0.97)	-0.0154 (-0.46)	0.127*** (3.36)	-0.0539* (-1.80)
CFO	-0.276** (-2.30)	-0.0998** (-2.00)	-0.141* (-1.94)	-0.0343 (-0.40)
Firm Size	0.0862*** (12.05)	-0.00241 (-0.72)	-0.00860* (-1.85)	0.0968*** (23.85)
Leverage	-0.0169 (-0.77)	-0.00326 (-0.32)	-0.0107 (-0.73)	-0.00117 (-0.09)
ROA	0.267** (2.35)	0.101** (2.13)	0.103 (1.48)	0.0533 (0.65)
Sales Growth	0.00175 (0.25)	0.00671** (2.14)	0.00388 (0.79)	-0.00996** (-2.32)
BTM	0.0233** (2.27)	0.0100** (2.07)	0.00140 (0.21)	0.0129** (2.48)
Net PPE	0.00734 (0.17)	-0.00764 (-0.38)	-0.0262 (-0.90)	0.0391* (1.70)
Board Size	-0.0150 (-0.80)	-0.00981 (-1.06)	-0.00400 (-0.32)	-0.00244 (-0.24)
CEO Duality	-0.00747 (-0.89)	-0.00351 (-0.79)	0.00532 (1.00)	-0.0101** (-2.25)
Board Independence	-0.101*** (-4.51)	-0.000246 (-0.02)	-0.0112 (-0.75)	-0.0899*** (-7.01)
Female Director	-0.398*** (-11.53)	-0.0395** (-2.25)	-0.366*** (-15.72)	0.00647 (0.34)
N	11298	11298	11298	11298
adj. R-sq	0.728	0.605	0.596	0.862
Year FE.	Yes	Yes	Yes	Yes
Firm FE.	Yes	Yes	Yes	Yes

Panel B: Yearly Maximum Value of RRI				
	(1)	(2)	(3)	(4)
	DE_CSR	DE_E	DE_S	DE_G
SC	0.0398*	0.00945	0.00236	0.0253**
	(1.85)	(0.78)	(0.17)	(2.35)
RRI_Max	-0.0211	-0.00994	-0.0165*	0.00185
	(-1.50)	(-1.47)	(-1.72)	(0.23)
SC * RRI_Max	0.0422	-0.00804	0.107***	-0.0573**
	(0.78)	(-0.27)	(3.16)	(-2.08)
CFO	-0.277**	-0.100**	-0.141*	-0.0341
	(-2.31)	(-2.01)	(-1.94)	(-0.40)
Firm Size	0.0862***	-0.00244	-0.00859*	0.0967***
	(12.06)	(-0.73)	(-1.85)	(23.84)
Leverage	-0.0167	-0.00321	-0.0106	-0.00112
	(-0.76)	(-0.31)	(-0.72)	(-0.09)
ROA	0.268**	0.101**	0.104	0.0532
	(2.36)	(2.14)	(1.48)	(0.65)
Sales Growth	0.00164	0.00675**	0.00367	-0.00992**
	(0.24)	(2.15)	(0.75)	(-2.31)
BTM	0.0233**	0.0100**	0.00136	0.0130**
	(2.27)	(2.07)	(0.20)	(2.49)
Net PPE	0.00729	-0.00779	-0.0263	0.0393*
	(0.17)	(-0.38)	(-0.90)	(1.72)
Board Size	-0.0151	-0.00990	-0.00424	-0.00222
	(-0.81)	(-1.07)	(-0.34)	(-0.22)
CEO Duality	-0.00745	-0.00348	0.00535	-0.0101**
	(-0.89)	(-0.78)	(1.00)	(-2.26)
Board Independence	-0.101***	-0.000324	-0.0113	-0.0898***
	(-4.51)	(-0.03)	(-0.76)	(-7.01)
Female Director	-0.398***	-0.0396**	-0.366***	0.00618
	(-11.53)	(-2.25)	(-15.70)	(0.32)
N	11298	11298	11298	11298
adj. R-sq	0.728	0.605	0.595	0.862
Year FE.	Yes	Yes	Yes	Yes
Firm FE.	Yes	Yes	Yes	Yes

t statistics in parentheses

* p<0.1 ** p<0.05 *** p<0.01

Appendix A: Variable Definitions

Variable	Definition
SC	An indicator variable coded as 1 if a firm has a sustainability committee, 0 otherwise, identified from BoardEx;
DE_ESG	The overall ESG decoupling that equals the difference between the claims/disclosure and policies/practice of a firm related to ESG and then scaled by the natural logarithm of total assets, data for a firm's ESG claims and polices is collected from Refinitiv ESG;
DE_E	The environmental decoupling that equals the difference between the claims/disclosure and policies/practice of a firm related to environmental issues and then scaled by the natural logarithm of total assets, from Refinitiv ESG;
DE_S	The social decoupling that equals the difference between the claims/disclosure and policies/practice of a firm related to social issues and then scaled by the natural logarithm of total assets, from Refinitiv ESG;
DE_G	The governance decoupling that equals the difference between the claims/disclosure and policies/practice of a firm related to corporate governance and then scaled by the natural logarithm of total assets, from Refinitiv ESG;
External	The sum of a firm's claims or disclosure on ESG scaled by the natural logarithm of total assets, from Refinitiv ESG;
Internal	The sum of a firm's policies or practice on ESG scaled by the natural logarithm of total assets, from Refinitiv ESG;
EX_E	The sum of a firm's claims or disclosure on environmental issues scaled by the natural logarithm of total assets, from Refinitiv ESG;
EX_S	The sum of a firm's claims or disclosure on social issues scaled by the natural logarithm of total assets, from Refinitiv ESG;
EX_G	The sum of a firm's claims or disclosure on corporate governance scaled by the natural logarithm of total assets, from Refinitiv ESG;
IN_E	The sum of a firm's policies or practice on environmental issues scaled by the natural logarithm of total assets, from Refinitiv ESG;
IN_S	The sum of a firm's policies or practice on social issues scaled by the natural logarithm of total assets, from Refinitiv ESG;
IN_G	The sum of a firm's policies or practice on corporate governance scaled by the natural logarithm of total assets, from Refinitiv ESG;
ESG Score	A variable that ranges from 0 to 1 and measures a firm's ESG performance based on verifiable public information, from Refinitiv ESG;
Ind_Mean ESG	The yearly industrial mean value of the ESG Score, from Refinitiv ESG;

Envrn Score	A variable that measures a firm's environmental performance, from Refinitiv ESG;
Social Score	A variable that measures a firm's social performance, from Refinitiv ESG;
Corpgov Score	A variable that measures a firm's corporate governance, from Refinitiv ESG;
Ind_Envrn	An indicator variable coded as 1 if a firm's two-digit historical SIC code is between 10 and 39, 0 otherwise, from Compustat;
Firm Size	The natural logarithm of total assets, measured at fiscal year-end, from Compustat;
CFO	Cash flows from operation scaled by total assets, measured at fiscal year-end, from Compustat;
Leverage	The ratio of total liabilities to total assets, measured at fiscal year-end, from Compustat;
ROA	The net income divided by total assets, measured at fiscal year-end, from Compustat;
Sales Growth	The percentage change of sales from the previous year to current year, from Compustat;
BTM	The ratio of book value of equity to the market value of equity, measured at fiscal year-end, from Compustat;
Net PPE	Net balance of property, plant, and equipment scaled by total assets, measured at fiscal year-end, from Compustat;
Board Size	The natural logarithm of the number of directors sitting on the board, from BoardEx;
CEO Duality	An indicative variable coded as 1 if the CEO of a firm also serve as the chairman of the board, 0 otherwise, from BoardEx;
Board Independence	The ratio of the number of independent directors to the total number of directors, from BoardEx;
Female Director	The ratio of the number of female directors to the total number of directors, from BoardEx;
Analyst	The natural logarithm of 1 plus the number of analyst forecasts on earnings, measured at fiscal year-end, from IBES;
IO%	The ratio of total institutional ownership in the percentage of market value, from FactSet;
RRI_Mean	The natural logarithm of 1 plus the yearly mean value of RepRisk Index, scaled by the natural logarithm of total assets, from RepRisk;
RRI_Max	The natural logarithm of 1 plus the yearly mean value of RepRisk Index, scaled by the natural logarithm of total assets, from RepRisk;

Appendix B: Sample Distribution

Table B1 Yearly distribution of firms with sustainability committee

Year	Firms with SC	All firms	Percentage
	N	N	
2002	40	232	17.24%
2003	40	239	16.74%
2004	46	327	14.07%
2005	59	376	15.69%
2006	63	378	16.67%
2007	67	402	16.67%
2008	79	515	15.34%
2009	86	573	15.01%
2010	96	615	15.61%
2011	104	630	16.51%
2012	108	634	17.03%
2013	110	648	16.98%
2014	115	665	17.29%
2015	142	1,079	13.16%
2016	149	1,547	9.63%
2017	168	2,000	8.40%
2018	185	2,173	8.51%
2019	226	2,348	9.63%
2020	302	2,510	12.03%
2021	336	2,147	15.65%
Total	2,521	20,038	12.58%
Unique Firms	416	2,759	15.08%

Table B2 Industrial sector distribution of firms with sustainability committee

Sector (FTSE International classification)	Firms with SC	All firms	Percentage
	N	N	
Aerospace & Defense	73	209	34.93%
Automobiles & Parts	80	422	18.96%
Banks	73	1,697	4.30%
Beverages	26	125	20.80%
Business Services	45	784	5.74%
Chemicals	243	551	44.10%
Clothing & Personal Products	58	360	16.11%
Construction & Building Material	45	632	7.12%
Consumer Services	3	122	2.46%
Containers & Packaging	16	187	8.56%
Diversified Industrials	30	151	19.87%
Education	0	73	0.00%
Electricity	39	122	31.97%
Electronic & Electrical Equipment	100	1,384	7.23%
Engineering & Machinery	129	937	13.77%
Food & Drug Retailers	22	128	17.19%
Food Producers & Processors	114	518	22.01%
Forestry & Paper	74	135	54.81%
General Retailers	80	793	10.09%
Health	13	1,000	1.30%
Household Products	86	314	27.39%
Information Technology Hardware	22	517	4.26%
Insurance	33	474	6.96%
Investment Companies	0	9	0.00%
Leisure & Hotels	128	780	16.41%
Leisure Goods	38	139	27.34%
Life Assurance	0	16	0.00%
Media & Entertainment	0	288	0.00%
Mining	109	216	50.46%
Oil & Gas	274	950	28.84%
Pharmaceuticals and Biotechnology	67	1,468	4.56%
Private Equity	0	17	0.00%
Publishing	17	130	13.08%
Real Estate	4	306	1.31%
Renewable Energy	4	145	2.76%
Software & Computer Services	18	1,156	1.56%
Specialty & Other Finance	39	761	5.12%
Steel & Other Metals	46	219	21.00%
Telecommunication Services	42	416	10.10%
Tobacco	21	50	42.00%
Transport	13	570	2.28%
Utilities - Other	297	767	38.72%
Total	2,521	20,038	12.58%