Governing Through Votes: Shareholder Responses to Major Environmental and Social Incidents*

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Abstract

This paper investigates shareholder reactions to major environmental and social (ES) incidents by examining voting behavior in director elections. Using a comprehensive dataset of U.S. firms, we find that directors of companies experiencing significant ES incidents face an average of 9.8% more negative votes, with climate-related incidents prompting the most pronounced dissent. Female directors, who typically enjoy higher support, experience greater losses in shareholder backing following major ES incidents. Negative voting, per se, has a negligible impact on lowering the likelihood of future ES incidents, but boards that respond by adopting ES-linked executive compensation or forcing CEO turnover see a significant mitigation in the likelihood of incidents. Our findings contribute to the understanding of the governance role of shareholders in holding directors accountable for ES oversight and highlight the conditions under which shareholder activism can effectively influence corporate sustainability.

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*All errors remain our own.

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1 Introduction

Boards of directors wield pivotal power in corporate governance, driving key decisions on corporate strategy, executive hiring, CEO compensation, and risk oversight. In recent years, corporate boards have faced increasing pressure from stakeholders and regulators to strengthen their oversight of environmental and social (ES) risks.[1] Media reports[2] suggest that proxy advisors and shareholders have increasingly signaled negative votes against incumbent directors when firms encounter sustainability failures. However, a recent survey of more than 500 public company directors across the United States reveals that the majority do not perceive ES issues to have a significant impact on the company's bottom line.[3] This finding underscores potential inadequacies in board oversight of ES issues, which may lead to firms' negative externalities, adversely affecting both the environment and society.

Despite a clear disconnect between the increased activism of shareholders on sustainability issues and the limited attention of directors to these issues, empirical evidence remains sparse on whether shareholder voting in director elections reflects an effort to impose accountability on outside directors for ES oversight failures. Therefore, this paper addresses the gap by examining how shareholders respond to major ES incidents through voting behavior in director elections. Using a dataset of ES incidents, we analyze the reputational and labor market consequences for directors and explore the implications for firms' sustainability performance. Specifically, we focus on the characteristics of ES incidents and how they influence shareholder voting patterns, providing new insights into the mechanisms of accountability in corporate governance.

[1] For instance, during the Keynote Address at the 2021 Society for Corporate Governance National Conference: *Climate, ESG, and the Board of Directors: "You Cannot Direct the Wind, But You Can Adjust Your Sails,"* Allison Herren Lee, Former SEC Commissioner, stated: "...Increasingly, boards of directors are called upon to navigate the challenges presented by climate change, racial injustice, economic inequality, and numerous other issues that are fundamental to the success and sustainability of companies, financial markets, and our economy..." See https://www.sec.gov/news/speech/lee-climate-esg-board-of-directors. In addition, Former Chief Justice of the Delaware Supreme Court, Leo Strine, has argued that ESG considerations are a critical aspect of a board's risk oversight responsibilities. He has emphasized that boards must account for material ESG factors as part of their fiduciary duties to manage risks and align corporate governance with long-term value creation.

[2] See Appendix B1.

[3] The survey conducted by PwC (2024) states: "...Despite the real risks and potentially significant opportunities that ESG presents, only 22% of directors believe it has a direct impact on the company bottom line..."

Financially oriented investors have incentives to vote against directors following ES incidents, as poor ES practices can result in significant pecuniary costs due to adverse reactions from stakeholders, including creditors, employees, consumers, and suppliers.[4] Meanwhile, socially responsible investors (e.g., SRI funds), usually driven by nonpecuniary preferences (Starks, 2023), may also withhold votes in director elections to pressure boards into adopting stronger sustainability policies and mitigating negative externalities. From the perspective of fiduciary duties, some argue that integrating ESG risks into directors' and officers' decision-making conflicts with fiduciary obligations, given the traditional emphasis on shareholder wealth maximization. However, Edmans (2024) contends that risk assessment, including ESG considerations, is a fundamental part of fiduciary responsibility. Major ES incidents can be seen as indicative of directors' failure to adequately oversee and mitigate ES risks, thereby falling short of their fiduciary responsibilities. Under this view, directors associated with major ES incidents are likely to receive lower shareholder support.

Nevertheless, shareholder voting responses to ES incidents may be attenuated if directors are viewed as independent and perceived as advisors, e.g., in auditing and compensation roles, rather than as primarily responsible for monitoring ES practices. Additionally, shareholders may also choose alternative external governance responses, such as direct engagement (e.g., Dimson et al., 2015, Krueger et al., 2020, Hoepner et al., 2024) or divestment (e.g., Duchin et al., 2022, Gantchev et al., 2022), rather than voting against directors' re-election.

The uncertainty surrounding shareholder responses to ES incidents highlights the importance of investigating how voting behavior reflects accountability for ES oversight failures. Understanding the consequences directors face in the aftermath of these failures is crucial for incentivizing better board-level monitoring of sustainability risks. While ESG topics remain politically contentious, the growing recognition of sustainability as a critical risk factor underscores the need for focused attention from both shareholders and boards.

To test our key hypothesis, we utilize a comprehensive dataset of firms listed on the three

[4] See Edmans (2011); Houston and Shan (2022); Houston et al. (2022); Xiao et al. (2023); Dube et al. (2023); Duan et al. (2023); Bisetti et al. (2023); Colak et al. (2023), among others.

major U.S. stock exchanges. We combine shareholder voting data from ISS Voting Analytics with major ES incident data[5] from RepRisk. In our sample, 13% of firm-year observations involve major environmental incidents, and 19% face major social incidents. Our analysis focuses on the election outcomes of incumbent independent directors, who serve as key internal monitors of firm actions.

We regress the percentage of negative votes received by a director (or the average percentage of negative votes across independent directors on the board) on the number (or an indicator variable) of major ES incidents occurring in the 12 months prior to a shareholder meeting. The regression models include firm-level, board-level, and director-level controls, as well as industry-year fixed effects. In additional tests, we augment our baseline regression with either firm or director fixed effects to account for time-invariant firm-specific and director-specific factors that may influence election outcomes. Our results show that firms with more major ES incidents experience a significantly higher percentage of negative votes. Economically, one major ES incident in the preceding year reduces the average support rate for boards by 0.5 percentage points, equivalent to 9.8% of the sample mean percentage of negative votes.

To strengthen identification, we first implement a stacked difference-in-differences (DiD) regression approach, following Bisetti et al. (2023) and Zhang (2024). We define a treatment as a firm-year in which a major ES incident occurs, provided it is the firm's first incident and there are no ES incidents in the preceding three years. For each treated firm, we match it with control firms from the same Fama-French 48 industry that do not experience any ES incidents within a three-year window before or after the event. Our finding reveals that firms experiencing a major ES incident face a significant decline in director election support in the immediate post-incident year relative to control firms within the same industry, indicating a prompt negative reaction from shareholders. However, this shareholder dissatisfaction appears to dissipate in subsequent years, as we do not observe a significant increase in negative votes in the second or third years following a major ES incident. Parallel trends analysis confirms the absence of any pre-trend

[5] An ES incident is classified as major if its severity is rated medium-to-high based on the RepRisk classification. In this study, we focus exclusively on major ES incidents, excluding those classified as low severity.

effects, indicating that pre-existing differences between treated and control firms do not drive the treatment effect.

Next, we focus on major ES incidents occurring within the quarter immediately preceding the shareholder meeting, as these events are unlikely to be endogenous to firm decisions, given the unpredictability of their timing. This approach also enables a comparison between the effects of recent incidents and those over a one-year period. We find that a higher number of major ES incidents in the preceding quarter has a more pronounced adverse effect on director election outcomes, emphasizing the critical role of recency in shaping shareholder perceptions and voting behavior.

We also incorporate greenwashing detection as an additional factor to further analyze voting outcomes in director elections, acknowledging that it does not represent a traditional "exogenous shock" in the strict sense. Shareholders are likely to perceive major environmental incidents as significant shocks for firms that publicly emphasize their environmental performance and initiatives, as such incidents contradict the firm's projected image. Using data from He et al. (2024), we measure corporate green talk intensity as the percentage of green talk sentences relative to the total number of sentences in each earnings conference call.[6] In our sample, 15% of firm-year observations contain green talk, and firms with higher ex-ante green talk intensity receive significantly more negative votes in director elections after a major environmental incident. This finding suggests that shareholders penalize boards when firms with strong environmental claims fail to align with actual outcomes, underscoring how greenwashing intensifies scrutiny and drives greater accountability for inconsistencies between public statements and firm performance.

To gain a better understanding of which types of incidents are more relevant to shareholder dissent votes, we separate ES incidents into different groups based on sets of characteristic. We document that directors face increased dissenting votes following financially material[7], far-

[6] We thank He et al. (2024) for providing the green talk data. Each earnings call transcript is segmented into individual sentences, which are classified as green talk or not using the well-known machine learning model, FinBERT (Huang et al., 2023).

[7] We classify the financial materiality of ES incidents according to the guidelines provided by the Sustainability Accounting Standards Board (SASB) industry-based guidance. This guidance identifies the sustainability-

reaching[8], novel[9], and U.S.-based incidents[10]. Additionally, directors receive significantly more negative votes when ES incidents impose higher pecuniary costs, as reflected in more negative cumulative abnormal returns. Using the detailed categorization provided by RepRisk, we find that incidents related to climate change and greenhouse gas emissions trigger the highest levels of dissent. This result aligns with increasing regulatory scrutiny and disclosure requirements for climate-related risks, which elevate shareholder expectations for board accountability in managing these critical issues.

Next, we aim to understand whether shareholders target specific groups of directors following ES incidents. Our findings reveal that female directors lose more investor support after major ES incidents. Prior to these incidents, female directors enjoyed significantly higher voting support, but ES issues appear to diminish this advantage. In contrast, we do not observe significantly higher dissenting votes for older directors, directors with longer tenure, or those serving on multiple boards. We also explore potential heterogeneity in shareholder voting based on board committee membership. However, we find no evidence that members of specific committees receive higher dissenting votes. This result may reflect the integration of ES responsibilities across multiple committees rather than their concentration in a single committee. Alternatively, it could indicate varying shareholder perspectives on which committees should be accountable for ES risks.

Building on our analysis of shareholder voting responses, we investigate the broader implications of these responses for directors' careers. While voting behavior reflects shareholder accountability, its consequences extend beyond elections, influencing directors' reputations and their likelihood of retaining board positions. As Aggarwal et al. (2019) highlights, disciplinary

related risks that are most likely to impact a company's cash flows, its access to finance and cost of capital over the short to long term. For instance, the SASB's framework illustrates that while greenhouse gas emissions might not represent a significant financial concern in the technology and communications or services sectors, they can be in the extractive and mineral processing sectors. For more details regarding SASB, see: https://sasb.org/

[8] The level of reach is based on the reporting news agency that covers the incident: high-reach sources include global news outlets, medium-reach sources encompass national or regional media outlets, and low-reach sources consist of local media and social platforms.

[9] Novelty indicates whether it is the first time a company is associated with a specific ES issue in a particular location.

[10] We categorize incidents based on their location, identifying whether they occur within or outside the United States.

votes, though rare, can cause public embarrassment and harm a director's prospects for renomination. Consistent with this, we find that major ES incidents increase the likelihood of director departures, particularly for those receiving higher dissenting votes. However, we do not observe spillover effects from ES incidents on directors' other outside board positions.

A pertinent question arises: Do negative shareholder votes in director elections following ES incidents lead to ES improvement? To address this, we analyze the impact of negative votes on the likelihood of future ES incidents, focusing on firms that experienced at least one major ES incident prior to the shareholder meeting. The results indicate that negative voting alone has a negligible effect on reducing the likelihood of future ES incidents. This suggests that other factors, such as adopting comprehensive sustainability policies or implementing governance changes, may be essential for improving ES outcomes. Supporting this view, our additional evidence reveals that boards with a higher average fraction of dissenting votes, which respond by introducing ES-linked executive compensation or enforcing CEO turnover, exhibit a significant reduction in the likelihood of future incidents.

In the final part of the paper, we explore the relationship between fund support for shareholder-initiated ES proposals and fund voting against directors following major ES incidents. Shareholders expressing dissatisfaction with ES issues may choose between two mechanisms: voting for shareholder-initiated ES-related proposals—such as those advocating greater transparency or reduction targets for greenhouse gas (GHG) emissions—or voting against directors. Intriguingly, we find a negative relationship between support for ES proposals and dissenting votes in director elections, suggesting that voting against directors serves as an alternative mechanism for institutional shareholders to express dissatisfaction with negative ES incidents. Furthermore, we observe distinct differences in voting behavior between socially responsible investment (SRI) funds and non-SRI funds. Relative to non-SRI funds, SRI funds are more likely to support ES proposals but less likely to vote against directors after a major ES incident. This suggests that SRI funds adopt a "constructive collaboration" approach, prioritizing ES proposals to drive sustainability improvements while avoiding direct confrontation with the board.

This study contributes to the literature along two main dimensions. First, it advances research on the factors influencing shareholder decisions to vote against directors. Existing work on director accountability has primarily focused on financial fraud lawsuits, earnings restatements, options backdating, and forced CEO turnover (see Srinivasan, 2005; Fich and Shivdasani, 2007; Ertimur et al., 2012; Von Meyerinck et al., 2023, among others). More recently, Michaely et al. (2024) analyze institutional investors' voting rationale data and find that the primary reasons for opposition are lack of board independence and diversity, while Aggarwal et al. (2024) use MSCI ESG scores to show that investors withhold votes in response to poor corporate governance. In contrast, our study leverages data on major environmental and social (ES) incidents from RepRisk, offering a more direct and objective measure of firm underperformance in ES activities.

By focusing on major ES incidents, we demonstrate that directors face significantly more negative votes following such incidents. Unlike ESG ratings, which may be influenced by greenwashing or social washing (He et al., 2024), ES incidents provide an exogenous measure of ES-related failures due to their unpredictability and external visibility. This approach not only mitigates endogeneity concerns but also enhances the accuracy of assessing shareholder accountability for ES oversight failures.

Our study is closely related to contemporaneous work by Ding et al. (2024), who finds that directors are more likely to leave firms that are experiencing ES incidents, and shareholders withhold more votes from directors in firms with ES failures. Our paper argues that director turnover could result from increased negative shareholder votes, suggesting that turnover may be a second-order effect. While both studies examine the relationship between ES incidents and shareholder voting, our paper offers a distinct perspective by extensively analyzing how shareholder voting patterns vary based on different characteristics of ES incidents and whether these incidents target specific directors. This analysis offers deeper insights into how shareholders hold boards accountable for ES incidents and highlights the types of ES incidents that investors consider most critical. Importantly, we assess the effectiveness of shareholder voting in reducing the likelihood of future ES incidents, emphasizing how subsequent board actions,

such as adopting ES-linked policies, can significantly influence outcomes. Lastly, we examine the relationship between voting for ES proposals and voting against directors in response to ES issues, offering deeper insights into shareholder activism patterns.

Second, our study contributes to the literature on shareholder responses to ES issues. Divestment and engagement are the two primary mechanisms through which investors express dissatisfaction with poor ESG practices and push for positive change. For instance, Gantchev et al. (2022) find that even highly ES-conscious institutional investors exhibit relatively low levels of divestment from firms involved in ES incidents. However, the mere threat of future exits motivates firms to improve their sustainability performance. Engagement, meanwhile, has demonstrated success in driving improvements in corporate ES practices (Dimson et al., 2015; Krueger et al., 2020; Becht et al., 2021; Hoepner et al., 2024). For example, Dimson et al. (2015) use proprietary data on institutional investor engagements to show how shareholder activism can effectively address ESG concerns.

Our study extends this literature by demonstrating that shareholders also express dissatisfaction through voting against incumbent directors following major ES incidents. However, we find that negative votes alone are insufficient to drive meaningful improvements in firms' ES performance. This is consistent with Hoepner et al. (2024), who find that ESG engagements only lead to risk reductions when firms acknowledge ESG issues and respond with concrete actions. Similarly, our results show that boards adopting effective measures in response to shareholder concerns, such as implementing ES-linked compensation or forcing CEO turnover, experience a significant reduction in the likelihood of future ES incidents. The limited effectiveness of negative votes against directors post-ES incidents underscores the need for shareholders, particularly institutional investors, to provide more comprehensive rationales for their voting behavior and proposal actions. Clear, actionable feedback may better align corporate responses with shareholder expectations, fostering meaningful improvements in sustainability practices.

2 Data and Sample

Our study employs environmental and social incidents data sourced from RepRisk; voting outcomes on director elections and sharehholder proposals from the ISS Voting Analytics; director characteristics from BoardEx and ISS ESG Directors U.S.; board governance index from the ISS Governance database; firm characteristics from Compustat/CRSP; institutional ownership from Thomson Institutional (13f) Holdings; ESG ratings, sustainability committee data from Refinitiv; ES-linked pay from ISS Executive Compensation Analytics (ECA); and financial materiality classifications from SASB. Additional details on variable construction for this study are provided in Table A1 in Appendix A. Our baseline sample includes S&P 1500 firms that held shareholder meetings during the period from January 2008 to June 2023, as the data from the RepRisk database is available starting from January 2007. We winsorize all continuous variables at the 1% and 99% levels.

2.1 Major ES Incidents

RepRisk combines AI and machine learning with human intelligence to translate big data into actionable research, analytics, and risk metrics. It categorizes each incident into environmental, social, and governance domains, encompassing 28 broad ESG-related issues. In this study, our focus is on major ES incidents categorized as medium-to-high severity by RepRisk, excluding minor incidents that may not attract investors' attention.[11]

There are a few key advantages to utilizing RepRisk ES incidents data. First, RepRisk takes an external perspective on ESG risks by assessing information from stakeholders and public sources, without considering firm self-disclosures. This approach is crucial because self-reported ESG data is prone to be biased, given the prevalence of greenwashing practices (e.g. He et al., 2024), especially in risk disclosures. Second, as emphasized by Berg et al. (2022), there is considerable disparity among ESG rating agencies that evaluate firms' ESG policies to assign

[11] In untabulated tables, we analyze ES incidents of all severity levels, and the results are consistent with our baseline finding. However, the coefficient magnitude decreases, indicating that the impact of major ES incidents on negative votes is stronger.

ratings. RepRisk focusing on downstream ESG reputation risk using actual incidents may help address these concerns. When a specific ES incident is reported in multiple sources, RepRisk includes the incidents from the most prominent source only once. This practice helps reduce measurement errors when estimating the impact of multiple ES incidents. Third, RepRisk categorizes ES incidents based on media reach and novelty allowing us to test which types of ES incidents are more closely associated with dissenting votes by shareholders. The aforementioned advantages contribute to the increasing popularity of RepRisk ESG incident data among researchers investigating the effects of negative ESG shocks on firm policies, equity market reactions, and other corporate stakeholder behavior (e.g., Glossner, 2021; Gantchev et al., 2022; Houston et al., 2022; Derrien et al., 2022; Bisetti et al., 2023; Dube et al., 2023; Duan et al., 2023; Xiao et al., 2023; Colak et al., 2023).

Existing literature provides evidence that institutional investors are more likely to vote against directors when concerns arise regarding governance matters such as board diversity, board independence, and tenure (see, for example, Cai et al., 2009; Michaely et al., 2024; Aggarwal et al., 2024). However, our primary focus is on ES issues like greenhouse gas emissions and employee discrimination, as these have increasingly become central concerns for both shareholders and stakeholders. Following the approach outlined by Gantchev et al. (2022), we include governance news coverage as a control variable to strengthen the robustness of our findings.

2.2 Shareholder Voting on Director Election Proposals

We source director voting outcomes from the ISS Voting Analytics database. Our study focuses on elections in which director slates are sponsored by management and limits the sample to incumbent directors. This approach allows us to investigate how shareholders utilize their voting rights to express dissatisfaction with members who were on boards after major ES incidents occur.

We first collect director names from the BoardEx database, which relies on information from firms' annual reports. Then, we extract director names from ballot item descriptions in the

ISS Voting Analytics database. The matching process requires a one-to-one correspondence of individual directors between the BoardEx and ISS Voting datasets. Utilizing a name-matching algorithm, we compare director names obtained from annual reports with those listed in proxies for director elections during subsequent annual meetings of the same companies. Further manual verification is conducted to ensure accurate matching.

Our study employs the widely used measure of shareholder voting against directors (e.g., Cai et al., 2009; Aggarwal et al., 2019; Liu et al., 2020). We calculate the percentage of negative votes by summing the total "Against" and "Withheld" votes for each director candidate and dividing it by total votes cast. As robustness checks, we use an alternative measure by calculating the percentage of funds withholding their votes in director elections. Also, we replace the percentage of negative votes with an indicator for unusually high levels of withheld votes, defined as at least 15% of votes cast (Bach and Metzger, 2017).

2.3 Control Variables

We incorporate various levels of control variables, including director-level characteristics, board-level characteristics, and fundamental firm performance measures. Director-level controls sourced from BoardEx include director gender, director age, director busyness (measured by the number of outside listed directorships), director tenure on the board, and director educational qualifications. We include poor meeting attendance which equals one if the director attended less than 75% of the board meetings during the year, and zero otherwise. Also, we utilize BoardEx to account for critical company governance characteristics such as board size, board gender diversity, board independence, CEO-chair duality, and board average age. Utilizing the ISS Governance database, we incorporate a commonly used governance metric known as the entrenchment index, developed by Bebchuk et al. (2009). The accounting controls are collected from Compustat/CRSP, including firm size, return-on-assets, and cumulative stock return. Additionally, we rely on institutional ownership data from Thomson Reuters (from Schedule 13F filings).

2.4 Descriptive Statistics

After consolidating data from multiple databases and excluding observations lacking the key control variables, our final baseline sample comprises 15,397 firm-year observations, including 15,643 unique independent directors, primarily from S&P 1500 firms. Summary statistics for these key variables are provided in Table 1.

[Please insert Table 1 about here]

Table 1 reveals that in our sample, less than 20% of firm-year observations have encountered at least one major environmental or social incident. The 75th percentile value for major ES incidents (0/1) is zero, suggesting that major ES incidents are relatively uncommon. However, it is important to note that some firms may experience multiple incidents within a single year. The average number of major social incidents (0.552) is higher than that of major environmental incidents (0.335). We also provide the distribution of major ES incidents by Fama-French 12-Industry in Figure 1. The figure reveals that among the 12 industries, oil, gas, and coal extraction and products industry see the highest frequencies of major environmental and social incidents, followed by the utilities, consumer non-durable goods, and the chemical and allied products industries.

Regarding shareholder voting on independent directors, the mean and median percentages of negative votes across director-firm-year are 4.3% and 2%, respectively. On average, the firm-level mean of negative votes is 5.1%, calculated by first averaging the negative votes across independent directors standing for re-election within each firm-year and then averaging these firm-level negative votes percentages across the sample. The above statistics align with those reported by Aggarwal et al. (2019), indicating that directors generally receive high support during elections. Additionally, we include an indicator for when ISS recommends voting "no" on a director election as a control variable in our robustness analysis.

3 Shareholder Votes on Director Elections

3.1 Voting Results on Independent Directors

In the baseline regression, we focus on the election outcomes of incumbent independent directors, who are widely considered the primary monitors of a firm's activities. ES incidents can be viewed as indicative of ineffective board oversight on sustainability issues. We conjecture that, when ES incidents occur, shareholders may view directors as failing in their fiduciary duty to effectively manage ES risks, prompting shareholders to vote against boards of directors to better align the management's actions with shareholder interests. To test this conjecture, we estimate the following pooled director-firm-year level ordinary least squares regression with heteroskedasticity-robust standard errors clustered by firm:

$$(Avg.)Negative\ Vote\%_{d,i,t} = \beta_1 Major\ ES\ Incidents_{i,t-12m} + \boldsymbol{\beta}_2 \mathbf{X}_{d,i,t} + \epsilon_{d,i,t}, \tag{1}$$

where the dependent variable is Negative Vote %, measured by the total aggregate votes cast as "Against" or "Withhold" for a director($_d$) as a fraction of the voting base; we also use dependent variable Avg. Negative Vote %, measured by the average percentage of Negative Vote % received by independent directors on re-election during a specific shareholder meeting. We use two measures to proxy for Major ES Incidents$_{i,t-12m}$ which are (1)Ln(1+ES Incidents) defined as the natural logarithm of one plus the total counts of major environmental or/and social incidents that a firm($_t$) experienced during one year preceding the annual meeting. Major incidents are defined as those with severity coded as medium-to-high by RepRisk; (2)ES Incident(0/1) is an indicator variable that equals one if a firm experienced at least one major environmental or/and social incident; and zero, otherwise. The vector $\mathbf{X}_{d,i,t}$ captures sets of controls includes director-level characteristics, board-level characteristics, and fundamental firm performance measures. In the regression, we incorporate industry-year fixed effects to account for unobserved industry-level factors, time trends, and industry-specific shocks. Additionally, at director-level regression, we include director fixed effects to control for unobserved, time-invariant director characteristics,

producing a within-person comparison of directors associated with major ES incidents versus themselves not involved in such incidents at different firms.

Table 2 Panel A presents the results. Across Columns 1-4, the coefficients for Ln(1+ES Incidents) and ES Incident(0/1) are all positive and statistically significant at the 10% level. In particular, the coefficients in Columns 3 for ES Incident(0/1) indicate that experiencing a major ES incident increases the proportion of negative votes in incumbent director elections by more than 0.4%. This represents a significant increase, considering that the mean negative vote percentage in our sample is 4.3%.

[Please insert Table 2 about here]

In Panel B, we aggregate the voting outcomes across all the firm's independent directors in the following director election. The results are consistent with those at the director level. Specifically, Column 3 shows that when a firm experiences at least one major ES incident, the support rate for director in elections drops by an average of 0.5%, which corresponds to 9.8% (= 0.005/0.051) of the sample mean. This result is statistically significant at the 1% level. At the firm-year level, fewer than 20% of firm-years experience major ES incidents as suggested in Table 1. The infrequent occurrence of major ES incidents can lead to limited within-firm variation, which can reduce the effectiveness of firm-fixed effects in capturing relevant dynamics. Nonetheless, we include firm-level fixed effects in Table A3 to ensure robustness by accounting for time-invariant firm-specific heterogeneity. The results presented in Table A3 confirm that our baseline finding remains unchanged, validating that the observed effects are not driven by firm-level characteristics that are constant over time.

3.2 Identification Strategies

As highlighted by De Chaisemartin and d'Haultfoeuille (2020), the traditional two-way fixed effects model can produce biased Average Treatment Effect on the Treated (ATT) estimates because treated observations may simultaneously serve as control groups in other treated cases. To address this concern, we employ a stacked DID regression approach to test the robustness

of our baseline findings following Bisetti et al. (2023) and Zhang (2024). We define the treated group as firm-years in which a major ES incident occurs, ensuring it is the first such incident and that the firm has not experienced any ES incidents in the prior three years. For each treated event, we match the treated firm with control firms from the same Fama-French 48 industry. Control firms are required to be free of any ES incidents within a seven-year window surrounding the event year (from three years before to three years after) to avoid contamination from other incidents.[12] Finally, we construct 189 cohort groups for the stacked DID regressions specified as follows:

$$\text{Avg. Negative Vote}_{i,c,t} = \sum_{\tau=-3}^{+3} \alpha_\tau \mathbb{I}(\text{Treatment})_{i,c,t} \times \mathbb{I}(\text{Major ES Incident} \pm \tau \text{ Year})_{i,c,t} + \beta_1 Controls + \gamma_{i\times c} + \delta_{t\times c} + \varepsilon_{i,c,t} \tag{2}$$

Table 3 Panel A presents the result from the stacked DID regressions, incorporating Cohort×Firm fixed effects and Cohort×Meeting Proxy Season fixed effects. The coefficient for $I(\text{Treatment}) \times I(\text{Post 1yr})$ is statistically significant at the 5% level, indicating that firms experiencing major ES incidents face a significant drop in director election support in the following year compared to control firms within the same industry. This reflects a clear and immediate reaction by shareholders. However, the coefficients for $I(\text{Treatment}) \times I(\text{Post 2yr})$ and $I(\text{Treatment}) \times I(\text{Post 3yr})$ are not statistically significant, suggesting that this reaction does not persist beyond the first year. The short-term nature of this response suggests that shareholders view their negative votes on director elections as a way to immediately express dissatisfaction with the incident, rather than a long-term change of sentiment toward directors. Unlike the settings in Bisetti et al. (2023) and Zhang (2024), where ES incidents have long-term implications for operational outcomes such as supply chains and green product development, director elections are a more direct and immediate channel for shareholders to signal their concerns. In addition, over time, the firm's actions to address the ES incident are likely alleviate shareholder concerns, thereby reducing shareholder motives for continued negative votes against directors in subsequent elections. We also present the dynamic effects of major ES incidents in

[12] For each cohort, we allow multiple matched firms, meaning the matching is not necessarily one-to-one.

Figure 2. Parallel trends analysis confirms the absence of any pre-trend effects, indicating that the treatment effect is not driven by pre-existing differences between treated and control firms.

[Please insert Table 3 about here]

We also reanalyze the results from Table 2 Panel B by focusing on the count of ES incidents occurring within the quarter immediately preceding the shareholder meeting. This approach highlights that the occurrence of ES incidents is unlikely to be endogenous to firm decisions, as the timing of such events is difficult for firms to predict or influence. Additionally, by using incident data from the most recent quarter, we aim to compare these effects with those derived from a one-year aggregation period. As shown in Table 3 Panel B, the coefficients of Ln(1+Lag 1-Qrt ES Incidents) from Columns 1-2 are greater than those in Columns 1-2 of Table 2 Panel B, where we aggregate the number of ES incidents over the 12 months preceding the meeting ($0.6\% > 0.4\%$). Our findings indicate that when firms experience a higher number of major ES incidents in the quarter preceding a particular shareholder meeting, the adverse impact of ES incidents on director election outcomes becomes more pronounced, suggesting that the recency of ES incidents plays a crucial role in shaping shareholder perceptions and their voting behavior.

In addition, we incorporate greenwashing detection as an additional factor to analyze voting outcomes in director elections. For firms that make more positive statements about their environmental performance and sustainability initiatives, shareholders are likely to perceive major environmental incidents as a significant shock to their expectations, as such incidents starkly contradict the firm's publicly projected image of being environmentally responsible. To capture this dynamic, we measure the green talk intensity[13] in the year preceding the incident count period. This approach allows us to assess the extent to which firms engage in promoting their environmental commitments before the occurrence of a major incident. As shown in Table 3 Panel C, the interaction term Env.Incident (0/1)×Green Talk Intensity is statistically significant and positive at the 10% significance level, indicating that firms with higher ex-ante green talk intensity receive significantly more negative votes in director elections following a

[13] The data on green talk intensity is sourced from He et al., 2024.

major environmental incident. This finding reflects a pronounced shareholder reaction to the perceived discrepancy between a firm's environmental claims and its actual performance, particularly when those claims create heightened expectations for accountability and environmental stewardship.[14]

3.3 Heterogeneity of ES Incidents

In this section, we report our regression analysis that examines how various characteristics and categories of ES incidents influence shareholder voting for directors. Not all environmental and social issues have equal significance for shareholders (Chen et al., 2020; Edmans, 2021). Consequently, shareholders are unlikely to attribute responsibility to directors for all types of ES incidents, as not all incidents have equal financial materiality to the firm's value.

To investigate the effect of ES issue materiality on director voting outcomes, we follow Chen et al. (2020) and manually map RepRisk ES incidents to SASB categories based on SASB's industry-specific materiality guidelines[15] for 11 industry sectors, representing 77 individual industry categories. SASB defines material issues as those demonstrating widespread interest from diverse user groups and showing evidence of financial impact, akin to the criteria utilized by the SEC in determining the materiality of financial information. In contrast to previous studies utilizing all five SASB dimensions of ESG issues, our study focuses exclusively on three dimensions that are ES-related given our study's scope: environment (e.g., greenhouse gas emissions), social capital (e.g., human rights and community relations), and human capital (e.g., labor practices). After mapping, we run regressions to examine the effect of ES issue materiality on director voting outcomes. We also conduct a horse racing analysis to compare the relative impacts of financially material and non-material ES issues on voting outcomes.

The result in Table 4, Panel A suggests that financially material ES incidents have a stronger effect on negative shareholder votes compared to non-financially material ES incidents, reflecting investors' heightened concern over ES issues with direct and tangible implications for

[14] While we focus solely on the green aspect (E), the understanding of environmental issues could also offers insights into shareholder reactions to similar social responsibility (S) gaps.

[15] See Figure B2 for SASB's industry-specific materiality guidelines.

firm financial performance. This finding aligns with the evidence in Table A4, which shows that directors receive lower support rates in subsequent elections when ES incidents are associated with more negative stock market reactions[16]. However, this does not imply that financially immaterial ES incidents are insignificant. As shown in Columns 2 and 3, the coefficient for Immaterial ES Incidents (0/1) is statistically significant at the 5%-10% level, indicating that financially immaterial incidents also significantly influence shareholder voting behavior.

[Please insert Table 4 about here]

Meanwhile, it is also important to emphasize that these results represent the aggregate impact of ES incidents at the firm level. Different investors may respond to ES incidents based on their own preferences and objectives. For example, financially oriented investors are likely to vote against directors primarily in response to the financial risks posed by material incidents, whereas socially responsible investors may assign equal or even greater importance to financially immaterial incidents, using their votes to advocate for improvements in broader ES practices. To conclude, while financially material ES incidents exert a more pronounced effect on shareholder dissent, financially immaterial incidents also play a role in shaping voting outcomes.

Next, we explore other characteristics of ES incidents on diretcor election outcomes. First, we investigate whether shareholder voting on director elections following ES incidents is sensitive to the extent of media coverage of ES incidents. The reach of an incident is captured by the coverage scope of the news agency reporting on the event. The regression in Column 1 of Table 4 Panel B compares the potential heterogeneous impact of high-reach ES incidents versus low-reach ES incidents on director election outcomes. The coefficient of High-reach ES Incidents (0/1) is statistically significant at the 1% level. This implies that when ES incidents receive higher attention (i.e., are reported by a larger scope of news agencies), directors tend to receive more negative votes. Specifically, when a firm experiences a high-reach ES incident, boards on average receive 0.6% more dissenting votes. By contrast, we do not observe a significant

[16] We remove ES incidents with confounding events (including RepRisk Governance Incidents, M&A Announcements, change in Company Bylaws/Rules, Lawsuits&Legal Issues) in the week before the incident.

change in election outcomes when a firm experiences a low-reach ES incident, as suggested by the insignificance of the Low-reach coefficient.

We then explore the potential heterogeneous impact of incident novelty on director election outcomes. Following the RepRisk definition, novelty is categorized into two distinct groups. A higher novelty value indicates that it is the first instance of a company or project being exposed to a specific ES issue in a particular location. The influence of ES incident novelty on election outcomes is not known ex-ante. On one hand, shareholders may hold directors accountable for non-novel ES incidents, as they signify a recurring pattern of ES issues and suggest that directors have failed to monitor firm operations. On the other hand, shareholders may be inclined to hold directors accountable when ES incidents are novel, as novel incidents can create more uncertainty about the firm's future risk exposure, prompting shareholders to take preemptive action by voting against directors to signal their concerns. Column 2 in Table 4 Panel B demonstrates positive and statistically significant coefficients on Novel ES Incidents (0/1) at the 5% level. In contrast, the coefficient of Non-novel ES Incidents (0/1) is statistically insignificant at the 10% level. The combined findings suggest that shareholders primarily hold independent directors accountable for novel ES issues, demonstrating a heightened response to these incidents. In contrast, non-novel ES incidents, due to their predictability, are likely to result in less pronounced reaction from shareholders.

To better understand whether the location of ES incidents influences investors' voting decisions on director elections, we separate ES incidents into two groups based on the incident location. Given that our sample focuses on director elections in the U.S. market, we examine whether shareholders' responses differ depending on whether incidents occur domestically or outside the U.S. In Column 3 of Table 4 Panel B , the significant coefficient of U.S.-based ES Incidents (0/1) at the 1% level reveals that shareholders predominantly react to ES incidents occurring within the U.S. One reason for this could be that the U.S. investors are more directly impacted by domestic incidents. For instance, air pollution incidents in the U.S. can impose externality costs that directly impact the health and well-being of local investors and their communities. The results suggest a significant and stronger reaction from shareholders when

ES incidents occur domestically, highlighting the importance of geographic proximity and direct impact on investor decision-making.

Lastly, to investigate whether investors demonstrate distinct voting patterns in response to specific categories of ES issues, we utilize the detailed classification of ES incidents provided by RepRisk, as presented in Table A2. We classify ES incidents into four categories. Recognizing the heightened attention by institutional investors on climate change(Krueger et al., 2020;Ilhan et al., 2023) and its substantial impact on firm valuation, we divide environmental incidents into two subcategories: (1) climate-related issues, such as carbon emissions and air pollution, and (2) other environmental issues, such as animal mistreatment and ecological damage. For social incidents, we categorize them into: (1) employee-related incidents, such as discrimination, labor rights violations, and workplace safety issues, and (2) community-related incidents, including violence against individuals, human trafficking, and access to essential drugs. The results are presented in Table 4 Panel C. Among all ES issue categories, climate-related incidents elicit the strongest negative voting reactions, with statistical significance at the 1% level. In terms of economic impact, Column 1 shows that when a firm experiences at least one major ES incident related to climate change, director voting support decreases by an average of 0.7%, representing approximately 14% (= 0.007/0.051) of the sample mean.

3.4 Director Attributes and Board Committees

This section examines whether certain director attributes and board committee memberships influence shareholder voting behavior following ES incidents. By examining heterogeneity among directors, we aim to understand, from the perspective of shareholders, which types of directors or committees are held accountable for ES failures. We begin by analyzing the impact of attributes such as director gender and age on voting outcomes. Furthermore, we investigate whether shareholders exhibit differential voting patterns toward directors based on their roles in various board committees. In the final part of this section, we include executive directors in the analysis to examine whether they, particularly those in higher positions, bear greater

responsibility for ES incidents.

Table 5 Panel A presents the heterogeneity in director voting outcomes based on director attributes in director-firm-year observations. The coefficient of ES Incident (0/1)×Female Director (0/1) in Column 1 is 0.3% and statistically significant at the 1% level, indicating that female directors face a relatively greater loss of investor support compared to male directors following major ES incidents.[17] We argue that this result may stem from the perception that female directors are held to higher standards regarding ES issues, as they are often viewed as more committed to these areas.[18] When an ES incident occurs, the gap between these elevated expectations and the actual outcome may lead to a greater loss of support for female directors.

[Please insert Table 5 about here]

Interestingly, while the coefficient of the interaction term is 0.3%, when considering the coefficients on ES Incident (0.1%) and Female Director (-0.5%), female directors, on average, still receive fewer dissenting votes compared to male directors following ES incidents (0.1% - 0.5% + 0.3% = -0.1%). This suggests that although female directors may lose more support after ES incidents, their overall support remains higher due to the ongoing importance of board diversity in corporate governance for shareholders generally.

We also investigate whether director age, tenure, and busyness could influence the voting outcomes. However, as suggested in Table 5 Panel A, we do not find that directors who are older, have longer board tenure, or serve on the boards of more listed firms (busier directors) receive significantly more or less dissenting votes after ES incidents. These results suggest that the aforementioned factors may not be key considerations for shareholders when voting against directors under heightened ES concerns.

Next, we explore the heterogeneity in director voting outcomes across board committees. We want to assess whether shareholders hold certain groups of directors more accountable for ES incidents based on their committee roles and responsibilities. We focus on directors on the

[17] In an untabulated analysis, we find that, in the absence of interaction with ES Incident (0/1), female directors receive significantly fewer negative votes, consistent with findings in Aggarwal et al. (2024).

[18] For example, Matsa and Miller (2013) note that firms with a higher proportion of female directors are more likely to make stakeholder-oriented decisions.

compensation, governance, audit, and nomination committees. The results are presented in Table 5 Panel B.

Overall, we do not observe statistically significant coefficients on interactions of ES Incident(0/1) with different director committee assignments at the 10% level, indicating that shareholders do not specifically hold directors on any particular committee responsible for ES incidents. We provide two possible reasons why no specific committee stands out in receiving more dissenting votes. First, in some firms, ES responsibilities might be integrated across multiple committees rather than concentrated in a single committee. This dispersion can dilute the perceived accountability of any one committee. Second, shareholders might have different views on which committees are responsible for ES risks. For instance, some may believe that governance committees should oversee ES risks, while others might think that the audit committee should be responsible due to the financial implications of ES risks. Additionally, some shareholders may believe ES issues are under the compensation committee's oversight, given their role in designing contracts that motivate top managers to diligently work on sustainability practices through ES compensation hurdles. This finding underscores the importance for insitutions to establish clear guidelines to clarify board accountability for emerging ES issues.

In further analysis, we examine the heterogeneous effects of board committees based on whether the firm has established a sustainability committee. The results are presented in Table A5 Panel A. In our sample, approximately 12% of firm-years have a sustainability committee. For firms without a sustainability committee, the results in Column 1 align with previous findings, showing no evidence that specific committees receive disproportionately higher negative votes following major ES incidents. However, for firms with a sustainability committee, we observe that the compensation committee receives significantly more negative votes at the 1% level, as shown in Column 2. This indicates that shareholders may hold the compensation committee accountable for ES incidents, potentially due to its failure to design executive compensation contracts that link managerial rewards to ES performance. To further explore this conjecture, we divide the "Has Sustainability Committee" sample based on whether the compensation committee tied CEO compensation to the firm's sustainability performance before

the incidents. The results are presented in Table A5 Panel B. We find that for firms without ES-linked pay, the compensation committee receives more negative votes following ES incidents. Conversely, in firms where the compensation committee had already established ES-linked pay prior to the incidents, it is the governance committee that receives higher dissenting votes. This suggests that shareholders may shift their accountability focus to the governance committee when ES-linked compensation mechanisms are already in place, possibly reflecting broader concerns about overall board oversight.

In the final part of this section, we include executive directors, those who are not independent directors, to examine how investors vote in director elections across different roles of directors. Directors' responsibilities and accountability may differ from the perspective of shareholders, offering a broader understanding of voting behavior and its implications for board governance and accountability. Weisbach (1988) emphasizes differences in monitoring between managers serving as directors (executive directors) and non-full-time employee directors (outside directors), who are generally regarded as more actively involved in monitoring management. Given their direct involvement in day-to-day operations, we hypothesize that executive directors, particularly those serving as CEOs, may receive a higher proportion of negative votes as ES concerns become more prominent. Major ES incidents are likely to be perceived as reflecting a direct failure on the part of executive directors to address these issues effectively within the company.

Table 5 Panel C presents our findings on the relationship between major ES incidents and voting outcomes at the director level across various types of directors. Directors are categorized into three groups: executive directors versus non-executive directors[19], CEO-directors versus non-CEO directors, and board chairs versus non-board chairs. The results indicate that, on average, executive directors receive a higher percentage of disciplinary votes from investors in annual meetings following major ES incidents. Specifically, when a firm experiences a major ES incident, executive directors receive approximately 1% more negative votes than non-executive directors, with statistical significance at the 1% level. In Column 2, the finding that CEO-

[19] In our sample, more than 90% of non-executive directors are independent directors.

directors face greater dissenting votes following ES incidents aligns with existing literature suggesting that CEOs bear reputational penalties for failing in their responsibilities (e.g., Dai et al., 2023; Lel, 2023; Colak et al., 2024). Interestingly, while we do not find significant evidence that chair-only directors receive higher dissenting votes, being both a board chair and a CEO simultaneously results in the highest levels of dissent. Economically, holding both board chair and CEO positions doubles the dissenting votes compared to the CEO-only effect following ES incidents, with an average increase of 1.4%, corresponding to 32.6% (= 0.014/0.043) of the sample mean. This suggests that shareholders may perceive combined leadership roles as a greater failure of oversight when major ES incidents occur.

4 The Consequences of Shareholder Voting

4.1 Director Turnover and Outside Board Seats

Aggarwal et al. (2019) demonstrates that although directors rarely fail to be re-elected, those who receive relatively weaker support from shareholders in their last election experience public embarrassment and are less likely to be renominated. We hypothesize that major ES incidents draw investors' attention, leading to increased monitoring pressure on the board and an increased possibility of removing directors currently serving on the boards. To test this hypothesis, we examine whether experiencing major ES incidents correlates with an increased likelihood of director departures.

Columns 1 and 2 of Table 6 provide evidence on the effect of ES incidents on director turnover in firms experiencing such incidents. Using director turnover dates from BoardEX, we accurately capture turnovers occurring within one year following a specific shareholder meeting. To focus on turnovers that are more likely to be forced rather than voluntary, we restrict the sample to independent directors under the age of 72, thereby excluding departures likely due to mandatory retirement. Additionally, we exclude turnovers resulting from death or cases where the departing director moves to a more prestigious firm within the following year. If

a director moves to a more prestigious firm after leaving an ES-incident firm, we consider it a voluntary departure driven by reputational concerns. As noted by Masulis and Mobbs (2014), directors are generally reluctant to leave prestigious board positions. In untabulated robustness checks, we include all director turnovers regardless of their cause, and the results remain qualitatively consistent. This reinforces the robustness of our findings, showing that ES incidents are associated with increased director turnover, particularly when directors face heightened shareholder dissent. However, it could still be argued that directors' departure may reflect endogenous choices driven by concerns over ES issues rather than forced turnover. Nevertheless, we posit that directors might choose to leave the firm and not to stand for re-election at the shareholder meeting following the incident, thereby avoiding the potential for heightened dissent or reputational damage.

[Please insert Table 6 about here]

In particular, Column 1 shows that when firms experience a major ES incident, the likelihood of director turnover increases by 0.8%, significant at the 10% level. In Column 2, the coefficient of ES Incident (0/1)×High Neg Votes% (0/1) is 0.7% and statistically significant at the 10% level, suggesting that higher negative votes following an ES incident further increase the likelihood of director turnover in the incident firm. Overall, our findings indicate that directors are more likely to leave the board after ES incidents, particularly when they receive a percentage of negative votes exceeding the average for the same board in the same year.

To assess potential spillover effects on directors in outside labor markets, we analyze the influence of ES incidents on directors' external board seats. The key dependent variable is Lose Outside Board Seats (0/1), which is an indicator variable that equals one if a director leaves at least one outside board following major ES incidents, and zero otherwise. The results are presented in Table 6 Column 3 and 4. The insignificant coefficients of ES Incident (0/1) and ES Incident (0/1)×High Neg Votes% (0/1) indicate that the directors' outside board positions are not affected by major ES incidents at the 10% significance level. This suggests there may not be a spillover impact on directors' outside board positions. One possible argument for this lack of spillover effects is that stakeholders and outside boards might attribute ES incidents to

firm-specific issues, rather than the actions of individual directors, particularly if the incidents are perceived as isolated or specific to the firm's operational setting.

4.2 Shareholder Votes, Board Response, and Future ES Incident

So far, we have presented evidence indicating that independent directors receive more dissenting votes during elections following major ES incidents. We have also shown that independent directors are more likely to leave the board after such incidents. However, it remains unclear whether these negative shareholder votes following ES incidents in director elections lead to future improvements in the firm's ES practices.

Previous literature has demonstrated that both divestment and direct engagement can motivate firms to enhance their sustainability performance (Dimson et al., 2015; Krueger et al., 2020; Gantchev et al., 2022;Hoepner et al., 2024). To understand whether negative shareholder votes in director elections following ES incidents have a positive impact on subsequent firm's ES practices, we examine the effect of negative votes on the possibility of future ES incidents, conditional on the firm having experienced an ES incident prior to the shareholder meeting.

In particular, we limit our sample to firms that have experienced at least one major ES incident. We construct a variable, High Neg Votes(0/1), which is an indicator variable equal to one if a board receives more negative votes during the shareholder meeting and zero otherwise. The dependent variable, ES Incident $(0/1)_{t+1,t+3}$, is an indicator variable equal to one if an ES incident occurs between year $_{t+1}$ and year $_{t+3}$ following a particular shareholder meeting, and zero otherwise. We employ a longer time window to test the effectiveness of voting, as immediate improvements in firm sustainability practices are unlikely, particularly in industries where implementing such changes is complex and time-intensive. We use future ES incidents as an event-based metric of ES practices because it provides a more precise reflection of the actions taken by companies to improve their sustainability practices. Firms with better ES policies should exhibit a reduced likelihood of major ES incidents.[20]

[20] In untabulated robustness checks, we replace this variable with ES scores from Refinitiv ratings, and the results remain consistent, supporting the robustness of our findings.

The results based on this longer window are reported in Table 7. In Columns 1 and 2 of Panel A, we observe that the coefficient of High Neg Votes (0/1) is negative, yet it is not statistically significant at the 10% level. In Table A6 Panel A, we focus on a shorter window, but the results indicate that negative votes do not have a statistically significant impact on future ES improvements. Similarly, in Table A6 Panel B, where we restrict the sample to firms experiencing a major ES incident for the first time, we still do not observe significant changes in the likelihood of future ES incidents. This finding implies that the act of shareholders casting more negative votes in director elections following major ES incidents does not significantly influence the firm's subsequent ES practices. The lack of statistical significance may suggest that negative votes alone are insufficient to drive meaningful changes in a firm's ES performance. It is possible that other factors, such as the implementation of comprehensive sustainability policies or governance changes, play a more critical role in improving ES outcomes. Therefore, in Table 7 Panel B, we further investigate whether boards that respond to high negative votes by implementing sustainability improvements experience significant future ES enhancements. To enhance clarity, we provide a timeline of this analysis in Figure 3.

[Please insert Table 7 about here]

We posit several potential actions that boards may take in response to increased negative shareholder votes on directors. One such action is the implementation of ES-linked compensation. In recent years, a growing number of firms have integrated ES-linked components into CEO pay structures. The executive compensation contracts are designed to align the interests of shareholders and management while promoting effective oversight of corporate executives. For example, Figure B2 illustrates a case of ES-linked compensation. As shown in Figure 4, industries such as oil, gas, and coal extraction, as well as utilities, are among the major adopters of ES-linked pay. This aligns with our summary statistics in Figure 1, which indicate that these industries are the top two offenders in terms of ES incidents. Interestingly, in Figure 4, we observe that firms are increasingly introducing short-term ES-linked pay components, while the adoption of long-term ES-linked pay is not growing as dramatically as that of short-term components.

Following Cohen et al. (2023), we utilize ES-linked compensation data from the ISS Executive Compensation Analytics (ECA) database. ISS ECA offers detailed and comparable information on incentive awards, including the types of incentives and incentive plans.[21] In Column 1, we show evidence that for boards that receive higher negative votes during the shareholder meeting and respond by adopting new ES-linked compensation features in the following year, the likelihood of future ES incidents in three years significantly decreases by 9.7% at the 5% significance level. This suggests that following negative votes, adopting ES-linked pay is an effective response to improving the firm's future sustainability practices.

Second, boards may opt to dismiss a CEO[22] to hold them accountable for major ES incidents. By changing the CEO of the firm, the board can signal a commitment to addressing the underlying issues that led to the incidents and to rectifying past failings. A new CEO may also leverage the lessons learned from previous leadership and implement more robust policies and practices to mitigate the risk of future ES incidents. In Column 2, the significantly negative coefficient on High Neg Votes (0/1)×CEO Forced Turnover (0/1) indicates that voting against directors and replacing the incumbent CEO reduces the likelihood of future ES incidents by 14.6%, significant at the 5% level. However, as shown in Column 3, we do not find evidence that the removal of any single director has a similar impact. This suggests that the CEO's role in shaping and driving sustainability practices is more pivotal than that of individual directors in this context.[23]

Third, we hypothesize that for boards lacking a sustainability committee, establishing an ES committee—tasked with the overarching responsibility for a company's sustainability policy and its implementation oversight—would result in future improvements in ES policies and reduce the likelihood of future ES incidents. However, as shown in Column 4, the interaction term High Neg Votes (0/1)×Sustainability Committee (0/1) is statistically insignificant. This

[21] ISS ECA classifies whether an incentive is tied to ESG goals. We then manually filter out those incentives solely linked to governance goals, retaining only those linked to environmental or social performances.

[22] Our forced CEO turnover data are sourced from Gentry et al. (2021). We extend our gratitude to the authors for providing the latest data through 2021.

[23] We also tested for the effects of CFO or COO turnover and found no significant changes following shareholder voting.

suggests that forming an ES committee does not significantly reduce the likelihood of future ES incidents, which may imply that establishing such a committee is merely symbolic and does not necessarily lead to substantive improvements in addressing ES concerns.

Finally, directors' expertise in charitable activities may help foster greater stakeholder trust, demonstrating the company's commitment to sustainability involvement. Therefore, boards may opt to appoint directors with expertise in charitable works to address investor dissatisfaction (Gertsberg et al., 2023). However, similar to the establishment of a sustainability committee, we do not find evidence that appointing new directors with a background in charitable activities following more negative shareholder voting on directors significantly reduces the likelihood of future ES incidents. This suggests that while appointing such directors following shareholder voting after ES incidents may have symbolic value, it does not on average translate into concrete improvements in the company's sustainability practices.

To further investigate which ES incentives are effective in reducing the likelihood of future ES incidents, we separate ES-linked pay into short-term and long-term ES-linked pay, as well as by whether the pay is related to environmental or social goals. We present the results in Table A7. In Panel A, we limit the sample to firms that have experienced major environmental incidents. In contrast, in Panel B, we restrict the sample to firms that have experienced major social incidents. The evidence suggests that the result in Column 1 of Table 7 Panel B is likely driven by adopting short-term social-linked compensation following social incidents, which reduces the likelihood of future social incidents. We argue that the reason could be that changes in environmental practices, such as reducing carbon emissions, implementing sustainable resource management, or achieving net-zero targets, typically require substantial time to plan, execute, and realize measurable results. In contrast, adopting social-linked goals, such as increasing diversity and providing a safer workplace for employees, can be easier to implement and yield more rapid visible outcomes.

5 Voting For ES-related Proposal vs. Voting Against Boards of Directors

In the final part of the paper, we investigate the relationship between fund support for shareholder-initiated ES proposals and fund voting against directors following major ES incidents. When shareholders choose to voice concerns about ES issues, they may increase their support for shareholder-sponsored ES-related proposals[24] as a way to signal their dissatisfaction with management. In untabulated tables, we provide evidence that following a major ES incident, the total number of ES-related proposals submitted by all types of investors increases by 4.4%, while those proposed specifically by mutual funds rise significantly by 2.4%. However, it remains unclear whether voting for these ES-related proposals acts as a substitute for or a complementary mechanism to voting against directors in expressing shareholder dissatisfaction with a firm's poor ES performance. This distinction is important for understanding the broader implications of shareholder activism on sustainability practices.

To explore the relationship between voting for shareholder-initiated ES proposals and voting against boards of directors in the presence of major ES incidents, we conduct the analysis presented in Table 8 Panel A. The dependent variable, Avg. % Fund Vote Against Directors , is calculated as the average percentage of funds casting "Against" or "Withhold" votes in director elections during a shareholder meeting. Avg. % Fund Vote For ES Proposals is calculated as the average percentage of funds voting "For" ES proposals during the same meeting. To calculate Avg. % Fund Vote For ES Proposal, if there are multiple shareholder-initiated ES proposals in a firm-year shareholder meeting, we first compute the percentage of funds that vote "For" each proposal. We then take the mean value of these percentages across all ES-related proposals. This approach captures the overall level of support for ES proposals at each meeting and allows us to analyze its relationship with voting behavior in director elections. In Columns 3 and 4, we replace Avg. % Fund Vote For ES Proposal with Max. % Fund Vote For ES Proposal, which

[24] It is worth noting that ES proposals are rarely initiated by the management team, according to ISS Voting data. Our findings remain consistent even when including ES proposals initiated by management.

represents the maximum percentage of funds casting "For" votes on any shareholder-initiated ES proposal during the meeting. This method helps us pinpoint the ES proposal that received the strongest support.

The number of observations in this table is significantly smaller compared to the board-level baseline regression, as only a limited number of firm-year observations include at least one ES proposal initiated by shareholders. The coefficients of ES Incident (0/1)×Avg. % Fund Vote For ES Proposal and ES Incident (0/1)×Max. % Fund Vote For ES Proposal are negative and statistically significant at the 5-10% level. These findings suggest that, at the firm-year level, in the presence of major ES incidents, higher fund support for ES proposals is associated with a reduction in the intensity of negative votes cast in director elections. This indicates that institutional shareholders may use voting on ES proposals as an alternative method to express dissatisfaction with a firm's poor sustainability performance, serving as a substitute for directly voting against directors.

[Please insert Table 8 about here]

We further conduct a test at the fund level in Panel B to gain deeper insights into individual funds' voting patterns following major ES incidents. In Panel B, Vote Against Directors% is defined as the percentage of a specific fund's votes cast "Against" across all director election proposals during a shareholder meeting. If a meeting includes multiple director election proposals, we calculate, for each fund, the proportion of votes cast "Against" across all such proposals. Similarly, Vote For ES Proposals% is calculated as the percentage of a specific fund's votes cast "For" ES proposals during the meeting. Consistent with the firm-level finding, we show that for individual funds, on average, increasing support for ES proposals after major ES incidents significantly reduces the percentage of negative votes in director elections, with statistical significance at the 1% level.

To explore heterogeneity among different types of funds, we classify funds into SRI funds and non-SRI funds, as shown in Table A8. SRI funds are identified using the US SIF database[25] of sustainable investment mutual funds, supplemented by a name-based identification ap-

[25] https://charts.ussif.org/mfpc/

proach.[26] The result in Table A8 reveals that, compared to non-SRI funds, SRI funds are more likely to support ES proposals and less likely to vote against directors following a major ES incident.[27] This heterogeneous effect suggests that SRI funds may tend to adopt a "constructive collaboration" way after major ES incidents. By prioritizing support for ES proposals, they aim to drive improvements in sustainability practices while avoiding direct confrontation with the board.

6 Additional Tests and Robustness Checks

We employ an alternative methodology to proxy the negative director voting percentage. Specifically, we calculate the percentage of funds that cast votes "Against" or "Withheld" in each director election.[28] In the main analysis, we consider the number of voting rights held by both individual and institutional investors; the alternative measurement emphasizes the percentage of mutual funds voting negatively in director elections. Both variables offer valuable insights into how investors vote in director elections. We provide evidence that our results, indicating that independent directors are more likely to receive negative votes following increased ES incidents, remain robust using this alternative measurement, as shown in Table 9 Panel A. This robustness test reinforces the validity of our main findings. We also replace the outcome variable with an indicator for unusually high levels of withheld votes, defined as at least 15% of withheld votes (Bach and Metzger, 2017). As shown in Table 9 Panel B, we find that the likelihood of experiencing very high levels of negative votes increases significantly after a firm experiences a major ES incident. This finding further supports the robustness of our baseline results.

[26] Funds are classified as SRI if their names include terms related to socially responsible investing, such as 'social,' 'environment,' 'green,' 'sustainable,' 'ESG,' or 'CSR.'

[27] In untabulated results, we show that both SRI and non-SRI funds are more likely to support ES-related proposals and to vote against directors after ES incidents. However, it is important to note that we are comparing voting patterns between SRI and non-SRI funds. The fact that SRI funds are more likely to support ES proposals does not imply that non-SRI funds are less likely to do so; it simply reflects a relative difference between the two groups.

[28] Similar constructions can be found in previous research. For example, Matvos and Ostrovsky (2010) and Gow et al. (2023) constructed the variable of institutional investor support using the percentage of funds voting 'For' on proposals.

[Please insert Table 9 about here]

Proxy advisory firms play a crucial role in the shareholder voting process by providing recommendations to investors on how to cast their votes in director elections and other significant corporate decisions. Therefore, understanding how firms' major sustainability incidents influence ISS recommendations is particularly relevant. We focus on ISS since it is one of the most prominent proxy advisors, providing recommendations on director elections, and has been studied extensively in the previous literature (e.g., Iliev and Lowry, 2015; Gow et al., 2023). The outcome variable now pertains to whether ISS provides a "Against" or "Withhold" recommendation for a director candidate. Consistent with our baseline findings, Table 9 Panel C shows that, on average, ISS is more likely to recommend against incumbent independent director candidates when firms experience more major ES incidents. Specifically, from Column 3-4, we can conclude that the likelihood of ISS recommending an "Against" vote increases by 1.5%-1.6% for a firm that has experienced at least one major ES incident in the year before the shareholder meeting. It is also noteworthy that ISS ceased disclosing their recommendation data in our sample for the most recent three-year period. While this absence of three-year data could be notable given the increasing shareholder attention to ES issues in recent years, we include ISS recommendation data up to mid-2019 to ensure the robustness of our key findings.

We introduce additional controls into our regression analysis to ensure the robustness of our findings. The results are presented in Table 9 Panel D. Specifically, we incorporate governance incidents that occur during the same period as the ES incidents, as suggested by Gantchev et al. (2022). By including governance incidents, we control for the possibility that other contemporaneous issues within the firm could affect shareholder votes. Governance incidents could encompass a variety of topics, such as fraud, executive misconduct, or other forms of corporate governance failures, which might influence shareholders' dissatisfaction independently of ES incidents.

Additionally, we consider the significance of ISS recommendations (Cai et al., 2009; Aggarwal et al., 2019) by introducing an additional control variable—ISS Vote Against (0/1). This control is important because ISS recommendations are known to significantly influence

institutional shareholder voting decisions. Furthermore, we add the ES rating from Refinitiv to control for external assessments of firm sustainability practices. After adding these controls, our results remain robust and suggest that other concurrent events or external recommendations do not drive the observed relationship between ES incidents and negative director votes.

Lastly, we exclude firms with staggered boards. The rationale for this exclusion is that staggered boards, where only a portion of directors are up for election in any given year, can dilute the accountability mechanisms of shareholder voting. In such firms, directors not up for re-election may escape immediate scrutiny, making it harder to isolate the impact of ES incidents on voting behavior. By focusing on director elections in firms without staggered boards, we can more accurately assess how shareholder voting behavior changes in response to ES incidents, providing a consistent reference point for comparison. We present our results in Table 9 Panel E. The findings remain consistent with the baseline results in Table 2, indicating that the exclusion of firms with staggered boards does not materially alter the observed relationship between ES incidents and shareholder voting outcomes. This reinforces the robustness of our conclusion.

7 Conclusion

We provide robust evidence on how shareholders hold independent directors accountable for failures to effectively oversee corporate sustainability practices. Our findings show that shareholders actively use their voting power to express discontent with independent directors in response to major ES incidents, with a particularly pronounced reaction to climate change-related issues. This heightened response suggests that shareholders are increasingly vigilant about climate risks and expect boards to provide strong oversight. Additionally, we observe a reduction in support for female directors following major ES incidents, highlighting potential biases or heightened scrutiny of female directors in these cases. Interestingly, shareholders do not specifically target directors on particular committees, indicating a potential gap in the current insitutional investor governance policies regarding committee member accountability for

ES practices.

We also examine the labor market outcomes for directors following ES incidents. While such incidents increase the likelihood of director turnover within the affected firm, they do not impact directors' ability to secure positions on outside boards, suggesting that their broader career prospects remain largely immune to these incidents. From a firm's perspective, our results indicate that increased negative votes alone do not significantly improve sustainability performance. However, firms implementing ES-linked compensation or enforcing CEO turnover in response to ES incidents show lower likelihood of future ES incidents.

In conclusion, our findings underscore the critical importance of proactive and meaningful board responses following ES incidents. While shareholder dissent through negative votes is a clear signal of its dissatisfaction with directors, it is insufficient to drive substantial sustainability improvements at firms. For meaningful progress, boards must respond decisively to shareholder concerns by adopting comprehensive measures such as ES-linked compensation or leadership changes. Likewise, institutional shareholders need to develop more specific voting guidelines to effectively influence firm ES practices.

References

Aggarwal, R., Dahiya, S., and Prabhala, N. R. (2019). The power of shareholder votes: Evidence from uncontested director elections. *Journal of Financial Economics*, 133(1):134–153.

Aggarwal, R., Dahiya, S., and Yilmaz, U. (2024). Why do investors vote against corporate directors? *Available at SSRN 4502527*.

Bach, L. and Metzger, D. (2017). How do shareholder proposals create value? *Available at SSRN 2247084*.

Bebchuk, L., Cohen, A., and Ferrell, A. (2009). What matters in corporate governance? *The Review of financial studies*, 22(2):783–827.

Becht, M., Franks, J. R., and Wagner, H. F. (2021). The benefits of access: Evidence from private meetings with portfolio firms. *European Corporate Governance Institute–Finance Working Paper*, (751).

Berg, F., Koelbel, J. F., and Rigobon, R. (2022). Aggregate confusion: The divergence of esg ratings. *Review of Finance*, 26(6):1315–1344.

Bisetti, E., She, G., and Zaldokas, A. (2023). Esg shocks in global supply chains. *Available at SSRN*.

Cai, J., Garner, J. L., and Walkling, R. A. (2009). Electing directors. *The Journal of Finance*, 64(5):2389–2421.

Chen, T., Dong, H., and Lin, C. (2020). Institutional shareholders and corporate social responsibility. *Journal of Financial Economics*, 135(2):483–504.

Cohen, S., Kadach, I., Ormazabal, G., and Reichelstein, S. (2023). Executive compensation tied to esg performance: International evidence. *Journal of Accounting Research*, 61(3):805–853.

Colak, G., Gustafsson, J., and Meyer, N. (2023). Trade credit flow along the supply chain and disruptions from esg risk.

Colak, G., Korkeamäki, T. P., and Meyer, N. O. (2024). Esg and ceo turnover around the world. *Journal of Corporate Finance*, 84:102523.

Dai, X., Gao, F., Lisic, L. L., and Zhang, I. X. (2023). Corporate social performance and the

managerial labor market. *Review of Accounting Studies*, 28(1):307–339.

De Chaisemartin, C. and d'Haultfoeuille, X. (2020). Two-way fixed effects estimators with heterogeneous treatment effects. *American economic review*, 110(9):2964–2996.

Derrien, F., Krueger, P., Landier, A., and Yao, T. (2022). Esg news, future cash flows, and firm value. *Swiss finance institute research paper*, (21-84).

Dimson, E., Karakaş, O., and Li, X. (2015). Active ownership. *The Review of Financial Studies*, 28(12):3225–3268.

Ding, T. T., Ertimur, Y., Patrick, P. H., and Tice, F. M. (2024). Director reputation effects of environmental and social failures. *Available at SSRN 4653230*.

Duan, T., Li, F. W., and Michaely, R. (2023). Consumers' reaction to corporate esg performance: Evidence from store visits. *Available at SSRN 4584361*.

Dube, S., Lee, H. S. G., and Wang, D. (2023). Do consumers vote with their feet in response to negative esg news? evidence from consumer foot traffic to retail locations. *Evidence from consumer foot traffic to retail locations (July 2023)*.

Duchin, R., Gao, J., and Xu, Q. (2022). Sustainability or greenwashing: Evidence from the asset market for industrial pollution. *Available at SSRN 4095885*.

Edmans, A. (2011). Does the stock market fully value intangibles? employee satisfaction and equity prices. *Journal of Financial economics*, 101(3):621–640.

Edmans, A. (2021). *Grow the pie: How great companies deliver both purpose and profit–updated and revised*. Cambridge University Press.

Edmans, A. (2024). Rational sustainability. *Journal of Applied Crporate Finance*, 36(2):8–15.

Ertimur, Y., Ferri, F., and Maber, D. A. (2012). Reputation penalties for poor monitoring of executive pay: Evidence from option backdating. *Journal of Financial Economics*, 104(1):118–144.

Fich, E. M. and Shivdasani, A. (2007). Financial fraud, director reputation, and shareholder wealth. *Journal of financial Economics*, 86(2):306–336.

Gantchev, N., Giannetti, M., and Li, R. (2022). Does money talk? divestitures and corporate environmental and social policies. *Review of Finance*, 26(6):1469–1508.

Gentry, R. J., Harrison, J. S., Quigley, T. J., and Boivie, S. (2021). A database of ceo turnover and dismissal in s&p 1500 firms, 2000–2018. *Strategic Management Journal*, 42(5):968–991.

Gertsberg, M., Jung, H. W. H., and Zhang, Y. (2023). Appointing charity directors in response to esg incidents. *Yuyang, Appointing Charity Directors in Response to ESG Incidents (June 2023)*.

Glossner, S. (2021). Repeat offenders: Esg incident recidivism and investor underreaction. *Available at SSRN 3004689*.

Gow, I. D., Larcker, D. F., and Watts, E. M. (2023). Board diversity and shareholder voting. *Journal of Corporate Finance*, 83:102487.

He, Q., Marshall, B. R., Nguyen, J. H., Nguyen, N. H., Qiu, B., and Visaltanachoti, N. (2024). Greenwashing: Measurement and implications.

Hoepner, A. G., Oikonomou, I., Sautner, Z., Starks, L. T., and Zhou, X. Y. (2024). Esg shareholder engagement and downside risk. *Review of Finance*, 28(2):483–510.

Houston, J. F., Lin, C., Shan, H., and Shen, M. (2022). How does esg shape consumption? *Available at SSRN 4243071*.

Houston, J. F. and Shan, H. (2022). Corporate esg profiles and banking relationships. *The Review of Financial Studies*, 35(7):3373–3417.

Huang, A. H., Wang, H., and Yang, Y. (2023). Finbert: A large language model for extracting information from financial text. *Contemporary Accounting Research*, 40(2):806–841.

Ilhan, E., Krueger, P., Sautner, Z., and Starks, L. T. (2023). Climate risk disclosure and institutional investors. *The Review of Financial Studies*, 36(7):2617–2650.

Iliev, P. and Lowry, M. (2015). Are mutual funds active voters? *The Review of Financial Studies*, 28(2):446–485.

Krueger, P., Sautner, Z., and Starks, L. T. (2020). The importance of climate risks for institutional investors. *The Review of Financial Studies*, 33(3):1067–1111.

Lel, U. (2023). Toxic ceos, esg funds as watchdogs, and the labor market outcomes. *European Corporate Governance Institute–Finance Working Paper*, (871).

Liu, C., Low, A., Masulis, R. W., and Zhang, L. (2020). Monitoring the monitor: Distracted

institutional investors and board governance. *The Review of Financial Studies*, 33(10):4489–4531.

Masulis, R. W. and Mobbs, S. (2014). Independent director incentives: Where do talented directors spend their limited time and energy? *Journal of financial economics*, 111(2):406–429.

Matsa, D. A. and Miller, A. R. (2013). A female style in corporate leadership? evidence from quotas. *American Economic Journal: Applied Economics*, 5(3):136–169.

Matvos, G. and Ostrovsky, M. (2010). Heterogeneity and peer effects in mutual fund proxy voting. *Journal of Financial Economics*, 98(1):90–112.

Michaely, R., Rubio, S., and Yi, I. (2024). Voting rationales. *Available at SSRN 4521854*.

PwC (2024). 2024 annual corporate directors survey.

Srinivasan, S. (2005). Consequences of financial reporting failure for outside directors: Evidence from accounting restatements and audit committee members. *Journal of Accounting Research*, 43(2):291–334.

Starks, L. T. (2023). Presidential address: Sustainable finance and esg issues—value versus values. *The Journal of Finance*, 78(4):1837–1872.

Von Meyerinck, F., Romer, J., and Schmid, M. (2023). Ceo turnover and director reputation. *European Corporate Governance Institute–Finance Working Paper*, (942).

Weisbach, M. S. (1988). Outside directors and ceo turnover. *Journal of financial Economics*, 20:431–460.

Xiao, Z., Zheng, X., and Zheng, Y. (2023). The economic and financial impact of negative environmental and social practices: Evidence from consumers store visits. *Available at SSRN 4475050*.

Zhang, Y. (2024). The incident-driven green products. *Available at SSRN 4908691*.

Figure 1. Major ES Incidents Distribution by FF12-Industry

The figure illustrates the distribution of major environmental and social incidents across the Fama-French 12 industries in our sample.

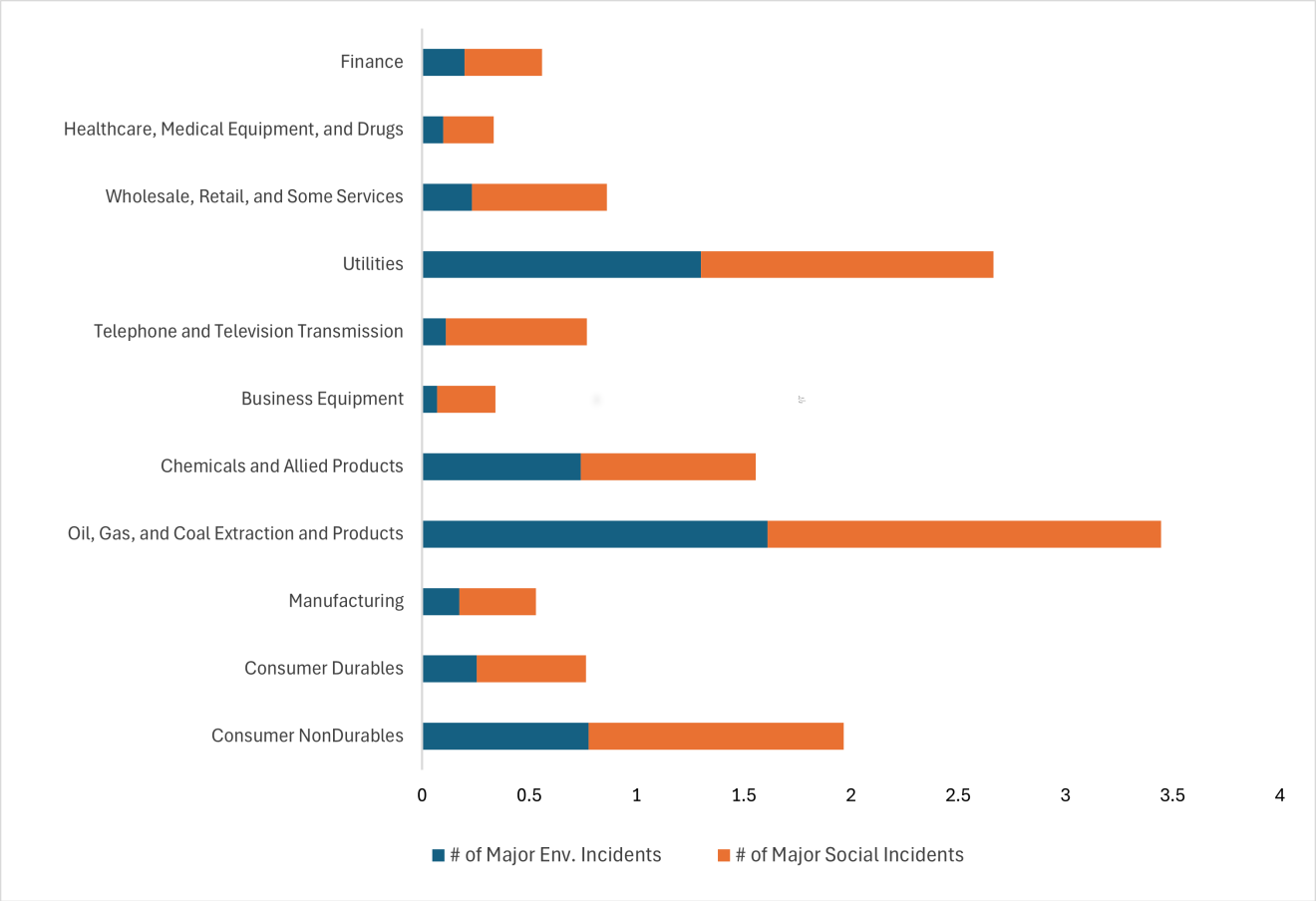


Figure 2. Dynamic Effects of Major ES Incidents

The figure shows the dynamic impact of major ES incidents on negative votes in director elections. To estimate these effects, we use the following model:

$$\text{Avg. Negative Vote}_{i,c,t} = \sum_{\tau=-3}^{+3} \alpha_\tau \mathbb{I}(\text{Treatment})_{i,c,t} \times \mathbb{I}(\text{Major ES Incident} \pm \tau \text{ Year})_{i,c,t} + \beta_1 Controls + \gamma_{i \times c} + \delta_{t \times c} + \varepsilon_{i,c,t} \tag{3}$$

where i, c, and t denote firm, cohort, and time, respectively.

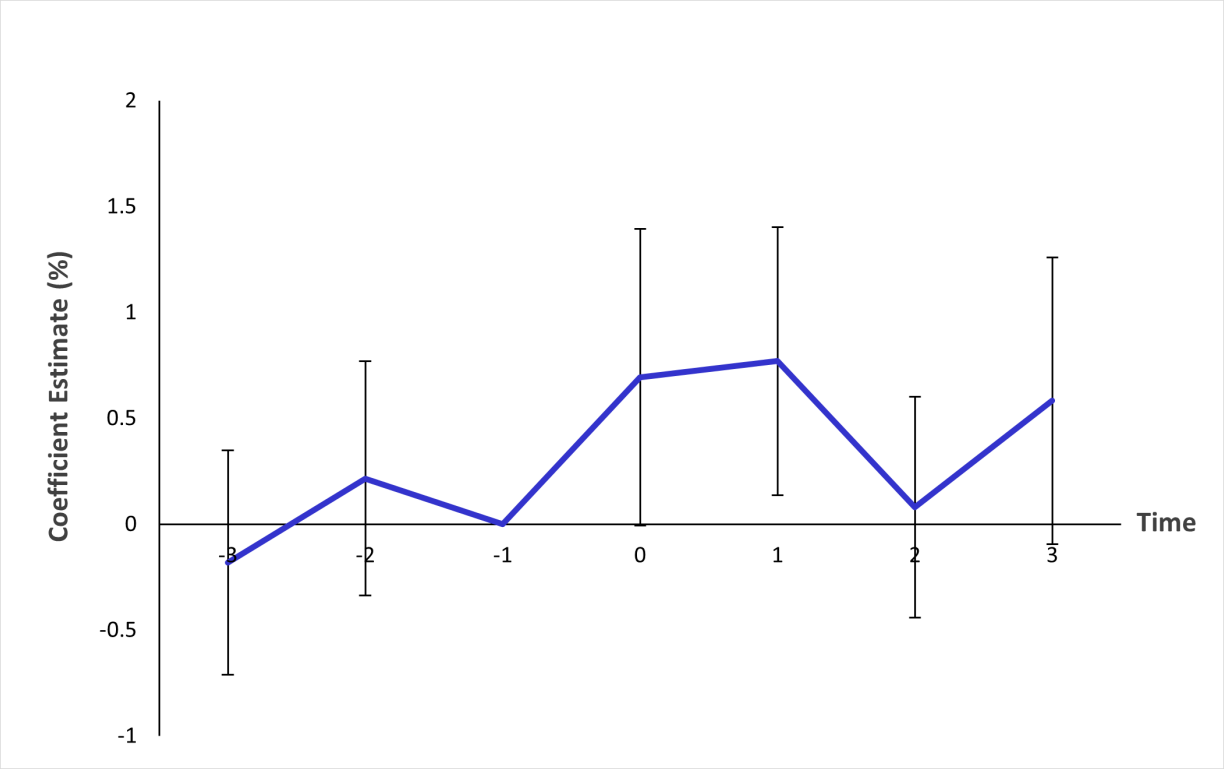


Figure 3. Timeline: Shareholder Votes, Board Responses, and Future ES incidents

The figure illustrates the timeline used for testing the relationships among shareholder votes, board responses, and future ES incidents. Specifically, it captures major ES incidents occurring during year $t-1$, board responses after shareholder voting at the first annual meeting in year t, and estimates the interactive role of shareholder voting and board responses on director elections in reducing the likelihood of future ES incidents from $t+1$ to $t+3$.

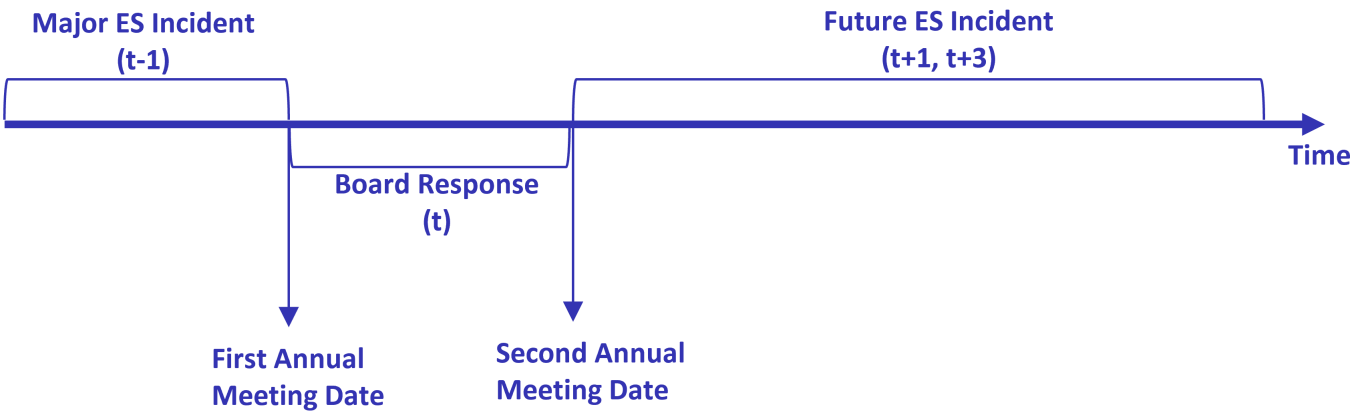
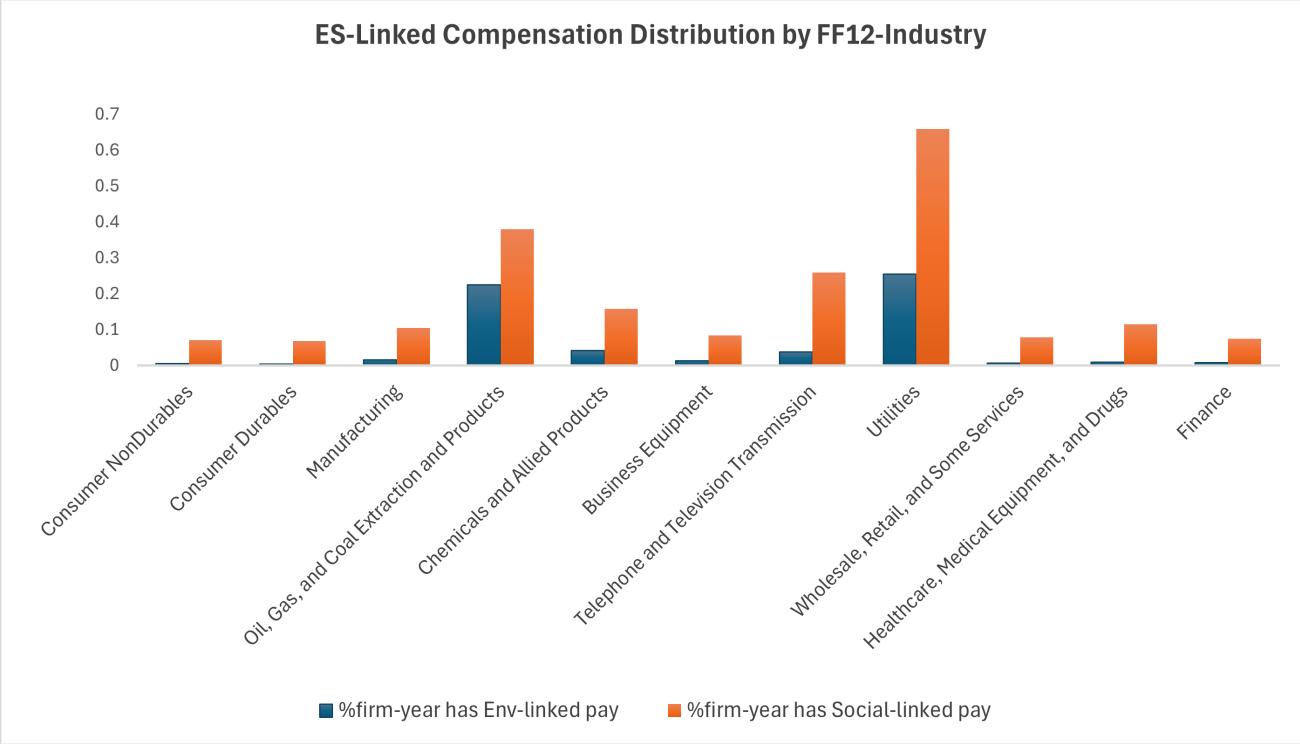


Figure 4. ES-Linked Compensation Distribution

The figure shows the percentage of firms that adopt Environmental-linked and Social-linked compensation across each Fama-French 12 industry category; and short (long) -term ES-linked pay across years in our sample.



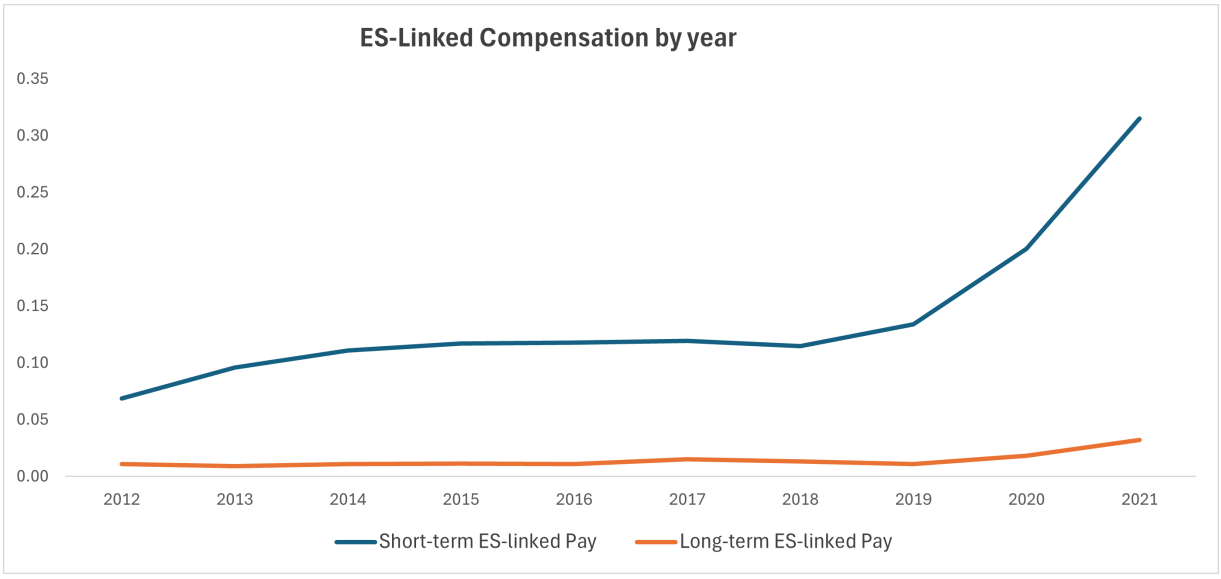


Table 1. Summary Statistics

This table reports descriptive statistics for the variables used in our baseline analyses, covering the period from January 2008 to June 2023. It includes the number of observations, mean, standard deviation, 25th percentile, median, and 75th percentile for each variable analyzed in the study. All continuous variables are winsorized at the 1st and 99th percentiles. Table A1 in Appendix A provides detailed variable definitions.

	N	Mean	S.D.	P25	P50	P75
Number of Major Incidents						
Env Incidents	15397	0.335	1.210	0.000	0.000	0.000
Social Incidents	15397	0.552	1.722	0.000	0.000	0.000
ES Incidents	15397	0.617	1.915	0.000	0.000	0.000
Indicator of Major Incidents						
Env Incidents(0/1)	15397	0.127	0.333	0.000	0.000	0.000
Social Incidents(0/1)	15397	0.186	0.389	0.000	0.000	0.000
ES Incidents(0/1)	15397	0.194	0.396	0.000	0.000	0.000
Climate-related(0/1)	15397	0.077	0.267	0.000	0.000	0.000
Other Environmental Issues(0/1)	15397	0.123	0.328	0.000	0.000	0.000
Employee-Relation(0/1)	15397	0.095	0.294	0.000	0.000	0.000
Community-Relations(0/1)	15397	0.168	0.374	0.000	0.000	0.000
Voting Outcomes						
Negative Votes%	82621	0.043	0.065	0.009	0.020	0.044
Avg. Negative Votes%	15397	0.051	0.064	0.016	0.029	0.055
Firm-level Controls						
Size	15397	8.352	1.704	7.104	8.226	9.488
ROA	15397	0.056	0.086	0.014	0.047	0.091
MTB	15397	3.893	6.670	1.465	2.297	3.903
Stock Return	15397	0.117	0.473	-0.134	0.073	0.287
Ins. Ownership%	15397	0.815	0.138	0.736	0.846	0.922
E-Index	15397	3.176	0.796	3.000	3.000	4.000
Board-level Controls						
Board Size	15397	9.709	2.303	8.000	10.000	11.000
Board NED%	15397	0.856	0.074	0.833	0.875	0.900
Board Male%	15397	0.812	0.120	0.727	0.818	0.889
Board Avg. Age	15397	63.211	3.858	60.821	63.143	65.513
CEO is Chairman(0/1)	15397	0.302	0.459	0.000	0.000	1.000
Director-level Controls						
Director Tenure	82621	8.378	6.555	3.000	7.000	12.000
Attend less than 75% of Meeting(0/1)	82621	0.004	0.064	0.000	0.000	0.000
Director Age	82621	63.458	7.785	58.000	64.000	69.000
Outside Listed Boards	82621	0.868	0.997	0.000	1.000	1.000
Director Edu. Qualification	82621	2.237	1.076	2.000	2.000	3.000
Female Director(0/1)	82621	0.241	0.428	0.000	0.000	0.000

Table 2. Major ES Incidents and Shareholder Voting Against Directors

This table estimates the effect of major ES incidents on shareholder voting against independent directors, who are primarily recognized as the firm's monitors. Panel A shows the baseline finding at the board-director-year level, while Panel B presents the baseline finding at the board-year level. The dependent variable in Panel A is **Negative Votes%**, measured by the total aggregate votes that are cast "Against" or "Withhold" on a director as a fraction of the voting base. The dependent variable in Panel B is **Avg. Negative Votes%**, measured by the average percentage of **Negative Votes%** received by independent directors across a board during a specific shareholder meeting. **Ln(1+ES Incidents)** is measured by the natural logarithm of one plus the total counts of major environmental or/and social incidents that a firm experienced during the 12 months preceding the annual meeting. Major ES incidents are defined as those with severity coded as medium-to-high by RepRisk. **ES Incident(0/1)** is an indicator variable that equals one if a firm experienced at least one major environmental or/and social incident during the 12 months preceding the annual meeting; and zero, otherwise. Robust standard errors clustered at the firm level are provided in parentheses. Table A1 in Appendix A provides detailed definitions of the control variables. ***, **, and * correspond to statistical significance at the 1, 5, and 10 percent levels, respectively.

Panel A: Director-level Negative Votes%

	(1)	(2)	(3)	(4)
Dep. Var. =		**Negative Votes%**		
Ln(1+ES Incidents)	**0.004*** **	**0.002** **		
	(0.001)	**(0.001)**		
ES Incident(0/1)			**0.004*** **	**0.002***
			(0.002)	**(0.001)**
Size	-0.002***	-0.001**	-0.002***	-0.001*
	(0.001)	(0.001)	(0.001)	(0.001)
ROA	-0.038***	-0.040***	-0.038***	-0.040***
	(0.007)	(0.008)	(0.007)	(0.008)
MTB	-0.000	-0.000	-0.000	-0.000
	(0.000)	(0.000)	(0.000)	(0.000)
Stock Return	-0.003**	-0.005***	-0.003**	-0.005***
	(0.001)	(0.001)	(0.001)	(0.001)
Ins. Ownership%	-0.023***	-0.024***	-0.025***	-0.024***
	(0.006)	(0.006)	(0.006)	(0.006)
E-Index	0.007***	0.006***	0.007***	0.006***
	(0.001)	(0.001)	(0.001)	(0.001)
Board NED%	-0.053***	-0.004	-0.053***	-0.004
	(0.016)	(0.012)	(0.016)	(0.012)
Board Size	-0.002***	-0.001***	-0.002***	-0.001***
	(0.000)	(0.000)	(0.000)	(0.000)
Board Male%	0.048***	0.042***	0.048***	0.042***
	(0.007)	(0.007)	(0.007)	(0.007)
Board Avg. Age	0.000	0.001**	0.000	0.001**
	(0.000)	(0.000)	(0.000)	(0.000)
CEO is Chairman(0/1)	0.001	0.001	0.001	0.001
	(0.001)	(0.001)	(0.001)	(0.001)

Director Tenure	0.002***	0.001***	0.002***	0.001***
	(0.000)	(0.000)	(0.000)	(0.000)
Attend less than 75% of Meeting (0/1)	0.128***	0.133***	0.128***	0.133***
	(0.008)	(0.009)	(0.008)	(0.010)
Ln(Director Age)	-0.001	-0.125***	-0.001	-0.124***
	(0.003)	(0.034)	(0.003)	(0.034)
Outside Listed Boards	0.007***	0.008***	0.007***	0.008***
	(0.000)	(0.001)	(0.000)	(0.001)
Director Edu. Qualification	-0.001***	-0.010	-0.001***	-0.010
	(0.000)	(0.016)	(0.000)	(0.016)
Female Director(0/1)	-0.004***	0.004	-0.004***	0.003
	(0.001)	(0.012)	(0.001)	(0.012)
Industry×Year FE	✓	✓	✓	✓
Director FE		✓		✓
Observations	82,621	79,251	82,621	79,251
Adjusted R-squared	0.138	0.369	0.138	0.369

Panel B: Board-level Negative Votes%

	(1)	(2)	(3)	(4)
Dep. Var. =		**Avg. Negative Votes%**		
Ln(1+ES Incidents)	**0.004*** **	**0.004*** **		
	(0.001)	**(0.001)**		
ES Incident(0/1)			**0.005*** **	**0.005*** **
			(0.002)	**(0.002)**
Size	-0.002**	-0.002**	-0.002**	-0.002**
	(0.001)	(0.001)	(0.001)	(0.001)
ROA	-0.028***	-0.030***	-0.028***	-0.030***
	(0.009)	(0.009)	(0.009)	(0.009)
MTB	0.000	0.000	0.000	0.000
	(0.000)	(0.000)	(0.000)	(0.000)
Stock Return	-0.005***	-0.005***	-0.005***	-0.005***
	(0.001)	(0.001)	(0.001)	(0.001)
Ins. Ownership%	-0.033***	-0.033***	-0.034***	-0.034***
	(0.007)	(0.007)	(0.007)	(0.007)
E-Index	0.009***	0.009***	0.009***	0.009***
	(0.001)	(0.001)	(0.001)	(0.001)
Board NED%	-0.045***	-0.045***	-0.044***	-0.045***
	(0.016)	(0.017)	(0.016)	(0.017)
Board Size	-0.003***	-0.003***	-0.003***	-0.003***
	(0.000)	(0.001)	(0.000)	(0.001)
Board Male%	0.059***	0.059***	0.059***	0.059***
	(0.009)	(0.009)	(0.009)	(0.009)
Board Avg. Age	0.001*	0.001*	0.001*	0.001*
	(0.000)	(0.000)	(0.000)	(0.000)
CEO is Chairman(0/1)	0.002	0.002	0.002	0.002
	(0.002)	(0.002)	(0.002)	(0.002)
Industry FE	✓		✓	
Year FE	✓		✓	
Industry×Year FE		✓		✓
Observations	15,397	15,397	15,397	15,397
Adjusted R-squared	0.096	0.099	0.096	0.099

Table 3. Identification Strategies

This table reports the effect of major ES incidents on shareholder voting on independent directors who are primarily recognized as firm monitors using identification strategies. Panel A presents the result from the stacked difference-in-differences regression. We define the treated group as firm-years in which a major ES incident occurs, ensuring it is the first such incident and that the firm has not experienced any ES incidents in the prior three years. For each treated event, we match the treated firm with control firms from the same Fama-French 48 industry and year. Control firms are required to be free of any ES incidents within a seven-year window surrounding the event year (from three years before to three years after) to avoid contamination from other incidents. Figure 2 presents the graph corresponding to Column (2) in Panel A. In Panel B, **Ln(1+Lag 1-Qrt ES Incidents)** is measured by the natural logarithm of one plus the total counts of major ES incidents that a firm experienced during the one quarter (3 months) preceding a specific annual shareholder meeting. **Lag 1-Qrt ES Incident(0/1)** is an indicator variable that equals one if a firm experienced at least one major ES incident during the one quarter (3 months) preceding the annual meeting; and zero, otherwise. Panel C examines the interactive effect of green talk intensity preceding major environmental incidents on shareholder voting outcomes in director elections. In particular, *Green Talk Intensity* is measured in the year preceding the incident count period. Robust standard errors in Panel A are double clustered at the cohort-by-firm level and the cohort-by-proxy season level. Robust standard errors in Panel B and Panel C clustered at the firm level are provided in parentheses. Table A1 in Appendix A provides detailed definitions of the control variables. ***, **, and * correspond to statistical significance at the 1, 5, and 10 percent levels, respectively.

Panel A: Stacked Dif-in-Dif Regression

	(1)	(2)
Dep. Var. =	**Avg. Negative Votes%**	
Treated×Year(T-3)	-0.006	-0.002
	(0.005)	(0.003)
Treated×Year(T-2)	-0.001	0.002
	(0.005)	(0.003)
Treated×Year(T0)	**0.009****	0.007
	(0.004)	(0.004)
Treated×Year(T+1)	**0.008****	**0.008****
	(0.004)	**(0.004)**
Treated×Year(T+2)	0.002	0.001
	(0.004)	(0.003)
Treated×Year(T+3)	0.005	0.006
	(0.004)	(0.004)
Firm-level&Board-level Controls	✓	✓
Cohort×Firm FE		✓
Cohort×Proxy Season FE		✓
Observations	39,952	39,851
Adjusted R-squared	0.072	0.352

Panel B: Major ES Incidents in the Recent Quarter

	(1)	(2)	(3)	(4)
Dep. Var. =	**Avg. Negative Votes%**			
Ln(1+Lag 1-Qrt ES Incidents)	**0.006*** **	**0.006*** **		
	(0.002)	**(0.002)**		
Lag 1-Qrt ES Incident(0/1)			**0.005*** **	**0.006*** **
			(0.002)	**(0.002)**
Firm-level&Board-level Controls	✓	✓	✓	✓
Industry FE	✓		✓	
Year FE	✓		✓	
Industry×Year FE		✓		✓
Observations	15,397	15,397	15,397	15,397
Adjusted R-squared	0.096	0.099	0.096	0.099

Panel C: Greenwashing

	(1)	(2)
Dep. Var. =	**Avg. Negative Votes%**	
Green Talk Intensity	0.003	0.003
	(0.002)	(0.002)
Env. Incident(0/1)	-1.239***	-1.099***
	(0.342)	(0.314)
Green Talk Intensity×Env. Incident(0/1)	**0.677***	**0.653***
	(0.359)	**(0.354)**
Firm-level&Board-level Controls	✓	✓
Industry FE	✓	
Year FE	✓	
Industry×Year FE		✓
Observations	9,900	9,889
Adjusted R-squared	0.111	0.117

Table 4. Heterogeneity in Environmental and Social Incidents

This table reports the cross-sectional estimates based on ES incident characteristics and categories. In Panel A, **Material ES Incidents (0/1)** is an indicator variable that equals one if there is at least one financially material ES incident that occurred in the 12 months preceding a particular shareholder meeting, while **Immaterial ES Incidents (0/1)** is an indicator variable that equals one if there is at least one non-financially material ES incident. Panel B estimates the effect of other ES incident characteristics on shareholder voting. (1) The reach of an incident is captured by the coverage scope of the news agency reporting on the event and is defined by RepRisk. **High-reach ES Incidents (0/1)** is an indicator variable that equals one if there is at least one far-reach ES incident, while **Low-reach ES Incidents (0/1)** is an indicator variable that equals one if there is at least one non-far-reach ES incident. (2) The novelty of an incident is captured by the newness of the event and is defined by RepRisk. **Novel ES Incidents (0/1)** is an indicator variable that equals one if there is at least one novel ES incident, while **Repeated ES Incidents (0/1)** is an indicator variable that equals one if there is at least one repeated ES incident. (3) **US-based ES Incidents (0/1)** is an indicator variable that equals one if there is at least one ES incident that occurred in the U.S. in the 12 months preceding a particular shareholder meeting, while **Non-US-based ES Incidents (0/1)** is an indicator variable that equals one if there is at least one ES incident that occurred outside the U.S. border. In Panel C, we classify major ES incidents based on their categories, and Table A2 in Appendix A provides detailed incident definitions. Robust standard errors are clustered at the firm level. Table A1 in Appendix A provides detailed definitions of the control variables. ***, **, and * correspond to statistical significance at the 1, 5, and 10 percent levels, respectively.

Panel A: Financial (Im)Materiality

	(1)	(2)	(3)
Dep. Var. =		**Avg. Negative Votes%**	
Material ES Incidents(0/1)	**0.005*** **		**0.005** **
	(0.002)		**(0.002)**
Immaterial ES Incidents(0/1)		**0.004** **	**0.003***
		(0.002)	**(0.002)**
Firm-level&Board-level Controls	✓	✓	✓
Industry×Year FE	✓	✓	✓
Observations	15,397	15,397	15,397
Adjusted R-squared	0.099	0.099	0.099

Panel B: Other Characteristics of ES Incident

	(1)	(2)	(3)	(4)
Dep. Var. =		**Avg. Negative Votes%**		
High-reach ES Incidents(0/1)	**0.006*** **			**0.006** **
	(0.002)			**(0.003)**
Low-reach ES Incidents(0/1)	0.002			0.002
	(0.002)			(0.003)
Novel ES Incidents(0/1)		**0.004** **		-0.002
		(0.002)		(0.003)
Repeated ES Incidents(0/1)		0.004		-0.002
		(0.002)		(0.003)
US-based ES Incidents(0/1)			**0.006*** **	**0.005** **
			(0.002)	**(0.002)**
Non US-based ES Incidents(0/1)			0.002	0.002
			(0.001)	(0.002)
Firm-level&Board-level Controls	✓	✓	✓	✓
Industry×Year FE	✓	✓	✓	✓
Observations	15,397	15,397	15,397	15,397
Adjusted R-squared	0.099	0.099	0.099	0.100

Panel C: ES Incident Categories

	(1)	(2)	(3)	(4)	(5)
Dep. Var. =			**Avg. Negative Votes%**		
Climate-related(0/1)	**0.007*** **				**0.006** **
	(0.003)				**(0.003)**
Other Environmental Issues(0/1)		**0.004** **			-0.000
		(0.002)			(0.003)
Employee Relation(0/1)			**0.004** **		0.003
			(0.002)		(0.002)
Community(0/1)				**0.004***	0.000
				(0.002)	(0.002)
Firm-level&Board-level Controls	✓	✓	✓	✓	✓
Industry×Year FE	✓	✓	✓	✓	✓
Observations	15,397	15,397	15,397	15,397	15,397
Adjusted R-squared	0.099	0.099	0.099	0.099	0.099

Table 5. Director Attributes, Board Committees, and Executive Roles

This table reports the heterogeneous effects of major ES incidents on director voting outcomes across various director attributes, board committees, and director roles. In Panel A, **Female Director (0/1)** is an indicator variable that equals one if the director is female; and zero otherwise. **Older Director (0/1)** is an indicator variable that equals one if the age of a director is above the median within the sample; and zero otherwise. **Longer Tenure (0/1)** is an indicator variable that equals one if the tenure of a director in a particular firm is above the median within the sample; and zero otherwise. **Busier Director (0/1)** is an indicator variable that equals one if the number of outside listed board seats of a director in a particular firm is above the median within the sample; and zero otherwise. In Panel B, **Compensation/Governance/Audit/Nomination (0/1)** is an indicator variable that equals one if the director serves on the Compensation/Governance/Audit/Nomination committee; and zero otherwise. Panel C presents regression analyses examining the impact of shareholder votes against directors after major ES incidents based on their roles including directors that are not independent directors. **Executive Director(0/1)** is an indicator variable that equals one if a director is an executive director of a firm; and zero, otherwise. **CEO-only(0/1)** is an indicator variable that equals one if a director is the CEO of a firm but not the chair of a board; and zero, otherwise. **Chairman-only(0/1)** is an indicator variable that equals one if a director is the chair of a board but not CEO of a firm; and zero, otherwise. **CEO-Chairman(0/1)** is an indicator variable that equals one if a director is the CEO of a firm AND the chair of a board; and zero, otherwise. Robust standard errors are clustered at the firm level. Table A1 in Appendix A provides detailed definitions of the control variables. ***, **, and * correspond to statistical significance at the 1, 5, and 10 percent levels, respectively.

Panel A: Director Attributes

	(1)	(2)
Dep. Var. =	**Negative Votes%**	
ES Incident(0/1)	0.001	-0.000
	(0.003)	(0.003)
Female Director(0/1)	-0.005***	-0.005***
	(0.001)	(0.001)
ES Incident(0/1)×Female Director(0/1)	**0.003*** **	**0.003*** **
	(0.001)	**(0.001)**
Older Director(0/1)	0.003***	0.003***
	(0.001)	(0.001)
ES Incident(0/1)×Older Director(0/1)	0.001	0.001
	(0.001)	(0.001)
Longer Tenure(0/1)	0.015***	0.015***
	(0.001)	(0.001)
ES Incident(0/1)×Longer Tenure(0/1)	0.001	0.001
	(0.001)	(0.001)
Busier Director(0/1)	0.006***	0.006***
	(0.001)	(0.001)
ES Incident(0/1)×Busier Director(0/1)	-0.001	-0.000
	(0.001)	(0.001)
Firm-level&Board-level Controls	✓	✓
Director-level Controls	✓	✓
Industry FE	✓	
Year FE	✓	
Industry×Year FE		✓
Observations	82,621	82,621
Adjusted R-squared	0.099	0.119

Panel B: Board Committees

	(1)	(2)
Dep. Var. =	**Negative Votes%**	
ES Incident(0/1)	0.006***	0.006***
	(0.002)	(0.002)
Compensation(0/1)	0.006***	0.007***
	(0.001)	(0.001)
ES Incident(0/1)×Compensation(0/1)	0.002	0.002
	(0.001)	(0.001)
Governance(0/1)	0.001	0.001
	(0.005)	(0.005)
ES Incident(0/1)×Governance(0/1)	-0.001	-0.003
	(0.028)	(0.030)
Audit(0/1)	-0.003***	-0.003***
	(0.001)	(0.001)
ES Incident(0/1)×Audit(0/1)	-0.001	-0.001
	(0.001)	(0.001)
Nomination(0/1)	0.008	0.008
	(0.005)	(0.005)
ES Incident(0/1)×Nomination(0/1)	-0.004	-0.002
	(0.028)	(0.030)
Firm-level&Board-level Controls	✓	✓
Director-level Controls	✓	✓
Industry FE	✓	
Year FE	✓	
Industry×Year FE		✓
Observations	82,621	82,621
Adjusted R-squared	0.126	0.146

Panel C: Director Roles

	(1)	(2)	(3)	(4)
Dep. Var. =		**Negative Votes%**		
ES Incident(0/1)	0.004***	0.004***	0.005***	0.004**
	(0.002)	(0.002)	(0.002)	(0.002)
Executive Director(0/1)	-0.009***			
	(0.001)			
ES Incident(0/1)×Executive Director(0/1)	**0.010*** **			
	(0.002)			
CEO-only(0/1)		-0.010***		
		(0.001)		
ES Incident(0/1)×CEO-only(0/1)		**0.007*** **		
		(0.002)		
Chairman-only(0/1)			-0.007***	
			(0.003)	
ES Incident(0/1)×Chairman-only(0/1)			0.005	
			(0.004)	
CEO-Chairman(0/1)				0.002
				(0.002)
ES Incident(0/1)×CEO-Chairman(0/1)				**0.014*** **
				(0.002)
Firm-level&Board-level Controls	✓	✓	✓	✓
Director-level Controls	✓	✓	✓	✓
Industry×Year FE	✓	✓	✓	✓
Observations	101,603	101,603	101,603	101,603
Adjusted R-squared	0.124	0.125	0.123	0.124

Table 6. Shareholder Votes and Director Turnover

This table reports the effects of shareholder voting on labor market outcomes of directors following major ES incidents. The dependent variable in Column (1) and (2), **Director Turnover(0/1)**, is an indicator variable that equals one if a director leaves the board within one year after a particular shareholder meeting; and zero, otherwise. The dependent variable in Column (3) and (4), **Lose Outside Board Seats(0/1)**, is an indicator variable that equals one if a director leaves a board of another organization where they serve, within a year after a particular shareholder meeting, and zero otherwise. **High Neg Votes% (0/1)** is an indicator variable that equals one if a director receives a percentage of negative votes higher than the average for the same board in the same year. To include director turnovers that are likely to be forced rather than voluntary, we focus solely on independent directors who are 72 years old or younger to ensure their departures are not due to mandatory retirement. Additionally, we exclude director turnovers resulting from death and those where the director joins a board of a firm with a larger size than the firm they left. In untabulated tables, we include all director turnovers, and our findings remain unchanged. Robust standard errors are clustered at the firm level. Table A1 in Appendix A provides detailed definitions of the control variables. ***, **, and * correspond to statistical significance at the 1, 5, and 10 percent levels, respectively.

	(1)	(2)	(3)	(4)
Dep. Var. =	**Director Turnover(0/1)**		**Lose Outside Board Seats(0/1)**	
ES Incident(0/1)	**0.008***	-0.002	0.000	-0.020
	(0.005)	(0.007)	(0.007)	(0.016)
High Neg Votes%(0/1)		0.006**		0.015**
		(0.002)		(0.007)
ES Incident(0/1)×High Neg Votes%(0/1)		**0.007***		0.014
		(0.004)		(0.010)
Firm-level&Board-level Controls	✓	✓	✓	✓
Director-level Controls	✓	✓	✓	✓
Industry×Year FE	✓	✓	✓	✓
Observations	67,045	67,045	24,756	24,756
Adjusted R-squared	0.030	0.031	0.021	0.022

Table 7. Shareholder Votes, Board Response, and Future ES Incident

This table reports the results investigating the relationships among shareholder votes, board responses, and the future likelihood of ES incidents. In Panels A and B, we limit the sample to firms that have experienced at least one major ES incident during a year. We present the timeline of Panel B empirical analysis in Figure 3. The dependent variable, **ES Incident(0/1)**$_{t+1,t+3}$ is an indicator variable that equals one if there is an ES incident between year$_{t+1}$ to year$_{t+3}$ following a particular shareholder meeting; and zero, otherwise. **High Avg. Neg Votes%(0/1)** is an indicator variable that equals one if a board receives more negative votes during the shareholder meeting; and zero, otherwise. **ES-linked Pay(0/1)** is an indicator variable that equals one if a board newly adopts compensation linked to environmental and social goals for CEO in the year following a particular shareholder meeting; and zero, otherwise. **CEO Forced TO(0/1))** is an indicator variable that equals one if there is a forced CEO turnover event in the year following a particular shareholder meeting; and zero, otherwise. **Any Dir TO(0/1)** is an indicator variable that equals one if there is at least one director leaves the firm in the year following a particular shareholder meeting; and zero, otherwise. **Sustainability Committee(0/1)** is an indicator variable that equals one if a board newly establishes a sustainability committee to oversee the firm's sustainability practices in the year following a particular shareholder meeting; and zero, otherwise. **Hire Charity dir(0/1)** is an indicator variable that equals one if a board hires new directors with charity experience in the year following a particular shareholder meeting; and zero, otherwise. Robust standard errors are clustered at the firm level. Table A1 in Appendix A provides detailed definitions of the control variables. ***, **, and * correspond to statistical significance at the 1, 5, and 10 percent levels, respectively.

Panel A: The Effect of Shareholder Voting and Firm Future ES Incident

	(1)	(2)
Dep. Var. =	**ES Incident(0/1)**$_{t+1,t+3}$	
High Avg. Neg Votes%(0/1)	**-0.004**	**-0.001**
	(-0.363)	**(-0.093)**
Firm-level&Board-level Controls	✓	✓
Industry FE	✓	
Year FE	✓	
Industry×Year FE		✓
Observations	3,027	2,867
Adjusted R-squared	0.261	0.295

Panel B: Board Response after Voting and Firm Future ES Incident

	(1)	(2)	(3)	(4)	(5)
Dep. Var. =	**ES Incident(0/1)$_{t+1,t+3}$**				
High Avg. Neg Votes%(0/1)	0.014	0.003	0.006	0.008	-0.010
	(0.019)	(0.012)	(0.018)	(0.014)	(0.015)
ES-linked Pay(0/1)	0.021				
	(0.028)				
ES-linked Pay(0/1)×High Avg. Neg Votes%(0/1)	**-0.097****				
	(0.039)				
CEO Forced TO(0/1)		0.110***			
		(0.041)			
CEO Forced TO(0/1)×High Avg. Neg Votes%(0/1)		**-0.146****			
		(0.062)			
Any Dir TO(0/1)			0.027*		
			(0.016)		
Any Dir TO(0/1)×High Avg. Neg Votes%(0/1)			-0.014		
			(0.023)		
Sustainability Committee(0/1)				0.012	
				(0.048)	
Sustainability Committee(0/1)×High Avg. Neg Votes%(0/1)				-0.047	
				(0.062)	
Hire Charity dir(0/1)					-0.013
					(0.017)
Hire Charity dir(0/1)×High Avg. Neg Votes%(0/1)					0.033
					(0.025)
Firm-level&Board-level Controls	✓	✓	✓	✓	✓
Industry×Year FE	✓	✓	✓	✓	✓
Observations	1,573	2,867	2,867	2,348	2,812
Adjusted R-squared	0.286	0.297	0.296	0.286	0.294

Table 8. Vote For ES-Proposal vs. Vote Against Directors

This table presents the results investigating the relationship between fund support for **shareholder-initiated ES proposals** and fund voting against directors following major ES incidents. In Panel A, the dependent variable, **Avg. % Fund Vote Against Directors**, is calculated as the average percentage of funds casting "Against" or "Withhold" votes in director elections during a shareholder meeting. **Avg. % Fund Vote For ES Proposal** is calculated as the average percentage of funds voting "For" ES proposals during a meeting. To calculate this, if there are more than one shareholder-initiated ES proposal in a firm-year shareholder meeting, we first calculate, for each proposal, the percentage of funds that vote "For" on that ES proposal. Next, we calculate the mean value of the percentages across different ES-related proposals. This method allows us to capture the overall level of support for ES proposals at each meeting and examine its relationship with the voting behavior in director elections. In Column 3 and 4, we replace **Avg. %Fund Vote For ES-Proposal** with **Max. %Fund Vote For ES-Proposal**, which is the maximum percentage of funds that cast votes "For" across shareholder-initiated ES proposal during a meeting. This measure helps us identify the strongest support for a single ES proposal during a particular shareholder meeting. In Panel B, we focus on the fund-firm-year level regression. **Vote Against Directors%** is measured as the percentage of a particular fund's votes against the board of directors. To calculate this, if a particular shareholder meeting includes multiple director election proposals, we calculate, for each fund, the percentage of votes cast "Against" across all director election proposals. Similarly, **Vote For ES-Proposals%** is measured as the percentage of a particular fund's votes "For" ES proposals during a meeting. Robust standard errors are clustered at the firm level in Panel A and at the fund level in Panel B. Table A1 in Appendix A provides detailed definitions of the control variables. ***, **, and * correspond to statistical significance at the 1, 5, and 10 percent levels, respectively.

Panel A: Firm-level Vote For ES-Proposal vs. Vote Against Directors

	(1)	(2)	(3)	(4)
Dep. Var. =	**Avg. %Fund Vote Against Directors**			
ES Incident(0/1)	0.026**	0.040**	0.025**	0.039**
	(0.012)	(0.016)	(0.012)	(0.016)
Avg. %Fund Vote For ES-Proposal	0.079**	0.115***		
	(0.032)	(0.042)		
ES Incident(0/1)×Avg. %Fund Vote For ES-Proposal	**-0.062***	**-0.098****		
	(0.035)	**(0.046)**		
Max. %Fund Vote For ES-Proposal			0.078**	0.112***
			(0.032)	(0.041)
ES Incident(0/1)×Max. %Fund Vote For ES-Proposal			**-0.058***	**-0.089****
			(0.035)	**(0.043)**
Firm-level&Board-level Controls	✓	✓	✓	✓
Industry FE	✓		✓	
Year FE	✓		✓	
Industry×Year FE		✓		✓
Observations	1,192	1,017	1,192	1,017
Adjusted R-squared	0.219	0.204	0.219	0.205

Panel B: Fund-level Vote For ES-Proposal vs. Vote Against Director

	(1)	(2)
Dep. Var. =	**Vote Against Directors%**	
ES Incident(0/1)	0.033***	0.012***
	(0.001)	(0.001)
Vote For ES-Proposals%	0.025***	0.007***
	(0.001)	(0.001)
ES Incident(0/1)×Vote For ES-Proposals%	**-0.014*** **	**-0.003*** **
	(0.001)	**(0.001)**
Firm-level&Board-level Controls	✓	✓
Fund×Proxy Season FE	✓	
Industry×Proxy Season FE	✓	
Fund FE		✓
Firm FE		✓
Proxy Season FE		✓
Observations	672,826	713,008
Adjusted R-squared	0.311	0.348

Table 9. Robustness Tests

This table replicates our main results using alternative measures and additional controlling factors for robustness analysis. In Panel A, in Column (1) and (2), we use an alternative measure of **Negative Votes%**, which is **%Fund Vote Against Director**, measured by the percentage of funds that cast votes "Against" or "Withheld" in each director election proposal. In Column (3) and (4), **Avg. %Fund Vote Against Director** is measured by the average percentage of **%Fund Vote Against Director** received by independent directors during their elections at a shareholder meeting. In Panel B, **ISS Vote Against(0/1)** is an indicator variable that equals one if ISS vote "Against" or "Withhold" on a particular director election proposal; and zero, otherwise. In Panel C, **G Incident(0/1)** is an indicator variable that equals one if a firm experienced at least one major governance incident during the 12 months preceding the annual meeting; and zero, otherwise. **ES Rating** is measured by the environment and social rating by Refinitiv. Robust standard errors are clustered at the firm level. Table A1 in Appendix A provides detailed definitions of the control variables. ***, **, and * correspond to statistical significance at the 1, 5, and 10 percent levels, respectively.

Panel A: (Avg.) %Fund Vote Against Director

	(1)	(2)	(3)	(4)
Dep. Var. =	**%Fund Vote Against Director**		**Avg. %Fund Vote Against Director**	
Ln(1+ES Incidents)	**0.005****		**0.005***	
	(0.002)		**(0.003)**	
ES Incident(0/1)		**0.006****		**0.006***
		(0.003)		**(0.003)**
Firm-level&Board-level Controls	✓	✓	✓	✓
Industry×Year FE	✓	✓	✓	✓
Observations	82,621	82,621	15,397	15,397
Adjusted R-squared	0.137	0.136	0.121	0.121

Panel B: Unusual High Negative Votes

	(1)	(2)	(3)	(4)
Dep. Var. =	**Unusual High Negative Votes(0/1)**			
Ln(1+ES Incidents)	**0.010*** **	**0.010** **		
	(0.004)	**(0.004)**		
ES Incident(0/1)			**0.012** **	**0.011** **
			(0.005)	**(0.005)**
Firm-level&Board-level Controls	✓	✓	✓	✓
Industry FE	✓		✓	
Year FE	✓		✓	
Industry×Year FE		✓		✓
Observations	82,621	82,621	82,621	82,621
Adjusted R-squared	0.058	0.075	0.058	0.075

Panel C: Proxy Advisor(ISS) Vote Against

	(1)	(2)	(3)	(4)
Dep. Var. =	**ISS Vote Against(0/1)**			
Ln(1+ES Incidents)	**0.013*** **	**0.012** **		
	(0.005)	**(0.005)**		
ES Incident(0/1)			**0.016*** **	**0.015** **
			(0.006)	**(0.006)**
Firm-level&Board-level Controls	✓	✓	✓	✓
Industry FE	✓		✓	
Year FE	✓		✓	
Industry×Year FE		✓		✓
Observations	53,202	53,201	53,202	53,201
Adjusted R-squared	0.069	0.101	0.069	0.100

Panel D: Additional Controls

	(1)	(2)	(3)	(4)	(5)	(6)
Dep. Var. =	**Negative Votes%**			**Avg. Negative Votes%**		
ES Incident(0/1)	**0.004****	**0.004****	**0.002***	**0.004***	**0.005****	**0.004****
	(0.002)	**(0.002)**	**(0.001)**	**(0.002)**	**(0.002)**	**(0.002)**
G Incident(0/1)	0.003**	0.003**	0.001	0.004***		0.004***
	(0.001)	(0.001)	(0.001)	(0.002)		(0.002)
ISS Vote Against(0/1)			0.235***			
			(0.006)			
ES Rating					-0.015**	-0.016***
					(0.006)	(0.006)
Firm-level&Board-level Controls	✓	✓	✓	✓	✓	✓
Director-level Controls	✓	✓	✓			
Industry×Year FE	✓	✓	✓	✓	✓	✓
Observations	82,621	82,621	53,201	15,397	11,673	11,673
Adjusted R-squared	0.138	0.138	0.579	0.099	0.110	0.111

Panel E: Excluding Staggered Board

	(1)	(2)	(3)	(4)
Dep. Var. =	**Negative Votes%**		**Avg. Negative Votes%**	
Ln(1+ES Incidents)	**0.004*****		**0.004****	
	(0.001)		**(0.001)**	
ES Incident(0/1)		**0.004****		**0.005****
		(0.002)		**(0.002)**
Firm-level&Board-level Controls	✓	✓	✓	✓
Industry×Year FE	✓	✓	✓	✓
Observations	70,056	70,056	9,861	9,861
Adjusted R-squared	0.145	0.145	0.105	0.105

Internet Appendix to: "Governing Through Votes: Shareholder Responses to Major Environmental and Social Incidents"

Table A1. Variable Definition

Variables	Definition
Voting Outcome Variables	
Negative Votes%	The total aggregate votes that are cast "Against" or "Withhold" on a director as a fraction of the voting base. **Source:** ISS Voting Analytics.
Avg. Negative Votes%	The average percentage of **Negative Votes%** received by independent directors during a specific shareholder meeting. **Source:** ISS Voting Analytics.
Major ES Incident Variables	
ES Incident(0/1)	An indicator variable that equals one if a firm experienced at least one major environmental or/and social incident during the 12 months preceding the annual meeting; and zero, otherwise. Major incidents are defined as those with severity coded as medium-to-high by RepRisk. **Source:** RepRisk.
Ln(1+ ES Incidents)	The natural logarithm of one plus the total counts of major environmental or/and social incidents that a firm experienced during the 12 months preceding the annual meeting. Major incidents are defined as those with severity coded as medium-to-high by RepRisk. **Source:** RepRisk.
Firm-level Controls	
Size	The natural logarithm of book value of total assets. **Source:** Compustat.
ROA	Earnings before interests divided by book value of total assets. **Source:** Compustat.
MTB	Market to book ration. **Source:** Compustat&CRSP.
Stock Return	Annual stock price return. **Source:** Compustat&CRSP.
Ins. Ownership%	Average institutional ownership preceeding a shareholder meeting. **Source:** Thomson Reuter Schedule 13F filings.
E-index	Entrenchment index. **Source:** Variable construction following Bebchuk et al. (2009) and source from ISS Governance.
Board-level Controls	
Board Size	The number of directors on a board. **Source:** BoardEX.
Board NED%	The percentage of non-executive directors in a board. **Source:** BoardEX.

Board Male%	The percentage of male directors on a board. **Source:** BoardEX.
Board Avg. Age	The average age of directors on a board. **Source:** BoardEX.
CEO-Chairman Duality(0/1)	An indicator variable that equals one if the CEO of a firm is also the Chairman on board; and zero, otherwise. **Source:** BoardEX.

Director-level Controls

Director Tenure	The number of years a director has been on the board. **Source:** BoardEX.
Attend less than 75% of Meeting(0/1)	An indicator variable that equals one if a director attends less than 75% of board meeting during a year; and zero, otherwise. **Source:** ISS ESG Director.
Director Age	Director's age. **Source:** BoardEX.
Outside Listed Boards	Director total board seats in publicly listed firms. **Source:** ISS ESG Director.
Director Edu. Qualification	The number of educational qualifications a director has. **Source:** BoardEX.
Female Director(0/1)	An indicator variable that equals one if a director is female; and zero, otherwise. **Source:** BoardEX.

Other Variables

Compensation(0/1)	An indicator variable that equals one if the director serves on the Compensation committee, and zero otherwise. **Source:** ISS ESG Director.
Governance (0/1)	An indicator variable that equals one if the director serves on the Governance committee, and zero otherwise. **Source:** ISS ESG Director.
Audit(0/1)	An indicator variable that equals one if the director serves on the Audit committee, and zero otherwise. **Source:** ISS ESG Director.
Nomination(0/1)	An indicator variable that equals one if the director serves on the Nominationcommittee, and zero otherwise. **Source:** ISS ESG Director.
Sustainability(0/1)	An indicator variable that equals one if the director serves on the Sustainability committee, and zero otherwise. **Source:** BoardEx.
Director Turnover(0/1)	An indicator variable that equals one if a director leaves the board within one year after a particular shareholder meeting, and zero otherwise. **Source:** BoardEX.

Lose Outside Board Seats(0/1)	An indicator variable that equals one if a director leaves a board of another organization where they serve, within a year after a particular shareholder meeting, and zero otherwise.**Source:** BoardEX.
ES-linked Pay(0/1)	An indicator variable that equals one if a board newly adopts compensation linked to environmental and social goals for CEO in the year following a particular shareholder meeting, and zero otherwise. **Source:** ISS Executive Compensation Analytics.
CEO Forced TO(0/1)	An indicator variable that equals one if there is a forced CEO turnover event in the year following a particular shareholder meeting, and zero otherwise. **Source:** From Gentry et al. (2021).
Hire Charity Dir(0/1)	An indicator variable that equals one if a board hires new directors with charity experience in the year following a particular shareholder meeting, and zero otherwise. **Source:** BoardEX.
G Incident(0/1)	An indicator variable that equals one if a firm experienced at least one governance incident during the 12 months preceding the annual meeting; and zero, otherwise. **Source:** RepRisk.
Green Talk Intensity	Green talk intensity data is derived from earnings conference call transcripts. Each earnings call transcript is segmented into individual sentences, which are classified as green talk or not using the well-known machine learning model, FinBERT (Huang et al., 2023). Green talk intensity is quantified as the percentage of green talk sentences relative to the total number of sentences in each earnings conference call. **Source:** From He et al. (2024).
%Fund Vote Against Director	The percentage of funds that cast votes "Against" or "Withheld" in each director election. **Source:** ISS Voting Analytics.
ISS Vote Against(0/1)	An indicator variable that equals one if ISS vote "Against" or "Withhold" on a particular director election proposal; and zero, otherwise. **Source:** ISS Voting Analytics.

Table A2. RepRisk ES Issues

Variables Name in Text	RepRisk ES Issues Name	ES Issues Definition
Climate-related Issues		
GHG Emissions	Climate change, GHG emissions, and global pollution	Global pollution and climate change, which includes atmospheric pollution and criticism related to climate change, carbon, and other greenhouse gas emissions.
Other Environmental Issues		
Local Pollution	Local pollution	Local pollution, which is pollution into local air, water, and soil.
Resource Overuse	Overuse and wasting of resources	Overuse and wasting of resources, which includes inefficient use or waste of renewable or non-renewable resources, such as water, energy, or commodities.
Ecological Impact	Impacts on landscapes, ecosystems, and biodiversity	Impacts on ecosystem/landscapes, such as contamination of groundwater, forests, rivers, or seas, deforestation, or impacts on wildlife.
Waste Management	Waste issues	Waste issues, such as inappropriate disposal or handling of waste.
Animal Mistreat	Animal mistreatment	Animal mistreatment, which includes torture, mistreatment or abuse of animals, through experiments, husbandry, or trophy hunting.
Social Issues—Employee Relations		
Forced Labor	Forced labor	Forced labor, such as bonded labor, prison labor, exploitative practices, restrictions on freedom of movement, or withholding of wages.
Child Labor	Child labor	Child labor, which also includes child prostitution, pornography, and trafficking.
Labor Rights	Freedom of association and collective bargaining	Freedom of association and collective bargaining, which refers to violations of workers' rights to organize and collectively bargain.
Discrimination	Discrimination in employment	Discrimination in employment, which is social discrimination against employees.

Workplace Safety	Occupation health and safety issues	Occupational health and safety issues, such as lack of safety for employees at work or negligence resulting in work-related accidents.
Poor Emp. Environment	Poor employment conditions	Poor employment conditions, such as "slave-like" working conditions, issues to labor contracts or pay, or spying on employees.
Social Issues—Community Relations		
Human Rights	Human rights abuses and corporate complicity	Human rights abuses and corporate complicity, such as violence against humans, human trafficking, organ trafficking, privatization of water sources, supporting oppressive regimes, or supporting terrorist organizations.
Community	Impacts on communities	Impacts on communities, such as land or water-grabbing, negative impacts on a community's livelihood or employment opportunities, relocation of communities, safety impacts, or access to lifesaving drugs.
Local Participation	Local participation issues	Local participation issue, which arises when local communities or individuals are not consulted about the firm's activities or when they do not benefit appropriately, and when critics are silenced by unethical tactics.
Social Discrimination	Social Discrimination	Social discrimination, which refers to treating people differently because of certain characteristics, such as gender, racial, ethnic, or religious.

Table A3. Adding Firm Fixed Effects

This table presents a robustness check on the effect of major ES incidents on shareholder voting against independent directors. Specifically, we include firm-level fixed effects in the regression, which account for unobserved time-invariant firm-specific heterogeneity. Robust standard errors are clustered at the firm level. Table A1 in Appendix A provides detailed definitions of the control variables. ***, **, and * correspond to statistical significance at the 1%, 5%, and 10% levels, respectively.

	(1)	(2)	(3)	(4)
Dep. Var. =	**Negative Votes%**		**Avg. Negative Votes%**	
Ln(1+ES Incidents)	**0.002****		**0.002***	
	(0.001)		**(0.001)**	
ES Incident(0/1)		**0.003****		**0.004****
		(0.001)		**(0.001)**
Firm-level&Board-level Controls	✓	✓	✓	✓
Director-level Controls	✓	✓		
Firm FE	✓	✓	✓	✓
Year FE	✓	✓	✓	✓
Director FE	✓	✓		
Observations	79,128	79,128	15,212	15,212
Adjusted R-squared	0.382	0.382	0.347	0.347

Table A4. Stock Market Reactions around Major ES Incidents

This table presents the summary statistics of cumulative abnormal returns (CAR) around major ES incidents in Panel A and Panel B. Panel C examines the relationship between CAR and shareholder voting following major ES incidents. We remove incidents with confounding events (including RepRisk Governance Incidents, M&A Announcements, change in Company Bylaws/Rules, Lawsuits&Legal Issues) in the week before the incident.**Min. CAR(-a,+a)** is defined as the minimum CAR(-a,+a) of major ES incidents occurring in the 12 months preceding a particular shareholder meeting. Robust standard errors in Panel C are clustered at the firm level. All continuous variables are winsorized at the 1st and 99th percentiles. ***, **, and * correspond to statistical significance at the 1, 5, and 10 percent levels, respectively.

Panel A: Incident-Level Major ES Incident CARs

Dep. Var. =	**Obs**	**Mean**	**Ha: mean <0 Pr(T <t)**
CAR (-1,1)	6,101	-0.044%	0.099*
CAR (-2,2)	6,101	-0.066%	0.065*
CAR (-5,5)	6,101	-0.094%	0.075*
CAR (-10,10)	6,101	-0.181%	0.029**

Panel B: Firm-level Minimum CARs around Major ES Incident

Dep. Var. =	**Obs**	**Mean**	**Ha: mean <0 Pr(T <t)**
Min.CAR (-1,1)	1,759	-0.479%	0.000***
Min.CAR (-2,2)	1,759	-0.550%	0.000***
Min.CAR (-5,5)	1,758	-0.782%	0.000***
Min.CAR (-10,10)	1,758	-1.255%	0.000***

Panel C: Major ES Incident CAR and Negative Votes

	(1)	(2)
Dep. Var. =	**Avg. Negative Votes%**	**Avg. %Fund Vote Against**
Min.CAR(-2,+2)	**-0.103***	**-0.221****
	(0.053)	**(0.086)**
Firm-level&Board-level Controls	✓	✓
Industry×Year FE	✓	✓
Observations	1,503	1,503
Adjusted R-squared	0.108	0.147

Table A5. Further Analysis: Voting Outcomes Across Board Committees

The table examines the heterogeneous effects of major ES incidents on director voting outcomes across various board committees. Specifically, Panel A separates the sample based on whether a firm has established a sustainability committee. Panel B focuses on firms with a sustainability committee and further separates the sample based on whether the executive pay is linked to any ES-related goals. Robust standard errors are clustered at the firm level. Table A1 in Appendix A provides detailed definitions of the control variables. ***, **, and * correspond to statistical significance at the 1, 5, and 10 percent levels, respectively.

Panel A: Conditional on Sustainability Committee

	(1)	(2)
	No Sustainability Committee	**Has Sustainability Committee**
Dep. Var. =	**Negative Votes%**	
ES Incident(0/1)	0.007***	0.001
	(0.002)	(0.005)
Compensation(0/1)	0.007***	0.002
	(0.001)	(0.002)
ES Incident(0/1)×Compensation(0/1)	0.002	**0.007*** **
	(0.002)	**(0.002)**
Governance(0/1)	0.000	0.001
	(0.005)	(0.014)
ES Incident(0/1)×Governance(0/1)	-0.001	-0.007
	(0.034)	(0.016)
Audit(0/1)	-0.003***	-0.005***
	(0.001)	(0.002)
ES Incident(0/1)×Audit(0/1)	-0.001	0.000
	(0.002)	(0.002)
Nomination(0/1)	0.008	0.006
	(0.005)	(0.013)
ES Incident(0/1)×Nomination(0/1)	-0.005	0.007
	(0.034)	(0.015)
Sustainability(0/1)		-0.001
		(0.002)
ES Incident(0/1)×Sustainability(0/1)		0.001
		(0.002)
Firm-level&Board-level Controls	✓	✓
Director-level Controls	✓	✓
Industry×Year FE	✓	✓
Observations	67,141	13,216
Adjusted R-squared	0.148	0.229

Panel B: Conditional on Adoption of ES-linked Pay

	(1)	(2)
	Has Sustainability Committee	
	With ES-linked Pay	**Without ES-linked Pay**
Dep. Var. =	**Negative Votes%**	
ES Incident(0/1)	0.000	0.001
	(0.005)	(0.004)
Compensation(0/1)	0.003	0.001
	(0.003)	(0.002)
ES Incident(0/1)×Compensation(0/1)	0.003	**0.009****
	(0.005)	**(0.004)**
Governance(0/1)	-0.088***	-0.005
	(0.011)	(0.027)
ES Incident(0/1)×Governance(0/1)	**0.098*****	-0.005
	(0.010)	(0.027)
Audit(0/1)	-0.003	-0.004*
	(0.002)	(0.002)
ES Incident(0/1)×Audit(0/1)	0.001	-0.004
	(0.004)	(0.003)
Nomination(0/1)	0.096***	0.011
	(0.010)	(0.027)
ES Incident(0/1)×Nomination(0/1)	-0.101***	0.002
	(0.010)	(0.027)
Sustainability(0/1)	-0.002	-0.000
	(0.003)	(0.002)
ES Incident(0/1)×Sustainability(0/1)	0.004	-0.000
	(0.003)	(0.003)
Firm-level&Board-level Controls	✓	✓
Director-level Controls	✓	✓
Industry×Year FE	✓	✓
Observations	3,086	6,094
Adjusted R-squared	0.267	0.241

Table A6. The Effect of Shareholder Voting and Firm Future ES Incident

This table presents the effect of shareholder voting on future firm ES incidents. Specifically, this table extends Table 7, Panel A. In this table, Panel A focuses on firm-years that experienced at least one major ES incident prior to a shareholder meeting, while Panel B further limits the sample to firm-years in which the major ES incident occurred for the first time. Robust standard errors are clustered at the firm level. Table A1 in Appendix A provides detailed definitions of the control variables. ***, **, and * correspond to statistical significance at the 1, 5, and 10 percent levels, respectively.

Panel A: Major ES Incident

	(1)	(2)	(3)
Dep. Var. =	**ES Incident(0/1)$_{t,t+1}$**	**ES Incident(0/1)$_{t+1,t+2}$**	**ES Incident(0/1)$_{t+1,t+3}$**
High Avg. Neg Votes%(0/1)	-0.019	-0.009	-0.001
	(0.018)	(0.013)	(0.012)
Firm-level&Board-level Controls	✓	✓	✓
Industry×Year FE	✓	✓	✓
Observations	2,866	2,866	2,866
Adjusted R-squared	0.336	0.264	0.295

Panel B: Major ES Incident Occurred for the First Time

	(1)	(2)	(3)
Dep. Var. =	**ES Incident(0/1)$_{t,t+1}$**	**ES Incident(0/1)$_{t+1,t+2}$**	**ES Incident(0/1)$_{t+1,t+3}$**
High Avg. Neg Votes%(0/1)	-0.013	-0.009	-0.007
	(0.061)	(0.062)	(0.058)
Firm-level&Board-level Controls	✓	✓	✓
Industry×Year FE	✓	✓	✓
Observations	335	335	335
Adjusted R-squared	0.399	0.312	0.373

Table A7. Board Response following Major ES Incidents by Newly Adopting ES-linked Pay

This table presents the results investigating which ES incentives effectively reduce the likelihood of future ES incidents. **ST Env-linked Pay(0/1)** is an indicator variable equal to one if a board newly adopts compensation linked to short-term (ST) environmental goals for the CEO in the year following a particular shareholder meeting, and zero otherwise. Similarly, **LT Env-linked Pay(0/1)** refers to compensation linked to long-term (LT) environmental goals for the CEO. **ST Social-linked Pay(0/1)** is an indicator variable equal to one if a board newly adopts compensation linked to short-term (ST) social goals for the CEO in the year following a particular shareholder meeting, and zero otherwise. Similarly, **LT Social-linked Pay(0/1)** refers to long-term (LT) social goals for the CEO. Robust standard errors are clustered at the firm level. Table A1 in Appendix A provides detailed definitions of the control variables. ***, **, and * correspond to statistical significance at the 1, 5, and 10 percent levels, respectively.

Panel A: Environmental Incident and Env-linked Pay

	(1)	(2)
Dep. Var. =	**Env Incident(0/1)**$_{t+1,t+3}$	
High Avg. Neg Votes%(0/1)	-0.008	-0.008
	(0.018)	(0.018)
ST Env-linked Pay(0/1)	-0.005	
	(0.035)	
ST Env-linked Pay(0/1)×High Avg. Neg Votes%(0/1)	0.014	
	(0.043)	
LT Env-linked Pay(0/1)		0.038
		(0.066)
LT Env-linked Pay(0/1)×High Avg. Neg Votes%(0/1)		0.031
		(0.089)
Firm-level&Board-level Controls	✓	✓
Industry×Year FE	✓	✓
Observations	1,215	1,215
Adjusted R-squared	0.301	0.301

Panel B: Social Incident and Social-linked Pay

	(1)	(2)
Dep. Var. =	**Social Incident(0/1)t+1,t+3**	
High Avg. Neg Votes%(0/1)	0.006	0.000
	(0.019)	(0.018)
ST Social-linked Pay(0/1)	0.022	
	(0.026)	
ST Social-linked Pay(0/1)×High Avg. Neg Votes%(0/1)	**-0.084****	
	(0.039)	
LT Social-linked Pay(0/1)		0.025
		(0.095)
LT Social-linked Pay(0/1)×High Avg. Neg Votes%(0/1)		0.004
		(0.122)
Firm-level&Board-level Controls	✓	✓
Industry×Year FE	✓	✓
Observations	1,561	1,561
Adjusted R-squared	0.292	0.291

Table A8. SRI Fund Votes

This table presents the results investigating the relationship between SRI fund support for **shareholder-initiated ES proposals** and SRI fund voting against directors following major ES incidents. **Vote Against Directors%** is measured as the percentage of a particular fund's votes against the board of directors. To calculate this, if a particular shareholder meeting includes multiple director election proposals, we calculate, for each fund, the percentage of votes cast "Against" across all director election proposals. Similarly, **Vote For ES-Proposal%** is measured as the percentage of a particular fund's votes "For" ES proposals during a meeting. Robust standard errors are clustered at the fund level. Table A1 in Appendix A provides detailed definitions of the control variables. ***, **, and * correspond to statistical significance at the 1, 5, and 10 percent levels, respectively.

Panel A: SRI Fund Vote

	(1)	(2)	(3)	(4)
Dep. Var. =	**Vote Against Director%**		**Vote For ES-Proposal%**	
ES Incident(0/1)	0.012***	0.012***	0.018***	0.018***
	(0.001)	(0.001)	(0.001)	(0.001)
ES Incident(0/1)×SRI Fund(0/1)		**-0.015*** **		**0.018** **
		(0.005)		**(0.008)**
Firm-level&Board-level Controls	✓	✓	✓	✓
Fund FE	✓	✓	✓	✓
Firm FE	✓	✓	✓	✓
Proxy Season FE	✓	✓	✓	✓
Observations	713,008	713,008	713,008	713,008
Adjusted R-squared	0.348	0.348	0.475	0.475

Appendix B

In Appendix B, we first show anecdotal evidence that shareholder voting and proxy advisor recommendations on director elections due to environmental and social concerns in Section B1. Figure B1 presents the SASB Classification of Financial Materiality. Figure B2 presents an example of ES Incentives for Executives.

B1 Anecdotal Evidence

This section presents some recent examples of shareholder voting and proxy advisor recommendations on director elections due to environmental and social concerns.

Major Pension Funds to Vote Against Exxon Board Over Climate Inaction[1]
In 2024, the New York State Common Retirement Fund, the nation's third-largest public pension fund with $260 billion in assets, announced it would vote against 10 of Exxon's 12 board members for failing to adequately address climate change. Similarly, the California Public Employees' Retirement System (CalPERS), managing $495 billion in assets and serving 2 million members, and the largest public pension fund in the U.S., declared its decision to vote against Exxon's board of directors at the May 2024 shareholders meeting. This decision follows Exxon's lawsuit against investors who urged the company to expedite its efforts to reduce emissions.

Shareholders Express Disapproval Over Juukan Gorge Incident[2]
Following the destruction of the sacred Juukan Gorge caves in Australia, which held significant cultural and historical importance to the indigenous people, shareholders expressed strong disapproval. Dr. Megan Clark received the highest protest vote, with more than 26 percent voting against her re-election. This backlash was due to her role as the head of the company's sustainability committee at the time of the Juukan Gorge destruction.

Boeing Faces Scrutiny and Calls for Boardroom Changes After 737 MAX 9 Incident[3]
After a door plug blew off a new 737 MAX 9 jet on January 5, 2024, proxy advisor Glass Lewis criticized Boeing's board for not adequately addressing safety, legal, and regulatory risks. They recommended that shareholders vote against re-electing three directors to signal dissatisfaction with the company's safety oversight and efforts to improve its culture.

[1] https://www.reuters.com/business/calpers-vote-against-exxon-board-members-2024-05-20/
[2] https://www.afr.com/rear-window/the-shame-of-rio-tinto-director-megan-clark-20210324-p57dr7
[3] https://www.reuters.com/business/aerospace-defense/glass-lewis-recommends-investors-vote-against-three-boeing-directors-2024-04-30/

Figure B1. SASB Financial Materiality Map®

The figure below displays the SASB Materiality Map®. As shown in red, under the industry **Extractives & Minerals Processing**, there are eight detailed sectors including **Coal Operation**, **Construction Materials**, and so on. The dark gray fields represent the highly material General Issue Categories (GICs) in the respective sector (e.g., the GIC **GHG Emissions** is highly material in the **Coal Operation** sector). Light gray fields are material in the respective sector (e.g., the GIC **Energe Management** is material in the first column **Consumer Goods** sector) while white fields show that a GIC is not material for firms in the specific sector (e.g., **Customer Privacy** in the **Construction Materials** sector).

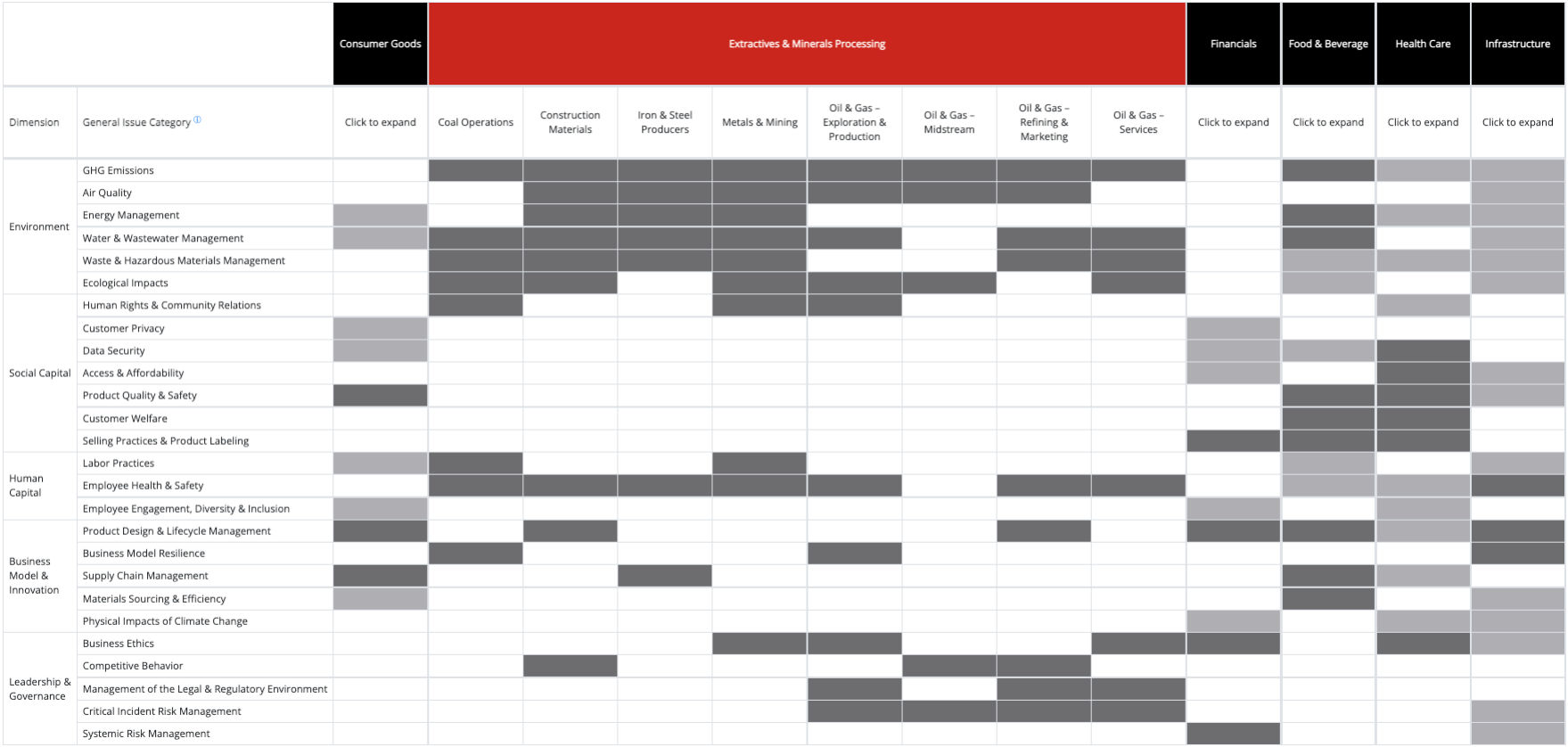


Figure B2. Example of ES Incentives to Executives

The figure below provides an example of the disclosure of ES-related metrics in executive compensation contracts. The disclosure is an excerpt of the description of the compensation package of the executives in **Cardinal Health, Inc.**, as disclosed in the firm's 2022 Proxy Statement. ***Additional notes***: DE&I: Diversity, Equity, and Inclusion; Restricted Stock Units (RSUs): RSUs are company shares granted to employees as part of their compensation package; Performance Stock Units (PSUs): PSUs are tied to the achievement of specific performance targets set by the company.

The charts below show the components of fiscal 2022 target total direct compensation and the elements of pay for our Chief Executive Officer and other named executives.

Pay Element	Description and Purpose	Links to Business and Talent Strategies
Base salary	▪ Fixed cash compensation, which is reviewed annually and adjusted when appropriate ▪ Based on qualifications, experience, role, performance, career progression, market data, and internal pay equity	▪ Competitive base salaries support our ability to attract and retain executive talent
Annual incentive	▪ Variable cash compensation based on achieving goals for annual adjusted non-GAAP operating earnings, operating cash flow, cost savings, and DE&I, and individual performance ▪ Target as a percentage of base salary reflects market data and internal pay equity	▪ Primary financial measure reflects our focus on operating earnings and liquidity-focused measure aligns with our focus on capital deployment ▪ Cost savings and DE&I goals align with key strategic initiatives ▪ Executives are assessed on their individual performance, including their alignment with our *Standards of Business Conduct,* values, and behaviors
Long-term incentive	▪ Weighted 60% in PSUs and 40% in RSUs ▪ PSUs vest based on achieving goals for adjusted non-GAAP EPS, cost savings, and DE&I goals over three years, with a relative TSR modifier ▪ RSUs vest ratably over three years ▪ Target annual grant value reflects market data and internal pay equity	▪ Supports sustainable long-term shareholder return and closely aligns management's interests with shareholders' interests ▪ Non-GAAP EPS is a primary measure for evaluating our performance and is closely followed by the investment community ▪ Cost savings and DE&I goals align with key strategic initiatives ▪ Long-term incentives help to retain executive talent