Compensation Incentives and the Effect of Chief Sustainability Officers

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Abstract: Companies appoint sustainability executives (CSOs) to advance their environmental, social, and governance (ESG) agendas. For most companies, CSOs are part of the broader executive team, but it is becoming more common for CSOs to be included amongst companies' five highest-paid executives, suggesting they have an influential role in the company. In this paper, we investigate how this choice is related to company sustainability and financial performance and how CSO incentives moderate these relations. We find that relative to having a CSO that is not one of the top-paid executives, having a highly paid CSO improves sustainability performance, but harms financial performance. However, when the CEO or CFO is also named as the CSO, financial performance deteriorates without a corresponding increase in sustainability performance. Finally, the composition of CSO compensation matters; CSOs who have a higher proportion of compensation paid as salary are the most effective at improving firm sustainability performance.

Keywords: Board of directors; corporate governance; director labor market; shareholder voting; ESG

1. Introduction

Chief Sustainability Officers (CSOs) develop, execute and oversee the sustainability strategy of a firm (Miller and Serafeim 2014, Fu, Tang and Chen 2020). For most firms, CSOs are part of the broader executive team, but it is becoming more common for CSOs to be included among firms' five highest-paid executives. This elevation of the CSO to the top-paid executives indicates an increasing need for firms to integrate sustainability into their overall strategy (Wang, Fu, Rui, and De Castro 2024). With a focus on sustainability, however, CSO efforts primarily pertain to success in the medium and longer term as is required to achieve many sustainability goals. This contrasts with the largely short-term focus of other top-paid executives such as the CEO and CFO. Indeed, CSOs who focus on the shorter term may forego sustainability-related initiatives that are costly in the short-term but have longer term impacts. In this paper, we identify a sample of firms with highly paid CSOs. Consistent with high pay signaling the importance of the executive's role, prior literature argues that highly paid executives have more power (Bebchuk, Cremers and Peyer 2011). We explore how these CSOs are compensated relative to the CEO and CFO, if highly paid CSOs are more effective at improving sustainability and financial performance, and whether compensation incentives affect the CSO's impact on the firm's sustainability and financial outcomes.

The CSO role gained prominence when Linda Fisher was appointed as DuPont's first CSO in 2004, marking a significant development in the composition of management teams. For example, in our sample the percentage of firms with CSOs among S&P 1500 companies has risen from 10.96% in 2007 to 38.69% in 2022, with an average of 22.60% across the sample. We find that recently more firms have elevated their CSOs to be among the highest-paid members of the management team, with 2.88% of firms S&P 1500 reporting a CSO among their top five highest-paid executives in 2022.

The decision to elevate CSOs to be among the highest-paid executives could be driven by several factors reflecting a company's commitment to sustainability and its strategic goals (Wang et al. 2024). Firms that prioritize sustainability often operate in industries facing intense scrutiny, such as oil, gas, and manufacturing. In these sectors, having a well-compensated CSO signals dedication to integrating sustainability into the core business strategy, which can attract investors and enhance the company's reputation. Additionally, as stakeholders—including customers and regulatory bodies—demand greater accountability, firms may see competitive compensation for CSOs as a means of attracting and retaining scarce top talent capable of navigating complex sustainability challenges.

Using a sample of firms that have CSOs, we examine differences between firms that elevate the CSO to the top five highest-paid executives and firms that employ CSOs as lower-level, lower-paid executives. We find that firms with highly paid CSOs are usually smaller, have higher leverage, face fewer ESG controversies, and are more likely to be in environmentally sensitive industries such as oil, gas, and coal extraction. Companies with highly paid CSOs also experience significant changes in sustainability and financial performance relative to those with lower-paid CSOs. While firms with highly paid CSOs tend to exhibit a reduction in future ESG controversies, their financial performance (market return) is also more likely to decline, suggesting that the market is skeptical about the trade-offs that the firm is making. These negative financial impacts primarily occur in firms where the highly paid CSO also serves as CEO or CFO.

The way that highly paid CSOs are compensated is important in determining their incentives and may impact the sustainability-related strategies that they pursue. Recent literature explores the effect of ESG objectives in the incentive pay contracts of highly paid executives (Cohen, Kadach, Ormazabal, and Reichelstein 2023). However, Cohen et al. (2023) do not consider differences across top-paid executives and their specific roles in the firm.

Further, we argue that the fundamental composition of the executive's contract (i.e., proportion of equity, bonus, and salary) is an important driver of executive behavior. For example, a CSO whose total pay is predominantly based upon financial performance (e.g., via equity grants based upon short term financial performance) has an incentive to avoid sustainability-related investments that will not produce immediate financial benefits. This short-term focus could delay or reduce improvements in the firm's sustainability performance.

Results of our analysis indicate that CSO pay composition differs significantly from both CEO and CFO pay composition. Compared to both CEOs and CFOs, CSOs have a higher proportion of total pay that is salary-based and a lower proportion of total pay that is equity-based. This compensation structure is consistent with the unique challenges CSOs face in managing sustainability performance, which may negatively impact short-term financial outcomes. Notably, despite having contracts with a stronger emphasis on salary, CSOs still receive a significant portion of their compensation in equity (averaging 71.03% in our sample), potentially influencing the trade-offs they must navigate when making sustainability-related decisions that carry short-term financial consequences. In further analysis, we examine the relation between the compensation composition and firm sustainability and financial outcomes. We find that firms with highly paid CSOs who have higher *proportions* of salary-based pay are more successful at improving sustainability performance.

Our paper contributes to the extensive literature on executive compensation by specifically examining the compensation structures of CSOs and the implications of these structures on sustainability outcomes. While early studies primarily focus on CEO compensation (e.g., Hall and Liebman, 1998; Bertrand and Mullainathan, 2001; Baker and Hall, 2004), our research expands this enquiry to include sustainability executives, a group that has received much less attention. The issue of how CSOs are compensated and their effectiveness at improving sustainability performance will become increasingly important. The

number of top-paid executives who are CSOs is increasing and firms face increased pressures to report on their sustainability governance mechanisms and performance, as well as details regarding how sustainability-related measures are included in executive compensation (e.g., IFRS 2023). Moreover, by examining the implications of dual roles held by CSOs, particularly when they also serve as CEOs or CFOs, we offer a nuanced perspective on the complexities of aligning executive incentives with long-term sustainability goals. This informs both academics and practitioners about the strategic importance of effective sustainability leadership in today's evolving corporate landscape.

2. Literature Review and Hypothesis Development

Research on the effect of highly paid CSOs on corporate ESG objectives is mixed. Prior evidence suggests that highly paid CSOs channel managerial attention toward resolving socially irresponsible activities, thereby improving ESG ratings (Fu, Tang and Chen 2020). Investor reaction to appointment of CSOs to the top five highest-paid is muted but is more positive when firms have sustainability concerns, and appointments appear to coincide with improvements in operating performance (Arora, Hora, Singhal, and Subramanian 2020). Other papers find that CSOs represent a symbolic, rather than substantive mechanism to improve ESG outcomes. Peters, Romi, and Sanchez (2019) find that poor ESG performers experience either no benefit or a deterioration in ESG performance after CSO appointments. Similarly, Kanashiro and Rivera (2019) find that the appointment of a highly paid CSO in highly pollutive industries is associated with a negative effect on pollution emissions and only has a positive influence on pollution emissions when the firm is subject to strict environmental regulations.

It is possible that the conflicting results in the literature are because of differences in the CSO compensation composition across the studies. Similar to most top executives, highly paid CSOs are compensated by some combination of salary, bonus, and equity incentives. This

mixture of payment forms is consistent with Holmstrom (1979), who finds that if principals only pay fixed compensation to the agent then the agent's incentives are weak and their effort is lower than it otherwise would have been. Further, a common view holds that firms should grant equity linked pay, such as stock and stock options to CEOs to make them behave more like owners.[1] Applying this logic to CSOs, it is important to include some variable pay (either bonus or equity linked pay) to motivate the CSO agent and to make the CSO behave more like an owner.

However, CSOs are responsible for a broad range of firm activities. In a multi-task setting with multiple performance measures, Holmstrom and Milgrom (1991) demonstrate that principals may prefer to not use variable pay. The reason is that incentive distortions to effort allocation across tasks means that some tasks may never get done because they have no reliable performance measure to imperfectly capture their effect. Further, measuring performance for many CSO activities by financial outcomes is frequently impossible. This limits the ability of firms to contract on summary measures that aggregate success across the CSOs many activities. As a result, CSOs likely have a broad range of non-financial key performance indicators (KPIs) that imperfectly measure their performance. In contrast, CEOs and CFOs are primarily focused on the financial performance of the firm, making it easier to include variable compensation based upon summary statistics such as ROA or stock market return to incentivize performance.

The problems with measuring sustainability performance notwithstanding, it is still possible for equity-based compensation schemes to motivate CSOs. As discussed in Edmans (2024), sustainability goals should be focused on creating sustainable, or long term, value for the company. If this is the case, then sustainability initiatives should have valuation

[1] Extending the argument, firms should also grant stock options to shield the executives from downside risk so they are more willing to take risk investment projects. This study does not specifically examine option grants to CSOs.

implications for investors who use expected future firm payouts to investors (in the dividend discount model) or expected future abnormal earnings (in the Ohlson model) to value a company.

Based upon the multi-dimensional nature of CSO activities and the difficulty of finding high-quality performance measures, while they may have some equity-based pay, we expect CSOs to have a higher proportion of fixed pay (and a lower proportion of variable pay) than either CEOs or CFOs.

H1: Highly paid CSOs have a compensation structure that has a greater (lower) proportion of fixed salary (equity and bonus)

The decision to elevate CSOs to be among the highest-paid executives raises important questions about the impact of their leadership on sustainability outcomes. Firms that appoint CSOs to be among the highest-paid executives send a strong signal to the market regarding their commitment to sustainability, suggesting that these companies are more likely to allocate resources toward achieving positive sustainability outcomes (Fu, Tang, and Chen, 2020). The presence of a highly paid CSO can have both symbolic and substantive implications. On the one hand, their inclusion in the top-paid executives can enhance the firm's ESG disclosures, improving transparency and fostering stakeholder trust. On the other hand, it raises the expectation that these firms will achieve tangible improvements in ESG performance, such as reducing environmental violations or enhancing social responsibility initiatives.

However, the impact of highly paid CSOs on firm performance may be more complex than initially assumed. While their presence is likely to improve sustainability outcomes, this may not always translate into immediate financial gains. sustainability initiatives often require substantial upfront investments, which can negatively affect short-term financial performance.

For example, the costs associated with adopting environmentally friendly technologies or improving labor practices may not yield immediate financial returns, particularly in firms that operate in heavily regulated industries or face significant sustainability-related risks (Arora et al., 2020). Furthermore, markets tend to be short-term focused, and investors may undervalue the long-term benefits of sustainability initiatives. As a result, firms with highly paid CSOs may see improvements in their sustainability performance, but these benefits may not be reflected in traditional financial metrics such as return on assets (ROA) or stock returns in the short term.

Based on this reasoning, we hypothesize that the presence of highly paid CSOs will be associated with better sustainability performance, as reflected in reduced ESG controversies and improved ESG scores. However, these improvements may not immediately translate into enhanced financial performance, particularly in the short term. Thus, we propose the following hypothesis:

H2a: Companies with highly paid CSOs have better ESG performance.
H2b: Companies with highly paid CSOs have lower ROA and stock market returns

3. Research Design

3.1. Empirical tests of H1 and H2

Our first hypothesis concerns the structure of compensation for CSOs relative to other top-five executives. Our tests of the hypothesis focus on firms with top-paid CSOs and employ univariate comparisons of the amount and composition (salary, bonus, equity) of CSOs versus CEOs and CFOs, who are also in the top-five-paid executives. A univariate analysis is appropriate because all comparisons are within firm-year, which controls for company characteristics.

Our second hypothesis concerns the impact of having a highly paid CSO. We estimate a model of changes in ESG outcomes and future financial performance. Our variable of interest in this model is *HiPaidCSO*, an indicator variable that is equal to one for a firm-year observation that has a CSO in the top five highest-paid employees. Specifically, we estimate the following linear probability model:

$$P(ESGScore\_decline_{t+1}) \,/\, P(ControversyScore\_decline_{t+1}) \,/\, \Delta ROA_{t+1} \,/\, \Delta RET\_12_{t+1} = \beta_0 + \beta_1 HiPaidCSO_t + \beta_2 Tangibility_t + \beta_3 LBM_t + \beta_4 Leverage_t + \beta_5 Assets_t + \beta_6 InstOwnership_t + \beta_7 \%Indep_t + \beta_8 ROA_t + \beta_9 RET12_t + \beta_{10} ESGScore_t + \beta_{11} ControversyScore_t + Industry\ Fixed\ Effects + Year\ Fixed\ Effects + \varepsilon_t \quad (1)$$

Equation (1) includes either ESG outcomes or measures of financial performance as the dependent variable. The two ESG outcomes we consider are (1) the probability that the ESG rating in the next year is lower than it was in the current year ($ESGScore\_decline_{t+1}$) and (2) the probability that the firm's Controversies Score is less than one in the next year ($ControversyScore\_decline_{t+1}$). The two measures of financial performance we consider are (1) the change in return on assets from the current year to the next year (ΔROA_{t+1}) and (2) the change in the annual stock return from the current year to the next year (ΔRET_12_{t+1}).

We control for any relation between the determinants of these outcomes that may also determine CSO pay. We include the log of total assets *(Assets)* because larger firms are scrutinized more for negative ESG performance. Growth and performance also could impact the costs and benefits of investing in ESG initiatives. We include *LBM,* the log of the book to market ratio, to capture growth firms. We also include return on assets *(ROA)* as a measure of accounting performance and the firm's annual stock return (*RET_12*) to capture stock market performance. We include two measures of ESG performance, the Refinitiv ESG rating (*ESGScore)* and controversies score (*ControversyScore*) because prior ESG performance is predictive of future ESG outcomes and financial performance. Since ESG outcomes and financial performance are impacted by the firm's financial policies we include *Leverage,* total debt scaled by total assets. Since tangible assets are more easily collateralizable, we include

Tangibility, the ratio of property, plant, and equipment over the firm's total assets. Finally, inefficient contracting at the top management level may influence the choice to promote a CSO to the top-paid executives so we include measures of board monitoring *(%Indep)* and investor monitoring *(InstOwnership)*. We also include fiscal year fixed effects and Fama-French 49 industry fixed effects in all regressions to address unobservable correlated variables that are time-invariant or industry-invariant, respectively.

4. Sample and Descriptive Statistics

4.1. Sample

To identify companies with CSOs, we start with 29,207 firm-year observations from U.S. public companies covered by both the ExecuComp and BoardEx databases between 2007 and 2022. ExecuComp provides detailed compensation data for top executives. BoardEx provides information on board composition and a broader range of executive roles, allowing us to identify CSOs and their positions within the management team. Our sample period begins in 2007, when changes in compensation disclosure standards improved the reliability of executive compensation data. Our sample period ends in 2022, the most recent year for which we can measure the ESG consequences of CSOs.

To identify executives who are CSOs, we match each executives' job title(s) against a list of sustainability-related job titles from a group-manual-coded position dataset.[2] This approach allows us to identify executives who hold CSO roles, even if their precise titles vary across firms. To ensure accurate industry classification and to control for industry effects, we exclude 65 firm-year observations lacking Standard Industrial Classification (SIC) codes from

[2] We downloaded all of the job titles from BoardEx and ExecuComp and identified job titles that had words related to environment, social, and more general sustainability. After we applied these terms to the list of titles for our sample, we manually checked the observations to ensure that the executives had sustainability-related duties. Our definition of CSOs includes executives with titles such as: Chief Sustainability Officer; Chief ESG Officer; Chief Compliance & Sustainability Officer; Senior Vice President of Environmental, Health, Safety and Social Responsibility, Chief of Health, Safety & Environment Officer, etc. We also use executive descriptions to determine whether the CSO is focused on environmental, social, or combined goals.

Compustat. We exclude 22,556 firm-year observations with no identified CSO. This results in 6,586 firm-year observations with available industry data and a designated CSO. We further exclude 325 firm-year observations with missing financial or market data from Compustat, CRSP, or Thomson Reuters Institutional (13f) Holdings, and 699 firm-year observations with incomplete environmental, social, and governance (ESG) data from Refinitiv ESG. These exclusions yield a final sample of 5,562 firm-year observations with the comprehensive financial, governance, and ESG information necessary for our analysis.

We classify CSOs as highly paid if they are among the top five highest-paid executives as reported in ExecuComp. This classification aligns with executive compensation reporting standards and indicates that the CSO holds a significant and influential role within the company's leadership structure. Our treatment group consists of 375 firm-year observations for which the list of top five highest-paid executives includes a member with a CSO job title. The remaining 5,187 firm-year observations serve as a control group. The distinction between highly paid and other CSOs allows us to explore the impact of appointing a highly paid CSO on company performance, particularly with respect to ESG outcomes. Table 1 presents details of our sample construction.

[*Insert Table 1 approximately here*]

4.2. Descriptive Statistics

Table 2 presents sample descriptive statistics. Panel A provides descriptive statistics for the total sample. On average, sample firms are profitable (mean *ROA* = 5.2%) and have strong positive annual market returns (mean *RET_12* = 12.9%). The average ESG Score from Refinitiv (*ESGScore)* is 0.563 and the average controversy score (*ControversyScore)* is 0.779. A significant number of sample firm-years represent a decline overall sustainability performance (38.5% have a decline in *ESGScore*). A smaller proportion of firm-years have a decline in the ESG-related controversies score (28.3% have a decline in *ControversyScore*),

representing a new or worsening ESG controversy. Consistent with the universe of companies covered by ExecuComp, sample firms are large (average log of total assets in $million, *Assets,* is 9.608) and have a high proportion of institutional ownership (mean *InstOwnership* = 75.6%). Across the sample, boards of directors have a high proportion of independent board members (mean *%Indep* = 87.9%).

[*Insert Table 2 approximately here*]

Table 2, panel B provides descriptive statistics for subsamples based upon whether the firm has a CSO in the top five highest-paid executives (*HiPaidCSO* = 1) or a CSO that is not among the top five highest-paid executives (*HiPaidCSO* = 0). We perform both parametric and non-parametric tests of differences across subsamples. Firms with highly paid CSOs are smaller ($p < 0.01$) and have higher leverage ($p < 0.01$). They have significantly fewer ESG controversies (i.e., a higher controversies score; $p < 0.10$), but the Refinitiv ESG scores do not significantly differ across sub-samples ($p > 0.10$). Firms with highly paid CSOs also are more capital-intensive ($p < 0.01$). It is possible that some of these differences are driven by industry. To examine this, in Table 2, panel C we compare the industry composition across highly paid CSO firm-year observations and observations with a CSOs that is not highly paid. Based upon the sample industry composition, it appears that environmentally sensitive industries have a higher proportion of highly paid CSOs (e.g., Oil, Gas, and Coal Extraction and Products; Utilities).

4.3. Tests of H1: Compensation structure of CSOs

Table 3, panel A presents results of paired t-tests for differences in pay structure for CSOs relative to CEOs and CSOs within the same firm. Table 3, panel B presents results of non-parametric tests. Overall, inferences from both panels are the same.[3] Unsurprisingly, relative

[3] Note that the sum of percentages for compensation components for each type of manager is not equal to one. This is because the median manager differs across the compensation components.

to CEOs, highly paid CSOs have overall lower pay. Their pay composition also differs significantly, with CSOs receiving a larger proportion of salary, and a lower proportion of equity compensation. This is consistent with CEO incentive contracts aligning their incentives with owners. A stronger focus on salary-based compensation for CSOs is consistent with their span of control and the potential negative short-term financial impacts of decisions necessary to address the firm's sustainability performance. It is interesting to note that CSOs still have a large proportion of equity-pay based pay (average = 71.03%, median = 73.83%), which may impact the tradeoffs that they face when making sustainability-related decisions that have significant short-term financial implications.

4.4. Results from tests of H2a and H2b

We present results from tests of H2a and H2b in Table 4. In panel A, univariate results indicate that firms with highly paid CSOs are more likely to have fewer ESG controversies in the next year ($p < 0.05$). Changes in stock returns are marginally statistically lower in these firms, but only for the median ($p < 0.10$). We do not find univariate differences the change in ESG score or in ROA.

Table 4, panel B presents results of estimating equation (1). Each column contains estimates for models with different measures of performance as the dependent variable. Column (1) results do not provide evidence of a significant difference in ESG performance for firms with highly paid CSOs versus firms with CSOs who are not highly paid. In column (2), however, we find marginally significant evidence ($p < 0.10$) that firms with highly paid CSOs are more likely to have a decrease in ESG controversies. For financial performance, we do not find that having a highly paid CSO differentially relates to change in ROA but returns deteriorate significantly ($p < 0.05$). It is possible that the market does not have a positive view of the tradeoffs that CSOs make as they seek to reduce the firm's ESG controversies.

5. Additional Tests

5.1. The dual role of CSO/CEO or CSO/CFO and the effect of Highly Paid CSOs on ESG and financial performance

Out of the 375 CSO observations in our sample 61 (6) of them represent instances where the CEO (CFO) has taken the on role of the CSO in addition to their current duties. CEOs and CFOs are unlikely to have the expertise to achieve ESG outcomes. However, given their span of control, they are better able to influence the operations of a business. It is important for us to consider the effect of multiple titles in our analysis. First, we argue that moving the CSO to a top five highest-paid position signals the importance of sustainability to the firm. Giving the CEO or CFO the CSO title may also impact performance but there is likely a difference between elevating a sustainability specialist to the top five highest-paid executives versus giving someone who is already in the top five highest-paid executives an additional title. Most CEOs and CFOs are not sustainability experts, although their broader span of control may make them more effective at implementing sustainability-related initiatives. It is also unclear whether designating the CEO or CFO signals an increased investment in sustainability since these executives are already highly paid.[4] Since it is unclear how these dual roles influence our results, we adjust Equation (1) to capture the effect highly paid CSOs who are also CEOs or CFOs. Specifically, we estimate the following model:

$$P(ESGScore\_decline_{t+1}) \,/\, P(ControversyScore\_decline_{t+1}) \,/\, \Delta ROA_{t+1} \,/\, \Delta RET\_12_{t+1} = \beta_0 + \beta_1 HiPaidCSO_t + \beta_2 HiPaidCSO\_CEO_t + \beta_3 HiPaidCSO\_CEO_t + \beta_4 Tangibility_t + \beta_5 LBM_t + \beta_6 Leverage_t + \beta_7 Size_t + \beta_8 InstOwnership_t + \beta_9 \%Indep_t + \beta_{10} ROA_t + \beta_{11} RET\_12_t + \beta_{12} ESGScore_t + \beta_{13} ControversyScore_t + Industry\ Fixed\ Effects + Year\ Fixed\ Effects + \varepsilon_t \quad (2)$$

Where *HiPaidCSO_CEO* is an indicator equal to one for a highly paid CSO who is also CEO and *HiPaidCSO_CFO* is an indicator equal to one for a highly paid CSO who is also CFO. Dependent variables and controls are the same as described in Equation (1).

[4] In future work we plan to investigate contractual details for the CSOs and will be able to examine changes in contracts when a CEO or CFO is also named CSO.

Results from this test are presented in Table 5 Panel A. Results for ESG outcomes are in columns (1) and (2), and for financial outcomes in columns (3) and (4). Across the models, we do not find evidence that the standalone CSOs impact either sustainability or financial performance significantly more than the CSOs with multiple titles. Indeed, when we split out CSOs with multiple titles, none of the categories of highly paid CSOs has a significantly incremental impact on sustainability performance. Results for financial performance are different, however. CEO/CSOs have a marginally negative impact on market returns ($p < 0.10$). CFO/CSOs have a significantly negative impact on both ROA ($p < 0.05$) and market returns ($p < 0.01$). This evidence is consistent with CEO/CSOs and CFO/CSOs diverting resources away from short term performance goals to achieve ESG objectives. However, our tests do not find evidence that they are able to achieve these outcomes in the short term.

In Table 5, panel B we estimate Equation (2) using only the sample of firms with highly paid CSOs. Results from this test corroborate those in Panel A and suggest that CEO/CSOs and CFO/CSOs have poorer future stock market performance.

5.2. Compensation incentives and the effect of Highly Paid CSOs on ESG and financial performance

Given the signal and resource implications for elevating a CSO to one of the highest-paid executives, it is surprising that we fail to find evidence of an impact of having highly paid CSOs on sustainability performance when we remove CEO/CSOs and CFO/CSOs. We therefore examine CSO pay structure as a potential reason why CSOs who are not also CEOs or CFOs do not affect ESG outcomes.

In our examination of CSO pay in table 3 and discussed in section 4.1, CSOs receive more salary and bonus pay and less equity pay than CEOs or CFOs. This is consistent with a focus on ESG objectives rather than short term profits. CSOs whose compensation incentives deviate from focusing on sustainability-related investments or resource allocation due to

receiving more equity pay or less bonus and salary could be impacting our results. To explore this, we focus on only CSOs who are not CEOs or CFOs and consider median splits on the percentage of total pay that the CSO received from Equity, Bonus, and Salary. Specifically, we estimate the following models:

$$P(ESGScore\_decline_{t+1}) \,/\, P(ControversyScore\_decline_{t+1}) \,/\, \Delta ROA_{t+1} \,/\, \Delta RET\_12_{t+1} = \beta_0 + \beta_1 HiPaidCSO\_HiComponent_t + \beta_2 HiPaidCSO\_LoComponent_t + \beta_3 Tangibility_t + \beta_4 LBM_t + \beta_5 Leverage_t + \beta_6 Assets_t + \beta_7 InstOwnership_t + \beta_8 \%Indep_t + \beta_9 ROA_t + \beta_{10} RET\_12_t + \beta_{11} ESGScore_t + \beta_{12} ControversyScore_t + Industry\ Fixed\ Effects + Year\ Fixed\ Effects + \varepsilon_t \quad (3)$$

Where *HiPaidCSO_HiComponent* (*HiPaidCSO_LoComponent*) comprise indicators for standalone CSO compensation that are 1 (0) for percentages of the compensation component (equity, bonus, or salary) that are above (below) the median of all standalone CSOs. Dependent variables and controls are the same as described in Equation (1).

Results from these tests are presented in Table 6. We first consider splits based on CSO equity pay percentage in Table 6, panel A. Columns (1) and (2) of Table 6, panel A focus on ESG outcomes. In column (2) we find a negative and significant coefficient on *HiPaidCSO_LoEquity* ($p<0.01$). This result indicates that standalone CSOs who have lower financial performance-based incentives are less likely to have future ESG controversies. Columns (3) and (4) of Table 6, panel A consider future financial performance. We do not find a differential effect on financial performance for CSOs based upon their equity-based incentives.

Table 6, panel B focuses on bonus pay. As before, the first two columns examine changes in sustainability performance and the last two columns focus on financial performance. Across the models, none of the coefficients of interest are significantly different from zero. We thus do not find a differential effect on sustainability or financial performance for CSOs based upon their bonus pay percentage.

Finally, in Table 6, panel C we consider the impact of CSO salary pay percentage on future sustainability and financial performance. Results in column (2) indicate that firms with highly paid CSOs who have a high proportion of salary compensation are more likely to have a reduction in ESG controversies ($p < 0.01$). Unexpectedly, firms with highly paid CSOs with a relatively low percentage of salary-based compensation have a weakly statistically significant decline in market return ($p < 0.10$).

6. Discussion and Conclusions

A growing number of companies are focusing on sustainability by appointing a chief sustainability officer. In some companies, the CSO becomes one of the five highest-paid executives. Highly paid executives within organizations are viewed as having greater power. This is an interesting phenomenon because many companies have CSOs but do not elevate them to the top executive suite. The role of a CSO is very different from that of other executives that are typically included in the top-paid positions, such as the CEO and the CFO. In the past, executives were typically focused on the financial performance of the firm, whereas a CSO is clearly expected to focus on more than financial performance and may indeed have incentives to reduce current financial performance to manage sustainability-related issues.

We examine a sample of firms where the CSO is among the top five highest-paid positions in the company. Details of compensation for these executives are available from proxy statements, allowing us to better disentangle different monetary incentives granted to CSOs. We argue that elevation of the CSO to one of the most highly paid positions in the firm likely occurs in firms that seek to emphasize non-financial performance. However, it is not only the amount of pay, but also the composition of pay (i.e., salary, bonus, equity) that determines the executive's incentives. We find that CSOs with higher equity incentives are less likely to improve their firm's sustainability performance. This is consistent with these

executives pursuing short-term financial performance at the expense of improving sustainability performance. CSOs thus respond to economic incentives in a way that is similar to other executives.

In some firms, the CSO position is not standalone, but is added to the duties of the CEO or CFO. We fail to find evidence that this choice is any more effective at improving sustainability performance. Further, we find that firms with CEO/CSOs or CFO/CSOs experience declines in financial performance. This may be because these executives may not have the necessary sustainability-related expertise to allocate firm resources to effective sustainability-focused initiatives. .

While our analysis has focused on the components of compensation, we do not examine specific features such as Key Performance Indicators (KPIs) and targets used in CSO compensation contracts, and how these aspects differ from the other top-paid executives. For example, we would expect that a greater fraction of KPIs for CSOs are directly linked to sustainability outcomes. Based upon these contract details, future research can extend our findings to investigate specific CSO incentives and their effectiveness in improving sustainability performance.

Our discussion has focused within firms. Future research can investigate the use of common performance measures across organizations. For example, are sustainability measures evaluated in a relative sense, comparing with sustainability outcomes or trends at peer or aspiration companies? Further, are sustainability targets set based on other firms?

The issues that we explore in this paper will become increasingly important and will continue to be an interesting area of research. With the advent of increased mandatory sustainability reporting requirements, it is likely that sustainability will become a greater priority within firms. Based upon the potential liability for improper reporting as well as legal and reputational risks stemming from the items reported, it is possible that firms will

increasingly elevate the role of the CSO to be one of the top-paid positions and that incentive contracts will change to reflect these new mandates.

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Appendix A: Variable definitions and sources

Variable	Description and source(s)
HiPaidCSO	An indicator variable equal to one if the firm has a CSO in the top five highest-paid executives, equal to zero otherwise. Source: ExecuComp
HiPaidCSO_CEO	An indicator variable equal to one when HiPaidCSO = 1 and the CSO is also the CEO, equal to zero otherwise. Source: ExecuComp
HiPaidCSO_CFO	An indicator variable equal to one when HiPaidCSO = 1 and the CSO is also the CEO, equal to zero otherwise. Source: ExecuComp
HiPaidCSO_HiEquity	An indicator variable equal to one when HiPaidCSO = 1, the CSO is not a CEO or CFO, and the CSO has above median equity percentage for highly paid CSOs, equal to zero otherwise. Source: ExecuComp
HiPaidCSO_LoEquity	An indicator variable equal to one when HiPaidCSO = 1, the CSO is not a CEO or CFO, and the CSO has below median equity percentage for highly paid CSOs, equal to zero otherwise. Source: ExecuComp
HiPaidCSO_HiBonus	An indicator variable equal to one when HiPaidCSO = 1, the CSO is not a CEO or CFO, and the CSO has above median bonus percentage for highly paid CSOs, equal to zero otherwise. Source: ExecuComp
HiPaidCSO_LoBonus	An indicator variable equal to one when HiPaidCSO = 1, the CSO is not a CEO or CFO, and the CSO has below median bonus percentage for highly paid CSOs, equal to zero otherwise. Source: ExecuComp
HiPaidCSO_HiSalary	An indicator variable equal to one when HiPaidCSO = 1, the CSO is not a CEO or CFO, and the CSO has above median salary percentage for highly paid CSOs, equal to zero otherwise. Source: ExecuComp
HiPaidCSO_LoSalary	An indicator variable equal to one when HiPaidCSO = 1, the CSO is not a CEO or CFO, and the CSO has below median salary percentage for highly paid CSOs, equal to zero otherwise. Source: ExecuComp
ESGScore	Unweighted ESG Score. Source: Refinitiv
ESGScore_decline	An indicator variable equal to one if the firm ESG Score is lower in the current year than the previous year, equal to zero otherwise. Source: Refinitiv
ControversyScore	ControversyScore equal to one if there are no ESG controversies and decreasing in severity of ESG controversies. Source: Refinitiv
ControversyScore_decline	An indicator variable equal to one if the firm's Controversies is lower in the current year than the previous year, equal to zero otherwise. Source: Refinitiv
ROA	Return on assets. Source: Compustat
RET_12	The 12 month stock return for the firm. Source: CRSP
Tangibility	The property, plant and equipment scaled by total assets. Source: Compustat.
LBM	The natural log of the book to market ratio. Source: Compustat
Leverage	The total debt scaled by total assets. Source: Compustat.
Assets	The natural log of total assets. Source: Compustat
InstOwnership	The percentage of shares owned by institutional investors. Source: Thomson Reuters Institutional (13f) Holdings
%Indep	The percentage of outside directors sitting on the board at the time of the annual meeting. Source: BoardEx

Table 1. Sample Construction

All US public firm-year observations covered by both ExecuComp and BoardEx (2007-2022 fiscal year)	29,207
Less: Firm-years with no industry data (sich from Compustat)	(65)
Less: Firm-years with no CSO	(22,556)
Equals: Firm-years with CSO and available industry data	6,586
Less: Firm-years with missing data from Compustat, CRSP, and Thomson Reuters Institutional (13f) Holdings	(325)
Less: Firm-years with missing data from Refinitiv ESG	(699)
Equals: Final sample	5,562
Of which:	
• Firm-years with non-highly paid CSO (Control Group)	5,187
• Firm-years with highly paid CSO (Treatment Group)	375

This table presents the process we followed when constructing the sample used in our analysis

Table 2. Descriptive Statistics

Panel A. Total Sample

	N	Mean	Std. Dev.	p25	Median	p75
Variables of Interest						
ESGScore	5,562	0.563	0.184	0.426	0.581	0.709
ESGScore_decline	5,562	0.385	0.487	0.000	0.000	1.000
ControversyScore	5,562	0.779	0.327	0.588	1.000	1.000
ControversyScore_decline	5,562	0.283	0.450	0.000	0.000	1.000
ROA	5,562	0.052	0.072	0.016	0.046	0.085
RET_12	5,562	0.129	0.353	-0.088	0.107	0.309
Control Variables						
Tangibility	5,562	0.277	0.261	0.065	0.175	0.459
LBM	5,562	0.477	0.166	0.353	0.494	0.610
Leverage	5,562	0.293	0.184	0.158	0.279	0.399
Assets	5,562	9.608	1.571	8.535	9.547	10.607
InstOwnership	5,562	0.756	0.242	0.702	0.816	0.906
%Indep	5,562	0.879	0.057	0.857	0.900	0.917

Panel B. Comparison of sample firms with CSOs and sample firms with highly paid CSOs

	HiPaidCSO = 1			HiPaidCSO = 0			Difference			
	count	Mean	Median	count	Mean	Median	Mean	t	Median	z
ESGScore	375	0.553	0.560	5,187	0.564	0.583	-0.011	-1.13	0.023	0.71
ControversyScore	375	0.814	1.000	5,187	0.777	1.000	0.038*	2.26	0.000***	2.69
ROA	375	0.046	0.045	5,187	0.053	0.046	-0.006	-1.60	0.001	0.54
RET_12	375	0.121	0.086	5,187	0.129	0.109	-0.008	-0.41	0.023	1.49
Tangibility	375	0.359	0.284	5,187	0.271	0.168	0.088***	6.08	0.116***	7.74
LBM	375	0.474	0.494	5,187	0.477	0.494	-0.004	-0.43	-0.001	-0.12
Leverage	375	0.332	0.316	5,187	0.290	0.275	0.042***	4.48	0.041***	4.03
Assets	375	9.162	9.211	5,187	9.641	9.575	-0.479***	-6.12	-0.363***	-7.79
InstOwnership	375	0.768	0.841	5,187	0.755	0.814	0.014	1.03	0.026	1.20
%Indep	375	0.880	0.889	5,187	0.879	0.900	0.001	0.54	-0.011***	-3.49

Panel C. Industry composition of sample firms with CSOs and sample firms with highly paid CSOs

		HiPaidCSO = 1			CSO (HiPaidCSO = 0)		
	FF12 Industry	N	% of Total	% of ExecuComp/Boardex	N	% of Total	% of ExecuComp/Boardex
1	Consumer NonDurables -- Food, Tobacco, Textiles, Apparel, Leather, Toys	19	5.07%	0.05%	325	6.27%	0.86%
2	Consumer Durables -- Cars, TV's, Furniture, Household Appliances	12	3.20%	0.03%	58	1.12%	0.15%
3	Manufacturing -- Machinery, Trucks, Planes, Off Furn, Paper, Com Printing	28	7.47%	0.07%	551	10.62%	1.46%
4	Oil, Gas, and Coal Extraction and Products	39	10.40%	0.10%	309	5.96%	0.82%
5	Chemicals and Allied Products	37	9.87%	0.10%	223	4.30%	0.59%
6	Business Equipment -- Computers, Software, and Electronic Equipment	33	8.80%	0.09%	844	16.27%	2.23%
7	Telephone and Television Transmission	11	2.93%	0.03%	149	2.87%	0.39%
8	Utilities	45	12.00%	0.12%	391	7.54%	1.03%
9	Wholesale, Retail, and Some Services (Laundries, Repair Shops)	34	9.07%	0.09%	455	8.77%	1.20%
10	Healthcare, Medical Equipment, and Drugs	9	2.40%	0.02%	260	5.01%	0.69%
11	Finance	20	5.33%	0.05%	894	17.24%	2.36%
12	Other -- Mines, Constr, BldMt, Trans, Hotels, Bus Serv, Entertainment	88	23.47%	0.23%	728	14.04%	1.92%
	Total	375	100.00%	0.99%	5,187	100.00%	13.70%

This table reports descriptive statistics for the sample of firm-years used in our analysis. Panel A presents statistics for the total sample. Panel B presents a t-tests of differences in mean and Wilcoxon rank-sum tests of differences in median variables across observations with highly paid CSOs and observations with CSOs that are not highly paid. Panel C presents the industry composition of observations with highly paid CSOs and observations with CSOs that are not highly paid. We winsorize all continuous variables at the 1st and 99th percentile. *, **, and *** denote significance at the 0.1, 0.05, and 0.01 levels, respectively. All variables are defined in Appendix A.

Table 3. Tests of H1: Components of Chief Sustainability Officer pay

Panel A. Paired t-tests

		CSO		CEO		Difference			
	N	**mean**	**%**	**mean**	**%**	**mean**		**%**	
Salary	355	527.89	26.40%	997.44	16.04%	-469.55	***	10.36%	***
Bonus	355	142.06	2.54%	296.34	2.44%	-154.28	***	0.10%	
Equity	355	2,413.63	71.03%	8,474.10	81.52%	-6,060.47	***	-10.49%	***
Total	355	3,083.58	100.00%	9,767.88	100.00%	-6,684.30	***		

		CSO		CFO		Difference			
	N	**mean**	**%**	**mean**	**%**	**mean**		**%**	
Salary	355	527.89	26.40%	554.78	24.94%	-26.90	*	1.46%	**
Bonus	355	142.06	2.54%	53.49	2.09%	88.57	*	0.45%	
Equity	355	2,413.63	71.03%	2,620.19	72.97%	-206.56		-1.94%	***
Total	355	3,083.58	100.00%	3,228.47	100.00%	-144.89			

Panel B. Wilcoxon signed-rank test

		CSO		CEO		Difference			
	N	**median**	**%**	**median**	**%**	**median**		**%**	
Salary	355	452.00	24.78%	963.90	13.09%	-511.90	***	11.69%	***
Bonus	355	-	0.00%	-	0.00%	0.00	***	0.00%	
Equity	355	1,385.79	73.83%	5,910.52	85.58%	-4,524.73	***	-11.75%	***
Total	355	1,875.55		7,111.25		-5,235.70	***		

		CSO		CFO		Difference			
	N	**median**	**%**	**median**	**%**	**median**		**%**	
Salary	355	452.00	24.78%	504.98	22.13%	-52.98	***	2.65%	***
Bonus	355	-	0.00%	-	0.00%	0.00	*	0.00%	
Equity	355	1,385.79	73.83%	1,804.46	76.70%	-418.67	***	-2.87%	***
Total	355	1,875.55		2,326.07		-450.52	***		

This table reports tests of H1 comparing the composition of CSO pay to that of CEOs and CFOs. Panel A presents paired t-tests of differences in mean amount and percentage of pay by component. Panel B presents Wilcoxon signed-rank tests of differences in the median amount and percentage of pay by component. *, **, and *** denote significance at the 0.1, 0.05, and 0.01 levels, respectively. All variables are defined in Appendix A.

Table 4. Tests of H2: The effect of highly paid CSOs on firm performance and ESG outcomes
Panel A: Univariate tests

	HiPaidCSO = 1			HiPaidCSO = 0			Difference			
	count	Mean	Median	count	Mean	Median	Mean	t	Median	z
$ESGScore\_decline_{t+1}$	375	0.400	0.000	5,187	0.406	0.000	-0.006	-0.24	0.000	-1.24
$ControversyScore\_decline_{t+1}$	375	0.248	0.000	5,187	0.300	0.000	-0.052*	-2.24	0.000***	-2.64
ΔROA_{t+1}	251	-0.003	0.000	4,194	0.000	0.000	-0.003	-0.80	0.000	-0.99
ΔRET_12_{t+1}	251	-0.077	-0.068	4,197	-0.024	-0.042	-0.054	-1.70	-0.026*	-1.75

Panel B: Multivariate tests

	(1) $ESGScore\_decline_{t+1}$	(2) $ControversyScore\_decline_{t+1}$	(3) ΔROA_{t+1}	(4) ΔRET_12_{t+1}
HiPaidCSO	-0.020	-0.041*	-0.003	-0.044**
	(-0.768)	(-1.777)	(-0.710)	(-2.146)
Tangibility	-0.084**	0.008	0.015**	0.011
	(-1.986)	(0.165)	(2.223)	(0.349)
LBM	0.103*	-0.153**	-0.142***	-0.017
	(1.791)	(-2.495)	(-12.845)	(-0.330)
Leverage	0.020	0.063	-0.001	-0.022
	(0.480)	(1.525)	(-0.182)	(-0.657)
Assets	-0.037***	0.091***	0.002	-0.009*
	(-6.004)	(13.230)	(1.599)	(-1.656)
InstOwnership	-0.058**	-0.025	0.004	0.000
	(-2.248)	(-0.906)	(1.052)	(0.010)
%Indep	-0.275**	-0.177	-0.020	-0.250**
	(-2.147)	(-1.516)	(-1.436)	(-2.571)
ROA	0.115	-0.079	-0.508***	-0.101
	(0.995)	(-0.783)	(-18.722)	(-0.949)
RET_12	-0.020	-0.023	0.016***	-1.023***
	(-0.963)	(-1.248)	(4.702)	(-48.031)
ESGScore	0.697***	0.100**	0.009	0.041
	(13.488)	(2.157)	(1.491)	(1.155)
ControversyScore	0.010	0.127***	-0.002	-0.034*
	(0.423)	(4.852)	(-0.459)	(-1.728)
Ind. and Year FE	Yes	Yes	Yes	Yes
Observations	5,562	5,562	4,445	4,448
Adjusted R-squared	0.052	0.142	0.306	0.631

This table reports tests of the effect of highly paid CSOs on future sustainability and financial performance (H2). Panel A presents t-tests (Wilcoxon rank-sum tests) of differences in median (mean) measures of future sustainability and financial performance by *HiPaidCSO*. Panel B presents OLS regression results. *, **, and *** denote significance at the 0.1, 0.05, and 0.01 levels, respectively. All variables are defined in Appendix A.

Table 5. The effect of highly paid CSOs on firm performance and ESG outcomes when the CSO is the CEO or CFO

Panel A. Sample of firms with CSOs

	(1) ESGScore_decline $_{+1}$	(2) ControversyScore_decline $_{t+1}$	(3) ΔROA_{t+1}	(4) ΔRET_12_{t+1}
HiPaidCSO	-0.009	-0.034	-0.000	-0.023
	(-0.304)	(-1.372)	(-0.043)	(-1.035)
HiPaidCSO_CEO	-0.083	-0.048	-0.007	-0.081*
	(-1.270)	(-0.719)	(-0.902)	(-1.797)
HiPaidCSO_CFO	0.091	-0.014	-0.068**	-0.372***
	(0.503)	(-0.150)	(-2.239)	(-2.961)
Tangibility	-0.083*	0.009	0.015**	0.013
	(-1.959)	(0.183)	(2.252)	(0.409)
LBM	0.105*	-0.153**	-0.142***	-0.018
	(1.819)	(-2.484)	(-12.864)	(-0.362)
Leverage	0.021	0.064	-0.002	-0.024
	(0.519)	(1.534)	(-0.228)	(-0.697)
Assets	-0.037***	0.091***	0.002	-0.009*
	(-6.019)	(13.224)	(1.572)	(-1.690)
InstOwnership	-0.057**	-0.024	0.004	0.003
	(-2.235)	(-0.888)	(1.178)	(0.126)
%Indep	-0.270**	-0.175	-0.020	-0.243**
	(-2.109)	(-1.495)	(-1.378)	(-2.509)
ROA	0.113	-0.081	-0.509***	-0.113
	(0.976)	(-0.801)	(-18.767)	(-1.066)
RET_12	-0.020	-0.023	0.016***	-1.024***
	(-0.953)	(-1.252)	(4.652)	(-48.223)
ESGScore	0.697***	0.100**	0.009	0.042
	(13.504)	(2.160)	(1.509)	(1.191)
ControversyScore	0.011	0.127***	-0.002	-0.035*
	(0.471)	(4.860)	(-0.568)	(-1.810)
F-tests of combined coefficients				
HiPaidCSO + CSOIsCEO=0	-0.092	-0.082	-0.007	-0.104***
HiPaidCSO + CSOIsCFO=0	0.082	-0.048	-0.068**	-0.395***
Sample	CSO Firms	CSO Firms	CSO Firms	CSO Firms
Ind. and Year FE	Yes	Yes	Yes	Yes
Observations	5,562	5,562	4,445	4,448
Adjusted R-squared	0.052	0.141	0.308	0.631

Panel B. Sample of firms with Highly Paid CSOs

	(1) ESGScore_decline $_{+1}$	(2) ControversyScore_decline $_{t+1}$	(3) Δroa_{t+1}	(4) ΔRET_12_{t+1}
HiPaidCSO_CEO	-0.049	-0.004	-0.013	-0.129**
	(-0.598)	(-0.053)	(-1.101)	(-2.144)
HiPaidCSO_CFO	0.028	0.040	-0.049	-0.134**
	(0.140)	(0.306)	(-1.386)	(-2.395)
Tangibility	0.023	(0.095)	0.019	0.152
	(0.144)	-0.077	(0.693)	(0.843)
LBM	-0.170	(-0.267)	-0.153**	0.696**
	(-0.595)	0.056	(-2.094)	(2.009)
Leverage	0.203	(0.323)	-0.048	-0.374
	(0.934)	0.124***	(-1.078)	(-1.431)
Assets	-0.022	(4.402)	-0.003	-0.027
	(-0.707)	-0.162	(-0.808)	(-1.058)
InstOwnership	0.025	(-1.578)	0.008	0.123
	(0.275)	-0.014	(0.505)	(1.074)
%Indep	0.089	(-0.027)	0.083	-0.014
	(0.152)	0.053	(0.707)	(-0.023)
ROA	0.148	(0.118)	-0.737***	0.390
	(0.288)	0.040	(-6.830)	(0.707)
RET_12	0.113	(0.561)	0.012	-0.987***
	(1.180)	0.132	(0.856)	(-10.187)
ESGScore	0.673***	(0.800)	-0.008	0.068
	(3.053)	0.165	(-0.246)	(0.328)
ControversyScore	0.082	(1.373)	0.007	0.038
	(0.696)	-0.004	(0.428)	(0.420)
Sample	HiPaidCSO Firms	HiPaidCSO Firms	HiPaidCSO Firms	HiPaidCSO Firms
Ind. and Year FE	Yes	Yes	Yes	Yes
Observations	375	375	251	251
Adjusted R-squared	0.024	0.214	0.290	0.652

This table reports tests of the effect of highly paid CSOs who are also CEOs or CFOs on future sustainability and financial performance. Panel A presents OLS regression results estimated using the total sample. Panel B presents OLS regression results estimated using only the sample of highly paid CSOs. *, **, and *** denote significance at the 0.1, 0.05, and 0.01 levels, respectively. All variables are defined in Appendix A

Table 6. Components of Non-CEO/CFO CSO pay and the effect of highly paid CSOs on firm performance and ESG outcomes

Panel A. Non-CEO/CFO CSO Equity Pay and the Sample of Firms with CSOs

	(1) ESGScore_decline $_{t+1}$	(2) ControversyScore_decline $_{t+1}$	(3) ΔROA_{t+1}	(4) ΔRET_12_{t+1}
HiPaidCSO_HiEquity	-0.019	0.029	-0.005	-0.028
	(-0.479)	(0.883)	(-0.958)	(-1.009)
HiPaidCSO_LoEquity	0.006	-0.103***	0.005	-0.015
	(0.152)	(-3.656)	(0.966)	(-0.473)
Tangibility	-0.084**	0.008	0.015**	0.013
	(-1.966)	(0.176)	(2.246)	(0.394)
LBM	0.103*	-0.151**	-0.142***	-0.016
	(1.791)	(-2.457)	(-12.866)	(-0.304)
Leverage	0.019	0.060	-0.001	-0.023
	(0.462)	(1.460)	(-0.180)	(-0.693)
Assets	-0.036***	0.090***	0.002*	-0.009
	(-5.936)	(13.143)	(1.697)	(-1.579)
InstOwnership	-0.058**	-0.029	0.004	-0.000
	(-2.237)	(-1.045)	(1.109)	(-0.014)
%Indep	-0.276**	-0.178	-0.021	-0.252***
	(-2.152)	(-1.533)	(-1.467)	(-2.596)
ROA	0.116	-0.076	-0.508***	-0.098
	(1.007)	(-0.745)	(-18.786)	(-0.918)
RET_12	-0.020	-0.023	0.016***	-1.022***
	(-0.948)	(-1.285)	(4.727)	(-47.854)
ESGScore	0.697***	0.095**	0.009	0.040
	(13.466)	(2.055)	(1.530)	(1.122)
ControversyScore	0.009	0.127***	-0.002	-0.034*
	(0.412)	(4.839)	(-0.483)	(-1.739)
F-tests of combined coefficients				
HiPaidCSO_HiEquity - HiPaidCSO_LoEquity = 0	-0.025	0.132***	-0.010	-0.043
Sample	CSO Firms	CSO Firms	CSO Firms	CSO Firms
Ind. and Year FE	Yes	Yes	Yes	Yes
Observations	5,562	5,562	4,445	4,448
Adjusted R-squared	0.052	0.361	0.306	0.630

Panel B. Non-CEO/CFO CSO Bonus Pay and the Sample of Firms with CSOs

	(1) ESGScore_decline$_{t+1}$	(2) ControversyScore_decline $_{t+1}$	(3) ΔROA$_{t+1}$	(4) ΔRET_12$_{t+1}$
HiPaidCSO_HiBonus	0.007	-0.045	-0.004	-0.070
	(0.163)	(-0.809)	(-0.360)	(-1.291)
HiPaidCSO_LoBonus	-0.011	-0.028	0.000	-0.007
	(-0.337)	(-1.054)	(0.104)	(-0.268)
Tangibility	-0.084**	0.008	0.016**	0.014
	(-1.970)	(0.178)	(2.261)	(0.449)
LBM	0.104*	-0.153**	-0.142***	-0.016
	(1.801)	(-2.491)	(-12.851)	(-0.316)
Leverage	0.019	0.062	-0.001	-0.024
	(0.455)	(1.495)	(-0.197)	(-0.701)
Assets	-0.037***	0.091***	0.002*	-0.009
	(-5.978)	(13.277)	(1.648)	(-1.544)
InstOwnership	-0.058**	-0.026	0.003	-0.001
	(-2.267)	(-0.933)	(1.027)	(-0.035)
%Indep	-0.275**	-0.180	-0.021	-0.257***
	(-2.141)	(-1.536)	(-1.452)	(-2.633)
ROA	0.118	-0.078	-0.508***	-0.103
	(1.021)	(-0.771)	(-18.764)	(-0.963)
RET_12	-0.020	-0.022	0.016***	-1.022***
	(-0.955)	(-1.235)	(4.709)	(-47.872)
ESGScore	0.696***	0.099**	0.009	0.039
	(13.474)	(2.137)	(1.468)	(1.099)
ControversyScore	0.009	0.127***	-0.001	-0.033*
	(0.408)	(4.846)	(-0.447)	(-1.691)
F-tests of combined coefficients				
HiPaidCSO_HiBonus - HiPaidCSO_LoBonus = 0	0.018	-0.017	-0.004	-0.063
Ind. and Year FE	Yes	Yes	Yes	Yes
Observations	5,562	5,562	4,445	4,448
Adjusted R-squared	0.052	0.141	0.306	0.630

Panel C. Non-CEO/CFO CSO Salary Pay and the Sample of Firms with CSOs

	(1) ESGScore_decline$_{t+1}$	(2) ControversyScore_decline $_{t+1}$	(3) Δroa$_{t+1}$	(4) ΔRET_12$_{t+1}$
HiPaidCSO_HiSalary	0.000	-0.096***	0.003	0.005
	(0.004)	(-3.249)	(0.502)	(0.137)
HiPaidCSO_LoSalary	-0.013	0.022	-0.003	-0.045*
	(-0.361)	(0.654)	(-0.524)	(-1.650)
Tangibility	-0.084**	0.009	0.015**	0.012
	(-1.967)	(0.189)	(2.243)	(0.378)
LBM	0.104*	-0.152**	-0.142***	-0.016
	(1.796)	(-2.474)	(-12.861)	(-0.311)
Leverage	0.019	0.061	-0.001	-0.023
	(0.458)	(1.474)	(-0.183)	(-0.673)
Assets	-0.036***	0.090***	0.002*	-0.008
	(-5.941)	(13.128)	(1.674)	(-1.520)
InstOwnership	-0.058**	-0.028	0.004	0.000
	(-2.255)	(-1.016)	(1.057)	(0.001)
%Indep	-0.276**	-0.176	-0.021	-0.254***
	(-2.152)	(-1.513)	(-1.467)	(-2.623)
ROA	0.116	-0.074	-0.508***	-0.100
	(1.006)	(-0.730)	(-18.779)	(-0.934)
RET_12	-0.020	-0.023	0.016***	-1.022***
	(-0.954)	(-1.258)	(4.712)	(-47.767)
ESGScore	0.697***	0.096**	0.009	0.040
	(13.460)	(2.079)	(1.500)	(1.146)
ControversiesScore	0.010	0.127***	-0.002	-0.034*
	(0.414)	(4.830)	(-0.469)	(-1.741)
F-tests of combined coefficients				
HiPaidCSO_HiSalary - HiPaidCSO_LoSalary = 0	0.013	-0.118***	0.006	0.050
Sample	CSO Firms	CSO Firms	CSO Firms	CSO Firms
Ind. and Year FE	Yes	Yes	Yes	Yes
Observations	5,562	5,562	4,445	4,448
Adjusted R-squared	0.052	0.142	0.306	0.630

This table reports tests of whether the composition of pay for highly paid CSOs (who are not CEOs or CFOs) affects their effect on future sustainability and financial performance. Panel A presents OLS regression results estimated after splitting *HiPaidCSO* by median equity pay percentage. Panel B presents OLS regression results estimated after splitting *HiPaidCSO* by median bonus pay percentage. Panel C presents OLS regression results estimated after splitting *HiPaidCSO* by median salary pay percentage. *, **, and *** denote significance at the 0.1, 0.05, and 0.01 levels, respectively. All variables are defined in Appendix A