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Abstract

This study examines whether ESG ratings reflect substantive improvements in corporate governance or primarily reward symbolic governance reforms. Using the adoption of compensation committees among Korean listed firms, we find that firms adopting compensation committees experience significant improvements in overall ESG ratings, driven primarily by increases in governance ratings. However, we find no corresponding changes in pay–performance sensitivity or in the level of executive compensation following adoption. These findings suggest that governance ratings respond to observable governance structures even when underlying corporate practices remain unchanged. Overall, our findings raise concerns about the extent to which ESG governance ratings capture substantive governance quality rather than formal governance arrangements.

Keywords: ESG ratings, Symbolic governance, Corporate governance, Compensation committees, Governance quality

JEL Classifications: G34, G38

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Do ESG Governance Ratings Reward Form over Substance? Evidence from Compensation Committee Adoption

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Abstract

This study examines whether ESG ratings reflect substantive improvements in corporate governance or primarily reward symbolic governance reforms. Using the adoption of compensation committees among Korean listed firms, we find that firms adopting compensation committees experience significant improvements in overall ESG ratings, driven primarily by increases in governance ratings. However, we find no corresponding changes in pay–performance sensitivity or in the level of executive compensation following adoption. These findings suggest that governance ratings respond to observable governance structures even when underlying corporate practices remain unchanged. Overall, our findings raise concerns about the extent to which ESG governance ratings capture substantive governance quality rather than formal governance arrangements.

Keywords: ESG ratings; Symbolic governance; Corporate governance; Compensation committees; Governance quality

1. Introduction

ESG ratings have become widely used tools for evaluating corporate sustainability and informing investment decisions. Institutional investors, regulators, and other stakeholders increasingly rely on ESG ratings to assess firms' environmental, social, and governance performance (Gillan, Koch, and Starks, 2021). As ESG ratings play a growing role in capital allocation and corporate accountability, concerns have emerged regarding how ESG ratings are measured and whether ESG ratings capture genuine ESG performance (Larcker, Pomorski, Tayan, and Watts, 2022). Consequently, understanding whether ESG ratings accurately reflect firms' underlying ESG performance has become an important question for both academia and practice.

Against this backdrop, this study examines whether ESG ratings reflect substantive governance improvements or primarily respond to formal governance structures. In particular, we focus on governance structures because they are among the most visible and easily verifiable components of ESG, rendering them more likely to influence governance ratings. We address our question by examining compensation committee adoption among KOSPI-listed firms. Compensation committees are widely regarded as an important governance mechanism intended to align executive compensation with firm performance and strengthen board oversight. If governance ratings effectively measure governance quality, improvements in ratings following committee adoption should be accompanied by meaningful changes in executive compensation practices. Conversely, if ratings primarily reward formal governance structures, adoption may improve ESG evaluations without affecting underlying governance outcomes.

To implement this empirical approach, Korea provides an especially useful setting for several reasons. First, Korea's concentrated ownership structure and prevalence of family-controlled business groups create conditions under which governance reforms may be adopted symbolically rather than substantively. Firms facing external pressure from institutional investors, or regulators may adopt formal governance mechanisms to improve external governance assessments. However, because controlling shareholders retain substantial influence over board decisions, formal governance structures may have limited ability to constrain managerial discretion even after their adoption. As a result, governance practices may remain largely unchanged despite the implementation of formal governance reforms.

Second, unlike firms listed on U.S. stock exchanges, compensation committees are not mandatory for listed firms in Korea, although their establishment is encouraged by regulators and the media. This voluntary nature of adoption enables us to examine firms' strategic decisions to establish compensation committees and their consequences for firm outcomes.

Third, Korea has a well-developed ESG rating infrastructure, with ratings provided by the Korean Institute of Corporate Governance and Sustainability (KCGS) and disaggregated into environmental, social, and governance components. This enables us to identify whether any improvement in overall ESG ratings is driven by changes in governance ratings.

Given this institutional setting, we expect compensation committee adoption to improve firms' ESG governance ratings rather than their underlying compensation practices. If governance ratings place substantial weight on formal governance structures, committee adoption should be reflected in higher governance scores even when compensation outcomes remain largely unchanged. Accordingly, we predict that compensation committee adoption leads to improvements in ESG governance ratings, but does not materially change compensation practices, as reflected in pay–performance sensitivity or the level of executive compensation.

We first examine the determinants of compensation committee adoption. We find that larger firms, firms with lower leverage, larger boards, higher institutional ownership, and affiliation with a large business group are more likely to adopt a compensation committee. These findings suggest that adoption is not random but driven by firm visibility, board capacity, and external monitoring.

We next investigate the effect of compensation committee adoption on overall ESG scores and their subcomponents. Using KCGS ratings, OLS estimates indicate that adoption is associated with significant improvements in overall ESG scores, driven by increases in environmental, governance, and social scores. However, instrumental variable estimation, using the industry-level average rate of compensation committee adoption as an instrument, reveals that only the governance component responds significantly. The positive OLS associations with environmental and social scores likely reflect correlated firm characteristics rather than causal effects. These findings suggest that compensation committee adoption affects ESG ratings primarily through the governance channel.

We then examine whether compensation committee adoption is accompanied by changes

in pay-performance sensitivity and the level of executive compensation. We begin by analyzing firm-level average compensation, where disclosure requirements apply to all listed firms. We find no significant association between compensation committee adoption and either pay-performance sensitivity or average compensation levels, suggesting that adoption does not alter compensation practices at the firm level.

To provide a more granular examination of compensation outcomes, we turn to the subsample of firms with at least one executive director receiving more than KRW 500 million (about USD 0.4 million), where director-level compensation data such as base salary and bonus are observable. We further distinguish between family member and non-family member executives, as incentive structures are likely to differ across these two groups. Nevertheless, we find no significant change in pay-performance sensitivity or compensation levels following adoption for either group. The results are similarly insignificant when we restrict attention to the highest-ranking executives, those holding titles of president, vice president, CEO, or vice CEO.

In sum, our findings indicate that compensation committee adoption improves ESG governance ratings but does not lead to corresponding changes in executive compensation practices. These results suggest that ESG governance ratings may place greater weight on the adoption of formal governance structures than on the substantive governance outcomes those structures are intended to produce.

We further examine whether the governance changes captured by domestic ESG ratings are similarly reflected in international ESG ratings. In contrast to the KCGS-based results, we find no significant effect of adoption on LSEG ratings. KCGS, specializing in Korean firms, is better positioned to capture local governance reforms such as compensation committee adoption, whereas LSEG applies a globally standardized framework that may not fully reflect the local significance of such changes. This divergence across domestic and international evaluators suggests that the rating implications of compensation committee adoption depend on how governance reforms are assessed. In particular, domestic evaluators appear more likely to reward the adoption of formal governance structures.

Finally, to address endogeneity concerns that firms adopting compensation committees differ systematically from non-adopting firms, we implement a difference-in-differences framework with propensity score matching, comparing adopting firms with non-adopting firms

that exhibit similar pre-adoption characteristics. The results are consistent with our main findings, supporting the conclusion that compensation committee adoption causally improves ESG governance scores consistent with our main findings.

Our paper makes three contributions to the literature. First, we contribute to the literature on ESG ratings by showing that governance ratings may respond to observable governance structures even when underlying governance outcomes remain unchanged (Larcker et al., 2022). Using compensation committee adoption as our empirical setting, we demonstrate that firms can obtain higher governance ratings without corresponding changes in compensation practices, raising questions about the extent to which ESG governance evaluations reflect substantive governance quality. Our findings also shed light on why ESG governance ratings may fail to capture underlying governance quality, complementing the evidence by Fabisik (2025).

Second, we contribute to the growing literature on ESG washing. Existing studies document ESG washing as the gap between favorable ESG reputations obtained through disclosures or communications and underlying ESG performance, implicitly treating ESG ratings as valid proxies for actual performance (Lagasio, 2024; Todaro and Torelli, 2024). In contrast, our study shows that ESG ratings themselves can improve in the absence of substantive organizational change. Our findings suggest that governance washing may arise not only from firms' disclosure strategies but also from ESG rating methodologies that place substantial weight on observable governance structures.

Third, we contribute to the literature on compensation committees and executive compensation. Prior studies report mixed evidence on whether compensation committees improve executive compensation practices (Conyon and Peck, 1998; Newman and Mozes, 1999; Anderson and Bizjak, 2003). We extend this literature to an emerging market setting characterized by concentrated ownership and family control, where controlling shareholders may limit the effectiveness of formal governance mechanisms. We show that compensation committee adoption does not materially improve executive compensation practices, suggesting that formal governance mechanisms may have limited effectiveness in such institutional settings.

The remainder of the paper is organized as follows. Section II describes the institutional background and data. Section III presents the empirical methodology. Section IV reports the main results. Section V presents robustness checks. Section VI concludes.

2. Related literature and hypothesis development

2.1 ESG ratings

ESG ratings have become a central mechanism through which investors, regulators, and other stakeholders evaluate firms' sustainability performance. As ESG considerations increasingly influence capital allocation and corporate decision-making, ESG ratings are often treated as indicators of firms' underlying environmental, social, and governance quality. However, a growing literature raises concerns regarding the validity of ESG ratings as measures of actual ESG performance (Larcker et al., 2022). Prior studies document substantial disagreement across rating agencies, driven by differences in measurement scope, weighting schemes, and evaluation methodologies (Billio, Costola, Hristova, Latino, and Pelizzon, 2021; Berg, Kölbel, and Rigobon, 2022). Such divergence suggests that ESG ratings may capture different dimensions of sustainability and raises questions about whether rating improvements necessarily reflect meaningful changes in underlying corporate behavior.

Concerns regarding measurement validity may be particularly relevant for the governance component of ESG ratings. Compared with environmental and social performance, governance characteristics are often more visible and easier to verify through publicly available disclosures. Consequently, rating agencies may place considerable weight on observable governance structures, such as board composition, committee structures, and governance policies.

Compensation committee adoption allows us to assess whether governance ratings respond to observable governance structures because compensation committees are commonly disclosed in corporate filings and readily incorporated into ESG governance assessments. Accordingly, we hypothesize:

H1. The adoption of compensation committees is positively associated with firms' ESG governance scores.

2.2 Compensation committees, executive pay, and symbolic governance

The theoretical rationale for compensation committees builds on agency theory, which emphasizes that independent oversight can mitigate conflicts of interest between shareholders

and management (Jensen and Meckling, 1976; Fama and Jensen, 1983). Compensation committees are expected to strengthen board oversight and align executive compensation more closely with firm performance.

Existing evidence from developed markets provides mixed support for this view. Conyon and Peck (1998) find that the presence of compensation committees is associated with stronger pay–performance sensitivity, suggesting that such committees can enhance incentive alignment by linking CEO compensation more closely to firm performance. In addition, Newman and Mozes (1999) show that this effect depends critically on committee composition. Specifically, when insiders serve on the compensation committee, the pay–performance relation becomes biased in favor of CEOs. While overall pay levels do not necessarily increase, compensation structures become more asymmetric with weaker penalties for poor performance. Anderson and Bizjak (2003), however, find limited evidence that the structure of compensation committees leads to meaningful reductions in pay levels or consistent improvements in incentive design. One possible explanation for this variation is that the formal adoption of compensation committees does not always translate into substantive changes in compensation practices.

Prior research on symbolic governance suggests that firms often adopt governance reforms in response to external pressures without implementing substantive organizational change (Westphal and Zajac, 1994, 1998; Yoshikawa and Rasheed, 2009). Such decoupling is particularly likely when formal governance structures are highly visible to external stakeholders but internal power structures remain largely unchanged.

Korea provides a setting in which formal governance structures are especially likely to be adopted symbolically rather than substantively. Ownership concentration remains high, family control is prevalent, and controlling shareholders frequently occupy executive positions within firms (Claessens, Djankov, and Lang, 2000; Bae, Kang, and Kim, 2002). Because controlling shareholders often retain substantial influence over managerial and board decisions, the formal adoption of governance mechanisms may not necessarily alter underlying decision-making processes. Under these conditions, compensation committees may serve as symbolic governance mechanisms with limited ability to constrain managerial influence over executive pay, even after their formal adoption.

If compensation committees primarily serve a symbolic rather than substantive

governance function, their adoption should have little effect on pay–performance sensitivity or executive compensation levels. Accordingly, we hypothesize:

H2. The adoption of compensation committees is not associated with pay–performance sensitivity or the level of executive compensation.

Taken together, H1 and H2 suggest that compensation committee adoption improves ESG governance scores without corresponding improvements in underlying governance outcomes.

3. Data and variables

3.1 Sample selection

We construct our dataset from multiple sources. Information on compensation committee adoption is manually collected from annual reports filed with the Financial Supervisory Service (FSS) for firms listed on the KOSPI market over the period 2015–2024. ESG ratings and their environmental, social, and governance components are obtained from the Korean Institute of Corporate Governance and Sustainability (KCGS) and LSEG (formerly Refinitiv). Because environmental and social ratings were not comprehensively measured until 2020, we merge KOSPI-listed firms with governance ratings from KCGS for the full sample period to minimize data loss, given that compensation committee adoption is most plausibly associated with governance ratings. Executive compensation, financial accounting data, and ownership by related parties come from TS-2000. Large business group classifications are obtained from the Korea Fair Trade Commission (KFTC). We exclude firms in financial industry. The final sample consists of 769 firms and 6188 firm-year observations.

3.2 Variables

3.2.1 Compensation committee

We identify whether a firm adopts a compensation committee using information disclosed in annual reports (equivalent of Form 10-K). Figure 1 reports the percentage and number of KOSPI-listed firms with (CC) and without (non-CC) a compensation committee over the sample period. Compensation committee adoption increases steadily over time. The adoption rate rises from 5.5% in 2015 to approximately 21% in 2024. This suggests that there is a meaningful variation in the adoption of compensation committee. As of 2024, 162 firms have

adopted a compensation committee, compared with 613 firms that have not.

[Insert Figure 1 here]

3.2.2 ESG ratings

KCGS provides broad coverage of publicly listed firms in Korea, particularly for governance ratings, which encompass most KOSPI-listed firms. The ratings are updated annually and are disaggregated into environmental (E), social (S), and governance (G) components, allowing us to examine both aggregate and dimension-specific effects. However, comprehensive measurement of environmental and social dimensions became available only from 2020 onward. Table 1 shows that governance ratings cover nearly all KOSPI-listed firms, whereas ESG rating coverage is incomplete prior to 2020.

KCGS ratings are reported in categorical form of A+, A, B+, B, C, and D. For empirical analysis, we convert these categories into numerical scores, assigning values of 6, 5, 4, 3, 2, and 1, respectively.[1] As an additional measure of ESG ratings, we exploit ESG scores provided by LSEG, and the scales of ESG scores by LESG ranges from zero to 100.

[Insert Table 1 here]

As an additional measure of ESG performance, we employ ESG scores provided by LSEG, which range from 0 to 100. Appendix Table A2 reports the correlations among ESG ratings and their components as measured by KCGS and LSEG. The relatively low correlations between the two providers, both at the aggregate and dimension-specific levels, suggest that the two rating systems capture meaningfully different aspects of ESG performance.

[1] Lower-tier ratings of C and D were not disclosed prior to 2020. In robustness checks, we repeat all analyses using the post-2020 subsample and find that the results remain consistent. These results are available upon request.

3.2.3 Compensation

Executive compensation is basically measured as average compensation for all executive directors. To measure the sensitivity of pay to performance, we exploit the average compensation for all directors per a firm. Each component of total compensation such as base salary, bonus etc., for individual executive directors are not disclosed unless a total compensation of an individual executive director exceeds KRW 500 mil (USD 0.4 million).

We additionally construct two firm-level measures for the subset of directors receiving more than KRW 500 million. The first is the total compensation and each of its components for the highest-paid director. Korean firms are predominantly controlled by a small number of dominant families, whose members actively participate in executive management (Claessens et al., 2000). Executive directors may include family members of the controlling shareholder. Using ownership data on related parties, we classify executive directors as either family members or non-family members of the controlling shareholder.

The second is the average compensation and average of each component across directors holding the titles of president, vice president, CEO, or vice CEO. As shown in Table 1, the subsample of KOSPI-listed firms disclosing individual compensation data for directors exceeding the KRW 500 million threshold exhibits a similar distribution of compensation committee adoption to the full sample.

3.2.4 Control variables

Our control variables include return on assets, total assets, leverage, board size, institutional ownership, foreign investor ownership, firm age, and large business group affiliation. Detailed variable definitions are provided in Appendix Table A1.

4. Empirical results

4.1 Summary statistics

Table 2 presents the summary statistics for variables used in the analysis. The mean value of Compensation committee (*CC*) is 0.11, indicating that only 11 % of firm-year observations have adopted a compensation committee. The mean *ESG score* is 3.08 out of a six-point scale.

Across the three ESG pillars, the social score has the highest mean value of 3.46, followed by the governance score of 3.01, while the environmental score is relatively lower at 2.96. Because E and S ratings were not comprehensively measured until 2020, the number of observations for the E and S scores is smaller than that for the G score.

With respect to compensation variables, *AvgComp* shows that the average compensation paid to directors is KRW 0.53 billion. For firms disclosing individual compensation of at least KRW 500 million (about USD 0.4 million), the mean *TtlComp_top* is KRW 1.94 billion, indicating that the highest-paid director receives substantially more than the average board member. Decomposing this amount, the mean *Salary_top* is 1.30 billion, while the mean *Bonus_top* is 0.54 billion, suggesting that fixed salary constitutes the largest portion of top executive pay.

For directors receiving at least KRW 500 million, the mean *mTtlComp* is 1.55 billion, consisting of an average *mSalary* of 1.13 billion and *mBonus* of KRW 0.38 billion. These figures indicate that highly compensated directors receive remuneration packages dominated by base salary, although bonuses also account for a nontrivial share.

[Insert Table 2 here]

4.2 Determinants of compensation committee adoption

In Table 3, we investigate determinants of compensation committee adoption through a logit regression model. The dependent variable equals one if a firm adopts a compensation committee and zero otherwise. All explanatory variables are lagged by one year. The model includes industry and year fixed effects.

First of all, the positive and highly significant coefficient on *ln(Asset)* indicates that larger firms significantly tend to adopt a compensation committee. Similarly, firms with larger boards are more likely to adopt a compensation committee as reflected in the positive and highly significant coefficient on *ln(Board Size).* Larger boards may have greater demand for specialized committees to enhance oversight efficiency. Institutional ownership is also positively associated with compensation committee adoption, indicating that institutional investors may encourage stronger governance structures (Gillan and Starks, 2003). In addition,

firms affiliated with large business groups are significantly more likely to establish a compensation committee, which may reflect stronger external pressure on prominent business groups to adopt visible governance mechanisms.

By contrast, the negative and statistically significant coefficient on *Leverage* suggests the likelihood of adopting a compensation committee decreases with a leverage. Coefficients on *ROA* and *Firm Age* are statistically insignificant, indicating that operating performance and firm maturity do not appear to be major determinants of committee adoption.

Overall, the results suggest that compensation committees are more likely to be adopted by larger, more institutionally monitored, and business-group-affiliated firms, implying that committee formation may be driven not only by visibility and external stakeholder pressure.

[Insert Table 3 here]

4.3 The effect of compensation committee adoption on ESG ratings

Panel A of Table 4 reports OLS estimates examining the effect of compensation committee adoption on ESG performance. The dependent variables are the overall ESG score and its three components: the environmental (E), social (S), and governance (G) scores. Each model includes a one-year lagged dependent variable to account for the high persistence of ESG scores over time. We also control for one-year lagged firm characteristics, including profitability (ROA), firm size, leverage, board size, institutional ownership, firm age, and an indicator for large business group affiliation. All models include firm and year fixed effects, with standard errors clustered at the firm level.

The coefficient on the compensation committee (CC) indicator is positive and statistically significant at the 1% level across all models. Specifically, compensation committee adoption is associated with increases of 0.525 in the overall ESG score, 0.509 in the E score, 0.285 in the S score, and 0.802 in the G score. These results indicate that firms with a compensation committee exhibit stronger ESG scores overall, with the effect most pronounced in the governance dimension. The observed increases in ESG ratings likely reflect the

expectation that compensation committees improve executive pay-setting practices and broader corporate governance quality.

Turning to the control variables, the coefficient on profitability (ROA) is positive and significant in columns (1) and (2), suggesting that more profitable firms have greater resources to invest in environmental initiatives. Firm size is positively associated with the overall ESG, E, and S scores, consistent with larger firms facing greater stakeholder scrutiny and possessing more capacity for CSR activities. Leverage is negatively associated with ESG outcomes, indicating that financially constrained firms reduce investment in socially responsible activities and governance improvements. Institutional ownership is positively related to the G score, consistent with institutional investors playing an active monitoring role that strengthens governance practices. In addition, the coefficients on lagged dependent variables are positive and highly significant across all specifications, confirming the strong persistence of ESG scores over time. Firms that achieved high ESG scores in the prior year tend to maintain high scores in the current year.

[Insert Panel A of Table 4 here]

We use the 2SLS-IV approach because the OLS results may suffer from endogeneity problems such as omitted variables, and self-selection bias. Panel B reports the 2SLS-IV regression results, using the industry mean of compensation committee adoption as an instrumental variable. The IV diagnostics support the use of the instrument. The KP LM statistics reject the null hypothesis of underidentification, and the KP Wald F statistics exceed the Stock–Yogo (2005) critical value in all specifications, indicating that the instrument is unlikely to suffer from weak identification.

The coefficient on compensation committee remains positive and statistically significant for the overall ESG score and the G score, suggesting that compensation committees have a causal positive effect particularly on governance performance. On the other hand, the coefficients for the E and S scores are not statistically significant, indicating that the impact of compensation committees is more concentrated in the governance dimension rather than environmental or social performance.

[Insert Panel B of Table 4 here]

Overall, the findings from Table 4 indicate that compensation committee adoption improves overall ESG ratings primarily through the governance dimension. While the OLS results suggest positive associations across all ESG components, the IV estimates indicate that only the governance component exhibits a robust causal response to compensation committee adoption.

4.4 The effect of compensation committee on executive compensation

We examine how compensation committee adoption affects both pay-for-performance sensitivity and the level of executive compensation. Under Korean disclosure rules, firms are required to report total compensation for all executives, but must disclose the detailed components of individual compensation only when a single director's total pay exceeds 500 million won. First of all, we utilize the average total compensation for all executives. In this analysis, the compensation committee variable is lagged by one year to mitigate simultaneity concerns and to capture the effect of prior governance structure on current executive compensation decisions. In contrast, firm performance and other control variables are measured contemporaneously because executive compensation, particularly annual bonuses, is typically determined based on current fiscal-year performance.

Table 5 reports the regression results examining the effect of compensation committee adoption on the average total compensation of executive directors. Model (1) includes the direct effect of compensation committee adoption (CC) on the level of executive compensation, while Model (2) additionally includes the interaction term $CC \times ROA$ to test whether compensation committees strengthen the sensitivity of executive pay to firm performance. In both models, the coefficient on *CC* is negative but statistically insignificant, indicating that the adoption of a compensation committee is not associated with a significant change in executive director compensation. In Model (2), the interaction term is positive but insignificant, suggesting that firms with compensation committees do not exhibit a stronger pay-for-performance relationship than firms without such committees.

Among the control variables, ROA is positively and significantly related to executive compensation, implying that better-performing firms pay higher compensation to executive directors. Overall, the results suggest that compensation committees do not significantly affect either the level of executive director compensation or the sensitivity of pay to firm performance.

[Insert Table 5 here]

Next, in Table 6, we investigate the effect of compensation committee adoption on the components of executive director compensation by using detailed compensation information for executive receiving more than 500 million won.

Panel A focuses on the highest-paid executive director in each firm. Models (1), (4), and (7) cover the full sample, while Models (2), (5), and (8) restrict the sample to highest-paid executive directors who are affiliated members of controlling shareholders. Models (3), (6), and (9) restrict the sample to those who are not affiliated with controlling shareholders. This subsample split allows us to examine whether the effect of compensation committees on executive pay differs depending on the executive's affiliation with the controlling shareholder.

The coefficient on *CC* is statistically insignificant across all specifications for total compensation, base salary, and bonus. This suggests that the adoption of a compensation committee does not significantly alter the overall pay level or salary of the top-paid executive, regardless of whether the executive is a family member or non-family member of the controlling shareholder. In addition, the interaction term between compensation committee adoption and firm performance (*CC*ROA*) is insignificant in all models, indicating that compensation committees do not significantly strengthen pay-for-performance sensitivity for the highest-paid executive director.

Regarding the control variables, *ROA* is positively and significantly associated with bonus compensation, implying that better-performing firms reward top-paid executives primarily through bonus payments rather than through fixed salary. Model (8) reports the results for top-paid executives affiliated with controlling shareholders, whereas Model (9) reports the results for those unaffiliated with controlling shareholders. The coefficient on *ROA* in Model (8) is smaller than that in Model (9), suggesting that the pay-performance sensitivity

of top-paid executives unaffiliated with controlling shareholders is stronger than that of affiliated executives. This finding suggests that bonus compensation of affiliated executives is less closely tied to firm performance than that of unaffiliated executives.

In Panel B, we focus on executive directors in senior positions such as president, vice president, CEO, or vice CEO whose total pay is larger than 500 million won. The dependent variables are average total pay, average bases salary, and average bonus for those executives. The coefficient on CC remains insignificant for average total compensation and average salary. However, it is positive and marginally significant for average bonus compensation. Nevertheless, the interaction term of CC with ROA remains insignificant in Models (1) to (3), again providing no evidence that compensation committees enhance the sensitivity of executive pay to firm performance. Therefore, the results in Table 6 suggest that compensation committees do not materially reduce or increase executive compensation levels, nor do they significantly strengthen pay-for-performance incentives.

[Insert Panels A and B of Table 6 here]

Consequently, the findings from Tables 5 and 6 reveal that while compensation committee adoption is associated with higher ESG ratings, particularly in the governance dimension, it does not translate into meaningful changes in executive compensation levels or in the sensitivity of pay to performance. This disconnect between improved governance ratings and the absence of substantive changes in compensation practices is indicative of ESG decoupling, whereby compensation committees serve as a symbolic governance reform that enhances external ratings without inducing real changes in executive pay-setting behavior.

4.5 Heterogeneity Across ESG Rating Providers

To examine the robustness of the baseline findings, Table 7 repeats the ESG analysis from Table 4 using LSEG ratings as alternative dependent variables. Recall that Table 4 relies on ESG scores provided by KCGS, a domestic Korean rating agency, whereas Table 7 employs scores from LSEG, an international rating provider.

Unlike Table 4, the results in Table 7 show that the coefficient on CC is statistically insignificant across all specifications. These results indicate that compensation committee adoption is not associated with measurable improvements in ESG performance when ESG

outcomes are assessed using LSEG ratings. This divergence in results across the two rating sources can be attributed to systematic differences in methodology, information sources, and sensitivity to governance reforms between domestic and international agencies. Because KCGS specializes in evaluating Korean firms within the local institutional and regulatory environment, it is likely better positioned to capture governance changes such as compensation committee adoption, particularly given the distinctive features of Korean corporate ownership structures and board practices. In contrast, LSEG applies a globally standardized framework designed to ensure cross-country comparability, which may not fully reflect the local significance of such reforms.

Importantly, while compensation committee adoption is positively associated with ESG ratings in Table 4, this relationship disappears in Table 7. If compensation committees produced substantive governance improvements, the effect would likely persist across rating agencies. Instead, the significance only under the domestic rating framework suggests that the observed ESG benefits reflect symbolic recognition of formal governance structures. This interpretation is consistent with the ESG decoupling hypothesis. Compensation committees may enhance external legitimacy and improve certain ESG ratings, yet they do not lead to meaningful changes in executive compensation levels or pay-for-performance sensitivity, as shown in Tables 5 and 6.

Taken together, the evidence suggests that compensation committees function more as symbolic governance mechanisms that enhance reputational standing than as effective tools for changing executive pay practices.

[Insert Table 7 here]

4.6 Robustness checks: propensity score matching

In Table 8, we conduct the difference-in-differences analysis with propensity score matching (PSM) to address potential selection bias in compensation committee adoption. Treated firms with a compensation committee are matched to comparable control firms without a compensation committee using one-to-one nearest-neighbor propensity score matching

without replacement. Matching is based on firm characteristics, industry, and year, and a caliper of 0.005 is imposed to ensure that treated firms are paired only with control firms that have sufficiently similar propensity scores.

Panel A presents the balancing test for the matched sample. The differences in firm characteristics between treated and control firms are economically small and statistically insignificant across all matching variables, including profitability, firm size, leverage, board size, institutional ownership, firm age, and large business group affiliation. These results indicate that the matching procedure successfully creates comparable treatment and control groups.

Panel B reports the DID estimation results for ESG performance. The coefficient on the treatment indicator is positive and statistically significant across all specifications. Compensation committee adoption is associated with an increase of 0.486 in the overall ESG score, 0.401 in the environmental score, 0.260 in the social score, and 0.673 in the governance score. The strongest effect appears in the governance dimension, reflecting the primary role of compensation committees in strengthening internal governance structures. Overall, these findings support the baseline results that compensation committee adoption is positively related to ESG performance.

Panel C reports the DID results for executive compensation outcomes. For average compensation of executive directors, *AVG_COMP*, the coefficient on *CC* is negative and weakly significant, suggesting a modest decline in average compensation following compensation committee adoption. However, for compensation measures based on highly paid executives, most coefficients on *CC* are statistically insignificant for total compensation and salary. By contrast, bonus compensation is positively significant in some specifications, indicating that compensation committees may be associated with a greater reliance on performance-based bonus pay rather than fixed salary. The interaction term between *CC* and *ROA* is insignificant across all models, indicating that compensation committee adoption does not significantly strengthen pay-for-performance sensitivity. Meanwhile, *ROA* itself is positively associated with several compensation measures, particularly total compensation and bonuses, implying that better-performing firms pay higher variable compensation.

Therefore, the PSM-DID results largely confirm the main findings shown in Table 4 and 6. Compensation committee adoption is consistently associated with higher ESG ratings,

especially governance scores, but does not materially enhance the alignment between executive pay and firm performance. These results further support the argument that compensation committees may improve external governance perceptions while producing limited substantive changes in executive compensation practices.

[Insert Table 8 here]

5. Conclusion

This paper examines whether compensation committee adoption in Korean listed firms reflects substantive governance improvement or primarily affects ESG governance assessments through the adoption of formal governance structures. Using a sample of KOSPI-listed firms over the period 2015 to 2024, we find that compensation committee adoption is associated with significant improvements in ESG governance ratings, but not with meaningful changes in executive compensation practices.

Specifically, compensation committee adoption leads to higher ESG ratings, with the effect concentrated in the governance dimension. However, despite these rating improvements, we find no evidence that adoption affects pay–performance sensitivity or the level of executive compensation. These findings hold across multiple samples, including firms with highly compensated executive directors, family and non-family affiliated executives, and senior executives occupying the highest-ranking managerial positions. Taken together, the results suggest that ESG governance ratings respond to the adoption of visible governance structures even when the governance outcomes those structures are intended to influence remain largely unchanged.

We further compare domestic and international ESG rating providers. While governance ratings issued by KCGS increase significantly following compensation committee adoption, we find no comparable effect using LSEG ratings. This divergence suggests that ESG evaluations are sensitive to rating methodologies and that different providers may interpret the same governance reform differently.

Our findings have important implications for investors, regulators, and ESG rating agencies. For investors, improvements in ESG governance ratings do not necessarily imply corresponding improvements in underlying governance quality. For regulators, the establishment of formal governance mechanisms alone may be insufficient to improve governance outcomes if those mechanisms lack the authority or independence necessary to influence managerial decision-making. For ESG rating agencies, our results underscore the importance of evaluating the effectiveness of governance mechanisms in addition to their formal adoption.

More broadly, this study contributes to the growing debate over the validity of ESG ratings as measures of underlying ESG performance. As ESG ratings continue to influence capital allocation and corporate accountability, understanding whether they capture governance substance rather than governance form remains an important area for future research.

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Appendix Table A. Variable list

Variable	Definition	Source
Compensation Committee		
CC	Indicator variable equal to 1 if a firm adopts a compensation committee, and 0 otherwise	Annual report from FSS
ESG ratings		
ESG score	ESG score by KCGS	KCGS
E score	Environmental score by KCGS	Same as above
S score	Social score by KCGS	Same as above
G score	Governance score by KCGS	Same as above
ESG score (L)	ESG score by LSEG	LSEG (former Refinitiv)
E score (L)	Environmental score by LSEG	Same as above
S score (L)	Social score by LSEG	Same as above
G score (L)	Governance score by LSEG	Same as above
Compensation		
AvgComp	Average compensation for directors	TS-2000
TtlComp_top	Total compensation of the highest-paid director receiving (≥ KRW 500 million)	Same as above
Salary_top	Base salary of the highest-paid director receiving (≥ KRW 500 million)	Same as above
Bonus_top	Bonus of the highest-paid director receiving (≥ KRW 500 million)	Same as above
mTtlComp	Average total compensation of directors receiving (≥ KRW 500 million)	Same as above
mSalary	Average base salary of directors receiving (≥ KRW 500 million)	Same as above
mBonus	Average bonus of directors receiving (≥ KRW 500 million)	Same as above
Firm characteristics		
ROA	Returns on assets	TS-2000
Asset	Total assets	Same as above
Leverage	Total debt to total assets	Same as above
Board Size	Total number of directors on the board	Same as above
Institutional ownership	Aggregate ownership of institutional investors holding at least 5% equity	Same as above
Firm Age	Number of years since the firm was established	Same as above
Large BG	Indicator variable equal to 1 if a firm belongs to a large business group, and 0 otherwise	Korea Fair Trade Commission

Appendix Table B. Correlations among ESG ratings

	ESG score	E score	S score	G score	ESG score (L)	E score (L)	S score (L)	G score (L)
ESG score	1.000							
E score	0.698	1.000						
S score	0.699	0.567	1.000					
G score	0.791	0.348	0.377	1.000				
ESG score (L)	0.459	0.538	0.409	0.309	1.000			
E score (L)	0.379	0.513	0.338	0.211	0.855	1.000		
S score (L)	0.397	0.462	0.396	0.251	0.925	0.752	1.000	
G score (L)	0.403	0.412	0.308	0.343	0.717	0.400	0.510	1.000

Figure 1. Adoption of compensation committees

This figure displays the percentage and number of KOSPI-listed firms with a compensation committee (CC) and without a compensation committee (non-CC) from 2015 to 2024. Data are sourced from the Financial Supervisory Service (FSS).

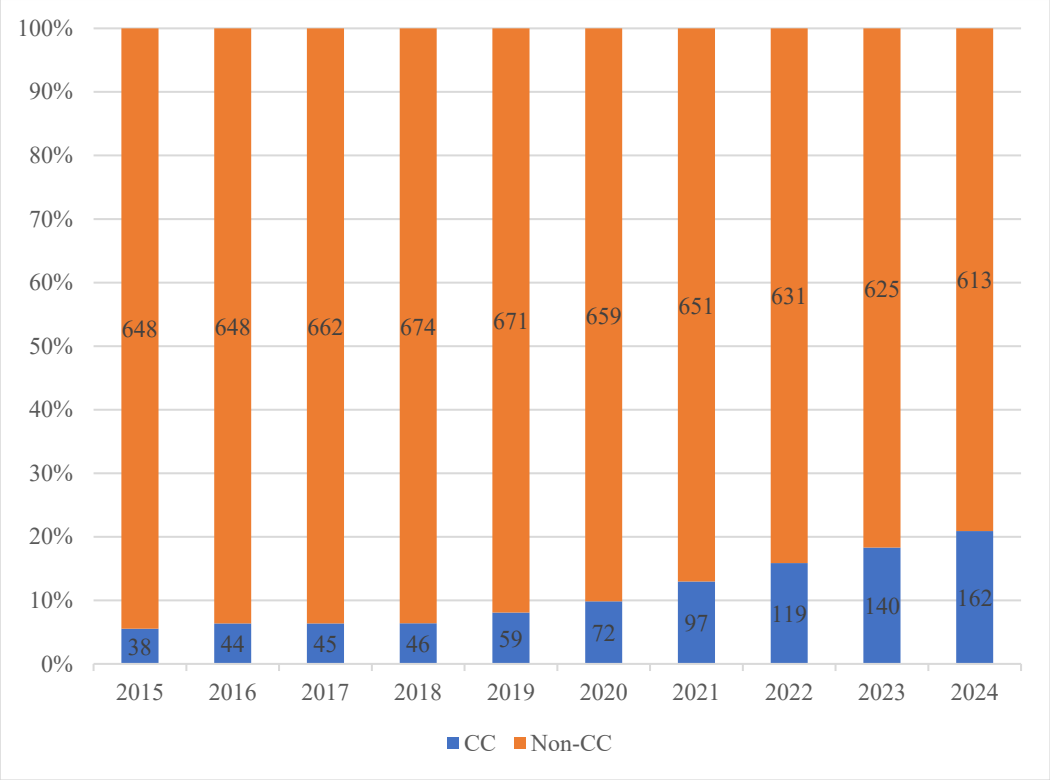

Table 1. Sample distribution of firms by compensation committee status

Table 1 reports the annual distribution of KOSPI-listed firms with a compensation committee (CC) and without a compensation committee (non-CC), along with the subset of firms with governance ratings, ESG ratings, and executive director compensation exceeding KRW 500 million(about USD 0.4 million). The data come from the FSS, TS-2000, and KCGS from 2015 to 2024.

	Whole Sample		Firms with Governance rating		Firms with ESG rating		Firms with compensation ≥500 Mil (KRW)	
Year	CC	Non-CC	CC	Non-CC	CC	Non-CC	CC	Non-CC
2015	38	648	35	608	19	63	31	238
2016	44	648	42	614	26	92	34	254
2017	45	662	44	638	26	99	34	258
2018	46	674	45	630	28	101	40	297
2019	59	671	58	642	54	358	53	316
2020	72	659	72	639	72	639	57	299
2021	97	651	88	625	88	625	84	312
2022	119	631	112	615	112	615	103	312
2023	140	625	135	608	135	608	117	329
2024	162	613	155	591	155	591	143	328

Table 2. Summary statistics

Panel A presents the descriptive statistics of the sample, while Panel B reports the correlations among ESG ratings. AvgComp, TtlComp_top, Salary_top, Bonus_top, mTtlComp, mSalary, and mBonus are expressed in billions of Korean won (KRW). Asset is expressed in trillions of Korean won (KRW). All variable definitions are in Appendix A.

	N	mean	sd	min	p25	p50	p75	max
CC	6188	0.12	0.32	0	0	0	0	1
ESG score	4318	3.08	1.39	1	2	3	4	6
E score	4473	2.96	1.46	1	2	3	4	6
S score	4516	3.46	1.64	1	2	4	5	6
G score	6188	3.01	1.19	1	2	3	4	6
ESG score (L)	1049	54.07	22.59	0.94	39.02	59.95	72.24	92.83
E score (L)	950	57.07	26.15	0.00	42.72	64.39	75.94	99.01
S score (L)	901	57.77	25.42	0.54	41.93	64.31	77.58	96.72
G score (L)	950	51.36	22.65	0.32	35.26	53.41	69.17	95.42
AvgComp	6087	0.53	0.79	0.00	0.18	0.31	0.57	15.18
TtlComp_top	2945	1.94	14.82	0.50	0.75	1.09	1.87	800.00
Salary_top	2945	1.30	14.74	0.00	0.54	0.79	1.25	800.00
Bonus_top	2945	0.54	1.01	0.00	0.03	0.22	0.55	16.28
mTtlComp	2785	1.55	15.17	0.50	0.72	0.98	1.50	800.00
mSalary	2785	1.13	15.15	0.00	0.53	0.72	1.03	800.00
mBonus	2785	0.38	0.59	0.00	0.05	0.20	0.45	7.69
ROA	6188	0.02	0.07	-0.32	0.00	0.02	0.05	0.23
Asset	6188	4.53	21.28	0.01	0.24	0.58	1.79	455.91
Leverage	6188	0.46	0.20	0.06	0.29	0.47	0.61	0.93
Board Size	6188	4.68	2.03	1	3	4	6	31
Inst_ownership	6188	0.07	0.09	0.00	0.00	0.05	0.11	0.59
Firm Age	6188	41.47	19.90	1	27	44	55	126
Large BG	6188	0.29	0.45	0	0	0	1	1

Table 3. Determinants of compensation committee adoption

This table reports the results of a logit regression model in which the dependent variable equals one if a firm adopts a compensation committee and zero otherwise. All independent variables are lagged by one year. The model includes industry and year fixed effects. Standard errors, reported in parentheses, are clustered at the firm level. Statistical significance is denoted by ∗, ∗∗, and ∗∗∗, corresponding to the 10%, 5%, and 1% levels, respectively. All variables are defined in Appendix A.

	(1)
VARIABLES	CC
L.ROA	0.187
	(1.557)
L.ln(Asset)	0.618***
	(0.074)
L.Leverage	-1.554***
	(0.524)
L.ln(Board Size)	0.878***
	(0.280)
L.Inst_ownership	2.220**
	(0.995)
L.ln(Firm Age)	-0.161
	(0.123)
L.Large BG	1.229***
	(0.293)
Constant	-5.722***
	(1.051)
Ind FE	Yes
Year FE	Yes
Obs.	5272
Pseudo R-squared	0.259

Table 4. The effect of a compensation committee on ESG scores

Panel A reports OLS regression results examining the effect of a compensation committee on ESG scores, as well as E, S, and G scores, in columns (1) through (4), respectively. Models in Panel A include firm and year fixed effects. Panel B presents 2SLS regression results examining the effect of a compensation committee on ESG scores, as well as E, S, and G scores, in columns (1) through (4), respectively, using the industry mean of compensation committee adoption as an instrumental variable. All independent variables are lagged by one year. Models in Panel B include industry and year fixed effects. Standard errors, reported in parentheses, are clustered at the firm level. Statistical significance is denoted by ∗, ∗∗, and ∗∗∗, corresponding to the 10%, 5%, and 1% levels, respectively. All variables are defined in Appendix A.

Panel A. OLS regressions

	(1)	(2)	(3)	(4)
VARIABLES	ESG score	E score	S score	G score
L.CC	0.525***	0.509***	0.285***	0.802***
	(0.077)	(0.081)	(0.078)	(0.075)
L.ROA	0.583**	0.750***	0.076	0.047
	(0.229)	(0.257)	(0.240)	(0.190)
L.ln(Asset)	0.139*	0.131*	0.164*	0.067
	(0.080)	(0.074)	(0.089)	(0.057)
L.Leverage	-0.170	0.300	-0.365*	-0.275*
	(0.193)	(0.221)	(0.215)	(0.149)
L.ln(Board Size)	0.049	-0.043	-0.057	-0.135***
	(0.054)	(0.051)	(0.062)	(0.050)
L.Inst_ownership	-0.231	-0.286	-0.627	0.394*
	(0.312)	(0.347)	(0.394)	(0.233)
L.ln(Firm Age)	0.248	0.136	0.476**	0.453***
	(0.203)	(0.179)	(0.200)	(0.149)
L.Large BG	0.057	0.073	0.203*	-0.008
	(0.090)	(0.083)	(0.120)	(0.085)
L.ESG score	0.276***			
	(0.018)			
L.E score		0.339***		
		(0.019)		
L.S score			0.380***	
			(0.019)	
L.G score				0.324***
				(0.016)
Constant	0.353	0.916	-0.449	0.220
	(0.839)	(0.746)	(0.851)	(0.609)
Firm FE	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
Number of id	754	759	758	769
Obs.	3656	3900	3857	6188
Adj R-squared	0.283	0.331	0.223	0.308

Panel B. 2SLS-IV regressions

VARIABLES	(1) ESG score	(2) E score	(3) S score	(4) G score
L.CC (=Industry CC)	0.414*	0.399	-0.138	0.770***
	(0.245)	(0.263)	(0.249)	(0.194)
L.ROA	0.976***	0.855***	0.799***	0.621***
	(0.174)	(0.175)	(0.182)	(0.157)
L.ln(Asset)	0.117***	0.124***	0.153***	0.079***
	(0.017)	(0.017)	(0.019)	(0.013)
L.Leverage	0.252***	0.305***	0.218***	0.058
	(0.080)	(0.076)	(0.084)	(0.064)
L.ln(Board Size)	-0.007	0.024	0.013	-0.119***
	(0.034)	(0.033)	(0.037)	(0.030)
L.Inst_ownership	0.166	0.068	0.093	0.424***
	(0.150)	(0.148)	(0.182)	(0.125)
L.ln(Firm Age)	-0.113***	-0.110***	-0.106***	-0.093***
	(0.020)	(0.019)	(0.020)	(0.017)
L.Large BG	0.168***	0.176***	0.269***	0.131***
	(0.045)	(0.047)	(0.052)	(0.038)
L.ESG score	0.716***			
	(0.024)			
L.E score		0.683***		
		(0.021)		
L.S score			0.790***	
			(0.018)	
L.G score				0.585***
				(0.019)
KP Wald F	31.81	47.71	46.77	68.03
KP LM	16.43***	19.78***	20.62***	33.01***
Industry FE	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
Obs.	3656	3900	3857	6188
Adj R-squared	0.722	0.707	0.734	0.534

Table 5. Compensation committee and average executive director compensation

This table reports regression estimates of the effect of compensation committee adoption on the average total compensation of executive directors. The dependent variable is the logarithm of the average total compensation of executive directors. *CC* is an indicator variable equal to one if a firm has a compensation committee and zero otherwise. *CC*×*ROA* denotes the interaction term between *CC* and *ROA*. *CC* is lagged one year, and all other independent variables are contemporaneous with the dependent variable. All models include firm and year fixed effects. Standard errors are clustered at the firm level and reported in parentheses. Statistical significance at the 10%, 5%, and 1% levels is denoted by ∗, ∗∗, and ∗∗∗, respectively. All variables are defined in Appendix A.

	(1)	(2)
VARIABLES	ln(AVG_COMP)	ln(AVG_COMP)
L.CC	-0.075	-0.083
	(0.056)	(0.056)
L.CC*ROA		0.339
		(0.455)
ROA	0.424**	0.394**
	(0.177)	(0.187)
ln(Asset)	0.209***	0.208***
	(0.051)	(0.051)
Leverage	-0.100	-0.103
	(0.126)	(0.126)
ln(Board Size)	-0.297***	-0.298***
	(0.042)	(0.042)
Inst_ownership	0.275	0.276
	(0.194)	(0.194)
ln(Firm Age)	-0.128	-0.128
	(0.099)	(0.099)
Large BG	0.019	0.019
	(0.064)	(0.064)
Constant	19.002***	19.004***
	(0.499)	(0.499)
Firm FE	Yes	Yes
Year FE	Yes	Yes
Number of id	772	772
Obs.	6231	6231
Adj R-squared	0.101	0.101

Table 6. Compensation committee and components of executive director compensation

This table reports regression estimates of the effect of compensation committee adoption on the components of executive director compensation. The sample is restricted to individual executive directors whose total compensation exceeds KRW 500 million (about USD 0.4 million). Panel A examines the highest-paid executive director in each firm. The dependent variables are ln(1+total compensation) in columns (1) through (3), ln(1+base salary) in columns (4) through (6), and ln(1+bonus) in columns (7) through (9). Within each set of three columns, column (1), (4), (7), and (10) report estimates for the full sample, columns (2), (5), (8), and (11) for executive directors classified as family members of the controlling shareholder, and columns (3), (6), (9), and (12) for executive directors classified as non-family members. Panel B examines executive directors holding the titles of president, vice president, CEO, or vice CEO. The dependent variables are ln(1+average total compensation) in column (1), ln(1+average base salary) in column (2), ln(1+average bonus) in column (3). *CC* is an indicator variable equal to one if a firm has a compensation committee and zero otherwise. *CC*×*ROA* denotes the interaction term between *CC* and *ROA*. *CC* is lagged one year, and all other independent variables are contemporaneous with the dependent variable. All models include firm and year fixed effects. Standard errors are clustered at the firm level and reported in parentheses. Statistical significance at the 10%, 5%, and 1% levels is denoted by ∗, ∗∗, and ∗∗∗, respectively. All variables are defined in Appendix A.

Panel A. Highest-paid executive director

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	ln(1+TtlComp_top)			ln(1+Salary_top)			ln(1+Bonus_top)		
VARIABLES	Whole	Family	Non-Family	Whole	Family	Non-Family	Whole	Family	Non-Family
L.CC	-0.039	-0.023	-0.008	-0.065	-0.057	-0.069	0.737	0.730	0.934
	(0.055)	(0.093)	(0.069)	(0.058)	(0.069)	(0.064)	(0.729)	(1.008)	(0.888)
L.CC*ROA	0.821	0.447	0.336	-0.198	1.119	0.126	0.057	1.858	-1.696
	(0.655)	(0.857)	(0.853)	(0.708)	(0.793)	(0.613)	(5.947)	(9.118)	(6.557)
ROA	0.857***	0.964***	1.184***	-0.110	0.111	-0.185	13.327***	9.422***	16.758***
	(0.170)	(0.188)	(0.271)	(0.302)	(0.349)	(0.576)	(2.049)	(2.484)	(3.631)
ln(Asset)	0.217***	0.027	0.286***	0.279***	0.193**	0.353**	-0.052	0.338	-0.022
	(0.060)	(0.061)	(0.094)	(0.084)	(0.095)	(0.145)	(0.457)	(0.700)	(0.560)
Leverage	-0.137	0.101	-0.167	-0.146	0.165	-0.519*	-2.947*	-4.876**	-1.772
	(0.146)	(0.173)	(0.204)	(0.251)	(0.285)	(0.265)	(1.589)	(2.114)	(2.029)
ln(Board Size)	0.036	-0.010	0.058	0.027	-0.051	0.019	-0.075	0.144	0.072
	(0.044)	(0.050)	(0.065)	(0.054)	(0.063)	(0.082)	(0.444)	(0.708)	(0.600)
Inst_ownership	0.043	0.098	-0.031	-0.450	-0.220	-0.443	-0.399	1.687	-3.165
	(0.190)	(0.235)	(0.297)	(0.338)	(0.392)	(0.548)	(2.164)	(3.012)	(3.237)
ln(Firm Age)	-0.189*	-0.348***	-0.161	0.162	-0.425***	0.351	0.360	1.327	-0.242
	(0.104)	(0.122)	(0.133)	(0.224)	(0.128)	(0.319)	(0.847)	(1.743)	(0.935)
Large BG	0.067	0.090	0.092	0.037	0.091	0.004	-0.089	-1.123	0.505
	(0.088)	(0.082)	(0.119)	(0.080)	(0.098)	(0.129)	(0.536)	(1.159)	(0.678)
Constant	12.816***	14.767***	12.078***	10.789***	13.631***	9.646***	9.548***	4.133	10.384**
	(0.519)	(0.573)	(0.779)	(0.742)	(0.583)	(1.111)	(3.610)	(6.625)	(4.642)
Firm FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Number of id	504	286	355	504	286	355	504	286	355
Obs.	3014	1392	1622	3014	1392	1622	3014	1392	1622
Adj R-squared	0.165	0.165	0.144	0.0362	0.0609	0.0244	0.0421	0.0413	0.0496

Panel B. Executive directors in senior positions

VARIABLES	(1) Ln(1+mTtlComp)	(2) Ln(1+mSalary)	(3) Ln(1+mBonus)
L.CC	-0.014	-0.056	1.065*
	(0.048)	(0.044)	(0.580)
L.CC*ROA	-0.110	-0.018	-1.879
	(0.507)	(0.400)	(5.173)
ROA	0.638***	-0.175	13.027***
	(0.143)	(0.279)	(1.965)
ln(Asset)	0.152***	0.159***	0.090
	(0.052)	(0.060)	(0.416)
Leverage	-0.067	-0.008	-3.696***
	(0.134)	(0.167)	(1.326)
ln(Board Size)	-0.077**	-0.038	-0.218
	(0.039)	(0.046)	(0.394)
Inst_ownership	-0.030	-0.414	1.508
	(0.160)	(0.307)	(1.691)
ln(Firm Age)	-0.079	0.184	-0.191
	(0.095)	(0.214)	(0.769)
Large BG	0.057	0.050	-0.246
	(0.077)	(0.074)	(0.540)
Constant	13.005***	11.579***	11.173***
	(0.445)	(0.665)	(3.445)
Firm FE	Yes	Yes	Yes
Year FE	Yes	Yes	Yes
Number of id	484	484	484
Obs.	2849	2849	2849
Adj R-squared	0.0919	0.0318	0.0491

Table 7. The effect of a compensation committee on ESG scores provided by LSEG

This table reports OLS regression results examining the effect of a compensation committee on ESG scores, as well as E, S, and G scores, in columns (1) through (4), respectively. Models in Panel A include firm and year fixed effects. All independent variables are lagged by one year. Standard errors, reported in parentheses, are clustered at the firm level. Statistical significance is denoted by ∗, ∗∗, and ∗∗∗, corresponding to the 10%, 5%, and 1% levels, respectively. All variables are defined in Appendix A.

	(1)	(2)	(3)	(4)
VARIABLES	ESG score (LSEG)	E score (LSEG)	S score (LSEG)	G score (LSEG)
L.CC	-0.568	-1.660	-0.598	2.687
	(0.920)	(1.284)	(1.342)	(1.977)
L.ROA	-0.289	-3.199	6.224	-10.596
	(5.474)	(7.159)	(7.543)	(8.639)
L.ln(Asset)	-1.155	-1.671	-0.723	2.856
	(1.259)	(2.238)	(1.919)	(1.974)
L.Leverage	-0.583	-0.156	-2.411	-5.536
	(3.318)	(4.752)	(4.786)	(6.235)
L.ln(Board Size)	0.142	-0.201	-1.884	0.051
	(0.930)	(1.142)	(1.400)	(2.011)
L.Inst_ownership	-0.378	-0.895	1.040	-8.679
	(5.121)	(7.126)	(7.469)	(8.383)
L.ln(Firm Age)	4.468	8.281**	6.499*	0.562
	(2.724)	(4.171)	(3.864)	(5.164)
L.Large BG	0.035	2.308	0.137	-0.484
	(2.026)	(2.789)	(3.025)	(2.774)
L.ESG score	0.698***			
	(0.028)			
L.E score		0.687***		
		(0.031)		
L.S score			0.666***	
			(0.038)	
L.G score				0.429***
				(0.039)
Constant	9.082	2.410	4.644	2.145
	(12.675)	(21.241)	(19.165)	(25.112)
Firm FE	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
Number of id	147	133	133	133
Obs.	1046	949	900	949
Adj R-squared	0.703	0.694	0.669	0.241

Table 8. Difference-in-Differences with propensity score matching (PSM) analysis

This table reports regression results of difference-in- differences with PSM analysis. We match treated firms, defined as those with a compensation committee, to control firms without a compensation committee using the following procedure. First, we estimate a logit model regressing the likelihood of compensation committee adoption on the firm-level control variables, industry dummies, and year dummies used in Table 3 to obtain propensity scores. Second, we match each treated firm to a control firm using one-to-one nearest-neighbor matching without replacement, imposing a caliper of 0.005. Control firms are required to share the same industry code and year as their matched treated firm. Panel A reports differences in firm characteristics between treated and control firms in the matched sample. Panel B reports estimation results using the matched sample, with all models including the full set of one-year lagged control variables and firm and year fixed effects. *Treat* × *Post* denotes the interaction between *Treat* and *Post*. *Treat* is an indicator variable equal to one for firms in the treated group and zero for firms in the control group. *Post* is an indicator variable equal to one for years after a treated firm introduces a compensation committee and zero otherwise. Standard errors are clustered at the firm level and reported in parentheses. Standard errors are clustered at the firm level and reported in parentheses. Statistical significance at the 10%, 5%, and 1% levels is denoted by ∗, ∗∗, and ∗∗∗, respectively. All variables are defined in Appendix A.

Panel A. Comparison of firm characteristics between treated and control firms

Variable	Treated	Control	Difference	t-statistics
L.ROA	0.03	0.03	0.00	-0.09
L.ln(Asset)	7.74	7.75	0.01	-0.04
L.Leverage	0.48	0.49	0.01	-0.27
L.ln(Board Size)	1.54	1.52	-0.03	0.47
L.Inst_ownership	0.10	0.10	0.00	-0.04
L.ln(Firm Age)	3.39	3.35	-0.04	0.35
L.Large BG	0.48	0.49	0.01	-0.13

Panel B. ESG ratings

	(1)	(2)	(3)	(4)
VARIABLES	ESG score	E score	S score	G score
CC	0.486***	0.401***	0.260**	0.673***
	(0.107)	(0.103)	(0.104)	(0.112)
Controls in Table 4	Yes	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
Number of id	213	213	213	213
Obs.	1223	1236	1274	1761
Adj R-squared	0.225	0.335	0.227	0.281

Panel C. Compensation

VARIABLES	(1) ln(AVG_COMP)	(2) Ln(1+TtlComp_top)	(3) Ln(+Salary_top)	(4) Ln(1+Bonus_top)	(5) Ln(1+mTtlComp)	(6) Ln(1+mSalary)	(7) Ln(1+mBonus)
CC	-0.311*	-0.069	-0.002	1.684*	0.013	-0.012	1.591**
	(0.176)	(0.072)	(0.073)	(0.889)	(0.059)	(0.051)	(0.756)
CC*ROA	-1.232	0.831	-0.421	-4.826	0.343	0.213	-0.787
	(2.034)	(0.756)	(0.922)	(6.631)	(0.591)	(0.594)	(5.708)
ROA	-0.072	1.077***	-0.128	16.616***	0.844***	-0.176	13.346***
	(0.494)	(0.327)	(0.572)	(4.306)	(0.311)	(0.559)	(3.885)
Controls in Table 3	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Number of id	213	185	185	185	178	178	178
Obs.	1754	1224	1224	1224	1166	1166	1166
Adj R-squared	0.0276	0.172	0.0191	0.0579	0.0949	0.0175	0.0636

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