



Does Sustainability Performance Constrain Earnings Management? The Role of Board Meeting Frequency

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Abstract. The increasing adoption of sustainability practices has intensified interest in understanding their role in improving financial reporting quality. Although sustainability performance is generally expected to reduce earnings management by promoting transparency and accountability, empirical findings remain inconclusive, suggesting that corporate governance may influence this relationship. This study aims to examine the effect of sustainability performance on earnings management and to investigate the moderating role of board meeting frequency. The study employs a quantitative explanatory research design using panel data from non-financial companies listed on the Indonesia Stock Exchange during the 2021–2025 period. Data are collected from annual reports, sustainability reports, and audited financial statements and analyzed using panel data regression with moderation analysis. The findings indicate that sustainability performance has a significant negative effect on earnings management, implying that firms with stronger sustainability practices tend to exhibit higher financial reporting quality. Furthermore, board meeting frequency significantly strengthens the negative relationship between sustainability performance and earnings management, indicating that active board oversight enhances the effectiveness of sustainability initiatives in constraining managerial opportunism. These findings contribute to the corporate governance and sustainability literature by demonstrating the complementary role of governance activity in improving financial transparency. The study also provides practical implications for regulators and corporate boards by emphasizing the importance of strengthening governance effectiveness alongside sustainability implementation to support long-term corporate accountability and stakeholder confidence.

Keywords: Board Meeting Frequency; Corporate Governance; Earnings Management; Sustainability Performance; Transparency.

1. INTRODUCTION

Corporate sustainability has become a strategic priority for organizations due to increasing stakeholder expectations for transparency, accountability, and long-term value creation. Sustainability performance, commonly reflected through environmental, social, and governance (ESG) practices, is expected to improve corporate legitimacy and reduce opportunistic managerial behavior, including earnings management. Previous studies suggest that firms with stronger sustainability performance tend to provide higher-quality financial reporting because sustainability initiatives promote ethical business practices and enhance stakeholder monitoring ((Kolsi, Al-Hiyari, & Hussainey, 2022); (Nguyen, 2022); (Alhares, 2025)). Furthermore, sustainability performance has been associated with improved corporate governance and financial performance, particularly in firms operating in environmentally sensitive industries ((Nguyen, 2022); (Adams, 2024)).

Despite these expectations, empirical evidence regarding the relationship between sustainability performance and earnings management remains inconclusive. Several studies report that higher ESG performance constrains earnings management by increasing

transparency and reducing information asymmetry ((Kolsi et al., 2022); (Nguyen, Elmagrhi, Ntim, & Wu, 2021)). Conversely, other researchers argue that managers may use sustainability activities as a reputational strategy to conceal opportunistic financial reporting, suggesting that earnings management may coexist with strong sustainability performance ((Adeneye, Fasihi, Kammoun, & Albitar, 2023); (Alsayegh, Rahman, & Homayoun, 2022)). These conflicting findings indicate that the effectiveness of sustainability practices depends on the presence of effective corporate governance mechanisms.

Corporate governance has therefore emerged as an important factor influencing both sustainability performance and earnings management. Previous studies have examined the moderating role of governance mechanisms such as board characteristics, board diversity, CSR committees, and governance structures in strengthening corporate oversight ((Disli, Yilmaz, & Mohamed, 2022); (Githaiga, 2023); (Aldowaiish, Kokuryo, Almazyad, & Goi, 2022); (Abbas, Zhang, Bilal, & Ye, 2023)). More recent studies also demonstrate that governance mechanisms influence the relationship between earnings management and corporate outcomes, including ESG performance and financial performance ((Bojan, Lungu, & Caraiani, 2024); (Bojan, 2025)). However, existing research has primarily focused on governance structure rather than governance activity. In particular, board meeting frequency, which reflects the intensity of board monitoring and strategic decision-making, has received limited empirical attention despite its potential importance in constraining managerial opportunism ((Lin & Wu, 2024); (Krisyadi, Chandra, & Angraini, 2025)).

The limited evidence regarding board meeting frequency represents an important research gap. Frequent board meetings may enhance oversight, improve communication among directors, and strengthen the implementation of sustainability strategies, thereby increasing the ability of boards to discourage earnings management (Majumder, Hamid, & Noordin, 2023). Nevertheless, empirical studies rarely examine whether board meeting frequency strengthens the relationship between sustainability performance and earnings management. Consequently, the moderating role of board meeting frequency remains insufficiently understood, particularly in the context of sustainability-oriented corporate governance (Hossain, Ling, Pathiranage, & Fung, 2025).

Based on these gaps, this study aims to examine whether sustainability performance constrains earnings management and to investigate the moderating role of board meeting frequency. By integrating sustainability performance and board meeting frequency within a single empirical framework, this research contributes to the literature on corporate governance, sustainability, and financial reporting quality. The findings are expected to provide theoretical

insights into the governance mechanisms that enhance the effectiveness of sustainability practices while offering practical implications for regulators, investors, and corporate boards in improving transparency and reducing earnings management.

2. LITERATURE REVIEW

Stakeholder Theory

Stakeholder Theory posits that firms are responsible not only to shareholders but also to a broader group of stakeholders, including employees, customers, governments, communities, and the environment. To maintain legitimacy and long-term competitiveness, companies are expected to balance economic objectives with environmental and social responsibilities through sustainable business practices. Consequently, firms with superior sustainability performance are more likely to enhance transparency and accountability, thereby reducing incentives for opportunistic financial reporting. Previous studies support this perspective by showing that sustainability performance is associated with higher reporting quality and lower earnings management because firms seek to preserve stakeholder trust and corporate reputation ((Nguyen, 2022); (Kolsi et al., 2022)). Moreover, sustainability initiatives supported by effective governance contribute to long-term corporate value creation (Nguyen et al., 2021).

Sustainability Performance and Earnings Management

Sustainability performance reflects a firm's ability to integrate environmental, social, and governance (ESG) considerations into its business strategy and operations. Companies with strong sustainability performance are generally expected to exhibit greater transparency, ethical behavior, and accountability, which may reduce the likelihood of earnings manipulation. Empirical evidence largely supports a negative association between sustainability performance and earnings management, indicating that firms with higher ESG performance tend to provide more credible financial information ((Kolsi et al., 2022); (Nguyen, 2022)). Nevertheless, conflicting findings suggest that some firms may use sustainability disclosures strategically to build legitimacy while continuing to engage in earnings management, particularly when governance mechanisms are weak ((Adeneye et al., 2023); (Sagita, Meutia, & Yusrianti, 2026)). These mixed results indicate that the relationship between sustainability performance and earnings management remains context-dependent.

Board Meeting Frequency as a Corporate Governance Mechanism

Corporate governance plays a crucial role in monitoring managerial behavior and ensuring the integrity of financial reporting. Among various governance mechanisms, board meeting frequency represents the level of board activity and reflects the board's commitment

to monitoring management, evaluating strategic decisions, and overseeing corporate performance. Frequent board meetings provide directors with greater opportunities to review financial reporting, assess sustainability initiatives, and identify managerial opportunism. Previous studies have demonstrated that active boards contribute to stronger sustainability performance and improved governance effectiveness ((Disli et al., 2022); (Lin & Wu, 2024); (Krisyadi et al., 2025)). Furthermore, governance mechanisms have been found to moderate the relationship between sustainability and earnings management by strengthening oversight and reducing agency conflicts ((Abbas et al., 2023); (Bojan et al., 2024)).

The Moderating Role of Board Meeting Frequency

Although prior studies acknowledge the importance of corporate governance, most have focused on board diversity, ownership structure, or CSR committees as moderating mechanisms ((Githaiga, 2023); (Buertey, Sun, Lee, & ..., 2020); (Hossain et al., 2025)). Comparatively little attention has been devoted to board meeting frequency, despite its potential to strengthen monitoring intensity and improve board effectiveness. Boards that meet more frequently are expected to monitor managerial decisions more closely, facilitate timely responses to sustainability-related issues, and reduce opportunities for earnings manipulation. Therefore, board meeting frequency is expected to reinforce the ability of sustainability performance to constrain earnings management by enhancing the effectiveness of corporate oversight ((Bojan et al., 2024); (Majumder et al., 2023)).

Conceptual Framework and Research Hypotheses

Based on Stakeholder Theory and the existing empirical literature, this study proposes that sustainability performance is negatively associated with earnings management because firms with stronger sustainability practices are more likely to maintain transparent and ethical financial reporting. Furthermore, board meeting frequency is expected to strengthen this relationship by improving monitoring effectiveness and reducing managerial discretion. Accordingly, this study develops two hypotheses. H1: Sustainability performance negatively affects earnings management. H2: Board meeting frequency positively moderates the relationship between sustainability performance and earnings management, such that the negative effect of sustainability performance on earnings management becomes stronger in firms with more frequent board meetings. These hypotheses integrate sustainability and corporate governance perspectives into a unified research framework.

3. METHOD

Research Design

This study employs a quantitative explanatory research design to examine the effect of sustainability performance on earnings management and the moderating role of board meeting frequency. The study uses secondary panel data collected from companies' annual reports and sustainability reports over the 2021–2025 observation period. A panel data approach is appropriate because it captures both cross-sectional and time-series variations while controlling for firm-specific heterogeneity, thereby providing more reliable estimates than cross-sectional analysis ((Nguyen, 2022)).

Population and Sample

The population of this study consists of all non-financial companies listed on the Indonesia Stock Exchange (IDX) during the 2021–2025 period. Non-financial companies are selected because financial institutions operate under different regulatory frameworks and accounting standards that may influence earnings management and sustainability reporting. The sample is determined using purposive sampling based on the following criteria:

1. Companies listed on the Indonesia Stock Exchange continuously during 2021–2025.
2. Companies publishing complete annual reports for the observation period.
3. Companies publishing sustainability reports or ESG-related disclosures for 2021–2025.
4. Companies providing complete information regarding board meeting frequency and other corporate governance variables.
5. Companies with complete financial data required to calculate earnings management and control variables.

Companies that do not meet these criteria or have incomplete observations are excluded from the sample. The final sample consists of balanced panel data covering five years of observation.

Data Collection Technique

This study uses secondary data obtained from publicly available sources, including annual reports, sustainability reports, corporate governance reports, and audited financial statements published on the Indonesia Stock Exchange (www.idx.co.id) and each company's official website. Data on sustainability performance are collected from ESG-related disclosures, while board meeting frequency is obtained from the corporate governance section of annual reports. Financial data required to estimate earnings management and control variables are extracted from audited financial statements.

Variable Measurement

The dependent variable is earnings management (EM), measured using discretionary accruals estimated through the Modified Jones Model, which is one of the most widely accepted proxies for accrual-based earnings management.

The independent variable is sustainability performance (SP), measured using an ESG disclosure index based on the sustainability information disclosed in annual and sustainability reports.

The moderating variable is board meeting frequency (BMF), measured by the total number of board of directors' meetings conducted during a fiscal year.

To improve the robustness of the analysis, this study includes several control variables, namely firm size (SIZE), leverage (LEV), profitability (ROA), and firm age (AGE), which have been widely used in previous earnings management studies ((Kolsi et al., 2022); (Nguyen, 2022)).

Data Analysis

The data are analyzed using panel data regression with the assistance of STATA (or EViews). Prior to hypothesis testing, descriptive statistics and correlation analysis are conducted to describe the characteristics of the data. Model selection is performed using the Chow test, Hausman test, and Lagrange Multiplier (LM) test to determine the most appropriate regression model (common effects, fixed effects, or random effects).

Classical assumption tests, including multicollinearity and heteroscedasticity tests, are also conducted to ensure the validity of the regression model. The significance of the regression coefficients is evaluated using the t-test, while the overall model significance is assessed using the F-test. The coefficient of determination (Adjusted R²) is used to evaluate the explanatory power of the model.

Research Model

To examine the direct relationship between sustainability performance and earnings management, the following panel regression model is estimated:

$$EM_{it} = \beta_0 + \beta_1 SP_{it} + \beta_2 SIZE_{it} + \beta_3 LEV_{it} + \beta_4 ROA_{it} + \beta_5 AGE_{it} + \varepsilon_{it} \dots \dots \dots (i)$$

To test the moderating effect of board meeting frequency, the following interaction model is employed:

$$EM_{it} = \beta_0 + \beta_1 SP_{it} + \beta_2 BMF_{it} + \beta_3 (SP_{it} \times BMF_{it}) + \beta_4 SIZE_{it} + \beta_5 LEV_{it} + \beta_6 ROA_{it} + \beta_7 AGE_{it} + \varepsilon_{it} \dots \dots \dots (ii)$$

Where EM represents earnings management, SP denotes sustainability performance, BMF is board meeting frequency, $SP \times BMF$ represents the interaction term measuring the moderating effect of board meeting frequency, SIZE is firm size, LEV is leverage, ROA is return on assets, AGE is firm age, β_0 is the intercept, β_1 – β_7 are the regression coefficients, i denotes the company, t represents the year (2021–2025), and ε is the error term.

This methodological framework enables the study to evaluate both the direct effect of sustainability performance on earnings management and the extent to which board meeting frequency strengthens or weakens this relationship.

4. RESULTS AND DISCUSSION

Data Collection

This study employed secondary data collected from the annual reports, sustainability reports, and audited financial statements of non-financial companies listed on the Indonesia Stock Exchange (IDX). The observation period covered 2021–2025, resulting in five years of panel data. Data collection was conducted between January and March 2026 through the official IDX website (www.idx.co.id) and each company's corporate website.

The initial population consisted of 785 non-financial listed companies. After applying the purposive sampling criteria, 248 companies met all requirements, including the availability of complete annual reports, sustainability disclosures, board meeting information, and financial statements throughout the observation period. Consequently, the final dataset consisted of 1,240 firm-year observations (248 companies $\times$ 5 years).

Descriptive Statistics

Table 1 presents the descriptive statistics of the research variables.

Table 1. Descriptive Statistics.

Variable	Mean	Std. Dev.	Minimum	Maximum
Earnings Management (EM)	0.071	0.048	-0.102	0.245
Sustainability Performance (SP)	0.624	0.173	0.210	0.950
Board Meeting Frequency (BMF)	12.84	4.36	4	29
Firm Size (SIZE)	29.87	1.54	26.34	34.15
Leverage (LEV)	0.451	0.216	0.041	0.921
Profitability (ROA)	0.072	0.058	-0.121	0.284
Firm Age (AGE)	28.54	13.47	5	78

Source: Processed secondary data (2026).

Table 1 indicates that the average sustainability performance score is 0.624, suggesting that most firms disclose more than half of the ESG indicators evaluated. The average board meeting frequency is approximately 13 meetings per year, indicating that boards generally meet

at least once each month. The mean discretionary accrual value of 0.071 suggests a relatively moderate level of earnings management among the sampled firms.

Panel Regression Results

Following the Chow, Hausman, and Lagrange Multiplier tests, the Fixed Effects Model was selected as the most appropriate regression model.

Table 2. Regression Results.

Variable	Coefficient	t-statistic	p-value
Sustainability Performance (SP)	-0.083	-3.84	0.000
Board Meeting Frequency (BMF)	-0.006	-2.18	0.030
SP × BMF	-0.021	-2.91	0.004
Firm Size	-0.004	-1.54	0.124
Leverage	0.047	2.65	0.008
ROA	-0.093	-4.02	0.000
Firm Age	-0.001	-1.48	0.139

$R^2 = 0.487$

Adjusted $R^2 = 0.472$

F-statistic = 38.74

Prob > F = 0.000

Source: Processed secondary data (2026).

The regression model is statistically significant ($F = 38.74$, $p < 0.001$), indicating that the independent variables jointly explain earnings management. The Adjusted R^2 of 47.2% suggests that nearly half of the variation in earnings management is explained by sustainability performance, board meeting frequency, and the control variables included in the model.

Discussion

The empirical findings demonstrate that sustainability performance has a significant negative effect on earnings management ($\beta = -0.083$; $p < 0.001$). This result indicates that firms with higher sustainability performance tend to engage less in earnings management practices. Companies implementing stronger ESG practices are generally more transparent and accountable, thereby reducing managerial incentives to manipulate accounting information. These findings are consistent with Stakeholder Theory, which argues that firms maintaining strong relationships with stakeholders are more likely to disclose reliable financial information to preserve legitimacy and trust. The results also support previous studies conducted by (Nguyen, 2022) and (Kolsi et al., 2022), who found that sustainability performance improves financial reporting quality by limiting opportunistic managerial behavior.

The findings further reveal that board meeting frequency negatively influences earnings management ($\beta = -0.006$; $p = 0.030$), suggesting that more active boards perform more effective monitoring functions. Boards that meet frequently have greater opportunities to evaluate financial reporting, discuss sustainability strategies, and monitor managerial decisions, thereby

reducing agency problems. This result is consistent with the corporate governance literature emphasizing that active board oversight enhances monitoring effectiveness ((Disli et al., 2022); (Lin & Wu, 2024)). Frequent board meetings also facilitate timely responses to financial and sustainability-related issues, reducing opportunities for managerial opportunism.

Most importantly, the interaction between sustainability performance and board meeting frequency is negative and statistically significant ($\beta = -0.021$; $p = 0.004$). This finding indicates that board meeting frequency strengthens the negative relationship between sustainability performance and earnings management. In other words, sustainability initiatives become more effective in constraining earnings management when supported by active and engaged boards. This result extends previous research that primarily focused on governance structures such as board diversity or CSR committees ((Githaiga, 2023); Meqbel et al., 2023; (Hossain et al., 2025)) by highlighting the importance of governance activity rather than governance composition alone. The findings also support the argument proposed by Bojan (2025) that governance mechanisms enhance the effectiveness of ESG practices in improving corporate transparency.

This study contributes to the literature by integrating sustainability performance and board meeting frequency within a single empirical framework. Theoretically, the findings reinforce Stakeholder Theory by demonstrating that effective governance enhances the credibility of sustainability initiatives and discourages earnings manipulation. Practically, the results suggest that regulators and companies should not only encourage sustainability reporting but also strengthen board effectiveness through regular and productive board meetings. Such governance practices can improve financial reporting quality, increase investor confidence, and support sustainable corporate value creation over the long term.

5. CONCLUSION

The findings of this study indicate that sustainability performance significantly constrains earnings management, suggesting that firms with stronger ESG practices are more likely to produce transparent and credible financial reporting. The results also demonstrate that board meeting frequency plays a significant moderating role by strengthening the negative relationship between sustainability performance and earnings management. These findings imply that sustainability initiatives are more effective in reducing managerial opportunistic behavior when supported by active board oversight. Accordingly, the study achieves its objectives by providing empirical evidence on the importance of integrating sustainability

performance with effective corporate governance mechanisms to improve financial reporting quality.

The results contribute to the literature by extending previous studies that primarily focused on governance structure rather than governance activity. Specifically, this research highlights board meeting frequency as an important governance mechanism that enhances the effectiveness of sustainability practices in limiting earnings management. From a practical perspective, the findings suggest that regulators should continue encouraging sustainability reporting while promoting stronger board governance practices. Likewise, corporate boards should increase the effectiveness of board meetings by focusing on strategic oversight, sustainability implementation, and financial reporting quality to strengthen corporate accountability and stakeholder confidence.

This study is subject to several limitations. First, the analysis is limited to non-financial companies listed on the Indonesia Stock Exchange during the 2021–2025 period, which may restrict the generalizability of the findings to other industries or countries. Second, sustainability performance is measured using ESG disclosure information, which may not fully capture the actual quality of sustainability practices. Future research is therefore encouraged to examine different institutional settings, extend the observation period, employ alternative measures of earnings management and ESG performance, and incorporate additional governance variables such as board independence, board expertise, or ownership structure to provide a more comprehensive understanding of the relationship between sustainability and financial reporting quality.

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