

The Effect of Environmental, Social, and Governance Disclosure on Firm Value with Earnings Management as a Moderating Variable: An Empirical Study of the ESG Quality of 45 IDX Kehati Companies on the Indonesian Stock Exchange (2019-2023)

Herna^{1*}, Ety Gurendrawati², Agung Dharmawan Buchdadi³

¹⁻³Master of Accounting Study Program, Faculty of Economics, Universitas Negeri Jakarta, Indonesia

E-mail: ¹⁾ herna.lumbangaol@gmail.com

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ABSTRACT

The growing emphasis on sustainable business practices has made Environmental, Social, and Governance (ESG) disclosure a strategic tool for shaping corporate legitimacy and market perception. This study examines the effect of ESG disclosure (aggregate and partial) on firm value and investigates earnings management as a moderator. Grounded in Legitimacy Theory and Agency Theory, this causal-quantitative research uses panel data regression. A purposive sample of non-financial firms consistently listed on the ESG Quality 45 IDX KEHATI index from 2019-2023 yielded 18 companies with 90 observations. Hypothesis testing employed the Fixed Effect Model after satisfying classical assumption tests. Results show that aggregate ESG disclosure and each pillar (environmental, social, governance) positively and significantly enhance firm value. Conversely, earnings management directly reduces firm value and significantly weakens ESG's positive effect. These findings confirm an entrenchment strategy, where managers exploit high sustainability disclosure to conceal earnings manipulation. This information asymmetry fosters market skepticism, perceived as greenwashing, which destroys credibility and eliminates valuation premiums. Thus, companies and regulators must align sustainability transparency with earnings quality integrity.

Keywords: Earnings Management, Earnings Quality, ESG, Firm Value, Sustainability Disclosure

1. INTRODUCTION

As a critical metric of corporate performance and market sentiment regarding future profitability, firm value is typically manifested in stock price fluctuations; consequently, rising share prices signify an accretion in shareholder wealth (Ramdhonah et al., 2019). Therefore, firm value is a primary concern for investors, shareholders, and management (Umboh & Yanti, 2025). Whereas traditional assessments of firm value emphasized purely monetary metrics, contemporary approaches increasingly incorporate intangible factors such as reputation, innovation, and long-term sustainability. Consequently, the construct of corporate valuation has expanded in a more holistic direction, with the explicit inclusion of Environmental, Social, and Governance (ESG) considerations.

In Indonesia, attention to ESG has been increasing along with regulatory support from the government and relevant authorities. The Financial Services Authority has issued various policies, such as POJK No. 51/POJK.03/2017 and the sustainable finance roadmap (OJK, 2021), which encourage companies to prepare sustainability reports. In addition, Indonesia has also adopted the Sustainable Development Goals (SDGs) since 2015 (SDGs, 2015). The Indonesia Stock Exchange has further strengthened ESG implementation by introducing ESG-based stock indices (IDX, 2021). These various initiatives demonstrate a transformation toward more sustainable and transparent business practices in the Indonesian capital market.

Prior scholarly evidence consistently reveals a positive relationship between the extent of ESG disclosure and two key corporate outcomes: market performance and firm value. According to Buallay (2019), Makhdalena et al. (2023), Wong et al. (2021) ESG practices serve to strengthen investor confidence and increase a company's market capitalization. This conclusion is reinforced by Aydoğmuş et al. (2022), who affirm that ESG exerts a beneficial influence on both firm value and profitability. Consequently, ESG disclosure has emerged as material information in investment decision-making, as it proxies for a company's dedication to sustainable operations and robust governance (Hardiningsih et al., 2020).

Nevertheless, the linkage between ESG and firm value is neither invariably direct nor uniformly consistent, as its magnitude may be contingent upon intervening variables most notably, earnings management practices. Viewed through the lens of agency theory, earnings management exacerbates information asymmetry between principals (investors) and agents (management), thereby potentially undermining the perceived reliability of financial disclosures. Empirically, Adeneye & Kammoun (2022) and Velte (2019) report that superior ESG performance correlates with diminished levels of earnings manipulation. Conversely, Ria & Prastyatini (2021) demonstrate that earnings management moderates the association between sustainability practices and corporate valuation. These findings collectively underscore the pivotal moderating role of earnings management in either amplifying or attenuating the effect of ESG on firm value.

On the other hand, the implementation and utilization of ESG in Indonesia still face various challenges. Relatively low ESG literacy, limited access to non-financial information, and suboptimal regulatory incentives are inhibiting factors in integrating ESG into investment decisions (Eu-Lin & Loh, 2023; Fitrianggraeni et al., 2023; Wongtrakool & Kim, 2019). This condition indicates a gap between the availability of ESG information and its utilization by investors. Yet, good ESG disclosure can reduce information asymmetry and improve corporate transparency, thereby potentially increasing firm value (Andriani & Arsjah, 2022; Safriani & Utomo, 2020).

In light of the preceding discussion, two salient gaps characterize the existing literature: persistent heterogeneity in reported results, and a relative scarcity of studies incorporating earnings management as a moderating variable in the ESG firm value nexus, particularly within the Indonesian capital market. While some recent studies from emerging markets have begun to explore this intersection, notably Adeneye and Kammoun (2022), who examined the relationship between ESG performance and real earnings management in developing economies, and Makhdalena et al. (2023), who investigated ESG and firm performance across ASEAN countries, these works do not explicitly model earnings management as a moderator of the ESG firm value relationship, nor do they focus specifically on the Indonesian context. Consequently, this investigation aims (a) to assess the effect of Environmental, Social, and Governance (ESG) factors on firm value, and (b) to examine the moderating function of earnings management in this relationship, targeting firms included in the ESG index on the Indonesia Stock Exchange. By bridging these gaps, the research promises theoretical value through literature extension, as well as practical utility for investors and corporate decision-makers in deploying ESG practices to foster long-term improvements in firm value.

2. LITERATURE REVIEW

2.1. The Effect of ESG, Earnings Management, and Firm Value

The relationship between ESG and firm value is an important research issue because firm value is often regarded as a representation of the returns obtained by shareholders. To maximize this value, companies today are required not only to focus on corporate performance, but also to express their sustainability performance in order to enhance reputation and investor confidence in the company's future viability (Hardiningsih et al., 2020). Therefore, comprehensive disclosure of sustainability information is believed to be capable of sending positive signals to the market, thereby impacting the increase in firm value both holistically and through each of its constituent pillars. Based on these arguments, the research hypotheses are:

H1: ESG disclosure has a positive effect on firm value.

H2: Environmental disclosure has a positive effect on firm value.

H3: Social disclosure has a positive effect on firm value.

H4: Governance disclosure has a positive effect on firm value.

In addition to sustainability practices, factors related to financial reporting governance such as earnings management also have a significant contribution to firm value. Viewed from the perspective of agency theory, earnings management is often used by management to engineer the company’s condition to appear good and stable in accordance with market expectations. These manipulative practices may have a positive impact in the short term. However, if exposed, such engineering actions will drastically reduce investor confidence and damage firm value in the long term. This view is supported by Hernawati et al. (2021) and Tulcanaza-Prieto & Lee (2022), who argued that opportunistic managerial behavior in the form of earnings management has a negative effect on firm value. The results of these studies explain the view of managerial behavior aimed at increasing their wealth and reputation. Meanwhile, Darmawan (2020), focusing separately on two categories of earnings manipulation accrual management and real transaction management which are the evidence demonstrates divergent directional effects. Accrual earnings management enhances firm value, whereas real earnings management diminishes it.

Viewed from the perspective of agency theory, earnings management is often used by management to maintain the company’s appearance in the eyes of investors. This is done to ensure that company performance appears stable in accordance with market expectations, even though it does not reflect the actual condition. This practice may have a short-term positive impact on investor perceptions, but at the same time may reduce trust and firm value in the long term if such management practices are exposed. Therefore, the next hypothesis is formulated as follows:

H9: Earnings management has a negative effect on firm value.

2.2. The Effect of ESG and Firm Value with Earnings Management as a Moderating Variable

While the ESG–firm value nexus has attracted considerable empirical attention, the extant literature reveals a conspicuous paucity of studies that explicitly model earnings management as a moderating variable in this association. According to Rahman et al. (2020), ignoring the role of earnings management is a significant gap, because earnings management practices can actually degrade and reduce the relevance of accounting information in assessing the performance of a business entity. Major financial scandals such as Enron, Merck, and WorldCom serve as real evidence of how earnings management practices destroy public trust and pose the risk of firm value collapse.

ESG disclosures may function as a favorable signal of corporate quality, insofar as they illuminate the interconnections among a firm's environmental, social, and governance responsibilities. In contrast, earnings management practices convey low-quality information with respect to firm value (Rahman et al., 2020). The following are the research hypotheses based on moderation:

H5: Earnings management weakens the positive effect of ESG disclosure on firm value.

H6: Earnings management weakens the positive effect of environmental disclosure on firm value.

H7: Earnings management weakens the positive effect of social disclosure on firm value.

H8: Earnings management weakens the positive effect of governance disclosure on firm value.

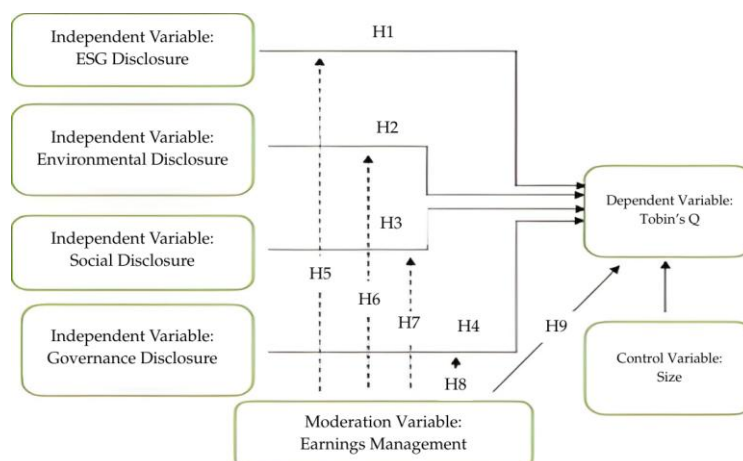


Figure 1. Conceptual Framework of the Research

Source: Authors’ compilation (2025)

3. RESEARCH METHODS

Employing a quantitative research design, the present study seeks to assess both the joint and individual impacts of ESG disclosure on corporate valuation, while additionally evaluating the extent to which earnings management moderates the aforementioned association. The quantitative approach was chosen because it enables systematic hypothesis testing through variable measurement and statistical analysis, thereby explaining phenomena based on the conceptual model used. The research design applied is causal research, which aims to identify causal relationships between variables. In this study, the unit of analysis used is the company, because the data analyzed relates to company characteristics and performance in accordance with the research focus.

The population in this study encompasses all companies listed in the ESG Quality 45 IDX KEHATI index during the period 2019-2023. The selection of the research period starting from 2019 was based on considerations of data maturity, given that GRI sustainability reporting standards began to be enforced in 2017, thus requiring time to achieve an adequate level of comparability and data reliability. Companies in this index were selected because they have relatively good ESG performance and financial quality, making them relevant for analyzing the relationship between ESG practices and corporate performance. To maintain consistency, the study employs a fixed-sample cohort approach, meaning only companies that were consecutively listed in the index in 2022 and 2023 are included.

This study uses balanced panel data with a purposive sampling technique, so that only companies with complete data during the observation period are included as the sample. These criteria generated a research sample of 18 entities. The study utilizes secondary data extracted from financial reports and sustainability publications made available on the Indonesia Stock Exchange and respective company websites. Data collection was conducted for the fiscal year period 2019-2023, while 2024 data were not used because they were not fully available at the time the research was conducted.

Table 1. Final Research Sample List

Criteria	Number of Sample Companies
Sample Frame: Companies consistently listed in the ESG Quality 45 IDX KEHATI Index (2022 and 2023 Releases)	32
Less:	
1. Companies operating in the financial industry	(7)
2. Companies with incomplete financial or sustainability report data during the 2019-2023 period	(7)
Final Research Sample (N)	18
Observation Period (Time-series)	5 Years (2019-2023)
Total Panel Data Observations (N × T)	90

Source: Data processed by the authors, 2025

This study examines seven variables organized into four categories: dependent, independent, moderating, and control. Firm value, the dependent variable, is proxied by Tobin's Q which calculated as market value of equity plus total liabilities over total assets. To address potential bias stemming from non-normal distribution and outliers, the Tobin's Q figures are transformed using the natural logarithm (Ln).

The independent variables consist of ESG (Environmental, Social, and Governance) disclosure both in aggregate and partially (ENV, SOC, GOV). A dummy-coding content analysis based on the GRI index is applied for measurement purposes; specifically, this study adopts the GRI Standards 2016 framework, which was the prevailing reporting standard throughout the 2019-2023 observation period and provides a stable set of indicators across environmental, social, and governance dimensions. Each indicator is scored 1 when disclosed and 0 when not, followed by calculation of the proportion of disclosed indicators relative to the total. Earnings management, functioning as the moderating variable, is proxied by discretionary accruals (DAC) estimated via the Modified Jones Model (Dechow & Sloan, 1995). DAC represents the difference between total accruals and non-discretionary accruals, and absolute values are adopted to reflect the extent of earnings manipulation without regard to its positive or negative direction. To enhance the precision with which the ESG-firm value nexus is estimated, this study introduces firm size (SIZE) and profitability (ROA) as control variables. SIZE is measured via the natural logarithm of total assets, while ROA is derived from the ratio of

net income to total assets. Employing these controls helps reduce confounding influences and bias in the principal relationships under investigation.

This study applies a quantitative statistical approach to data analysis. The analytical sequence encompasses descriptive statistics (mean, minimum, maximum, standard deviation) for data characterization, followed by hypothesis testing employing the F-test for simultaneous influence, the t-test for partial influence, and the Adjusted R² as a measure of model fit specifically, its capacity to explain variation in the dependent variable.

Panel data regression, which jointly exploits cross-sectional and longitudinal variation, serves as the primary analytical model. Selection among the Common Effect Model (CEM), Fixed Effect Model (FEM), and Random Effect Model (REM) proceeds through sequential application of the Chow, Hausman, and Lagrange Multiplier tests. In addition to hypothesis testing, Pearson correlation coefficients are computed to examine inter-variable relationships, and the model's robustness is verified using classical assumption tests addressing multicollinearity, heteroscedasticity, and autocorrelation.

Data processing was carried out using Microsoft Excel 365 in the initial stage and continued with Stata 13 for advanced statistical analysis due to its capability in processing panel data accurately and efficiently. In hypothesis testing, this study uses two regression models: a model that tests the partial effect of ESG (ENV, SOC, GOV) on firm value with earnings management moderation, and a model that tests the aggregate effect of ESG on firm value with the same moderation, while controlling for SIZE and ROA variables to improve estimation accuracy.

4. RESULTS AND DISCUSSION

4.1. Research Results

4.1.1. Panel Data Regression Model Selection Test

This testing was conducted on Model 1 (partial) and Model 2 (aggregate).

Table 2. Chow Test Results

Panel Data Model	Effects Test	Statistic	d.f.	Prob.
Model 1	Cross-section F	7.74	(17, 63)	0.0000
Model 2	Cross-section F	8.53	(17, 67)	0.0000

Source: Secondary data processed using Stata 13.0, 2025

Given a Chow test probability of 0.0000 ($p < 0.05$), the Fixed Effect Model (FEM) is determined to be the best-fitting model. This result indicates notable cross-firm heterogeneity, affirming that FEM provides a more appropriate framework for estimation.

Table 3. Hausman Test Results

Panel Data Model	Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Model 1	Cross-section random	19.57	9	0.0208
Model 2	Cross-section random	12.68	5	0.0266

Source: Secondary data processed using Stata 13.0, 2025

The Hausman test shows that both models have probabilities < 0.05 (Model 1: 0.0208; Model 2: 0.0266), so FEM is selected as the best model. Accordingly, FEM is considered more consistent and free of bias, and is used for analysis without the need for the LM test.

4.1.2. Classical Assumption Tests

1) Normality Test

Table 4. Normality Test Results

Panel Data Model	Variable	Obs	Pr(skewness)	Pr(kurtosis)	Adj chi2(2)	Prob>chi2
Model 1	resid	90	0.0956	0.4926	3.35	0.1873
Model 2	resid_2	90	0.1539	0.1428	4.31	0.1162

Source: Secondary data processed using Stata 13.0, 2025

The normality test shows that the residuals in both models are normally distributed, with probability values of Model 1 (0.1873) and Model 2 (0.1162) > 0.05. This is supported by the non-significant skewness and kurtosis values. Thus, the normality assumption is met, the models are free from distributional bias, and the statistical test results can be considered valid and robust.

2) Multicollinearity Test

Table 5. Multicollinearity Test Results

Variable	Model 1 VIF	Model 1 1/VIF	Model 2 VIF	Model 2 1/VIF
ENV	2.19	0.45762		
SOC	2.21	0.45235		
GOV	1.08	0.92353		
ESG			1.03	0.97542
ENVXEM	1.86	0.53848		
SOCXEM	1.90	0.52605		
GOVXEM	1.14	0.87517		
ESGXEM			1.04	0.95783
EM	1.25	0.79822	1.08	0.92358
ROA	1.16	0.86083	1.15	0.87118
SIZE	1.11	0.89762	1.09	0.91875
Mean VIF	1.55	-	1.08	-

Source: Secondary data processed using Stata 13.0, 2025

The multicollinearity test shows that all variables in both models have VIF values below the threshold (≤ 10 and even ≤ 5), so there is no multicollinearity problem. Model 1 has a mean VIF of 1.55, while Model 2 is lower at 1.08. Thus, the regression models are considered stable, efficient, and their estimation results can be trusted.

3) Heteroscedasticity Test

Table 6. Heteroscedasticity Test Results

Variable	Model 1 Coefficient	Model 1 Std. Error	Model 1 t-Statistic	Model 1 Prob.	Model 2 Coefficient	Model 2 Std. Error	Model 2 t-Statistic	Model 2 Prob.
ENV	0.068436	0.131115	0.52	0.603				
SOC	0.089918	0.167612	0.54	0.593				
GOV	-0.008536	0.177399	-0.05	0.962				
EM	-0.115418	0.127057	-0.91	0.366	0.055113	0.036155	1.52	0.131
ESG					0.143839	0.072700	1.98	0.051
ENVXEM	-0.075665	0.195794	-0.39	0.700				
GOVXEM	0.052004	0.184903	0.28	0.779				
SOCXEM	0.077923	0.118902	0.66	0.514				
ESGXEM					-2.439006	1.532312	-1.59	0.115
SIZE	-0.000918	0.028407	-0.03	0.974	0.005360	0.011991	0.45	0.656
ROA	-0.201739	0.085377	-2.36	0.021	0.048867	0.036628	1.33	0.186

Source: Secondary data processed using Stata 13.0, 2025

The Glejser test shows that most variables have p-values > 0.05, so there is no heteroscedasticity. Although ROA in Model 1 is significant, it is not systematic in nature. Overall, the models meet the homoscedasticity assumption, so the estimates remain efficient and the statistical test results are valid.

4) Autocorrelation Test

Table 7. Autocorrelation Test Results

Panel Data Model	Test	F-Statistic	d.f.	Prob.
Model 1	Wooldridge test	2.743	(1, 17)	0.1160
Model 2	Wooldridge test	2.240	(1, 17)	0.1528

Source: Secondary data processed using Stata 13.0, 2025

The Wooldridge test shows that the probability values of Model 1 (0.1160) and Model 2 (0.1528) are greater than 0.05, so there is no autocorrelation in the models. This means that the residuals are independent and the models have met the assumption, so the resulting estimates are valid and efficient.

4.1.3. Panel Data Regression Analysis Results (Fixed Effect Model)

Table 8. Panel Data Regression Test (Fixed Effect Model) Results

Variable	Model 1 (Partial)	Model 2 (Aggregate)	Hypothesis
Constant (C)	-0.0133 (-0.37)	0.0170 (0.30)	
ENV	1.0880* (3.86)	-	H2 Accepted
SOC	1.3461* (3.32)	-	H3 Accepted
GOV	0.7630* (2.10)	-	H4 Accepted
ESG (Aggregate)	-	1.5571* (2.13)	H1 Accepted
EM	-1.0287* (-4.1)	-0.9302* (-2.23)	H9 Accepted
ENV * EM	-0.9712* (-2.72)	-	H6 Accepted
SOC * EM	-0.6661* (-3.25)	-	H7 Accepted
GOV * EM	-1.4212* (-4.05)	-	H8 Accepted
ESG * EM	-	-0.7664* (-2.63)	H5 Accepted
SIZE (Control)	0.3239 (0.83)	0.76517 (0.70)	
ROA (Control)	0.6922 (2.32)	0.79436 (2.16)	
R-Squared (Within)	0.6810	0.3124	
R-Squared Between	0.9123	0.8972	
R-Squared Overall	0.8806	0.8324	
F-Statistic	14.94	6.09	
Prob > F	0.0000	0.0001	
Rho	0.838936	0.677987	

Note: The asterisk (*) indicates significance level at $\alpha=5\%$. Values in parentheses are *t*-statistic values.

Source: Secondary data processed using Stata 13.0, 2025

Based on Table 8, the regression equation for Model 1 can be written as follows:

$$TBQ_{it} = -0.0133 + 1.0880 ENV_{it} + 1.3461 SOC_{it} + 0.7630 GOV_{it} - 1.0287 EM_{it} - 0.9712 ENV_{it} * EM_{it} - 0.6661 SOC_{it} * EM_{it} - 1.4212 GOV_{it} * EM_{it} + 0.3239 SIZE_{it} + 0.6922 ROA_{it} + \varepsilon \quad (4.1)$$

And the regression equation for Model 2 can be written as follows:

$$TBQ_{it} = 0.0170 + 1.5571 ESG_{it} - 0.9302 EM_{it} - 0.7664 ESG_{it} * EM_{it} + 0.76517 SIZE_{it} + 0.79436 ROA_{it} + \varepsilon \quad (4.2)$$

4.1.4. Simultaneous Significance Test (F-Statistic Test)

The empirical results reveal that Model 1 (partial specification) yields an F-statistic of 14.94 ($p = 0.0000$), whereas Model 2 (aggregate specification) produces an F-statistic of 6.09 ($p = 0.0001$). Given that both probability values fall below the 0.05 significance threshold, it can be inferred that the collective set of variables in each model exerts a jointly significant influence on firm value. These results indicate that the regression models used are considered fit and have strong explanatory power in explaining the variation in firm value. This finding also aligns with previous studies stating that ESG disclosure, together with other financial factors, significantly affects firm value. Thus, the rejection of the null hypothesis in the F-test provides an empirical basis for proceeding to partial analysis (t-test), while also confirming that the dynamics of firm value during the 2019-2023 period were influenced by a combination of sustainability performance and financial reporting quality.

4.1.5. Coefficient of Determination Test (R^2)

The Coefficient of Determination (R^2) test shows that Model 1 (partial) is superior to Model 2 (aggregate). The within R^2 value of Model 1 at 0.6810 means that 68.10% of the variation in firm value can be explained by the separation of ESG pillars, whereas Model 2 is only 0.3124. In addition, Model 1 also has higher between R^2 (0.9123) and overall R^2 (0.8806) compared to Model 2 (0.8972 and 0.8324), thereby demonstrating stronger explanatory and predictive capability. The high rho value of Model 1 (0.8389) confirms the dominance of individual company effects, making the use of the Fixed Effect Model appropriate. Meanwhile, Model 2 has a lower rho (0.6780), indicating a greater role of time variation but with a loss of information detail. Overall,

Model 1 is better able to capture the characteristic differences of each ESG pillar, thereby providing more accurate explanatory power compared to the aggregate model.

4.1.6. Parameter Significance Test (T-Test)

Estimations from Model 1 indicate that ENV, SOC, and GOV each positively and significantly affect firm value at the 5% level, with coefficients of 1.0880, 1.3461, and 0.7630, respectively. Conversely, earnings management (EM) carries a significant negative coefficient (-1.0287). Furthermore, all three interaction variables (ENV×EM, SOC×EM, GOV×EM) are negative and statistically significant, implying that EM moderates ESG's positive influence by diminishing its magnitude. SIZE proves insignificant, whereas ROA contributes positively and significantly. Turning to Model 2, the findings mirror those of Model 1: the composite ESG variable exerts a significant positive effect (coefficient: 1.5571), and EM remains significantly negative (-0.9302). The ESG×EM interaction is also negative and significant, again confirming the negative moderating role of earnings management. The SIZE variable remains insignificant, while ROA shows a significant positive effect. The consistency between models strengthens the validity and robustness of the finding that ESG increases firm value, but this effect can be weakened by earnings management practices.

4.2. Discussion

Consistent with the predictions of Hypothesis 1, the aggregated ESG disclosure variable exhibits a positive and statistically significant effect on firm value in Model 2. Specifically, the coefficient of 1.5571 ($t = 2.13$; $p < 0.05$) indicates that, holding other covariates constant, each unit increase in the ESG disclosure score raises firm value by 1.5571 units. The substantial magnitude of this coefficient underscores the economically meaningful contribution of ESG practices to enterprise valuation. Importantly, these empirical results provide comprehensive validation of legitimacy theory, which contends that organizational survival depends upon maintaining operations within the bounds of socially accepted norms.

According to legitimacy theory, companies will ensure their operations are within the bounds of norms accepted by society to ensure their survival. In the prior descriptive statistics, the average aggregate ESG score in the ESG Quality 45 IDX KEHATI Index was at a moderate level of 0.522. Nevertheless, the capital market provides extraordinarily high appreciation and valuation premiums to companies that are willing to go beyond compliance. This sustainability information serves as a signal captured by institutional investors as an indication that the company has successfully managed its long-term risks very well. This positive perception is responded to by investors through massive stock demand, which ultimately boosts the company's value (Tobin's Q) above the book value of its assets.

The results of this study are highly consistent with various previous studies that found a positive Aydoğmuş et al. (2022) provide evidence of a significant positive linkage between ESG scores and Tobin's Q, based on an international panel of 1,720 companies observed from 2013 to 2021. According to their analysis, capital markets reward superior ESG performance with higher firm valuations. Importantly, the positive relationship exhibits cross-regional and cross-industry stability, underscoring the resilience and generalizability of the ESG–firm value nexus. Buallay (2019) found that ESG disclosure has a positive effect on ROA, ROE, and Tobin's Q in 235 banks in the European Union during the 2007-2016 period, confirming that investment in sustainability provides positive financial returns.

Hypothesis 2, asserting a positive relationship between environmental disclosure and firm value, is accepted on the basis of the empirical tests. Model 1 estimates show that the environmental pillar carries a very strong and significant positive coefficient of 1.0880 ($t = 3.86$; $p \ll 0.05$) when considered in partial specification. This result provides compelling evidence that environmental disclosure positively and substantially affects firm value, leading to acceptance of Hypothesis 2 with a high degree of confidence. *Ceteris paribus*, the coefficient of 1.0880 signifies that a one-unit increase in the environmental disclosure score generates a 1.0880-unit increase in firm value.

This result is consistent with legitimacy theory and agency theory. From the perspective of agency theory, environmental transparency reduces information asymmetry between managers and investors regarding potential future environmental liabilities. Interestingly, the descriptive statistics show that the environmental pillar has the most extreme volatility and disparity, with a minimum value of 0.031 and a maximum reaching a perfect level of 1.000. This indicates the existence of polarization which some issuers only meet the regulatory safe threshold, while others are highly ambitious. For companies that achieve high environmental scores, the

market believes that environmental efficiency (such as emission reduction and waste management, among others) will protect entities from potential fines, boycotts, or regulatory sanctions. This risk mitigation effort is genuinely valued by investors through increased market valuation (Tobin's Q).

From the perspective of legitimacy theory, comprehensive environmental disclosure helps companies build social legitimacy by demonstrating that the company operates in accordance with societal norms and expectations regarding environmental protection (Deegan, 2002). In the context of increasing global awareness of climate change and environmental degradation, companies that are transparent in their environmental disclosure are considered more legitimate and sustainable by stakeholders. Deegan (2002) further explains that legitimacy obtained through environmental disclosure can be translated into a strong social license to operate, which in turn reduces operational and reputational risks that could harm firm value.

Hypothesis 3 (positive effect of social disclosure on firm value) is accepted. Model 1 shows a positive coefficient for the social variable of 1.3461 ($t = 3.32$, $p < 0.05$), confirming a highly significant impact on firm value and furnishing strong empirical evidence. Importantly, the social disclosure coefficient (1.3461) is the largest among the three ESG pillars, indicating that the social aspect most strongly influences firm value in this sample. This coefficient's magnitude which exceeding that of the environmental and governance pillars demonstrates that, in the Indonesian context, the social dimension possesses the greatest valuation relevance and economic weight.

This finding reinforces the foundation of legitimacy theory in maintaining a "social contract" with society. Based on the descriptive statistical analysis, the social pillar records the lowest average compliance value among all ESG pillars, at 0.4528. This low average indicates that social issues such as gender equality, occupational safety, and the protection of human rights are often overlooked or considered complex by most issuers. Because the industry average compliance is still low, companies that manage to stand out with comprehensive social disclosure receive the most massive appreciation from the market (as reflected in the highest regression coefficient of 1.3461). Harmonious relationships with employees and local communities are viewed by investors as a crucial intangible asset that ensures smooth operations and mitigates social conflicts, thereby directly boosting firm value.

The descriptive statistics explain that the governance pillar records the highest average value. The results of this study support the findings of Hardiningsih et al. (2020), who found that social disclosure has a significant impact on firm value in the mining sector in Indonesia and Malaysia. Hardiningsih et al. (2020) note that social disclosure covering employment, occupational health and safety, community development, and human rights is vital for companies aiming to build harmonious stakeholder relationships. Separately, Hypothesis 4 (governance disclosure has a positive effect on firm value) is accepted based on Model 1 results, which yield a positive governance coefficient of 0.7630 ($t = 2.10$, $p < 0.05$). Although significant, the governance coefficient is the smallest among the three ESG components, indicating that the impact of governance on firm value is relatively lower compared to the environmental and social pillars in the context of this research sample.

The proof of this hypothesis is a perfect confirmation of agency theory. Compliance with Good Corporate Governance (GCG) principles such as the independence of the board of commissioners and audit committee acts as the primary mechanism for suppressing opportunistic managerial behavior. Within the framework of agency theory, governance disclosure operates as a monitoring mechanism that mitigates both information asymmetry and agency costs (Jensen & Meckling, 1976). Firms that demonstrate robust governance transparency convey a credible signal to capital providers that an effective system of checks and balances is in place, thereby lowering the risk of expropriation by either managerial agents or dominant shareholders.

According to the descriptive statistics, the governance pillar records the highest average value of 0.5827. This high score is very logical because the governance aspect is a mandatory compliance requirement of the Financial Services Authority (OJK). Although it tends to be mandatory and uniform, the issuers' commitment to upholding a transparent and anti-corruption governance structure remains the primary anchor of risk protection for investor capital. The capital market responds to this robust governance as a guarantee that their funds will not be exploited, which is ultimately expressed through an increase in firm value (Tobin's Q).

The results of this study are consistent with the findings of Alareeni & Hamdan (2020), who found that governance disclosure has a significant positive impact on firm performance and Tobin's Q in S&P 500

companies. Alareeni & Hamdan (2020) explained that good governance practices, as reflected in governance disclosure, help reduce agency problems and protect shareholder interests, thereby increasing firm value. This finding also aligns with Buallay (2019), who found that governance disclosure has a positive effect on the market performance of banks in the European Union, indicating that transparency in ownership structure, board composition, executive remuneration, and internal control systems is valued by investors.

Interestingly, the lowest governance coefficient among the three ESG components can be explained by several contextual factors. In the Indonesian context where corporate governance regulations are already quite strict and mandatory through various regulations such as OJK Regulation No. 33/2014 on Directors and Boards of Commissioners of Public Companies, and OJK Regulation No. 34/2014 on Audit Committees, the variation between companies in governance disclosure is relatively smaller compared to environmental and social disclosure, which are largely still voluntary. This indicates that investors may give greater premiums to aspects that are still voluntary and reflect a proactive commitment of companies toward sustainability.

Based on the estimation results from Model 2 (aggregate specification), Hypothesis 5 is confirmed: earnings management diminishes the positive effect of ESG disclosure on firm value. The interaction variable (EM×ESG) yields a negative coefficient of -0.7664 ($t = -2.63$; $p \ll 0.05$), indicating that earnings management exerts a very significant weakening effect on the ESG–firm value relationship. Consequently, Hypothesis 5 receives strong empirical backing. The t-statistic of -2.63, combined with a probability far below 0.05, constitutes robust evidence of the negative moderating influence exerted by earnings management.

This finding provides empirical confirmation of the existence of a “shield effect” explained through the intersection of agency theory and legitimacy theory. Based on the descriptive statistics, the average ESG score in the ESG Quality 45 IDX KEHATI Index stands at 0.5225, meaning the companies’ sustainability commitment is generally at a moderate and stable level. However, high levels of sustainability reporting published by companies immediately lose legitimacy in the eyes of the market if managers are detected engaging in earnings management. From the perspective of agency theory, the information asymmetry created through accrual manipulation proves the opportunistic intentions of managers. Institutional investors will be very skeptical and consider the massive ESG publications to be nothing more than a greenwashing tactic which is a tool of image manipulation to deceive stakeholders regarding the actual weaknesses of financial integrity. It is this crisis of trust that degrades the quality of corporate information, thereby significantly eliminating (weakening) the valuation premium that should be obtained from ESG disclosure.

This result is highly consistent with the findings of Rahman et al. (2020), which is one of the pioneering studies exploring the moderating role of earnings management in the relationship between ESG disclosure and firm value. Rahman et al. (2020) explained that although ESG disclosure provides positive signals about corporate commitment to sustainability, earnings management practices create noise that reduces the quality of these signals and makes investors more skeptical. This study also aligns with the findings of Adeneye & Kammoun (2022), who found that companies with active ESG engagement tend to have lower levels of earnings management, indicating that ESG and earnings quality should go hand in hand to create sustainable value creation.

The very high statistical significance of this moderating effect ($p=0.011$) indicates that the relationship between ESG disclosure and firm value is highly dependent on the quality of corporate financial reporting. In other words, to maximize the returns from investment in ESG practices, companies must also ensure that they maintain the integrity of financial reporting and avoid earnings management practices that can damage their credibility. This finding provides strong empirical evidence that ESG and financial reporting quality are complementary factors in value creation, not substitutes for one another.

Hypothesis 6, which asserts that earnings management attenuates the effect of environmental disclosure on firm value, is accepted. Estimation results from the partial specification (Model 1) reveal that the interaction term between earnings management and the environmental pillar (ENV×EM) exhibits a negative coefficient of -0.9712 (t -statistic = -2.72), with an associated probability substantially below the 0.05 significance threshold. This finding demonstrates that earnings management significantly weakens the positive influence of environmental disclosure on corporate valuation, thereby providing strong empirical support for Hypothesis 6. The significant negative coefficient implies that as earnings management practices intensify, the beneficial impact of environmental disclosure on firm value is considerably diminished.

Consistent with the results of Rahman et al. (2020), the current study confirms that earnings management serves as a negative moderator of the relationship between ESG disclosure and firm value in the Bangladeshi context. Rahman et al. (2020) argue that earnings management practices inject distortion into financial reporting, which weakens the informational value of positive ESG signals and increases investor skepticism about a company's dedication to sustainability. Furthermore, Adeneye & Kammoun (2022) find that firms with higher ESG scores typically engage in lower levels of earnings manipulation, implying that ESG strength and earnings quality jointly reinforce one another in their influence on investor trust and corporate valuation.

This result explains that earnings management destroys the positive sentiment from the company's pro-environmental initiatives. Referring to the descriptive statistical analysis, the environmental pillar is the pillar with the most extreme volatility and polarization, ranging from a minimum value of 0.031 to a perfect compliance level of 1.000. For companies that invest heavily in reducing emissions and complying with environmental standards to gain social legitimacy (legitimacy theory), from the perspective of agency theory, this result can be explained through the mechanism of trust and credibility. High environmental disclosure should increase investor trust in the company by signaling that the company is committed to sustainable practices and transparency (Jensen & Meckling, 1976). However, when a company is also involved in earnings management practices, this creates an inconsistency between transparency in non-financial information and opacity in financial reporting. Sophisticated investors can detect this inconsistency and respond by lowering their valuation of the company. Earnings management practices indicate the existence of opportunistic behavior on the part of management that is contrary to ESG principles emphasizing transparency, accountability, and business ethics.

Hypothesis 7 (earnings management weakens the social disclosure–firm value relationship) is accepted. In Model 1, the EM×SOC interaction term shows a negative coefficient of -0.6661 ($t = -3.25$, $p < 0.05$), providing very strong empirical evidence that earnings management significantly attenuates the positive effect of social disclosure on firm value. Although the social moderation coefficient (-0.6661) is smaller than that of the environment (-0.9712), it remains significant and negative at the 1% level, confirming the strong weakening effect of earnings management.

Opportunistic managerial behavior, as shown by these results, destroys the value embedded in a firm's "social contract." Descriptive statistics reveal that the social pillar (SOC) has the lowest average compliance rate of all pillars (0.4528), making social information highly market-sensitive. In line with legitimacy theory, companies strive to strengthen relationships with employees, customers, and local communities, and to operate within normative boundaries to ensure business sustainability and societal approval (Deegan, 2002). However, when managers engage in earnings management (agency theory), this social commitment is perceived by investors as a distraction or merely a waste of corporate resources (overinvestment) that is not aligned with efforts to generate real profits. This agency conflict erodes market trust, so that the positive effect of corporate social activities on stock value formation becomes reduced and significantly weakened. These results corroborate Velte (2019), who found that ESG performance negatively affects earnings management, implying that firms with strong ESG commitment typically eschew opportunistic earnings practices. However, when high social disclosure coexists with earnings management, investors perceive the firm as hypocritical, thereby undermining trust.

Hypothesis 8 states that earnings management weakens the positive effect of governance disclosure on firm value (H8 accepted). The interaction variable (GOV×EM) between earnings management and the governance pillar in Model 1 shows the deepest and most destructive weakening effect among all moderation variables, with a negative coefficient of -1.4212, a t-statistic value of -4.05, and a probability much smaller than the significance level of 0.05. This finding indicates that earnings management very significantly weakens the positive effect of governance disclosure on firm value, so Hypothesis 8 is accepted with very strong empirical evidence. Notably, the governance moderation coefficient (-1.4212) is the highest (most negative) among the three ESG components, indicating that the inconsistency between governance disclosure and earnings quality has the largest negative impact on firm value.

This finding is very logical and consistent with agency theory, which forms the foundation of corporate governance (Jensen & Meckling, 1976). Comprehensive governance disclosure should reflect a good governance system, including board independence, audit quality, internal control systems, and effective risk management. All these governance elements are designed to reduce agency problems and protect shareholder

interests through monitoring and control over management. Descriptively, the governance pillar has the highest average compliance (0.5827) because its structural criteria are mandatory according to OJK regulations (such as the existence of audit committees and independent commissioners). However, this GCG structure that appears perfect on paper is penalized most heavily by the market (coefficient of -1.4212) if the company is proven to engage in earnings management. This is entirely rational — the essence of governance disclosure is to guarantee the integrity of financial reporting and mitigate information asymmetry. If a company with a high governance score is detected to be manipulating earnings, the market will immediately conclude that the governance structure has completely failed, is flawed, and is operating merely as window dressing (pure formality).

Dechow & Sloan (1995) in their classic study found that companies committing accounting fraud tend to have weak governance structures, including boards dominated by insiders and a lack of audit committees. From the investor's perspective, high governance disclosure creates high expectations for the quality of financial reporting. When these expectations are not met due to earnings management practices, the disappointment experienced by investors becomes greater than if they had no high expectations from the outset. This phenomenon is known as an expectation-reality gap that can trigger a dramatic decline in investor trust and confidence.

Hypothesis 9 states that earnings management has a negative effect on firm value (H9 accepted). Directly, without interaction, the earnings management variable has been proven to impose a real devaluation penalty on firm value. Regression results reveal consistently negative coefficients for earnings management across both models. Model 1 shows a coefficient of -1.0287 ($t = -4.10$, $p < 0.05$), and Model 2 shows -0.9302 ($t = -2.23$, $p < 0.05$). Both outcomes confirm that earnings management negatively and significantly affects firm value, leading to acceptance of Hypothesis 9 with very strong empirical support. The consistency of results across both models provides a robustness check that strengthens the validity of the findings.

The empirical evidence presented here clearly validates the foundational tenets of agency theory, namely the existence of a divergence of interests in which managerial agents may sacrifice shareholder value in pursuit of personal utility, bonus maximization, and reputational enhancement. Earnings manipulation serves as an observable expression of the agency conflict, whereby management exploits accounting discretion either for self-interested purposes or to fulfill transient earnings benchmarks, thereby undermining the long-term value interests of shareholders (Jensen & Meckling, 1976). According to the prior descriptive analysis, 18 leading companies in the ESG Quality 45 IDX KEHATI index have on average engaged in relatively measured earnings management (6.17% of total assets), yet there are unusual figures where some entities aggressively manipulate their accruals to a peak of 22.7%. This practice of income smoothing to beautify the company's financial statements has failed to deceive the sharpness of capital market rationality. Investors are aware that discretionary accrual manipulation represents flawed earnings quality (earnings quality) that does not reflect the actual operational cash flow capacity. As a form of risk mitigation against such rent-seeking managerial behavior, the market imposes strict sanctions in the form of low stock price valuations, which absolutely undermine firm value (Tobin's Q).

Consistent with numerous earlier studies including Hernawati et al. (2021), who found a negative earnings management–firm value relationship and explained that short-term earnings target attainment may be offset by long-term damage to reporting credibility and heightened risk perceptions the current results reaffirm the adverse effect of earnings manipulation on corporate valuation. The study's focus on companies within the ESG Quality 45 IDX KEHATI Index adds a compelling dimension: even among firms recognized for exemplary ESG performance, earnings management practices still diminish firm value. This finding indicates that Indonesian capital market participants have become increasingly discerning, able to differentiate between enterprises characterized by reliable financial disclosures and those implicated in earnings manipulation.

The larger coefficient magnitude in Model 1 (-1.028716) compared to Model 2 (-0.930286) can be explained by the inclusion of separate ESG components in Model 1 that provides a more nuanced picture of the interaction effect. However, the consistency in direction and significance across both models provides strong evidence that earnings management has a detrimental effect on firm value that does not depend on model specification.

5. CONCLUSIONS

The study concludes that both aggregated and individual dimensions of ESG disclosure (environmental, social, and governance) positively and significantly affect firm value, indicating that market participants reward transparency and sustainability commitment with higher corporate valuations. Conversely, earnings management not only exerts a direct negative effect on firm value but also significantly weakens the positive ESG–firm value relationship. This evidence demonstrates that earnings manipulation compromises the reliability of sustainability reporting and diminishes investor trust.

Implicitly, this study affirms the importance of integrating ESG disclosure with the integrity of financial reporting. Theoretically, these results reinforce Legitimacy Theory and Agency Theory, particularly in the context that efforts to gain legitimacy through ESG can be reduced by agency conflicts in the form of earnings management. Practically, companies need to maintain consistency between sustainability practices and earnings quality, investors should be more critical in assessing the quality of information, and regulators need to strengthen ESG oversight integrated with financial reporting quality. The limitations of this study lie in the limited sample size, variables that are not yet comprehensive, and the measurement of earnings management based solely on accruals, so future research is advised to expand the research subjects, period, and to use more diverse measurement approaches such as real earnings management proxies alongside accrual-based measures. Additionally, future studies could incorporate moderating variables such as audit quality, institutional ownership, or board characteristics, and extend the analysis to cross-industry or cross-country comparative settings within ASEAN emerging markets to enhance the generalizability of findings.

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