

ACCRUAL EARNING MANAGEMENT AND FIRM VALUE: THE MODERATING ROLE OF ENVIRONMENTAL, SOCIAL, AND GOVERNANCE (ESG) PERFORMANCE

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Abstract

This study aims to analyze the relationship between accrual earnings management and firm value, with environmental, social, and governance (ESG) performance serving as a moderating variable, based on agency theory. The sample consists of manufacturing companies listed on the Indonesia Stock Exchange during the period 2022–2024. Regression analysis is employed to test the proposed hypotheses. The findings indicate that accrual earnings management is significantly and negatively associated with firm value. Furthermore, ESG performance weakens the negative relationship between accrual earnings management and firm value. These findings remain robust across additional analyses in which ESG performance is decomposed into its environmental, social, and governance dimensions. Specifically, environmental performance weakens the negative relationship between accrual earnings management and firm value. Likewise, social performance weakens the negative relationship between accrual earnings management and firm value. Similarly, governance performance weakens the negative relationship between accrual earnings management and firm value. The findings of this study provide important implications for firms, financial statement users, and the Indonesian Financial Services Authority (OJK).

Keywords: ESG Performance, Firm Value, Accrual Earnings Management

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1. Introduction

A firm's value reflects investors' perceptions of its performance and future prospects. In evaluating a firm, investors rely heavily on the information presented in financial statements. However, according to agency theory, as

proposed by Jensen & Meckling (1976), conflicts of interest may arise between shareholders, who act as principals, and management, who act as agents. Such conflicts occur because management possesses more information about the firm than shareholders, resulting in information asymmetry. This condition creates opportunities for management to pursue its own interests, including manipulating reported financial information.

One form of opportunistic behavior often associated with agency conflicts is accrual earnings management. Numerous cases of earnings management have been reported worldwide, including those involving Enron, WorldCom, PT Perusahaan Gas Negara, and PT Kimia Farma Tbk., highlighting how opportunistic financial reporting can undermine investor confidence and corporate value. In response to such concerns, the growing importance of Environmental, Social, and Governance (ESG) in capital markets suggests that investors increasingly rely on ESG performance as a credible signal of corporate transparency and governance quality, which may mitigate the adverse market perception associated with opportunistic earnings management. Regarding earnings management practices, Healy & Wahlen (1999) define earnings management as the use of managerial judgment in financial reporting and in structuring transactions to alter financial reports. Accrual earnings management specifically involves the selection of accounting methods and policies to achieve desired earnings outcomes (P. Dechow & Skinner, 2000). Through the flexibility provided by accounting standards, management can influence reported earnings figures without directly altering the company's operational activities. This practice may be undertaken for various purposes, such as meeting earnings targets, maintaining the company's reputation, obtaining higher compensation, or fulfilling market expectations. Although earnings management does not always violate accounting standards, it can reduce the quality of financial information and increase the information risk faced by investors (Junaidi & Siregar, 2020). Earnings management is often viewed as a consequence of weak monitoring mechanisms over managerial actions. When investors become aware of the possibility of earnings manipulation, their trust in financial statements may decline. Such a decline in trust can ultimately affect the market's assessment of the company and lead to a reduction in firm value.

Several studies have examined the relationship between earnings management practices and firm value. A study by Duarte et al. (2024) found that managers should pay attention to the quality of reported earnings, as it can

positively affect a firm's financial performance, particularly through accrual quality. However, persistence, predictability, smoothness, timeliness, and conservatism were not found to have a significant effect on financial performance in the sample. Research by Boachie & Mensah (2022) found a positive impact of earnings management on firm performance, indicating efficiency motives behind earnings management practices in Africa and suggesting that the African context differs from other emerging markets, where opportunistic motives are more commonly reported. Studies conducted in Indonesia and Pakistan found that earnings management can increase firm value when it is used to reduce financial frictions or as a signal of short-term performance (Afrizal et al., 2021; Arzu et al., 2025). Conversely, Shittu et al. (2023) found that accrual earnings management reduces firm value. Furthermore, negative effects of earnings management on firm value have been documented in Nigeria's oil and gas sector, Indonesia's technology sector, and Indonesia's food and beverage sector (Ahmed & Ali, 2022; Agustina & Malau, 2023; Hussain et al., 2025).

Although numerous studies have examined the relationship between earnings management and firm value, the findings remain inconclusive. These mixed findings suggest that other factors may influence the relationship between earnings management and firm value. One factor that has received increasing attention is Environmental, Social, and Governance (ESG) performance. This study contributes to the literature by incorporating Environmental, Social, and Governance (ESG) performance as a moderating variable in the relationship between accrual earnings management and firm value within the context of Indonesia as an emerging market. Unlike most prior studies, which primarily examine ESG as a direct determinant of firm value or earnings management, this study investigates whether high-quality ESG performance can mitigate the adverse effects of managers' opportunistic earnings management on market valuation. Furthermore, this study extends Agency Theory by proposing that ESG serves as an external governance mechanism that alleviates agency conflicts through enhanced transparency and accountability. Strong ESG performance is expected to improve the credibility of financial reporting, strengthen investor confidence, and reduce information asymmetry, thereby weakening the negative impact of accrual earnings management on firm value. By providing evidence from Indonesia, where ESG implementation and institutional governance are still evolving, this study offers important insights into the role of ESG in enhancing corporate governance effectiveness and market valuation in emerging market settings.

Literature Review and Hypothesis Development

The Relationship Between Accrual Earnings Management and Firm Value

According to agency theory Jensen & Meckling (1976), the separation of ownership and control within a firm gives rise to conflicts of interest between shareholders (principals) and managers (agents). Shareholders expect managers to act in ways that maximize firm value, whereas managers may have incentives to pursue their own interests, such as obtaining higher compensation, retaining their positions, or achieving specific performance targets. This situation creates opportunities for managers to engage in opportunistic behavior, one form of which is accrual earnings management.

Accrual earnings management provides managers with the flexibility to use accounting estimates and policies to influence reported earnings without altering the company's underlying operational activities. Although this practice may improve reported performance in the short term, it can reduce earnings quality because the reported information no longer fully reflects the firm's actual economic condition. As a result, information asymmetry between managers and investors increases.

Increased information asymmetry creates greater uncertainty for investors regarding a firm's prospects and performance. Consequently, investors may perceive the firm as having higher agency risk, which reduces their confidence in the credibility of its financial statements. This decline in investor confidence is ultimately reflected in a lower market valuation of the firm. Therefore, a higher level of accrual earnings management is expected to be associated with lower firm value (Lizińska & Czapiewski, 2018; Al-Shouha et al., 2024; Nguyen et al., 2025). Based on the above discussion, the following hypothesis is proposed:

H1: Accrual earnings management is negatively associated with firm value.

The Relationship Between Accrual Earnings Management and Firm Value Is Moderated by ESG Performance

According to agency theory Jensen & Meckling (1976), Environmental, Social, and Governance (ESG) performance can be viewed as an external governance mechanism that mitigates agency conflicts by enhancing transparency, accountability, and the quality of corporate disclosures. High-quality ESG practices reduce information asymmetry between managers and investors by providing broader non-financial information regarding a firm's

governance structure, sustainability commitments, and risk management practices. As a result, investors are better able to assess whether reported financial performance reflects the firm's underlying economic condition rather than managerial opportunism. Consequently, firms with strong ESG performance are more likely to gain investor trust and organizational legitimacy, leading investors to perceive earnings management as less indicative of persistent governance weaknesses. Companies with strong ESG performance are generally expected to provide more comprehensive and higher-quality information to stakeholders (Tang et al., 2024; Ngamtampong & Sukprasert, 2025). ESG disclosure enhances corporate transparency, thereby reducing information asymmetry between management and investors. Furthermore, ESG implementation reflects a company's commitment to responsible business practices, effective risk management, and stronger oversight of managerial behavior.

The presence of ESG mechanisms can reduce agency risk by enhancing the ability of investors and stakeholders to monitor managerial actions. When a company demonstrates strong ESG performance, investors are more likely to perceive the risk of opportunistic behavior as lower and the company's control systems as more effective. Therefore, even if a company is suspected of engaging in accrual earnings management, investors may not react as negatively as they would to a company with poor ESG performance. ESG serves as a mechanism for mitigating the negative consequences of accrual earnings management on market valuation. The higher a company's ESG performance, the weaker the negative impact of accrual earnings management on firm value, as investors have greater confidence in the quality of the company's governance and transparency. Based on the above discussion, the following hypothesis is proposed:

H2: ESG performance weakens the negative relationship between accrual earnings management and firm value.

2. Research Method

Data and Sample

In this study, the population consists of all manufacturing companies listed on the Indonesia Stock Exchange (IDX) during the period from 2022 to 2024. The study period was selected because it coincides with the post-COVID-19 recovery phase, during which companies began to realign their

sustainability strategies. The manufacturing sector was chosen because it is one of the largest sectors on the IDX and is characterized by complex production activities and substantial asset holdings. These characteristics create numerous opportunities for estimation and managerial judgment in the preparation of financial statements, making the sector particularly susceptible to earnings management practices.

The data used in this study are quantitative and consist of secondary data, which refer to data that are already available in documented form (Juliandi, 2014). The data required for this study include financial information obtained from companies' annual reports, which were collected from the Indonesia Stock Exchange (IDX) website and the respective companies' websites, as well as ESG scores obtained from LSEG.

Research Variables

Dependent Variable

The dependent variable in this study is firm value, which reflects investors' perceptions of a firm as represented by its market stock price. Firm value is measured using Tobin's Q, consistent with prior studies (Aydoğmuş et al., 2022; Tang et al., 2024; Brighi et al., 2025). Tobin's Q was selected because it captures the value created by a firm relative to its assets. In addition, Tobin's Q reflects the market's assessment of a company's future growth opportunities and long-term value. Accordingly, Tobin's Q is calculated as the sum of a company's market capitalization and the book value of its liabilities, divided by the book value of its total assets. Based on this explanation, Tobin's Q is measured using the following equation:

$$Tobin's\ Q = \frac{MV\ of\ equities + BV\ of\ Liabilities}{BV\ of\ Total\ Assets} \dots\dots\dots(1)$$

Independent Variables

The independent variable in this study is accrual earnings management. To measure accrual earnings management, this study employs the Modified Jones Model developed by Jones (1991) and modified by (Dechow et al., 1995). This model was selected because it incorporates changes in accounts receivable, thereby improving upon the original Jones (1991) model. Furthermore, the model developed by Dechow et al. (1995) is

considered more effective in detecting earnings management practices because it captures discretionary accruals arising from accounting estimates and valuation judgments that may be subject to managerial manipulation. Accrual earnings management is measured using the Modified Jones Model developed by Dechow et al. (1995). The estimation begins by calculating total accruals, which are subsequently decomposed into non-discretionary accruals (NDA) and discretionary accruals (DA). Non-discretionary accruals are estimated using firm-specific normal accrual determinants, including changes in revenue adjusted for changes in receivables and property, plant, and equipment, while discretionary accruals are obtained as the residual difference between total accruals and estimated non-discretionary accruals. Following prior earnings management studies, this study employs the absolute value of discretionary accruals (ABSAEM) as the proxy for accrual earnings management because the primary objective is to capture the magnitude of managerial discretion in financial reporting regardless of whether earnings are managed upward or downward. Unlike signed discretionary accruals, which distinguish between income-increasing and income-decreasing earnings management, the absolute measure reflects the overall extent of earnings manipulation and is therefore more appropriate for assessing financial reporting quality and the intensity of opportunistic managerial behavior. The measurement of accrual earnings management is presented in the following equation (Dechow et al., 1995):

$$TACct = NIt - CFOt \dots \dots \dots (2)$$

$$\frac{TACct}{TAit-1} = a_1 \left(\frac{1}{TAit-1} \right) + a_2 \left(\frac{\Delta REV}{TAit-1} \right) + a_3 \left(\frac{PPEt}{TAit-1} \right) + eit \dots \dots \dots (3)$$

$$NACC = a_1 \left(\frac{1}{TAit-1} \right) + a_2 \left(\Delta REVt - \frac{\Delta REC}{TAit-1} \right) + a_3 \left(\frac{PPEt}{TAit-1} \right) \dots \dots \dots (4)$$

$$AACct = \frac{TACt}{TAit-1} - NDA \dots \dots \dots (5)$$

Moderating Variables

The moderating variable in this study is Environmental, Social, and Governance (ESG) performance is measured using the ESG Score obtained from the London Stock Exchange Group (LSEG), one of the most widely recognized ESG databases in academic and professional research. The LSEG

ESG Score is constructed through a standardized assessment of publicly available corporate disclosures across the three ESG pillars: Environmental, which evaluates a firm's environmental management, resource utilization, and emissions; Social, which assesses workforce management, human rights, product responsibility, and community engagement; and Governance, which examines board structure, shareholder rights, audit quality, executive compensation, and corporate ethics. The overall ESG Score is designed to capture a firm's commitment to sustainable business practices and transparent corporate governance. LSEG is selected because its methodology applies consistent evaluation criteria across firms, relies on comprehensive publicly disclosed information, and provides internationally comparable ESG measures, thereby enhancing the reliability and validity of ESG performance as a proxy for corporate sustainability and governance quality. Consequently, the LSEG ESG Score has been widely adopted in prior accounting and finance studies to examine the impact of ESG on corporate performance, financial reporting quality, and investor decision-making. ESG performance is measured using an ESG score ranging from 0 to 100 (Sassen et al., 2016; Chairani & Siregar, 2021).

Control Variables

In addition to the main independent variable, this study includes several control variables that may influence firm value. Firm Size (SIZE). Larger firms generally possess greater resources, stronger reputations, and more stable market positions, which may enhance firm value (Buallay., 2018; Shao et al., 2025; Brighi et al., 2025). Therefore, SIZE is expected to be positively associated with firm value (Brighi et al., 2025). Leverage (LEV). Firms with high leverage may have less financial flexibility to invest in ESG activities and other long-term projects. As a result, high leverage may adversely affect firm value (Buallay., 2018). Therefore, LEV is expected to be negatively associated with firm value. Profitability (ROA). More profitable firms have greater capacity to undertake sustainability initiatives and other value-enhancing activities. In addition, high profitability reflects favorable business prospects and operational efficiency (Buallay., 2018; Shao et al., 2025). Therefore, ROA is expected to be positively associated with firm value. Sales Growth (GROWTH). Firms with strong growth opportunities are generally more attractive to investors because they are expected to generate

higher future returns (Shao et al., 2025). Therefore, GROWTH is expected to be positively associated with firm value.

Research Model

This study employs a regression model to test the proposed hypotheses. The research model is specified as follows:

$$TOBINSQ_{it} = \beta_0 + \beta_1 ABSAEM_{it} + \beta_2 ESG_{it} + \beta_3 ABSAEM_{it} * ESG_{it} + \beta_4 SIZE_{it} + \beta_5 LEV_{it} + \beta_6 ROA_{it} + \beta_7 GROWTH_{it} + \varepsilon_{it}$$

To determine the appropriate panel data estimation model, this study employed the Hausman specification test to compare the fixed effects and random effects models. The results of the Hausman test indicate that the null hypothesis cannot be rejected, suggesting that the unobserved individual effects are not systematically correlated with the explanatory variables. Therefore, the random effects model was selected as the appropriate estimation method because it provides more efficient and consistent parameter estimates under this assumption.

Table 1 presents the operational definitions of the variables used in this study.

Table 1. Operationalization of Variables

Variable	Implementation	Source
Variabel Dependen		
<i>TOBINSQ</i>	The aggregate market value of equity plus the book value of liabilities divided by total assets	Annual Report
Variabel Independen		
<i>ABSAEM</i>	The absolute value of the residual from accrual earnings management	Annual Report
Variabel Moderasi		
<i>ESG_{it}</i>	The company's ESG score t	LSEG
Variabel Kontrol		
<i>SIZE</i>	Natural logarithm of total assets	Annual Report
<i>LEV</i>	Total debt-to-total assets ratio	Annual Report
<i>ROA</i>	Net profit to total assets ratio	Annual Report
<i>GROWTH</i>	The ratio of sales in year t to sales in the previous year	Annual Report

Source: Authors' compilation

3. Result and Discussion

Sample Selection

The population in this study consists of all manufacturing companies listed on the Indonesia Stock Exchange (IDX) during the period from 2022 to 2024. The sample was subsequently selected through a screening process based on predefined criteria, as presented in Table 2. As shown in the table, from a total population of 630 firm-years, a final sample of 60 firm-years (9.52%) was obtained for the analysis.

Table 2. Sample Selection

Criteria	Total
All manufacturing companies for the 2022–2024 period	630
Companies that do not have ESG data in the LSEG database	(570)
Total selected samples	60
Percentage of the selected sample	9,52%

Source: Authors' compilation

The high sample attrition reflects the limited ESG coverage of Indonesian listed firms in the LSEG database during the observation period rather than discretionary sample exclusion by the researchers.

Descriptive Statistical Analysis

Based on the descriptive statistics presented in Table 3, the firm value variable (TOBINSQ) has a mean of 1.243 and a standard deviation of 1.268. A mean value greater than one indicates that, on average, the market values the sample firms above their book value. The minimum value of 0.082 and the maximum value of 7.123 suggest substantial variation in market valuations across the sample firms. Furthermore, a standard deviation that is nearly equal to the mean indicates a relatively high degree of heterogeneity in firm value among the sample firms.

The accrual earnings management variable (ABSAEM) has a mean value of 0.086 and a standard deviation of 0.094. The minimum and maximum values are 0.001 and 0.516, respectively. These findings indicate that, on average, the sample firms engage in accrual earnings management at a relatively low level. However, the relatively high maximum value suggests that some firms engage in a substantial degree of earnings management. Furthermore, a standard deviation that is close to the mean indicates considerable variation in earnings management practices across the sample firms.

For the ESG performance variable (ESGSCORE), the mean value of 50.545 indicates that, on average, the sample firms exhibit a moderate level of ESG performance and disclosure. The standard deviation of 18.321 suggests substantial variation in ESG practices among the sample firms. Furthermore, the minimum value of 11.795 and the maximum value of 79.653 indicate that while some firms demonstrate relatively low ESG performance, others have implemented ESG practices to a considerably higher standard.

Table 3. Descriptive Statistics

Variable	Mean	Std. Dev.	Min	Max
TOBINSQ	1.243	1.268	0.082	7.123
ABSAEM	0.086	0.094	0.001	0.516
ESGSCORE	50.545	18.321	11.795	79.653
SIZE	9.203	25.747	0.038	156.4
ROA	0.029	0.102	-0.413	0.285
LEV	0.223	0.194	0.000	0.699
GROWTH	0.076	0.336	-0.718	1.687

Source: Authors' compilation

The control variables consist of firm size (SIZE), profitability (ROA), leverage (LEV), and firm growth (GROWTH). The mean value of SIZE is 9.203, suggesting variation in firm size among the sample firms. This variation is further reflected in the relatively high standard deviation of 25.747. The mean value of ROA is 0.029, indicating that, on average, the sample firms generate a return of 2.9% on their total assets. LEV has a mean value of 0.223, suggesting that approximately 22.3% of the firms' assets are financed through debt. Meanwhile, GROWTH has a mean value of 0.076, indicating that the sample firms experienced an average growth rate of 7.6% during the observation period. Overall, the considerable variation in the control variables suggests substantial heterogeneity in the characteristics of the sample firms.

Correlation and Multicollinearity Matrix

Table 4 presents the results of the Pearson correlation analysis among the study variables. The results indicate that firm value (TOBINSQ) is positively and significantly correlated with accrual earnings management (ABSAEM) ($r = 0.113$, $p < 0.01$), suggesting that firms with higher levels of accrual earnings management tend to exhibit higher firm value. Furthermore, firm value is positively and significantly correlated

with ESG performance (ESGSCORE) ($r = 0.280$, $p < 0.05$), indicating that firms with stronger ESG performance tend to receive higher market valuations.

Table 4. Correlation Matrix

Variable	(1)	(2)	(3)	(4)	(5)	(6)	(7)
(1) TOBINSQ	1.000						
(2) ABSAEM	0.113*** (0.005)	1.000					
(3) ESGSCORE	0.280** (0.030)	-0.084 (0.522)	1.000				
(4) SIZE	0.070* (0.070)	-0.283** (0.000)	0.322** (0.012)	1.000			
(5) ROA	0.182*** (0.082)	-0.177** (0.000)	0.021 (0.874)	0.210*** (0.000)	1.000		
(6) LEV	-0.129*** (0.001)	0.010 (0.797)	-0.084 (0.526)	0.167*** (0.000)	-0.367*** (0.000)	1.000	
(7) GROWTH	0.028 (0.484)	0.020 (0.614)	-0.132 (0.313)	-0.028 (0.495)	0.259*** (0.000)	-0.045 (0.265)	1.000

Note: Significance level: * $p < 0.10$; ** $p < 0.05$; *** $p < 0.01$.

Source: Authors' compilation

Regarding the control variables, SIZE is positively correlated with TOBINSQ ($r = 0.070$, $p < 0.10$), suggesting that larger firms tend to have higher firm value. Furthermore, ROA is positively and significantly correlated with TOBINSQ ($r = 0.182$, $p < 0.01$), indicating that firms with higher profitability tend to exhibit higher firm value. In contrast, LEV is negatively and significantly correlated with TOBINSQ ($r = -0.129$, $p < 0.01$), suggesting that higher leverage is associated with lower firm value. Meanwhile, GROWTH is not significantly correlated with firm value ($r = 0.028$, $p > 0.10$).

To ensure the reliability of the panel data estimation results, this study conducted a series of diagnostic tests to examine the underlying assumptions of the regression model. Multicollinearity was assessed using the Variance Inflation Factor (VIF) to ensure that the explanatory variables did not exhibit excessive correlation that could distort the estimated coefficients. Table 4 also indicates that none of the correlation coefficients exceed 0.8, suggesting that multicollinearity is not a concern in this study.

Regression Test Results and Analysis

Table 5 presents the results of the hypothesis tests examining the relationship between accrual earnings management and firm value, with Environmental, Social, and Governance (ESG) performance serving as a moderating variable. The results indicate that ABSAEM has a negative coefficient of -12.209 and is statistically significant at the 1% level ($p = 0.002$). This finding suggests that a higher level of accrual earnings management is associated with lower firm value, thereby supporting H1. These results indicate that investors tend to perceive earnings management practices as opportunistic behavior that may reduce earnings quality and increase uncertainty regarding a firm's future performance. Consequently, the market assigns lower valuations to firms suspected of engaging in high levels of accrual earnings management (Lizińska & Czapiewski, 2018; Al-Shouha et al., 2024; Nguyen et al., 2025). The negative effect of accrual earnings management on firm value is particularly relevant in the context of Indonesian manufacturing firms, where investors increasingly rely on earnings quality to assess corporate performance and long-term sustainability. As manufacturing companies generally require substantial capital investment and external financing, transparent and credible financial reporting plays a critical role in maintaining investor confidence. When investors perceive that reported earnings are influenced by managerial discretion rather than reflecting the firm's actual economic performance, they tend to question the reliability of financial statements, resulting in higher perceived information risk and lower market valuation. This finding supports Agency Theory, suggesting that opportunistic earnings management exacerbates information asymmetry and agency conflicts, ultimately reducing firm value through declining investor confidence and increasing perceived corporate risk.

The ESGSCORE variable has a positive coefficient of 0.023 and is statistically significant at the 10% level ($p = 0.082$). This finding indicates that firms with stronger ESG performance tend to have higher firm value (Tang et al., 2024; Ngamtampong & Sukprasert, 2025). The result is consistent with the view that ESG practices can enhance corporate legitimacy, strengthen corporate reputation, reduce non-financial risks, and increase investor confidence, thereby contributing positively to market valuation.

Furthermore, the interaction term between ABSAEM and ESGSCORE has a positive coefficient of 0.237 and is statistically significant at the 1% level ($p = 0.002$). This finding indicates that ESG performance moderates the relationship between accrual earnings management and firm value. The positive interaction coefficient suggests that ESG performance weakens the negative relationship between accrual earnings management and firm value, thereby supporting H2. The moderating effect of ESG performance indicates that strong ESG practices can mitigate the negative impact of accrual earnings management on firm value by strengthening corporate reputation, enhancing organizational legitimacy, and reducing investors' risk perceptions. Companies with high ESG performance are generally perceived as more transparent, accountable, and committed to sustainable business practices, leading investors to regard opportunistic accounting behavior as less likely to reflect persistent governance weaknesses.

Table 5. Regression Results

Variable	Exp.Sign	Coefficient	p-value
ABSAEM	-	-12.209	0.002***
ESGSCORE	+	0.023	0.082*
ABSAEM*ESGSCORE	+	0.237	0.002***
ROA	+	16.628	0.000***
LEV	-	5.484	0.028**
SIZE	+	-0.378	0.050**
GROWTH	+	-0.856	0.020**
Constant		5.182	0.078*
R-squared		0.454	
F-test (Chi-Square)		30.207	
Number of obs		60	
Prob > F		0.000	

Note: Significance level: * $p < 0.10$; ** $p < 0.05$; *** $p < 0.01$.

Source: Authors' compilation

The results for the control variables reveal several interesting findings that may reflect the characteristics of Indonesian manufacturing firms during the observation period. The negative association between firm size and firm value suggests that larger firms may experience higher organizational complexity, bureaucratic inefficiencies, and agency costs, which can reduce operational efficiency and investors' expectations of future growth. ROA has a positive and statistically significant coefficient ($\beta = 16.628$, $p < 0.01$), indicating that more profitable firms tend to have higher firm value. This finding is consistent with financial theory, which suggests that profitability is a key indicator considered by investors when evaluating a firm's prospects. The LEV variable also exhibits a positive and statistically significant effect ($\beta = 5.484$, $p = 0.028$), indicating that the use of debt at a certain level may be perceived as a positive signal of a firm's growth prospects and financial capacity, thereby enhancing firm value. However, this result should be interpreted with caution, as excessive leverage may increase a firm's financial risk. The GROWTH variable also has a negative and statistically significant coefficient ($\beta = -0.856$, $p = 0.020$). This result indicates that higher firm growth is not always perceived positively by the market. Investors may view rapid growth as an indicator of increased risk, greater financing needs, or uncertainty regarding the sustainability of future growth.

Results of Additional Tests

This study conducted an additional analysis by decomposing the overall ESG score into its three underlying dimensions: Environmental, Social, and Governance. This additional test aims to examine whether the moderating effect of ESG performance on the relationship between accrual earnings management and firm value remains consistent when ESG is evaluated through its individual components rather than as an aggregated measure. The additional models follow the same regression specification as the main model by replacing the overall ESG score with each ESG dimension separately. This approach provides a more comprehensive understanding of the specific mechanisms through which ESG practices influence investors' responses to earnings management. The consistency of the results across the ESG dimensions supports the validity and reliability of the main findings, indicating that ESG performance, both collectively and through its individual pillars, plays an important role in

mitigating the negative market consequences of accrual earnings management.

The additional analysis reveals that the Environmental, Social, and Governance (ESG) dimensions each weaken the negative relationship between accrual earnings management and firm value, although they operate through different mechanisms. The environmental dimension strengthens investors' confidence by demonstrating a firm's commitment to regulatory compliance, resource efficiency, and long-term sustainability, thereby reinforcing its long-term viability. The social dimension enhances stakeholder trust through responsible employee relations, customer protection, and community engagement, which improve corporate reputation and reduce concerns about managerial opportunism. Meanwhile, the governance dimension plays the most direct role in mitigating the adverse effects of earnings management because effective governance practices, including board oversight, accountability, and transparent disclosure, directly constrain managerial discretion and reduce information asymmetry.

Additional Test of Accrual Earnings Management and Firm Value : The Moderating Role of Environmental Performance

Table 6 presents the results of the additional analysis examining the relationship between accrual earnings management and firm value, with environmental performance serving as a moderating variable. The results indicate that ABSAEM has a negative coefficient of -11.845 and is statistically significant at the 1% level ($p = 0.002$). This finding is consistent with the main test results, indicating that higher levels of accrual earnings management are associated with lower firm value. These results suggest that investors perceive earnings management practices as actions that may reduce the quality of earnings information and increase uncertainty in investment decision-making (Al-Shouha et al., 2024; Nguyen et al., 2025).

The ENVSCORE variable has a positive coefficient of 0.022; however, it is not statistically significant ($p = 0.138$). This finding suggests that environmental performance does not have a significant direct effect on firm value. In other words, the market does not appear to assign a higher valuation to firms solely based on their environmental

performance. These results may indicate that investors place greater emphasis on financial performance than on environmental performance when evaluating firms. Alternatively, the economic benefits associated with environmental practices may require a longer period to be reflected in market valuation.

Table 6. Additional Analysis: Accrual Earnings Management and Firm Value with Environmental Performance as a Moderating Variable

Variable	Exp.Sign	Coefficient	p-value
ABSAEM	-	-11.845	0.002***
ENVSCORE	+	0.022	0.138
ABSAEM*ENVSCORE	+	0.254	0.002***
ROA	+	14.416	0.000***
LEV	-	5.139	0.027**
SIZE	+	-0.453	0.060*
GROWTH	+	-0.848	0.036**
Constant		6.722	0.056*
R-squared		0.522	
F-test (Chi-Square)		41.762	
Number of obs		60	
Prob > F		0.000	

Note: Significance level: *p < 0.10; **p < 0.05; ***p < 0.01.

Source: Authors' compilation

Nevertheless, an interesting result is observed for the ABSAEM × ENVSCORE interaction term, which has a positive coefficient of 0.254 and is statistically significant at the 1% level (p = 0.002). This finding suggests that environmental performance moderates the relationship between accrual earnings management and firm value. The positive interaction coefficient indicates that environmental performance weakens the negative relationship between accrual earnings management and firm value. In other words, firms with stronger environmental performance tend to experience a less pronounced negative effect of accrual earnings management on firm value than firms with weaker environmental performance. This finding is consistent with legitimacy theory and stakeholder theory, which suggest that a firm's commitment to environmental responsibility can enhance its reputation and strengthen investor trust. As a result, environmental performance may mitigate the market's negative perception of earnings management practices and reduce their adverse effect on firm value.

Among the control variables, ROA has a positive and statistically significant effect on firm value ($\beta = 14.416$, $p < 0.01$), indicating that more profitable firms tend to receive higher market valuations. LEV also exhibits a positive and statistically significant effect ($\beta = 5.139$, $p = 0.027$), suggesting that debt usage at a certain level may be perceived as a positive signal regarding a firm's growth prospects and financial capacity. In contrast, SIZE has a negative coefficient and is statistically significant at the 10% level ($\beta = -0.453$, $p = 0.060$), while GROWTH has a negative and statistically significant effect ($\beta = -0.848$, $p = 0.036$). These findings suggest that larger firms and firms experiencing rapid growth do not necessarily receive higher market valuations.

Additional Test of Accrual Earnings Management and Firm Value : The Moderating Role of Social Performance

Table 7 presents the results of an additional analysis examining the effect of accrual earnings management on firm value, with social performance serving as a moderating variable. The regression results indicate that ABSAEM has a negative effect on firm value ($\beta = -8.400$, $p = 0.053$). This finding supports agency theory, which suggests that managers have incentives to engage in opportunistic behavior through earnings management in order to maximize their own interests. Such practices may reduce the quality of accounting information and increase information asymmetry between managers and investors. Consequently, investors may respond negatively to firms suspected of engaging in earnings management practices, leading to lower firm value (Al-Shouha et al., 2024; Nguyen et al., 2025).

The SOCSCORE variable has a positive coefficient; however, it is not statistically significant ($\beta = 0.014$, $p = 0.148$). This finding suggests that social performance does not have a significant direct effect on firm value. The result indicates that investors do not necessarily assign higher market valuations to firms solely because they demonstrate strong social performance.

Table 7. Additional Analysis: Accrual Earnings Management and Firm Value with Social Performance as a Moderating Variable

Variable	Exp.Sign	Coefficient	p-value
ABSAEM	-	-8.400	0.053*
SOCSCORE	+	0.014	0.148
ABSAEM*SOCSCORE	+	0.145	0.070*
ROA	+	16.956	0.000***
LEV	-	4.731	0.046**
SIZE	+	-0.262	0.125
GROWTH	+	-0.877	0.022**
Constant		3.676	0.180
R-squared		0.385	
F-test (Chi-Square)		27.163	
Number of obs		60	
Prob > F		0.000	

Note: Significance level: *p < 0.10; **p < 0.05; ***p < 0.01.

Source: Authors' compilation

However, the ABSAEM × SOCSCORE interaction term has a positive and statistically significant coefficient ($\beta = 0.145$, $p = 0.070$). This finding suggests that social performance mitigates the negative impact of accrual earnings management on firm value. From an agency theory perspective, strong social performance reflects a firm's commitment to transparency, accountability, and sustainable relationships with stakeholders. Such a commitment may signal that management is not solely driven by self-interest, thereby reducing investors' concerns about managerial opportunistic behavior.

Regarding the control variables, ROA and LEV have positive and statistically significant effects on firm value, whereas GROWTH has a negative and statistically significant effect. In contrast, SIZE does not have a statistically significant effect on firm value. Overall, these results indicate that social performance serves as a reputational mechanism that can mitigate the negative impact of accrual earnings management on firm value, although its moderating effect appears to be weaker than that of the environmental dimension.

Additional Test of Accrual Earnings Management and Firm Value : The Moderating Role of Governance Performance

Table 8 presents the results of an additional analysis examining the effect of accrual earnings management on firm value, with governance performance serving as a moderating variable. The regression results indicate that ABSAEM has a negative and statistically significant relationship with firm value ($\beta = -11.207$, $p = 0.005$). This finding is consistent with agency theory, which suggests that earnings management reflects managerial opportunistic behavior that can increase information asymmetry and reduce investor confidence. Consequently, the market assigns lower valuations to firms suspected of engaging in accrual earnings management practices (Al-Shouha et al., 2024; Nguyen et al., 2025).

The GOVSCORE variable has a negative and statistically insignificant coefficient ($\beta = -0.006$, $p = 0.330$), suggesting that governance quality does not have a significant direct effect on firm value. These results indicate that investors do not necessarily assign a valuation premium solely based on a firm's governance score.

However, the interaction term $ABSAEM \times GOVSCORE$ has a positive and statistically significant coefficient ($\beta = 0.228$, $p = 0.002$). This finding suggests that governance performance mitigates the negative impact of accrual earnings management on firm value. From an agency theory perspective, corporate governance serves as a monitoring mechanism designed to limit managerial opportunistic behavior and align managers' interests with those of shareholders. Strong governance enhances monitoring effectiveness, transparency, and accountability, thereby reducing agency risks associated with earnings management practices.

Table 8. Additional Analysis: Accrual Earnings Management and Firm Value with Governance Performance as a Moderating Variable

Variable	Exp.Sign	Coefficient	p-value
ABSAEM	-	-11.207	0.005***
GOVSCORE	+	-0.006	0.330
ABSAEM*GOVSCORE	+	0.228	0.002***
ROA	+	16.91	0.000***
LEV	-	4.316	0.017**
SIZE	+	-0.145	0.260

Variable	Exp.Sign	Coefficient	p-value
GROWTH	+	-0.931	0.041**
Constant		2.749	0.239
R-squared		0.366	
F-test (Chi-Square)		23.752	
Number of obs		60	
Prob > F		0.000	

Note: Significance level: *p < 0.10; **p < 0.05; ***p < 0.01.

Source: Authors' compilation

Regarding the control variables, ROA and LEV have positive and statistically significant effects on firm value, whereas GROWTH has a negative and statistically significant effect. In contrast, SIZE does not have a statistically significant effect on firm value. Overall, these results provide evidence that although corporate governance does not have a direct effect on firm value, it serves as an agency control mechanism that reduces the negative impact of accrual earnings management on firm value. These findings suggest that high-quality corporate governance can enhance investor confidence in a firm's credibility and mitigate the adverse consequences of earnings management practices.

4. Conclusion

This study aims to analyse the relationship between accrual earnings management and firm value, with environmental, social, and governance (ESG) performance serving as a moderating variable, based on agency theory. The results indicate that accrual earnings management is significantly and negatively associated with firm value. Furthermore, ESG performance is found to weaken the negative relationship between accrual earnings management and firm value. These findings are consistent across various additional tests that decompose ESG performance into its environmental, social, and governance components. The results indicate that environmental performance weakens the negative relationship between accrual earnings management and firm value. Similarly, social performance weakens this negative relationship. Likewise, governance performance also weakens the negative relationship between accrual earnings management and firm value.

This study also has several implications. For practical implications: For companies should strengthen the quality of ESG disclosure by providing comprehensive, consistent, and transparent sustainability information that

complements financial reporting and enhances investor confidence. In addition, firms should reinforce corporate governance mechanisms through more effective board oversight, stronger internal controls, and enhanced audit committee effectiveness to reduce managerial discretion in financial reporting and limit earnings management practices. Investors are encouraged to incorporate ESG performance into their investment analysis as an additional indicator of financial reporting credibility and long-term corporate sustainability. For regulators, particularly the Financial Services Authority (OJK) and the Indonesia Stock Exchange (IDX), the findings support the need to further improve ESG reporting standards, promote greater comparability and assurance of sustainability disclosures, and strengthen regulatory oversight to enhance transparency and protect investors in the Indonesian capital market. **Academic Contributions:** This study contributes to the accounting and finance literature by extending Agency Theory through demonstrating that ESG performance functions as an external governance mechanism capable of mitigating the adverse effect of accrual earnings management on firm value. Unlike previous studies that primarily examine ESG as a direct determinant of firm value or earnings management, this study highlights the moderating role of ESG in weakening the negative market consequences of managerial opportunistic behavior. Furthermore, the additional analysis of the Environmental, Social, and Governance dimensions provides a more comprehensive understanding of how different aspects of ESG influence investor perceptions. By providing evidence from Indonesia as an emerging market, this study enriches the literature on earnings management, ESG performance, and firm value while offering empirical evidence that institutional characteristics and governance quality shape investors' responses to financial reporting quality.

This study has several limitations that should be considered when interpreting the findings. First, the relatively small sample size of 60 firm-year observations, resulting from the limited availability of ESG data in the LSEG database, may restrict the generalizability of the results. Second, the analysis focuses exclusively on manufacturing firms, limiting the applicability of the findings to other industries that may have different governance structures and ESG practices. Third, the observation period covers only 2022–2024, which may not fully capture the long-term effects of ESG performance and earnings management on firm value. Finally, this study relies solely on ESG scores obtained from the LSEG database, whereas different ESG rating providers may employ different methodologies and assessment criteria. Future research is

therefore encouraged to use larger and more diverse samples, extend the observation period, examine multiple industries, and compare ESG measures from different data providers to enhance the robustness and generalizability of the findings.

This study acknowledges potential endogeneity concerns in the relationship between ESG performance, accrual earnings management, and firm value, particularly due to possible reverse causality and omitted variable bias. Although this study employs relevant control variables and panel data estimation to address firm-specific heterogeneity, these approaches may not fully resolve all endogeneity issues. Future research is encouraged to apply more robust methodologies, such as instrumental variable estimation, dynamic panel GMM, propensity score matching, or quasi-experimental approaches, to strengthen causal inference.

5. References

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