

DO ENVIRONMENTAL, SOCIAL, AND GOVERNANCE DISCLOSURE AND INTELLECTUAL CAPITAL AFFECT FIRM VALUE WITH FINANCIAL PERFORMANCE AS A MODERATING VARIABLE?

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Abstract

This study examines the effect of Environmental, Social, and Governance (ESG) disclosure and Intellectual Capital on firm value, with financial performance as a moderating variable, in Basic Materials sector companies listed on the Indonesia Stock Exchange during 2022–2024. This study contributes to the literature by addressing the research gap in ESG-related studies within the Basic Materials sector, which remains relatively underexplored despite its high environmental exposure. In addition, this study integrates ESG disclosure, Intellectual Capital, and financial performance within a comprehensive analytical framework. Using a quantitative approach, this study applies panel data regression and Moderated Regression Analysis (MRA) to 30 companies selected through purposive sampling, resulting in 90 observations. The results show that ESG disclosure positively affects firm value, while Intellectual Capital and financial performance moderation have no significant effect.

Keywords: Basic Materials Sector, ESG Disclosure, Firm Value, Financial Performance, Intellectual Capital

1. Introduction

Global economic instability has become an increasingly dynamic phenomenon that significantly affects various sectors of the economy, including the capital market. Changes in international interest rates, rising geopolitical risks, energy crises, and global market volatility influence investors' decision-making patterns and investment strategies, both for institutional and retail investors (Khaddafi et al., 2025; Pinem & Rahmayuni, 2025). These

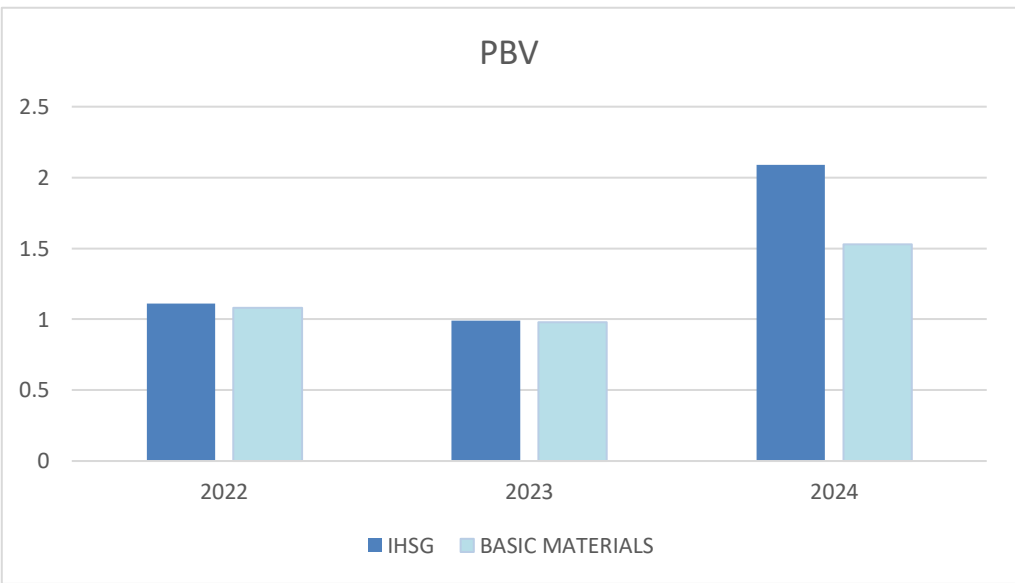
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conditions encourage investors to become more selective in making investment decisions by considering various types of information that can comprehensively reflect a company's condition and prospects. In the context of the capital market, investor behaviour is influenced not only by rational analysis but also by psychological factors, risk perception, and market sentiment (Deddy & Zunairoh, 2024; Rudiharta et al., 2025; Tisya, 2025). Differences in investor characteristics ultimately lead to variations in investment behaviour, which subsequently affect stock price dynamics and firm value.

Firm value is an important indicator that reflects investors' perceptions of a company's performance, prospects, and sustainability. In this study, firm value is represented by the Price to Book Value (PBV) ratio because this ratio illustrates how the market values a company by comparing its market stock price with its book value (Hidayati & Meidiaswati, 2023; Naraswari & Ratnadi, 2021). A higher PBV indicates that the market assigns a higher valuation to the company; therefore, PBV is widely used as an indicator of firm value in capital market research (Amro et al., 2019).

Figure 1: PBV Diagram of the Basic Materials Sector for 2022–2024



Source: Processed by the researcher (2026)

The PBV data for the Basic Materials sector during the 2022–2024 period indicate fluctuations in PBV values. In 2022, the PBV value was 1.08, then declined to 0.98 in 2023, and increased to 1.53 in 2024. On the other hand, the Composite Stock Price Index (IHSG) showed a relatively similar pattern, namely 1.11 in 2022, declining to 0.99 in 2023, and increasing to 2.09 in 2024. The IHSG was selected as a comparative indicator because it reflects the general condition of the Indonesian capital market and is frequently used in capital market research as a benchmark for market conditions (Widhiarti et al., 2018; Majid et al., 2024). However, the increase in IHSG was not consistently followed by an increase in PBV in the Basic Materials sector. This inconsistency indicates that factors beyond market conditions influence investors' perceptions of firm value.

The condition of the Basic Materials sector in Indonesia during the 2022–2024 period reflects dynamic fluctuations influenced by global and domestic factors. The sector experienced pressure in 2023 due to declining commodity prices and weakening global demand, particularly from major trading partners, which affected company performance and investor sentiment. However, in 2024, the sector began to recover along with improving global economic conditions and increasing commodity demand. In addition, increasing regulatory pressure and global awareness related to environmental sustainability have encouraged companies in this sector to improve their ESG practices and disclosures. These conditions indicate that the Basic Materials sector is not only influenced by financial performance but also by non-financial factors such as sustainability and corporate responsibility, which may affect investor perceptions of firm value.

One of the non-financial factors considered influential is Environmental, Social, and Governance (ESG) disclosure, which enhances transparency, reduces information asymmetry, and increases investor confidence (Anita et al., 2025; Saripah et al., 2024). However, empirical findings on ESG disclosure and firm value remain inconsistent. Similarly, Intellectual Capital is considered important in value creation due to its role in innovation and competitive advantage (Malikah & Nandiroh, 2024), yet its impact on firm value is also inconclusive. Financial performance, proxied by Return on Assets (ROA), is expected to strengthen the relationship between ESG disclosure, Intellectual Capital, and firm value. Previous studies show mixed results regarding this moderating role (Tansil et al., 2025; Pramesti et al., 2024), indicating inconsistency in empirical findings.

Therefore, this study offers several novelties compared to previous research. First, this study focuses specifically on the Basic Materials sector, which is characterised by high environmental exposure and capital-intensive operations, yet remains relatively underexplored in ESG-related studies. Second, this study uses a more recent observation period, namely 2022–2024, reflecting current economic conditions and sustainability trends. Third, this study examines the effect of ESG disclosure and Intellectual Capital on firm value, with financial performance (ROA) as a moderating variable, providing a more comprehensive analytical framework. Finally, this study employs panel data regression analysis, which enables capturing both cross-sectional and time-series variations, thereby producing more robust and reliable empirical results compared to prior studies.

Based on these issues, this study examines the effect of ESG disclosure and Intellectual Capital on firm value with financial performance as a moderating variable in Basic Materials sector companies listed on the Indonesia Stock Exchange during 2022–2024. This study is expected to contribute to capital market and accounting literature and provide insights for investors, companies, and regulators regarding the role of ESG, intellectual capital, and financial performance in determining firm value. Based on the explanation above, the research questions in this study are: (1) Does ESG disclosure affect firm value? (2) Does intellectual capital affect firm value? (3) Is financial performance able

to moderate the effect of ESG disclosure on firm value? and (4) Is financial performance able to moderate the effect of intellectual capital on firm value?

This study aims to obtain empirical evidence regarding the effect of ESG disclosure and intellectual capital on firm value and to examine the role of financial performance as a moderating variable in Basic Materials sector companies listed on the Indonesia Stock Exchange during the 2022–2024 period. This research is expected to contribute theoretically to the development of accounting and capital market studies, particularly regarding non-financial factors influencing firm value. In addition, this study is expected to serve as a reference for investors, companies, and regulators in understanding the importance of ESG disclosure, intellectual capital, and financial performance in enhancing firm value.

2. Literature Review

Research on the effect of ESG disclosure and intellectual capital on firm value has been conducted extensively; however, the findings remain inconsistent. Several studies have found that ESG disclosure has a positive effect on firm value because it can enhance transparency, legitimacy, and investor confidence. Nugroho & Sabaruddin (2025) found that ESG disclosure has a significant positive effect on firm value in manufacturing companies in Indonesia. Similar findings were reported by Abdi et al (2022), who demonstrated that the governance dimension of ESG can increase firm value in the global aviation industry. Furthermore, Tansil et al (2025) proved that ESG disclosure positively affects firm value and that the company's financial performance strengthens this relationship.

However, other studies have produced different results. Margana & Wiagustini (2024) found that ESG disclosure has no significant effect on firm value in IDX30 companies. Research by Oktaviana et al (2025) also showed that ESG disclosure does not significantly affect the firm value of plantation companies in Indonesia. Meanwhile, Prayogo et al (2023) found that ESG disclosure actually hurts firm value, although firm size can moderate the relationship. Dewi & Muhyarsyah (2025) also revealed that the governance disclosure dimension hurts firm value, while profitability can moderate the relationship between the independent variables and firm value.

In addition to ESG disclosure, intellectual capital is also considered a factor that may influence firm value. Puspita & Wahyudi (2021) found that intellectual capital simultaneously affects the firm value of manufacturing companies, particularly through the components of Value Added Capital Employed (VACA) and Value Added Intellectual Coefficient (VAIC). Research by Safitri & Dewi (2023) also showed that intellectual capital has a significant effect on firm value in construction companies. However, different findings were reported by Suzan & Supriyadiputri (2023), who stated that intellectual capital has no effect on firm value in pulp and paper companies in Indonesia.

The findings of previous studies indicate that the relationship between ESG disclosure and intellectual capital on firm value remains inconsistent, particularly across different sectors and research periods. In addition, studies regarding the role of financial performance as a moderating variable are still limited and have produced mixed results. Therefore, this study re-examines the effect of ESG disclosure and intellectual capital on firm value, with financial performance as a moderating variable, in Basic Materials companies listed on the Indonesia Stock Exchange during the 2022–2024 period.

These inconsistent findings indicate that the effect of ESG disclosure and Intellectual Capital on firm value is highly context-dependent. Differences in industry characteristics, such as capital intensity and reliance on tangible assets, may influence how investors perceive both financial and non-financial information. In capital-intensive sectors such as Basic Materials, investors tend to place greater emphasis on tangible assets and financial performance, which may reduce the perceived relevance of ESG disclosure and Intellectual Capital in determining firm value. In addition, variations in ESG measurement, disclosure quality, and research methods may also contribute to the inconsistent results across studies. Therefore, further research is needed to clarify these relationships, particularly by focusing on specific sectors and incorporating moderating variables such as financial performance.

3. Research Methods

This study employs a quantitative approach with an associative causal research design to examine the effect of ESG disclosure and intellectual capital on firm value, with financial performance serving as a moderating variable. The object of this study consists of Basic Materials sector companies listed on the Indonesia Stock Exchange during the 2022–2024 period. The data used are secondary in the form of annual reports and sustainability reports obtained from the official website of the Indonesia Stock Exchange and the respective company websites. The sampling technique applied in this study is purposive sampling with the following criteria:

Table 1. Sample Criteria

No.	Criteria	Total
1.	Basic Materials sector companies listed on the Indonesia Stock Exchange during the 2022–2024 period	95
2.	Basic Materials sector companies whose annual reports and sustainability reports were accessible during the 2022–2024 period	(27)
3.	Basic Materials sector companies that did not experience negative profits (losses) during the 2022–2024 period	(24)
4.	Basic Materials sector companies that provided complete data related to all research variables during the 2022–2024 period	(14)

Total companies	30
Total samples	90

Source: Processed by the researcher (2026)

The dependent variable in this study is firm value, which is proxied by Price to Book Value (PBV).

$$PBV = \frac{P}{BVS}$$

The independent variables in this study consist of ESG disclosure and intellectual capital. ESG disclosure is measured using the ESG index, which is calculated based on the number of indicators disclosed by a company compared to the total number of disclosure indicators that should be disclosed.

$$ESG_{Dij} = \frac{\text{Number of disclosed indicators}}{\text{Total indicators that should be disclosed}}$$

Intellectual capital is measured using the Value Added Intellectual Coefficient (VAICTM) method, which consists of Value Added Capital Employed (VACA), Value Added Human Capital (VAHU), and Structural Capital Value Added (STVA).

$$VAIC = VACA + VAHU + STVA$$

The moderating variable in this study is financial performance, represented by Return on Assets (ROA).

$$\text{Return on Assets} = \frac{\text{Net Income After Tax}}{\text{Total Assets}}$$

The data analysis technique used in this study is panel data regression analysis with the assistance of EViews 13 software. This method is chosen because panel data regression combines cross-sectional and time-series data, allowing for a more comprehensive analysis than using only one type of data. In addition, this method can capture individual heterogeneity among companies and reduce potential bias caused by unobserved variables. Therefore, panel data regression provides more robust and reliable estimation results in analysing the relationship between ESG disclosure, Intellectual Capital, and firm value.

The stages of analysis include descriptive statistical analysis, panel data regression model selection through the Chow test, Hausman test, and Lagrange Multiplier test, as well as classical assumption testing consisting of normality, multicollinearity, heteroscedasticity, and autocorrelation tests. Hypothesis testing is conducted using the t-test, F-test, and coefficient of determination (R^2). The panel data regression model in this study is formulated as follows:

$$Y_{it} = \alpha + \beta_1 X1_{it} + \beta_2 X2_{it} + \varepsilon_{it}$$

Meanwhile, the Moderated Regression Analysis (MRA) model used in this study is as follows:

$$Y_{it} = \alpha + \beta_1 X1_{it} + \beta_2 X2_{it} + \beta_3 M_{it} + \beta_4 (X1_{it} \times M_{it}) + \beta_5 (X2_{it} \times M_{it}) + \varepsilon_{it}$$

Keterangan :

Y = Firm Value

α = Konstanta

β = Koefisien regresi

X_1 = ESG Disclosure

X_2 = Intellectual Capital

M = Profitabilitas (ROA)

$(X_1 \times M)$ dan $(X_2 \times M)$ = Interaction variable to test the moderating effect of ROA.

ε = Error term

i = Data cross-section

t = Data time series

4. Results and Discussion

4.1. Result

This study uses Basic Materials sector companies listed on the Indonesia Stock Exchange during the 2022–2024 period as the research objects. The dependent variable in this study is firm value, represented by PBV, while the independent variables consist of ESG disclosure and Intellectual Capital (VAIC). This study also uses financial performance, represented by Return on Assets (ROA), as a moderating variable.

The data used are secondary data obtained from the companies' annual reports and sustainability reports. The sampling technique applied is purposive sampling with criteria requiring companies to be consecutively listed during the research period and to have complete data in accordance with the research requirements. Based on these criteria, 30 sample companies were obtained with a total of 90 research observations.

4.1.1 Descriptive Analysis

Descriptive statistical analysis was conducted to provide a general overview of the characteristics of the research data, including the minimum value, maximum value, mean, and standard deviation of each research variable.

Table 2. Descriptive Analysis Results

	PBV	ESG	VAIC	ROA
Mean	0.436066	0.841423	26.00672	0.068211
Median	0.697201	0.848485	20.51560	0.047558
Maximum	14.94685	1.000000	92.80326	0.313395
Minimum	-19.01688	0.484848	0.974569	0.002597

Std. Dev.	6.428851	0.141195	17.43756	0.061632
Skewness	-0.168696	-0.620661	1.123089	1.761646
Kurtosis	3.219853	2.504356	4.517493	6.829714
Jarque-Bera	0.608133	6.699534	27.55538	101.5511
Probability	0.737812	0.035093	0.000001	0.000000
Sum	39.24596	75.72809	2340.605	6.138979
Sum Sq. Dev.	3678.381	1.774308	27062.09	0.338070
Observations	90	90	90	90

Source: Processed using EViews 13, 2026.

Based on Table 1, the PBV variable has a mean value of 0.436066 with a standard deviation of 6.428851, indicating a relatively high level of variation in firm value among companies. The ESG disclosure variable has a mean value of 0.841423 with a standard deviation of 0.141195, indicating that the level of ESG disclosure among companies tends to be relatively homogeneous. The Intellectual Capital (VAIC) variable has a mean value of 26.00672 with a standard deviation of 17.43756, indicating differences in intellectual capital efficiency among the sample companies. Meanwhile, the ROA variable has a mean value of 0.068211 with a standard deviation of 0.061632, indicating that the companies' financial performance was relatively stable during the research period.

4.1.2 Model Selection

The Chow test was conducted to determine the best model between the Common Effect Model (CEM) and the Fixed Effect Model (FEM).

Table 3. Chow Test

Effects Test	Statistic	d.f.	Prob.
Cross-section F	1.682867	(29,57)	0.0468
Cross-section Chi-square	55.667599	29	0.0021

Source: Processed using EViews 13, 2026.

The Chow test results show a cross-section Chi-square probability value of $0.0021 < 0.05$, indicating that the Fixed Effect Model (FEM) is more appropriate for this study. The Hausman test was conducted to determine the best model between the Fixed Effect Model (FEM) and the Random Effect Model (REM).

Table 4. Hausman Test

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	2.442366	3	0.4858

Source: Processed using EViews 13, 2026.

The probability value of $0.4858 > 0.05$ indicates that the Random Effect Model (REM) is more appropriate than the Fixed Effect Model (FEM). The Lagrange Multiplier test was conducted to determine the best model between the Common Effect Model (CEM) and the Random Effect Model (REM).

Table 5. Lagrange Multiplier Test

	Cross-section	Time	Both
Breusch-Pagan	2.332594 (0.1267)	0.366957 (0.5447)	2.699551 (0.1004)

Source: Processed using EViews 13, 2026.

The test results show a probability value of $0.1267 > 0.05$; therefore, the Common Effect Model (CEM) was selected as the regression model used in this study

4.1.3 Classical Assumption Tests

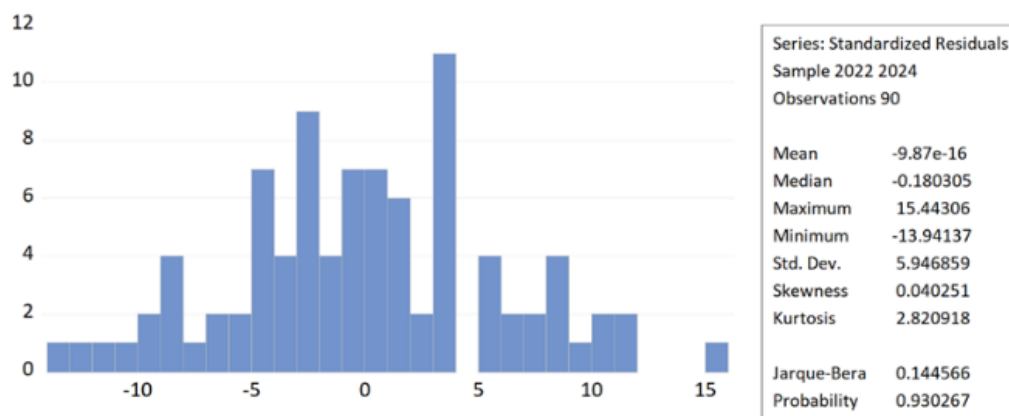


Table 6. Normality Test

Source: Processed using EViews 13, 2026.

The normality test results show a Jarque-Bera probability value of $0.930267 > 0.05$, indicating that the residuals are normally distributed.

Table 7. Multicollinearity Test

	ESG	IC	ROA
ESG disclosure	1.000000	-0.202471	-0.033953
IC(VAIC)	-0.202471	1.000000	0.241524
ROA	-0.033953	0.241524	1.000000

Source: Processed using EViews 13, 2026.

The multicollinearity test results show that all correlation values among the independent variables are below 0.8, indicating that the regression model is free from multicollinearity problems.

Table 8: Heteroscedasticity Test

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	4.626615	2.571561	1.799146	0.0755
ESG	-0.440177	2.787061	-0.157936	0.8749
IC (VAIC)	-0.010614	0.023242	-0.456667	0.6491
ROA	10.35471	6.443467	1.607009	0.1117

Source: Processed using EViews 13, 2026

The heteroscedasticity test results show that all variables have probability values above 0.05, indicating that the research model is free from heteroscedasticity problems.

Table 9. Autocorrelation Test

R-squared	0.144326	Mean dependent var	0.436066
Adjusted R-squared	0.114476	S.D. dependent var	6.428851
S.E. of regression	6.049694	Akaike info criterion	6.481319
Sum squared resid	3147.497	Schwarz criterion	6.592422
Log likelihood	-287.6594	Hannan-Quinn criter.	6.526122
F-statistic	4.835169	Durbin-Watson stat	1.631840
Prob(F-statistic)	0.003704		

Source: Processed using EViews 13, 2026

The Durbin-Watson value of 1.631840 falls within the range of -2 to +2, indicating that the regression model is free from autocorrelation problems.

4.1.4 Panel Data Regression

Table 10. Panel Data Regression

Variabl	Coefficient	Std. Error	t-Statistic	Prob.
C	-2.711811	4.424522	-0.612905	0.5415
ESG	5.960851	4.818967	1.236956	0.2194
IC(VAIC)	-0.071817	0.039020	-1.840512	0.0691

Source: Processed using EViews 13, 2026

The panel data regression equation in this study is formulated as follows:

$$PBV = -2.711811 + 5.960851(ESG) - 0.071817(VAIC) + \varepsilon$$

The regression results indicate that ESG disclosure has a positive effect on firm value, while Intellectual Capital hurts firm value.

4.1.5 Moderated Regression Analysis (MRA)

Moderated Regression Analysis (MRA) is used to examine whether a moderating variable strengthens or weakens the relationship between independent and dependent variables (Ghozali, 2021: 199). In this study, financial performance, proxied by Return on Assets (ROA), is positioned as a moderating variable that may influence the relationship between ESG disclosure, Intellectual Capital, and firm value. MRA is considered appropriate because it enables the analysis of interaction effects between the independent and moderating variables on firm value.

Table 11. Moderated Regression Analysis (MRA) Results

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-9.449613	6.651932	-1.420582	0.1591
ESG	15.13983	6.964046	2.174000	0.0325
IC(VAIC)	-0.021995	0.073930	-0.297512	0.7668
ROA	121.2200	100.4851	1.206348	0.2311
ESG*ROA	-167.2489	101.0827	-1.654574	0.1017
IC*ROA	-0.492251	0.836789	-0.588262	0.5579

Source: Processed using EViews 13, 2026.

The moderation regression equation in this study is formulated as follows:

$$PBV = -9.449613 + 15.13983(ESG) - 0.021995(VAIC) + 121.2200(ROA) - 167.2489(ESG \times ROA) - 0.492251(VAIC \times ROA) + \varepsilon$$

The test results indicate that ESG has a significant effect on firm value, whereas Intellectual Capital does not have a significant effect. Furthermore, ROA is unable to moderate the relationship between ESG disclosure and firm value, as well as the relationship between Intellectual Capital and firm value

4.1.6 Hypothesis Testing

Table 12. Hypothesis Testing

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-9.449613	6.651932	-1.420582	0.1591
ESG	15.13983	6.964046	2.174000	0.0325
IC(VAIC)	-0.021995	0.073930	-0.297512	0.7668

ROA	121.2200	100.4851	1.206348	0.2311
ESG*ROA	-167.2489	101.0827	-1.654574	0.1017
IC*ROA	-0.492251	0.836789	-0.588262	0.5579

Source: Processed using EViews 13, 2026.

The hypothesis testing results indicate that ESG disclosure has a positive and significant effect on firm value with a probability value of 0.0325 (< 0.05); therefore, H1 is accepted. In contrast, Intellectual Capital (VAIC) does not have a significant effect on firm value, with a probability value of 0.7668 (> 0.05); therefore, H2 is rejected. In addition, the interaction variables *ESGROA* and *VAICROA* have probability values of 0.1017 and 0.5579 (> 0.05), respectively, indicating that financial performance (ROA) is unable to moderate the effect of ESG disclosure and Intellectual Capital on firm value. Therefore, H3 and H4 are rejected.

Table 13. F-Test and Coefficient of Determination (R^2)

R-squared	0.174427	Mean dependent var	0.436066
Adjusted R-squared	0.125286	S.D. dependent var	6.428851
S.E. of regression	6.012658	Akaike info criterion	6.489951
Sum squared resid	3036.772	Schwarz criterion	6.656605
Log likelihood	-286.0478	Hannan-Quinn criter.	6.557156
F-statistic	3.549503	Durbin-Watson stat	1.606125
Prob(F-statistic)	0.005834		

Source: Processed using EViews 13, 2026.

The F-test results show a probability value of 0.005834 (< 0.05), meaning that ESG disclosure, Intellectual Capital (VAIC), financial performance (ROA), and their interaction variables simultaneously have a significant effect on firm value. In addition, the coefficient of determination (R^2) value of 0.174427 indicates that the variables in this study can explain 17.44% of the variation in firm value, while other factors outside the research model influence the remaining 82.56%. The Adjusted R-Squared value of 0.125286 indicates that the effective contribution of the independent and moderating variables to firm value is 12.52%.

4.2 Discussion

4.2.1 The Effect of ESG Disclosure on Firm Value

The results of the study indicate that ESG disclosure has a significant effect on firm value in the basic materials sector during the 2022–2024 period. This indicates that the broader the disclosure of environmental, social, and governance aspects, the higher the investor confidence in the company's prospects. ESG information transparency is considered capable of improving corporate reputation and providing positive signals

regarding business sustainability in the future. Increased investor confidence encourages higher stock demand, which ultimately increases firm value.

This stronger investor response to ESG disclosure in the Basic Materials sector can be explained by industry characteristics closely associated with environmental exposure and resource utilisation. Companies in this sector tend to face higher environmental risks, such as carbon emissions, waste management issues, and natural resource exploitation. Therefore, investors are more likely to pay attention to ESG disclosure as an indicator of the company's commitment to sustainability and risk management. Compared to other sectors, ESG information in the Basic Materials sector is considered more relevant because it is directly related to operational sustainability, regulatory compliance, and corporate reputation, all of which may influence long-term firm value.

These findings are in line with Stakeholder Theory, which states that companies capable of fulfilling social and environmental responsibilities will obtain support from stakeholders, including investors. ESG disclosure becomes a communication tool for companies to demonstrate their commitment to sustainability, so the market responds positively by increasing stock prices. In addition, based on Institutional Theory, companies implementing good ESG standards are considered successful in obtaining legitimacy from investors because they can follow global disclosure practices (mimetic isomorphism). The results of this study support the research of (Prayogo et al., 2023), (Antonetta & Simon, 2026), and (Nugroho & Sabaruddin, 2025), which state that ESG disclosure has a positive effect on firm value. However, these findings contradict the studies of (Oktaviana et al., 2025), (Pramesti et al., 2024), and (Perkasa & Simatupang, 2025), which found that ESG disclosure does not affect firm value.

Differences in research findings may occur due to variations in industrial characteristics, observation periods, ESG disclosure measurements, and investor responses across sectors. In sectors with high environmental exposure such as Basic Materials, investors tend to pay greater attention to sustainability-related information because it is closely associated with operational risks and long-term business continuity.

4.2.2 The Effect of Intellectual Capital on Firm Value

The results of the study indicate that Intellectual Capital measured using VAIC does not affect firm value. This indicates that the efficiency of intellectual capital management has not become a primary consideration for investors in assessing companies in the basic materials sector. Investors in this sector tend to focus more on physical assets, operational capabilities, and profitability compared to intangible assets such as human capital, structural capital, and corporate innovation. Several factors cause the insignificance of the effect of Intellectual Capital. First, the capital-intensive characteristics of the basic materials sector cause investors to appreciate tangible asset ownership more than intellectual assets. Second, the benefits of Intellectual Capital are long-term in nature, so they have not been able to provide a direct impact on increasing firm market value.

Third, VAIC measurement is considered not fully capable of reflecting the value of intangible assets comprehensively because it mainly focuses on the efficiency of value creation based on accounting data. Several studies have argued that VAIC has limitations in capturing important components of intellectual capital, such as innovation capability, knowledge quality, employee creativity, and relational capital, because these elements are difficult to measure through financial statements alone (Marzo, 2022; Xu et al., 2022). Therefore, intellectual capital efficiency measured using VAIC may not fully reflect the company's actual intangible asset performance. As a result, investors, particularly in capital-intensive industries such as the Basic Materials sector, tend to place greater emphasis on physical assets, operational capability, and profitability rather than intellectual capital efficiency in assessing firm value.

In addition, not all components of intellectual capital can contribute positively simultaneously. Setiawan & Arismaya (2025) explained that there is a mismatch between human capital, structural capital, and physical capital in creating firm value. Gani (2022) also stated that intellectual capital has not become the main basis for investors in making investment decisions. Meanwhile, Maheswari & Dharma (2025) explained that investors still place greater emphasis on profitability indicators compared to intellectual capital efficiency. Savila & Chariri (2025) added that corporate innovation is often unable to be converted into real market value, especially in industries that depend on operational stability.

The results of this study support the research of Suzan & Supriyadiputri (2023) and Pramudita & Budiwitjaksono (2024), which state that Intellectual Capital does not affect firm value. However, these findings contradict the studies of Pramesti et al (2024) and Safitri & Dewi (2023), which found a positive effect of Intellectual Capital on firm value. Variations may influence differences in research findings in industrial characteristics, intellectual capital measurement methods, and investor perceptions toward intangible assets. In the Basic Materials sector, investors tend to focus more on physical assets and operational performance because the sector is highly capital-intensive. As a result, intellectual capital efficiency is not always considered a major factor in determining firm value.

Based on Stakeholder Theory, investors in the basic materials sector do not yet consider the management of human capital and structural capital as the main factor in generating profits. Investors prioritise physical results that can be directly observed. From the perspective of Institutional Theory, the management of intellectual assets in this sector is still at an early stage, so the market has not yet provided full legitimacy to companies that excel intellectually but are not yet supported by large physical assets.

4.2.3 The Role of Financial Performance in Moderating the Effect of ESG Disclosure on Firm Value

The results of the study indicate that financial performance, proxied by Return on Assets (ROA), is unable to moderate the relationship between ESG disclosure and firm value. This indicates that high or low company profitability does not strengthen or weaken the effect of ESG disclosure on firm value. Investors tend to view ESG information and financial performance as two separate aspects in making investment decisions. Several factors cause the insignificance of the moderating role of financial performance. First, investors view profitability as a short-term performance indicator, whereas ESG is a long-term commitment whose benefits cannot be directly perceived. Second, the capital-intensive nature of the basic materials sector and its dependence on global commodity prices make investors focus more on operational performance than on the integration of ESG and profitability. Third, ESG implementation requires considerable costs, causing companies to reuse profits to support sustainability activities and not yet be able to increase firm value directly.

From the perspective of Stakeholder Theory, ESG disclosure is viewed as a form of corporate responsibility to stakeholders that is independent in nature, so it does not depend on the level of company profitability. Meanwhile, Institutional Theory explains that ESG practices in the basic materials sector tend to be carried out due to regulatory pressure (coercive isomorphism), so ESG disclosure is considered a corporate obligation rather than the main strategy for creating firm value. The results of this study are consistent with the research of Sulistyawati & Ratmono (2023), which states that profitability is unable to moderate the relationship between ESG and firm value. However, these findings contradict the study of Arofah & Khosmiah (2023), which found that financial performance can strengthen the effect of ESG on firm value.

These differences may stem from differences in sectoral characteristics and investor priorities across industries. In the Basic Materials sector, investors are more likely to emphasise operational stability and commodity market conditions rather than the interaction between profitability and ESG implementation. In addition, ESG activities often require substantial long-term investments, so their benefits may not be immediately reflected in firm value.

4.2.4 The Role of Financial Performance in Moderating the Effect of Intellectual Capital on Firm Value

The results of the study indicate that financial performance is unable to moderate the relationship between Intellectual Capital and firm value. This indicates that the level of company profitability does not strengthen or weaken the effect of intellectual capital on firm value. Investors view Intellectual Capital and profitability as two independent indicators in assessing firm value. Several factors influence the insignificance of this moderating role. First, the capital-intensive characteristics of the basic materials sector cause investors to prioritise physical assets and operational capabilities over intellectual capital efficiency. Second, investor perceptions separate financial and non-financial

information: profitability is viewed as a short-term indicator, while Intellectual Capital is considered a long-term investment. Third, VAIC measurement has not been able to describe the value of intangible assets comprehensively, so intellectual capital efficiency has not become a primary concern for investors even when companies have high profitability.

The results of this study are consistent with the research of Maheran et al (2021) and Aminda et al (2022), which state that financial performance is unable to moderate the relationship between Intellectual Capital and firm value. However, these findings contradict the study of al. (2024), which found that financial performance can strengthen the relationship between Intellectual Capital and firm value. Variations in industry characteristics may cause differences in findings, the effectiveness of intellectual capital utilisation, and investor perspectives regarding intangible assets. In the Basic Materials sector, investors tend to prioritise physical assets and operational efficiency over intellectual capital, even when companies demonstrate high profitability.

Based on Stakeholder Theory, company profitability has not been able to synergise the benefits of intellectual capital with investor expectations because there is still an information gap regarding the benefits of intellectual assets. Meanwhile, from the perspective of Institutional Theory, the basic materials sector is still more oriented toward physical assets than knowledge-based assets, so the pressure to demonstrate intellectual superiority remains relatively low. As a result, high company profitability has not been able to strengthen the effect of Intellectual Capital on firm value.

5. Conclusions

This study concludes that ESG disclosure has a positive and significant effect on firm value in Basic Materials sector companies listed on the Indonesia Stock Exchange during 2022–2024. This finding indicates that broader ESG disclosure can increase investor confidence and improve firm value. In contrast, Intellectual Capital measured using VAIC does not have a significant effect on firm value because investors in the Basic Materials sector tend to focus more on tangible assets and operational performance. In addition, financial performance proxied by ROA is unable to moderate the relationship between ESG disclosure, Intellectual Capital, and firm value.

The practical implications of this study indicate that companies are encouraged to improve the quality and consistency of ESG disclosure and optimise intellectual capital management through innovation and employee competency development. Investors are expected to consider sustainability disclosure in addition to financial performance in making investment decisions. Regulators are encouraged to strengthen ESG and intellectual capital disclosure standards to improve corporate transparency. Future researchers are recommended to use broader intellectual capital measurements beyond VAIC and expand the research scope to other sectors and longer observation periods. This

study has several limitations, including the limited research period of 2022–2024, the focus only on Basic Materials sector companies, and the use of VAIC measurement, which may not fully capture intangible asset performance comprehensively. Therefore, future studies are expected to include additional variables and alternative measurements to provide more comprehensive results regarding the determinants of firm value.

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