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ESG DISCLOSURE, GREEN ACCOUNTING, INTELLECTUAL CAPITAL AND FIRM VALUE: THE MODERATING ROLE OF FINANCIAL PERFORMANCE

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Abstract
This study examines the effect of Environmental Disclosure, Social Disclosure, Governance Disclosure, Green Accounting, and Intellectual Capital on firm value, and analyzes the moderating role of financial performance. This study uses a quantitative approach using panel data from IDXESGL companies during the 2021–2024 period, with 40 observations from 10 firms selected through purposive sampling. Data are analyzed using Multiple Linear Regression Analysis and Moderated Regression Analysis using EViews 13. The results show that Intellectual Capital has a significant positive effect on firm value, whereas other independent variables do not have a significant effect. Financial performance strengthens the positive effect of Social Disclosure on firm value, weakens the effect of Environmental Disclosure on firm value, and does not significantly moderate the effects of Governance Disclosure, Green Accounting, and Intellectual Capital. The results show that strengthening intellectual capital and credible social initiatives supported by strong financial performance offers greater value-creation potential.
***Keywords**: Environmental, Social, and Governance (ESG) Disclosure, Green Accounting, Intellectual Capital, Financial Performance, Firm Value*

1. Introduction

Firm value has become an increasingly important indicator for assessing a company's long-term performance, market perception, and ability to generate sustainable returns. Firm value reflects investors' perspectives on the company, where rising stock prices signal improved corporate performance and investor confidence (Sinaga et al., 2025). In recent years, global awareness of sustainability has grown rapidly, driven by concerns over climate change, inequality, and environmental degradation. These issues not only threaten ecological stability, economic resilience, and social well-being but also shape how investors evaluate firm value. One key way companies are able to demonstrate their commitment is through sustainability reporting. Integrating ESG into corporate strategy is able to enhance competitiveness, strengthen stakeholder trust, and create long-term value which is able to enhance firm value (ESG Indonesia Capital Market, 2025). For investors, ESG-oriented investments have proven more resilient during global crises and more competitive in generating sustainable long-term returns.

The adoption of ESG practices among Indonesian companies has continued to increase, supported by a stronger regulatory framework established by the Financial Services Authority (OJK). Through POJK No. 51/POJK.03/2017 and SEOJK No. 16/SEOJK.04/2021, OJK requires financial institutions, issuers, and public companies to integrate sustainability principles into their business operations and publish sustainability reports. This action is expected to enhance firm value by providing investors with more credible, consistent, and transparent information regarding a company's long-term risks, strategic direction, and operational accountability, thereby strengthening market confidence. Following the implementation of these regulations, companies have demonstrated greater compliance and commitment to sustainability reporting, reflected in the increasing percentage of IDX-listed companies disclosing sustainability reports, which rose from 80% in 2021 to 88% in 2022, 94% in 2023, and 97% in 2024 (Andy, 2023; Nurahmad, 2025; Redaksi Shift Indonesia, 2025; Shafira, 2025).

Although ESG adoption among Indonesian companies continues to increase, several

challenges still limit its effectiveness in enhancing firm value, including high implementation costs, limited understanding of ESG standards, and data constraints. A more serious concern is the risk of greenwashing, where firms exaggerate sustainability performance for reputational or financial gain (Olivia et al., 2025). For example, PT Kalimantan Industrial Park Indonesia (KIPI) promoted its operations as environmentally friendly, although reports indicated unresolved ecological and social impacts and limited transparency (CELIOS, 2024). Similar concerns arise in Indonesia's retail sector, where companies such as PT Matahari Department Store Tbk, PT Ramayana Lestari Sentosa Tbk, and PT Sona Topas Tourism Industry Tbk reported emission reductions without clear methodological justification (Aptasari et al., 2024). These examples illustrate the continuing credibility risk surrounding ESG disclosures in Indonesia, which may lower investor confidence and weaken their firm value.

Previous studies have reported mixed findings regarding the relationship between sustainability-related factors and firm value. While ESG disclosure, green accounting, and intellectual capital are generally associated with higher firm value, several studies have reported insignificant or even negative effects, indicating that the benefits of sustainability initiatives depend on firm-specific conditions and suggesting that financial performance may play an important moderating role. These mixed findings highlight an important gap in the literature, particularly in the Indonesian context, where empirical evidence on the combined effects of ESG disclosure, green accounting, and intellectual capital on firm value remains limited. Existing research has primarily examined these variables separately or focused only on aggregate ESG scores, with limited attention to the moderating role of financial performance (Angela & Sari, 2023; Christy & Sofie, 2023; Jayanti et al., 2024).

Furthermore, few studies have specifically focused on companies listed in the IDX ESG Leaders Index (IDXESGL), despite these firms' representing companies with relatively stronger sustainability commitments. Therefore, this study investigates the effects of ESG disclosure, green accounting, and intellectual capital on firm value, with financial performance as a moderating variable, using IDXESGL-listed companies as the research sample. By focusing on firms with established sustainability commitments, this study provides empirical evidence on whether sustainability-related initiatives create greater firm value when supported by strong financial performance. The findings are expected to enrich the literature and offer practical insights for regulators, investors, and companies in promoting a more transparent, accountable, and sustainable capital market in Indonesia.

2. Literature Review

2.1 Signalling Theory

Signalling theory explains that firms use voluntary disclosure to reduce information asymmetry (Connelly et al., 2011), where ESG disclosure and green accounting act as strategic signals to communicate sustainability commitment and shape investor perceptions of long-term value.

2.2 Legitimacy Theory

From the legitimacy theory perspective, firms adopt ESG and green accounting practices to align their activities with social norms and regulatory expectations, securing legitimacy as a key resource for survival and reputation enhancement (Del Gesso & Lodhi, 2025).

2.3 Stakeholder Theory

Stakeholder theory emphasizes that firms must manage relationships with all actors who affect or are affected by corporate activities, as stakeholder alignment supports long-term performance and value creation (Freeman et al., 2021).

2.1 Environmental, Social, and Governance (ESG) Disclosure

Environmental, Social, and Governance (ESG) represents an integrated framework of environmental, social, and corporate governance factors that influence a company's ability to

create long-term value and manage sustainable development (Sustainability Nasdaq, 2019).

2.1.1 Environmental Disclosure

Environmental disclosure refers to the disclosure of information regarding a company's environmental performance, including its management of natural resources, emissions, energy, waste, biodiversity, and other environmental impacts (Kaźmierczak, 2022).

2.1.2 Social Disclosure

Social disclosure refers to the disclosure of information regarding a company's relationships with stakeholders, including employees, customers, suppliers, and communities, through responsible social and labor practices (Kaźmierczak, 2022).

2.1.3 Governance Disclosure

Governance disclosure refers to the disclosure of information regarding the systems, structures, and practices that guide corporate governance, accountability, transparency, and stakeholder protection (Kaźmierczak, 2022).

2.2 Green Accounting

Green accounting is an accounting approach that integrates environmental assets, resource use, and ecological impacts into financial reporting. It aims to incorporate environmental costs into a company's financial outcomes, allowing organizations to recognize the economic implications of their environmental activities (Rounaghi, 2019).

2.6 Intellectual Capital

Intellectual capital is broadly defined as a company's knowledge-based resources that generate value, enhance performance, and sustain competitive advantage through intangible assets such as employee expertise, organizational systems, innovation capability, and relational networks that are not captured in traditional financial statements but significantly shape long-term success (Aryanti & Mertha, 2022).

2.7 Firm Value

Firm value is broadly defined as the market's perception of a company's overall performance and future prospects that determines shareholder welfare, commonly reflected through stock prices and emphasizing its link to market returns (Astari et al., 2023; Perihati & Putri, 2023).

2.8 Financial Performance

Financial performance reflects a company's ability to effectively utilize its resources to generate profits and achieve sustainable growth. It can be measured using various financial indicators, with Return on Assets (ROA) being one of the most widely used proxies for profitability.

2.9 Firm Size

Firm size refers to the scale of a company's operations, typically measured by its total assets. Larger firms generally possess greater financial resources, managerial capacity, and visibility, enabling them to implement sustainability initiatives more effectively and create long-term value.

2.10 Leverage

Leverage refers to the extent to which a company uses debt to finance its assets and operations. It reflects a firm's financial risk and capital structure, which may influence its ability to sustain operations and create firm value (Hulster, 2009).

2.11 Conceptual Framework

This study examines one dependent variable, five independent variables, one moderating variable, with two control variables. The dependent variable is firm value, measured using Tobin's Q. The independent variables consist of environmental disclosure (ED), social disclosure (SD), governance disclosure (GD), green accounting (GA), and intellectual capital (IC). Environmental, social, and governance disclosure are measured using the Global Reporting Initiative (GRI) Standards 2021 disclosure index, green accounting is measured by the ratio of environmental costs to net profit, and intellectual capital is measured using the Modified Value Added Intellectual Coefficient (MVAIC). Financial performance, represented by Return on Assets (ROA), serves as the moderating variable. In addition, firm size (FS) and leverage (LEV) are included as control variables, measured by the natural logarithm of total assets (LnTA) and the Debt-to-Equity Ratio (DER), respectively.

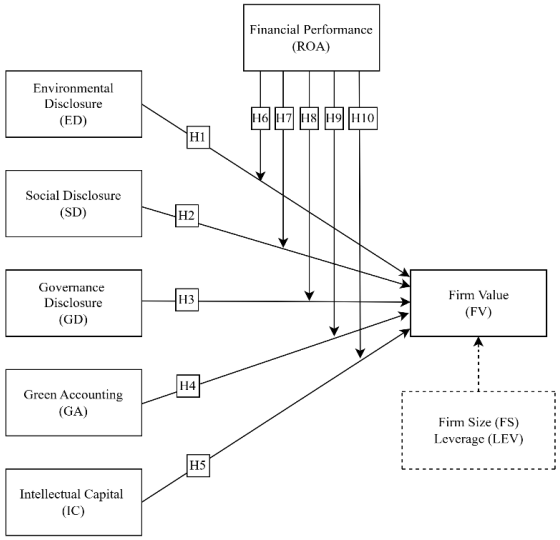


Figure 1 Conceptual Framework

Based on the conceptual framework and supported by theoretical foundations and prior studies, the research hypotheses can be formulated as below :

HI : Environmental Disclosure is expected to enhance firm value.
H2 : Social Disclosure is expected to enhance firm value.
H3 : Governance Disclosure is expected to enhance firm value.
H4 : Green Accounting is expected to enchance firm value.
H5 : Intellectual Capital is expected to enhance firm value.
H6 : Financial Performance positively moderates the association between Environmental Disclosure and Firm Value.
H7 : Financial Performance positively moderates the association between Social Disclosure and Firm Value.
H8 : Financial Performance positively moderates the association between Governance Disclosure and Firm Value.
H9 : Financial Performance positively moderates the association between Green Accounting and Firm Value.
H10 : Financial Performance positively moderates the association between Intellectual Capital and Firm Value

3 Research Methods

3.1 Research Methodology

This study employs a quantitative research approach using a causal research design that focuses on cause-and-effect relationships. Quantitative data are used to measure and analyze the relationship between Environmental, Social, and Governance (ESG) disclosure, green

accounting, and intellectual capital on firm value, as well as the moderating role of financial performance. This study employs panel data regression analysis, which combines cross-sectional and time-series data to provide a more comprehensive and robust analytical framework. The data for this study were sourced from the Indonesia Stock Exchange (IDX) official website (www.idx.co.id) and the official website of the company, including the company annual reports, sustainability reports, and other supporting data of the companies listed on the IDX. These sources are selected for the reliability in providing comprehensive financial, ESG, green accounting, and intellectual capital-related information.

3.2 Population and Sample

The population of this study consists of 53 IDXESGL companies listed on the Indonesia Stock Exchange (IDX) during 2021-2024 period. The observation period of this study begins in 2021, following the launch of the IDX ESG Leaders index (IDXESGL) in December 2020, which marks the first year of complete annual report and sustainability report disclosures. Accordingly, the study covers four years observations during the 2021–2024 period, excluding the year of 2025 due to the unavailability of finalized annual reports from the companies. The sampling process conducted using purposive sampling method involved several filtering stages.

Table 1 Purposive Sampling Criteria

No	Criteria	Total
1.	Research population	53
2.	Companies whose inclusion in the IDXESGL index was not maintained throughout the 2021–2024 observation period	(35)
3.	Companies that failed to provide annual reports and sustainability reports consistently and completely for each year from 2021 to 2024	0
4.	Companies that do not disclose their environmental cost in sustainability report consecutively during 2021-2024 period	(8)
	Number of companies	**10**
	Time series (2021 – 2024)	**4 years**
	Total of samples	**40**

The use of purposive sampling in this study is consistent with prior empirical research. Previous studies employing purposive sampling have similarly obtained relatively small samples due to strict selection criteria, such as ESG data availability and complete sustainability reporting. This is particularly evident in research on IDXESGL constituent companies, where purposive sampling resulted in 14 firms with 42 observations over three years (Putri et al., 2025), demonstrating that sustainability-based research naturally involves limited observations. Based on the purposive sampling criteria, the final sample of this study is presented in Table 2.

Table 2 List of Research Samples

No	Code	Company Name
1.	BBCA	Bank Central Asia Tbk.
2.	BBNI	Bank Negara Indonesia (Persero) Tbk
3.	BBRI	Bank Rakyat Indonesia (Persero) Tbk
4.	BMRI	Bank Mandiri (Persero) Tbk
5.	BSDE	Bumi Serpong Damai Tbk
6.	CTRA	Ciputra Develompment Tbk
7.	ERAA	Erajaya Swasembada Tbk
8.	JSMR	Jasa Marga (Persero) Tbk
9.	PWON	Pakuwon Jati Tbk
10.	TOWR	Sarana Menara Nusantara Tbk

3.3 Operational Definition of Variables

Table 3 presents the operational definitions and measurement proxies of the variables used in this study.

Table 3 Operational Definition of Variables

Variables	Operational Definition	Measurement Scale
Environmental Disclosure (ED)	Measured by the proportion of disclosed environmental items on sustainability report or disclosed sustainability information in annual report to the total GRI Standard 2021 300 series with total of 31 indicators.	ED= Sum of Company's Environmental Disclosure Item Total of GRI's Environmental Disclosure Standard Item Source: Christy & Sofie (2023)
Social Disclosure (SD)	Measured by the proportion of disclosed social items on sustainability report or disclosed sustainability information in annual report to the total GRI Standard 2021 400 series with total of 36 indicators.	SD= Sum of Company's Social Disclosure Item Total of GRI's Social Disclosure Standard Item Source: Christy & Sofie (2023)
Governance Disclosure (GD)	Measured by the proportion of disclosed governance items on sustainability report or disclosed sustainability information in annual report to the total GRI 2 and GRI 205 standard items on GRI Standard 2021 with total of 33 indicators.	GD= Sum of Company's Governance Disclosure Item Total of GRI's Governance Disclosure Standard Item Source: Christy & Sofie (2023)
Green Accounting (GA)	Calculated as environmental expenditure relative to the company's net profit.	GA= Total Environmental CostNet Profit Source: Perihati & Putri (2023)
Intellectual Capital (IC)	The measurement is based on the Modified Value-Added Intellectual Coefficient (MVAIC) approach.	MVAIC = HCE + SCE + RCE + CEE Source: Pramesti et al. (2024)
Firm Value (FV)	Asessed through Tobin's Q, reflecting the relationship between the market value and the book value of the company's assets	Tobin's Q Ratio = Total Market Value+ Total Book Value of Liabilities Total Book Value of Assets Source: Christy & Sofie (2023)
Firm Size (FS)	Determined using the natural logarithm of the company's total assets.	FS = Ln(Total Assets) Source: Kumar & Firoz (2022)
Leverage (LEV)	Represented by the Debt-to-Equity Ratio (DER), calculated from total debt relative to total equity.	DER= Total DebtTotal Equity Source: Mauliddin & Subardjo (2023)
Financial Performance (ROA)	Determined from the proportion of profit after tax generated from the company's total assets.	ROA= Profit After Tax (PAT)Total Assets Source: Kumar & Firoz (2022)

3.4 Data Analysis Method

The relationship between the independent and dependent variables in this study is analyzed using multiple regression models, and further assessed through Moderated Regression Analysis to evaluate the moderating role of financial performance. The research is conducted through EViews 13. The stages of data analysis include descriptive analysis, regression panel data model estimation, selection of panel data regression model, classical assumption test, regression analysis, and hypothesis test. The following is the regression model equation used :

$$FV = c + \beta 1ED + \beta 2SD + \beta 3GD + \beta 4GA + \beta 5IC + \beta 6FS + \beta 7LEV + \varepsilon \ldots\ldots (1)$$

$$FV = c + \beta 1ED + \beta 2SD + \beta 3GD + \beta 4GA + \beta 5IC + \beta 6ROA + \beta 7FS + \beta 8LEV + \varepsilon \ldots\ldots (2)$$

$$FV = c + \beta 1ED + \beta 2SD + \beta 3GD + \beta 4GA + \beta 5IC + \beta 6ROA + \beta 7FS + \beta 8LEV + \beta 9ED*ROA + \beta 10SD*ROA + \beta 11GD*ROA + \beta 12GA*ROA + \beta 13IC*ROA + \varepsilon \ldots\ldots (3)$$

4 Research Findings and Discussion

The results and analysis describing the relationship between the Environmental Disclosure, Social Disclosure, Governance Disclosure, Green Accounting and Intellectual Capital as independent variables and firm value as dependent variable with financial performance as moderating variable are presented in this section. These relationships are examined using multiple regression models and further evaluated through Moderated Regression Analysis (MRA) to assess the moderating role of financial performance. Each stage of the results and analysis is explained in the following sections.

4.1 Descriptive Statistic Analysis

Table 4 Descriptive Statistic Result

Variable	Mean	Median	Max	Min	Std. Dev.	Observation
ED	0.4694	0.4033	0.8710	0.0323	0.2305	40
SD	0.4563	0.4306	0.8611	0.1389	0.1677	40
GD	0.8485	0.8940	1.0000	0.4242	0.1624	40
GA	0.0255	0.0014	0.2479	0.0000	0.0663	40
IC	5.7844	5.1994	13.6546	2.4395	2.9001	40
ROA	0.0397	0.0389	0.0983	0.0086	0.0189	40
FS	19.0735	18.2490	21.6100	16.2467	1.7933	40
LEV	0.7050	0.3317	2.3277	0.1509	0.6711	40
FV	0.0606	0.0033	0.5239	-0.4452	0.2464	40

Table 4 presents the descriptive statistics of the study variables. Governance disclosure (GD) has the highest average value, while green accounting (GA) records the lowest mean, indicating that governance practices are more extensively disclosed than environmental cost allocation. In addition, intellectual capital (IC) exhibits the highest variability, suggesting considerable differences across firms. Overall, the results indicate adequate variation in the data for further panel regression analysis.

4.2 Regression Panel Data Model Estimation

Table 5 Regression Panel Data Model Estimation Result

Variable	CEM		FEM		REM	
	Coefficient	Prob.	Coefficient	Prob.	Coefficient	Prob.
C	-2.448879	0.0002	8.448318	0.0003	1.094085	0.2913
ED	-0.408681	0.0457	0.005127	0.9674	-0.229357	0.0378
SD	0.169752	0.4303	0.069620	0.5554	0.153193	0.1770
GD	-0.365035	0.0509	-0.104339	0.2622	-0.232982	0.0090
GA	0.016672	0.9677	1.462806	0.1146	0.060484	0.9343
IC	0.058826	0.0007	0.035700	0.0455	0.031440	0.0534
ROA	2.755177	0.3355	2.188262	0.1618	2.519664	0.0929
FS	0.128904	0.0000	-0.444616	0.0003	-0.049899	0.3495
LEV	0.035352	0.7036	-0.260539	0.0611	-0.183954	0.1035

Table 5 presents the estimation results of the Common Effect Model (CEM), Fixed Effect Model (FEM), and Random Effect Model (REM). Since the estimated coefficients differ across models, panel model selection tests are conducted to identify the most appropriate model for further analysis.

4.2.1 Chow Test

Table 6 Chow Test Result

Effects Test	Statistic	d.f.	Prob.
Cross-section F	17.88864	(9,22)	0.0000
Cross-section Chi-square	84.73726	9	0.0000

Based on the results in Table 6, both the F-statistic and Chi-square statistic produce probability values of 0.0000, which are below the 0.05 significance level. This indicates that the regression coefficients differ significantly across cross-sections, and therefore the Fixed Effect Model (FEM) is preferred over the Common Effect Model (CEM).

4.2.2 Hausman Test

Table 7 Hausman Test Result

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	32.0986	8	0.0001

Table 7 shows a Chi-square probability value of 0.0001, which is lower than 0.05. This result indicates that the Fixed Effect Model (FEM) is more appropriate because the assumption required for the Random Effect Model (REM) is violated.

Based on the Chow Test and Hausman Test, the Fixed Effect Model (FEM) is selected as the most suitable model for this study. The LM test is not required because it is only used to choose between the Random Effect Model (REM) and the Common Effect Model (CEM). Since both the Chow and Hausman tests consistently direct the selection toward the Fixed Effect Model (FEM), additional LM testing becomes unnecessary (Basuki, 2021).

4.3 *Classical Assumption Testi*

4.1.1 *Normality Test*

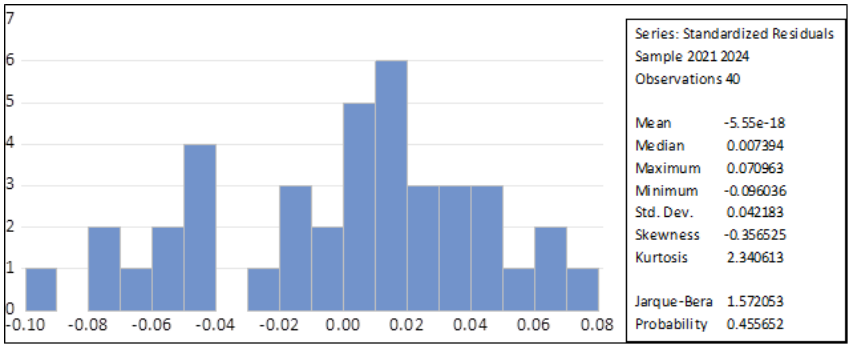


Figure 2 Normality Test Result

The normality test in Figure 2 indicates that the residuals are normally distributed. This is shown by the Jarque-Bera probability of 0.455652, which is higher than 0.05, meaning the residuals do not significantly differ from a normal distribution. The Skewness value of -0.356525 and the Kurtosis value of 2.340613 are also within the acceptable ranges for a normal distribution. Based on these results, the data can be concluded to meet the normality assumption.

4.1.2 Multicollinearity Test

Table 8 Multicollinearity Test Result

Variable	Coefficient Variance	Uncentered VIF	Centered VIF
ED	0.0385	19.7905	3.7689
SD	0.0451	20.0661	2.3359
GD	0.0323	45.4650	1.5678
GA	0.1667	1.5519	1.3466
IC	0.0002	19.3488	3.8087
ROA	7.9301	28.7421	5.2039
FS	0.0007	516.7498	4.4156
LEV	0.0085	14.9720	7.0234

Based on Table 8, all variables show Centered VIF values below the acceptable threshold (VIF<10), indicating that the regression model is generally free from multicollinearity issues.

4.1.3 Heteroscedasticity Test

Table 9 Heteroscedasticity Test Result

F-statistic	**0.922397**	**Prob. F**	**0.5117**
Obs*R^2	7.690815	Prob. Chi-Square	0.4642
Scaled explained SS	6.206877	Prob. Chi-Square(8)	0.6241

Based on Table 9, the heteroscedasticity test using the Glejser method shows probability values of Prob. F = 0.5117 and Prob. Chi-Square (Obs*R^2) = 0.4642, indicate that the regression model does not exhibit heteroscedasticity, meaning that the residual variance is constant (homoscedastic).

4.2 *Refression Analysis & Hypothesis Test*

Regression analysis in this study was conducted through Multiple Linear Regression Analysis to test the direct effect of each independent variable on firm value and Moderated Regression Analysis (MRA) by including interaction terms with ROA to examine whether financial performance moderates the relationship between the independent variables and firm value. The regression analysis of this study are shown in table 10.

Table 10 Regression Analysis Result

Variable	Cofficient	Std. Error	t-Statistic	Prob.	R^2	Adjusted R^2
Model 1						
C	8.345986	2.020272	4.131120	0.0004	0.967908	0.945583
ED	-0.007831	0.126613	-0.061847	0.9512		
SD	0.091808	0.117950	0.778367	0.4443		
GD	-0.075134	0.090474	-0.830452	0.4148		
GA	1.223764	0.895407	1.366712	0.1849		
IC	0.047627	0.015029	3.169008	0.0043		
FS	-0.443509	0.107636	-4.120462	0.0004		
LEV	-0.152335	0.111389	-1.367597	0.1847		
Model 2						
C	8.448318	1.975074	4.277469	0.0003	0.970699	0.948057
ED	0.005127	0.124024	0.041341	0.9674		
SD	0.069620	0.116252	0.598873	0.5554		
GD	-0.104339	0.090666	-1.150799	0.2622		
GA	1.462806	0.890263	1.643117	0.1146		
IC	0.035700	0.016837	2.120344	0.0455		
FS	2.188262	1.511635	1.447612	0.1618		
LEV	-0.444616	0.105163	-4.227877	0.0003		
Model 3						
C	2.211955	3.352368	0.659819	0.5182	0.988168	0.972856
ED	0.343010	0.157770	2.174119	0.0441		
SD	-0.282147	0.197067	-1.431734	0.1703		
GD	0.000829	0.186402	0.004446	0.9965		
GA	3.891612	1.637451	2.376628	0.0295		
IC	0.002616	0.037052	0.070601	0.9445		
ROA	-5.145660	3.894071	-1.321409	0.2039		
FS	-0.097038	0.183929	-0.527587	0.6046		
LEV	-0.588955	0.174335	-3.378290	0.0036		
ED*ROA	-14.668300	4.598193	-3.190014	0.0054		
SD*ROA	14.417230	6.234291	2.312569	0.0335		
GD*ROA	0.454251	3.950311	0.114991	0.9098		
GA*ROA	-78.136970	36.628320	-2.133239	0.0478		
IC*ROA	1.055583	0.643161	1.641241	0.1191		

Model 1 shows that Environmental Disclosure (ED) has a coefficient of -0.007831 with a p value of 0.9512, showing a negative and statistically insignificant effect on firm value, therefore **H1 is rejected**. Social Disclosure (SD) also shows a positive yet insignificant effect, with a coefficient of 0.091808 and a p value of 0.4443, indicating that SD does not contribute meaningfully to changes in firm value, therefore **H2 is rejected**. Governance Disclosure (GD) has a negative coefficient of –0.075134 with a p value of 0.4148, meaning the variable does not significantly affect firm value, therefore **H3 is rejected**. Green Accounting (GA) has a coefficient of 1.223764 with a p value of 0.1849, also indicating a positive but insignificant

impact, therefore **H4 is rejected**. However, Intellectual Capital (IC) has a coefficient of 0.047627 with a p value of 0.0043, which is below the 0.05 threshold. This result means that IC has a positive and statistically significant effect on firm value, therefore **H5 is accepted**. The R^2 value of 0.967908 and adjusted R^2 value of 0.945583 indicates that Model 1 feasible to use in predicting the firm value variable.

Model 2 includes financial performance (ROA) as an additional independent variable. The results show that IC remains significantly positive, whereas ED, SD, GD, and GA continue to show no significant effect on firm value. ROA itself has a probability value of 0.1618 > 0.05, meaning that it does not directly influence firm value. The R^2 and adjusted R^2 value slightly increases to 0.970699 and 0.948057, indicating that Model 2 remains feasible for predicting firm value, although financial performance does not contribute a significant direct effect in this model.

Model 3 adds interaction terms between ROA and each independent variable to test the moderating effect of financial performance. The results show that the interaction between Environmental Disclosure and ROA (ED*ROA) has a coefficient of –14.66883 with a p-value of 0.0054, indicating a statistically significant moderating effect. The negative coefficient shows that ROA weakens the influence of environmental disclosure on firm value, therefore **H6 is rejected**. The interaction between Social Disclosure and ROA (SD*ROA) has a coefficient of 14.41723 and a p-value of 0.0335, demonstrating a significant positive moderating effect, which means ROA strengthens the relationship between social disclosure and firm value, therefore **H7 is accepted**. The interaction between Governance Disclosure and ROA (GD*ROA) has a coefficient of 0.454251 with a p-value of 0.9098, indicating no significant moderating role, therefore **H8 is rejected**. The interaction term for Green Accounting and ROA (GA*ROA) also shows a significant result, with a coefficient of –78.13697 and a p-value of 0.0478. However, the negative direction suggests that ROA weakens the impact of green accounting on firm value rather than strengthening it, therefore **H9 is rejected**. The interaction between Intellectual Capital and ROA (IC*ROA) has a coefficient of 1.055583 and a p-value of 0.1191, indicating that ROA does not significantly moderate the effect of intellectual capital on firm value, therefore **H10 is rejected**. The R^2 value and adjusted R^2 value increases substantially to 0.988168 and 0.972856, demonstrating that the model's predictive ability improves when the moderating variable and interaction terms are included. Therefore, Model 3 is considered highly feasible for explaining variations in firm value.

The moderating variable, ROA (Financial Performance), functions as a pure moderator. This means that the pure moderator influences the relationship between the predictor and the dependent variable without acting as a predictor itself (Solimun, 2011). In this study, ROA as moderating variable does not have a significant direct effect on firm value (Prob. = 0.2039 > 0.05), but its interaction with several independent variables (ED, SD, GA) significantly affects firm value, confirming its role as a pure moderator.

4.3 *Simultaneous Test*

Table 11 Simultaneous Test Result

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	1.35909	0.09570	14.20116	0.00000
ED	-0.14213	0.15971	-0.88994	0.38136
SD	0.10451	0.17141	0.60971	0.54715
GD	-0.28861	0.11086	-2.60342	0.01482
Effects Specification				
Cross-section fixed (dummy variables)				
R-squared	0.92868	Mean dependent var	1.09517	R-squared
Adjusted R-	0.89699	S.D. dependent	0.28250	Adjusted R-

squared		var		squared
S.E. of regression	0.09066	Akaike info criterion	-1.70624	S.E. of regression
Sum squared resid	0.22196	Schwarz criterion	-1.15735	Sum squared resid
Log likelihood	47.12485	Hannan-Quinn criter.	-1.50778	Log likelihood
F-statistic	29.30026	Durbin-Watson stat	1.57278	F-statistic
Prob(F-statistic)	0.00000			Prob(F-statistic)

Based on Table 11, the F-test produces a probability value of 0.0000 (<0.05), indicating that Environmental Disclosure, Social Disclosure, and Governance Disclosure simultaneously have a significant effect on firm value. These findings suggest that ESG disclosure, when measured as an aggregate index, significantly influences firm value, although its individual dimensions may exhibit mixed results in the partial test. This result is consistent with Aydoğmuş et al. (2022), who found that the overall ESG score positively affects firm value despite inconsistent effects across individual ESG dimensions.

4.4 Discussion

The results show that environmental, social, and governance disclosures do not individually have a significant effect on firm value. These findings suggest that investors do not consider ESG disclosures alone as sufficient indicators of firm value, particularly when the information is largely compliance-driven or lacks direct economic relevance. This result is consistent with previous studies reporting that ESG disclosure often serves as a legitimacy mechanism rather than a value-creating signal unless it provides credible and decision-useful information. From the perspectives of signalling and legitimacy theories, ESG disclosure influences market valuation only when it effectively reduces information asymmetry and demonstrates substantive sustainability performance.

Similarly, green accounting is found to have no significant effect on firm value, indicating that environmental cost disclosures are not yet perceived by investors as value-relevant information. In contrast, intellectual capital has a positive and significant effect on firm value, implying that knowledge-based resources are recognized as important drivers of competitiveness, innovation, and long-term corporate performance. These findings support previous studies suggesting that while sustainability-related disclosures may not immediately influence market valuation, intellectual capital provides a stronger strategic signal regarding a firm's future growth and value creation.

Regarding the moderating effect, financial performance weakens the relationships between environmental disclosure and firm value as well as between green accounting and firm value, while strengthening the relationship between social disclosure and firm value. However, financial performance does not significantly moderate the effects of governance disclosure and intellectual capital on firm value. These findings indicate that profitability does not uniformly enhance the value relevance of sustainability initiatives. Instead, financial performance appears to strengthen disclosures that directly reflect stakeholder engagement, such as social disclosure, while reducing the importance of environmental disclosures when investors place greater emphasis on financial outcomes.

4 Conclusion

This research examines the effect of Environmental Disclosure, Social Disclosure, Governance Disclosure, Green Accounting, and Intellectual Capital on firm value, with financial performance as a moderating variable from IDXESGL companies during the 2021–2024 period, with 40 observations from 10 firms selected through purposive sampling. This research was

conducted with data analysis techniques using Multiple Linear Regression Analysis and Moderated Regression Analysis (MRA). The results show that Environmental Disclosure, Social Disclosure, Governance Disclosure, and Green Accounting do not significantly affect firm value, indicating that these disclosures have not yet been perceived as value-relevant by the market. In contrast, Intellectual Capital has a significant positive effect on firm value, confirming the importance of knowledge-based resources in creating competitive advantage. Financial performance weakens the relationship between Environmental Disclosure and Green Accounting with firm value, does not moderate Governance Disclosure or Intellectual Capital, but strengthens the influence of Social Disclosure on firm value. Overall, these findings suggest that intellectual capital and socially oriented initiatives supported by strong financial performance contribute more to firm value than ESG disclosure or green accounting practices.

This study provides theoretical and managerial insights for IDXESGL companies by showing that Environmental, Social, and Governance Disclosures, along with Green Accounting, do not significantly affect firm value, challenging signaling theory and suggesting these disclosures may lack strategic depth or credibility (Connelly et al., 2011). From a legitimacy perspective, the findings indicate that such reporting may be symbolic rather than substantively value-creating (Burlea & Popa, 2013), while stakeholder theory is refined by the significant positive effect of Intellectual Capital, highlighting knowledge-based resources as the most credible signal for long-term value (Freeman et al., 2021). Financial performance moderates these relationships selectively, strengthening Social Disclosure but weakening Environmental Disclosure and Green Accounting, implying that sustainability impacts depend on profitability, disclosure type, and perceived credibility. Managerially, firms should enhance ESG and green accounting reporting by linking initiatives to measurable outcomes, invest in intellectual capital development, and ensure environmental and social programs demonstrate clear value, as only substantive, performance-integrated practices are likely to improve stakeholder trust and firm value.

References

Andy, C. (2023). *The Most Recent State and Future Directions of Sustainability Reporting Indonesia*. PwC Indonesia. https://www.pwc.com/id/en/media-centre/press-release/2023/english/the-most-recent-state-and-future-directions-of-sustainability-reporting-indonesia.html

Angela, T., & Sari, N. (2023). The Effect of Environmental, Social, and Governance Disclosure on Firm Value. *E3S Web of Conferences*, *426*. https://doi.org/10.1051/e3sconf/202342601078

Aptasari, F. W., Aryawati, N. P. A., & Falah, M. H. (2024). Identifikasi Greenwashing atau Greenwishing pada Perusahaan Retail di Indonesia: Evaluasi Laporan Keberlanjutan. *Jurnal Kebijakan Pembangunan*, *19*(2), 301–322. https://doi.org/10.47441/jkp.v19i2.382

Aryanti, N. P. I., & Mertha, M. (2022). Intellectual Capital, Profitabilitas, Ukuran Perusahaan Dan Nilai Perusahaan. *E-Jurnal Akuntansi*, *32*(11), 3348–3359.

Astari, T. A., Laurens, S., Wicaksono, A., & Sujarminto, A. (2023). Green Accounting and Disclosure of Sustainability Report on Firm Values in Indonesia. *E3S Web of Conferences*, *426*. https://doi.org/10.1051/e3sconf/202342602024

Aydoğmuş, M., Gülay, G., & Ergun, K. (2022). Impact of ESG Performance on Firm Value and Profitability. *Borsa Istanbul Review*, *22*, S119–S127. https://doi.org/10.1016/j.bir.2022.11.006

Basuki, A. T. (2021). *Analisis Data Panel dalam Penelitian Ekonomi dan Bisnis (Dilengkapi dengan Penggunaan EViews)*.

Burlea, A. S., & Popa, I. (2013). Legitimacy Theory. In *Encyclopedia of Corporate Social Responsibility* (pp. 1579–1584). Springer Science+Business Media. https://doi.org/10.1007/978-3-642-28036-8_471

CELIOS. (2024). *Press Release – Green Industry and the Greenwashing*. Celios.Co.Id. https://celios.co.id/press-release-green-industry-and-the-greenwashing/

Christy, E., & Sofie. (2023). Pengaruh Pengungkapan Environmental, Social, dan Governance. *Jurnal Ekonomi Trisakti*, *3*(2), 3899–3908.

Connelly, B. L., Certo, S. T., Ireland, R. D., & Reutzel, C. R. (2011). Signaling Theory: A Review and Assessment. In *Journal of Management* (Vol. 37, Issue 1, pp. 39–67). https://doi.org/10.1177/0149206310388419

Del Gesso, C., & Lodhi, R. N. (2025). Theories Underlying Environmental, Social and Governance (ESG) Disclosure: A Systematic Review of Accounting Studies. *Journal of Accounting Literature*, *47*(2), 433–461.

ESG Indonesia Capital Market. (2025). *Rise of ESG Investments*. Esg.Idx.Co.Id. https://esg.idx.co.id/rise-of-esg-investments

Freeman, R. E., Dmytriyev, S. D., & Phillips, R. A. (2021). Stakeholder Theory and the Resource-Based View of the Firm. *Journal of Management*, *47*(7), 1757–1770. https://doi.org/10.1177/0149206321993576

Hulster, K. D. (2009). The Leverage Ratio. In *The World Bank Group, Financial and Private Sector Development Vice Presidency, Note.*

Jayanti, D., Kustinah, S., Mulyandini, V. C., Winarso, E., & Nidyanti, A. (2024). Environmental, Social, Governance (ESG) Influence on Company Value Registered IDXESGL 2020-2022. *Economics World*, *11*(1), 35–41. https://doi.org/10.17265/2328-7144/2024.01.004

Kaźmierczak, M. (2022). A Literature Review on the Difference between CSR and ESG. *Scientific Papers of Silesian University of Technology. Organization and Management Series*, *2022*(162), 275–289. https://doi.org/10.29119/1641-3466.2022.162.16

Kumar, P., & Firoz, M. (2022). Does Accounting-based Financial Performance Value Environmental, Social and Governance (ESG) Disclosures? A detailed note on a corporate sustainability perspective. *Australasian Accounting, Business and Finance Journal*, *16*(1), 41–72. https://doi.org/10.1007/978-3-031-11491-5_4

Mauliddin, J. A., & Subardjo, A. (2023). Pengaruh Leverage, Profitabilitas, Environmental Social Dan Goverment (ESG) terhadap Nilai Perusahaan yang Mengungkapkan ESG pada Tahun 2022. *Jurnal Ilmu Dan Riset Akuntansi*, *13*(5), 1–21.

Nurahmad, K. P. (2025). *Perkuat Transparansi Data ESG, BEI Luncurkan ESG Reporting untuk Perusahaan Tercatat*. Indonesia Stock Exchange (IDX). https://www.idx.co.id/id/berita/siaran-pers/2306

Perihati, S. B., & Putri, I. L. A. (2023). The Effect of Business Strategy and Environmental Disclosure on Firm Value. *International Journal of Research on Financial & Business (IJRFB)*, *5*(1), 177–190. https://doi.org/10.59188/devotion.v4i7.505

Pramesti, W. C., Sudarma, M., & Ghofar, A. (2024). Environmental, Social, And Governance (ESG) Disclosure, Intellectual Capital And Firm Value: The Moderating Role Of Financial Performance. *Jurnal Reviu Akuntansi Dan Keuangan*, *14*(1), 103–121. https://doi.org/10.22219/jrak.v14i1.32849

Putri, P., Desyana, G., & Haryono. (2025). Pengaruh Peringkat Risiko ESG dan Kinerja Keberlanjutan Terhadap Nilai Perusahaan. *Jurnal Akuntansi, Ekonomi Dan Manajemen Bisnis*, *5*(2), 421–435.

Redaksi Shift Indonesia. (2025). *Tren Peningkatan ESG Report di Indonesia*. Shiftindonesia.Com. https://shiftindonesia.com/tren-peningkatan-esg-report-di-indonesia/

Rounaghi, M. M. (2019). Economic Analysis of Using Green Accounting and Environmental Accounting to Identify Environmental Costs and Sustainability Indicators. *International Journal of Ethics and Systems*, *35*(4), 504–512. https://doi.org/10.1108/IJOES-03-2019-0056

Shafira, M. H. (2025). *97 Persen Perusahaan Tercatat di BEI Telah Penuhi Laporan Keberlanjutan*. Beritasatu.Com. https://www.beritasatu.com/ekonomi/2865426/97-persen-perusahaan-tercatat-di-bei-telah-penuhi-laporan-keberlanjutan

Sinaga, P., Simanjuntak, A., Sagala, F., & Ginting, M. C. (2025). The Effect of Environmental, Social and Governance Disclosure on Firm Value in Energy Sector Companies Listed on the Indonesia Stock Exchange in the 2021-2023 Period. *Jurnal Ilmiah Accusi*, *7*(1), 113–124. https://doi.org/10.36985/94t7h561

Solimun. (2011). *Analisis Variabel Moderasi dan Mediasi*. Statistika FMIPA Universitas Brawijaya.

Sustainability Nasdaq. (2019). ESG Reporting Guide 2.0 A Support Resource for Companies. *Nasdaq Stock Exchange*, *May*, 1–34. https://www.nasdaq.com/docs/2019/11/26/2019-ESG-Reporting-Guide.pdf