

THE ROLE OF SUSTAINABILITY REPORTING IN INCREASING THE VALUE OF BANKING COMPANIES IN 2021-2024

Stefanus Putra Pradana^{1*}
Yuana Rizky Octaviani Mandagie²

^{1,2} Faculty of Economics and Business, Universitas Pancasila, Jakarta, Indonesia

*Corresponding Author: 1222210004@univpancasila.ac.id

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Abstract: This study examines the impact of Environmental, Social, and Governance (ESG)-based sustainability reporting on firm value in the Indonesian banking sector over the 2021-2024 period. The sample consists of 25 banking companies that consistently publish sustainability reports, resulting in 100 panel observations. ESG disclosure is measured using the 2021 Global Reporting Initiative (GRI) Standards, while firm value is proxied by the Price-to-Book Value (PBV) ratio. The analysis employs panel data regression using the Random Effects Model (REM), complemented by robust standard error estimation using the White cross-section method to address heteroskedasticity issues. The findings indicate that the environmental dimension has a positive and statistically significant effect on firm value, suggesting that environmental disclosure is increasingly valued by investors. In contrast, the social and governance dimensions do not exhibit a robust influence on firm value, implying that these aspects are either perceived as long-term investments or considered standard compliance practices. These results highlight that the Indonesian capital market is still in a transitional phase in incorporating ESG information into investment decisions.

Keywords: Sustainability Reporting, ESG.

Abstrak: Studi ini meneliti dampak pelaporan keberlanjutan berbasis Lingkungan, Sosial, dan Tata Kelola (ESG) terhadap nilai perusahaan di sektor perbankan Indonesia selama periode 2021-2024. Sampel terdiri dari 25 perusahaan perbankan yang secara konsisten menerbitkan laporan keberlanjutan, menghasilkan 100 observasi panel. Pengungkapan ESG diukur menggunakan Standar Global Reporting Initiative (GRI) 2021, sedangkan nilai perusahaan diwakili oleh rasio Harga terhadap Nilai Buku (PBV). Analisis menggunakan regresi data panel dengan Model Efek Acak (REM), dilengkapi dengan estimasi kesalahan standar yang kuat menggunakan metode White cross-section untuk mengatasi masalah heteroskedastisitas. Temuan menunjukkan bahwa dimensi lingkungan memiliki pengaruh positif dan signifikan secara statistik terhadap nilai perusahaan, menunjukkan bahwa pengungkapan lingkungan semakin dihargai oleh investor. Sebaliknya, dimensi sosial dan tata kelola tidak menunjukkan pengaruh yang kuat terhadap nilai perusahaan, yang menyiratkan bahwa aspek-aspek ini dianggap sebagai investasi jangka panjang atau dianggap sebagai praktik kepatuhan standar. Hasil ini menyiratkan bahwa pasar modal Indonesia masih dalam fase transisi dalam memasukkan informasi ESG ke dalam keputusan investasi.

Kata Kunci: Sustainability Reporting, ESG.

INTRODUCTION

In recent years, sustainability has become a central issue in global economic and business activities. Companies are no longer evaluated solely based on their financial performance, but also on their ability to manage environmental impacts, fulfill social responsibilities, and implement sound governance practices. This broader evaluation framework is commonly referred to as ESG, which has gained increasing attention from investors, regulators, and other stakeholders (Elkington, 1997; Friede et al., 2015). The growing awareness of sustainability issues has encouraged companies to adopt sustainability reporting as a means of disclosing non-financial information. Sustainability reporting serves as a tool to enhance transparency, accountability, and stakeholder trust by providing information on how companies address environmental, social, and governance challenges. In addition, sustainability reporting is expected to reduce information asymmetry between management and investors, thereby influencing investment decisions and potentially increasing firm value (Dhaliwal et al., 2011; KPMG, 2020).

The banking sector plays a strategic role in supporting sustainable development due to its function as a financial intermediary. Banks influence the allocation of financial resources to various sectors, which in turn may generate environmental and social impacts. Therefore, the integration of ESG principles into banking operations is essential to ensure that financial activities contribute to sustainable economic growth. In Indonesia, this effort is reinforced by Financial Services Authority Regulation No. 51/POJK.03/2017, which requires financial institutions to implement sustainable finance and publish sustainability reports (Otoritas Jasa Keuangan, 2017).

The implementation of green banking and green financing practices becomes increasingly important in achieving sustainable development. Green banking reflects the integration of environmental considerations into banking operations, while green financing emphasizes the allocation of funds toward environmentally sustainable projects. These practices are considered strategic instruments in supporting the achievement of Sustainable Development Goals (SDGs), as they enable financial institutions to contribute directly to environmental sustainability and long-term economic development (Mandagie et al., 2024).

Despite the increasing commitment to sustainable finance, the banking sector continues to face significant ESG-related challenges. Banks are increasingly exposed to climate-related financial risks, transition risks arising from the shift toward a low-carbon economy, and growing stakeholder expectations regarding transparency and responsible lending practices. Furthermore, sustainability reporting in the banking industry still faces challenges related to disclosure quality, comparability, standardization, and the integration of ESG information into strategic decision-making processes (Sebastião et al., 2024). In the Indonesian context, although sustainability reporting has become mandatory following the implementation of POJK No. 51/POJK.03/2017, variations in reporting practices and ESG implementation remain evident across banking institutions. Recent evidence from

Islamic commercial banks in Indonesia also indicates that sustainability reporting has not consistently translated into higher firm value, suggesting that investors may respond differently to ESG-related disclosures depending on the quality and credibility of the information provided (La Ane & Fitriah, 2025). Moreover, ESG considerations are increasingly incorporated into banking activities, including credit assessment and lending decisions, as demonstrated in the case of Bank Negara Indonesia (BNI), where ESG factors have become an important component in evaluating long-term borrower sustainability and risk exposure (Steelyana et al., 2026). These developments indicate that while ESG implementation is becoming more prominent in the banking sector, there remains uncertainty regarding whether ESG disclosures effectively contribute to firm value creation. This issue highlights an important research gap, particularly concerning the extent to which each ESG dimension—Environmental, Social, and Governance—individually influences the market valuation of banking firms in Indonesia.

Despite the growing implementation of sustainability reporting and ESG practices, empirical evidence regarding their effect on firm value remains varied. A number of studies have found that ESG disclosure is able to increase firm value by enhancing corporate image, building stakeholder trust, and improving long-term risk management, as reported by Rahmawati & Gunawan (2021), Sari & Mahardika (2021), Putri & Yuliani (2022), and Wulandari (2023). In contrast, other research, such as Atan et al. (2018), shows that ESG disclosure does not necessarily lead to a significant impact, particularly in developing countries where sustainability initiatives are still in an early stage and are often treated as regulatory compliance rather than strategic priorities. These differing findings indicate that the role of ESG disclosure in influencing firm value is likely contingent upon the level of implementation maturity and the extent to which investors consider non-financial information.

Such inconsistencies point to an existing research gap, especially within the banking industry, where empirical studies linking ESG-based sustainability reporting directly to firm value are still limited. Previous findings also suggest that certain firm characteristics, including company size, may moderate this relationship (Kusumastuti, 2022). In addition, other scholars argue that the effectiveness of ESG practices is determined more by the substance and quality of their implementation rather than symbolic reporting alone (Clarkson et al., 2024; Hakim & Hidayat, 2023). Furthermore, limited attention has been given to examining the individual influence of each ESG dimension—Environmental, Social, and Governance—on firm value after the enactment of POJK No. 51/2017 in Indonesia. Building on these considerations, sustainability has increasingly become a fundamental aspect of modern business practices, shifting the evaluation of corporate performance beyond traditional financial indicators toward ESG dimensions. ESG disclosure is now viewed as a critical mechanism for improving transparency and reducing information gaps between firms and investors. In the banking sector, this issue is particularly important given its influence on capital allocation across industries. Although regulatory support in Indonesia has strengthened the implementation of sustainability reporting, empirical evidence regarding its impact on firm value remains inconclusive, with findings

that vary across different contexts. Therefore, this study aims to investigate the impact of ESG-based sustainability reporting on the value of banking firms listed on the Indonesia Stock Exchange during the 2021–2024 period.

LITERATURE REVIEW

1. Sustainability Reporting and ESG

Sustainability reporting refers to the disclosure of non-financial information related to a company's environmental, social, and governance (ESG) performance. This reporting practice has become increasingly important as stakeholders demand greater transparency and accountability in corporate activities. ESG disclosure provides relevant information regarding how companies manage risks, opportunities, and long-term sustainability issues (KPMG, 2020). Sustainability reporting is also related to the *Triple Bottom Line* concept, which emphasizes a balance between economic, social, and environmental performance (Elkington, 1997). In the banking sector, ESG disclosure serves not only as a form of compliance but also as an effort to build trust among investors and the public. Companies that consistently present high-quality sustainability reports are more likely to be perceived as having a strong commitment to sustainability, which can ultimately enhance firm value.

2. Legitimacy Theory

Legitimacy theory explains that companies seek to align their operations with societal values and expectations in order to gain legitimacy. Sustainability reporting is one of the main tools used by companies to communicate their compliance with environmental and social norms. In the banking industry, ESG disclosure through sustainability reporting can strengthen the company's image as a responsible institution. When a company gains social acceptance, stakeholder trust tends to increase. This condition can encourage positive investor responses and potentially improve firm value.

3. Signaling Theory

Signaling theory suggests that companies provide information to reduce information asymmetry between management and investors (Spence, 1973). ESG disclosure can serve as a signal of a company's quality, risk management capability, and long-term orientation. Companies with higher levels of ESG disclosure are generally perceived as more stable and less risky. This perception can increase investor confidence in the company. However, the effectiveness of this signal largely depends on the quality and credibility of the information disclosed, meaning that purely symbolic reporting without real implementation is less likely to have a significant impact on firm value.

4. Stakeholder Theory

Stakeholder theory emphasizes that companies are accountable not only to shareholders but also to a wider group of stakeholders, including customers, employees, regulators, and society (Freeman, 1984). Sustainability reporting serves as a medium to meet stakeholders' information needs regarding the company's social and environmental activities. In the banking sector, trust is a key factor in

maintaining long-term relationships. By providing transparent ESG disclosure, companies can enhance their reputation, strengthen stakeholder trust, and ultimately increase firm value.

Sustainability reporting, which includes Environmental, Social, and Governance (ESG) aspects, is increasingly considered a strategic element in enhancing firm value, especially in the banking industry where public trust is essential. According to Legitimacy Theory introduced by Mark Suchman (1995), companies attempt to obtain social approval by providing information that aligns with societal norms and expectations. In the context of banking, ESG disclosure through sustainability reports can be used to strengthen corporate legitimacy, improve transparency, and develop a sustainable reputation over time. As a company gains greater social acceptance, investors tend to perceive it as more stable and sustainable, which ultimately contributes to higher firm value.

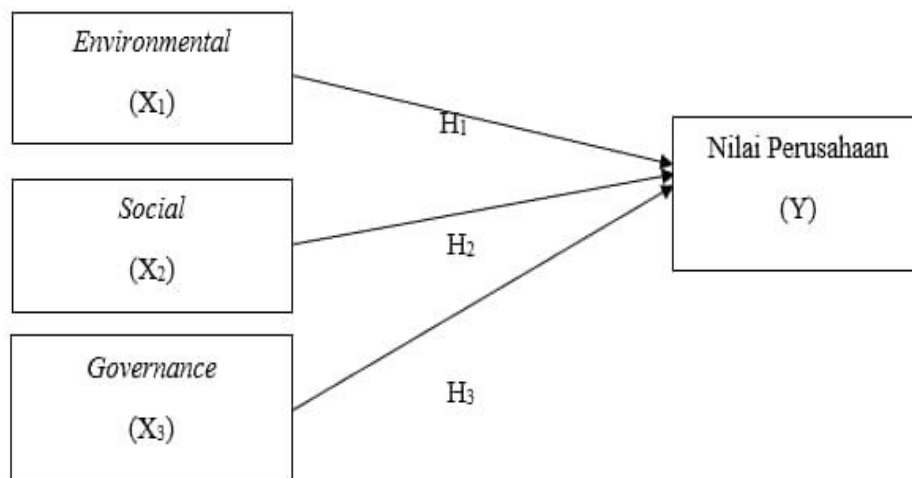


Figure 1. Framework of Thought

The hypotheses in this study are developed based on the proposed research framework and are presented as follows:

H₁: The environmental dimension of sustainability reporting has a positive effect on firm value.

The environmental aspect represents how effectively a bank manages environmental risks, including the implementation of sustainable financing policies and the control of operational impacts. According to Signaling Theory proposed by Michael Spence (1973), the disclosure of environmental information sends a positive signal to the market regarding the company's capability in managing long-term risks. As a result, investors are more likely to perceive firms that demonstrate strong environmental commitment as more stable and having lower levels of risk.

H₂: The social dimension of sustainability reporting has a positive effect on firm value.

According to the Triple Bottom Line concept proposed by John Elkington (1997), the social or "People" dimension plays an essential role in generating long-term value. Firms that maintain strong relationships with stakeholders generally achieve a better reputation and higher stakeholder loyalty. Empirical evidence, such as studies conducted by Haryono et al. (2021) and Rodrigues et al. (2023), indicates that consistent disclosure of social activities can enhance investor trust and support the long-term stability of a company.

H₃: The governance dimension of sustainability reporting has a positive effect on firm value.

The implementation of Good Corporate Governance (GCG) principles, including transparency, accountability, and fairness, is essential in banking operations. The disclosure of governance-related information in sustainability reports reflects a bank's commitment to ethical practices, which can enhance investor trust and contribute to higher firm value. This perspective is consistent with Stakeholder Theory introduced by R. Edward Freeman (1984), which emphasizes that effective governance strengthens relationships with stakeholders and ultimately improves company value.

RESEARCH METHODOLOGY

Research Design and Type

This study adopts a quantitative approach with a causal (associative) design to analyze the effect of Environmental, Social, and Governance (ESG) variables on firm value. The research is classified as non-experimental (ex post facto) since it utilizes secondary data without any manipulation of variables. In addition, the study applies a panel data approach, combining time series data from 2021 to 2024 with cross-sectional data from banking companies. The analysis is conducted using panel data regression with the assistance of EViews software. This method is consistent with the view of Hair et al. (2010), which explains that regression analysis in quantitative research is used to empirically and objectively examine causal relationships between variables.

Samples and Sampling Techniques

The sample of this study consists of 25 banking companies listed on the IDX during the 2021–2024 period. These companies consistently publish annual report and sustainability reporting that include Environmental, Social, and Governance (ESG). The sampling method used is purposive sampling, where samples are selected based on specific criteria in accordance with the research objectives. This approach follows Hair et al. (2010), who state that in quantitative research, selecting samples based on predetermined criteria is important to ensure the relevance and adequacy of data for multivariate regression analysis. The sample selection process is presented in the following table:

Table 1. Sample Selection Criteria

No	Criteria	Number of Companies
1	The company has been listed on the IDX since 2021 and is still valid until now.	46
2	Non-Conventional Banking Companies	(3)
3	Banking companies that do not publish sustainability reports	(2)
4	Banking Companies that do not use GRI 2021	(16)
Number of Samples		25
Year Period		4
Number of Observation Data		100

Source: Processed by the researcher (2026).

Data collection technique

This study utilizes secondary data derived from audited annual financial statements and sustainability reports of banking companies for the 2021–2024 period. The data were collected from the official website of the Indonesia Stock Exchange (IDX) as well as the official websites of each bank included in the sample. The use of secondary data in this research is consistent with Hair et al. (2010), who argue that data obtained from official corporate reports and capital market institutions are appropriate for regression analysis due to their high reliability and objectivity for empirical testing.

Data Analysis Techniques

The data were analyzed using panel data regression. Model selection was conducted through the Chow test, Hausman test, and Lagrange Multiplier test to determine whether the common effect, fixed effect, or random effect model was the most appropriate. Hypothesis testing was then carried out using the t-test, F-test, and coefficient of determination, supported by classical assumption testing to evaluate model adequacy.

RESULT AND DISCUSSION

Descriptive Statistical Analysis

Table 2. Descriptive Statistics of Variables

	X1	X2	X3	Y
Mean	31.17358	0.055260	0.257580	13603.74
Median	0.641500	0.044500	0.184500	10404.50
Maximum	1026.010	0.66000	0.553000	51534.00
Minimum	0.139000	-0.854000	0.026000	27.00000
Std. Dev	154.7781	0.180981	0.160354	12343.54
Skewness	5.770286	-1.844355	0.499743	0.857404
Kuartosis	36.29290	16.23619	1.737523	3.146369
Jarque-Bena	2586.671	393.3402	5.401710	6.170817
Probability	0.000000	0.000000	0.067148	0.045711
Sum	1558.679	2.763000	12.87900	680187.0
Sum Sq. Dev.	1173857.	1.604956	1.259962	7.47E+09
Observations	100	100	100	100

Source: Processed by the researcher (2026).

Based on the descriptive statistical analysis presented in Table 1, the Environmental variable (X1) has a mean value of 31.17358, a median of 0.641500, and a standard deviation of 154.7781. This indicates a very high level of variability and suggests the presence of extreme values within the data. The Jarque-Bera probability of 0.000000 (<0.05) further confirms that the data is not normally distributed. The Social variable (X2) records a mean of 0.055260 and a median of 0.044500, with a standard deviation of 0.180981. These results show that the data distribution is relatively more stable compared to X1; however, the Jarque-Bera probability of 0.000000 (<0.05) indicates that it also does not follow a normal distribution. For the Governance variable (X3), the mean is 0.257580 and the median is 0.184500, accompanied by a standard deviation of 0.160354. This reflects a low to moderate

level of variation. In addition, the Jarque-Bera probability of 0.067148 (>0.05) suggests that the data is normally distributed. Meanwhile, the Firm Value variable shows a mean of 13,603.74 and a median of 10,404.50, with a standard deviation of 12,343.54. This indicates considerable variation among the samples, with a tendency for the distribution to be slightly right-skewed due to the substantial gap between the maximum and minimum values.

Panel Data Regression Model Selection

Table 3. Panel Data Model Selection (Chow Test)

Redundant Fixed Effects Tests

Equation: Untitled

Test cross-section fixed effects

Effects Test	Statistic	d.f.	Prob.
Cross-section F	15.898462	(9,37)	0.0000
Cross-section Chi-square	79.125875	9	0.0000

$0.0000 < 0.05$ diambil dr chi square

Source: Processed by the researcher (2026).

Based on the Chow Test results presented in the Redundant Fixed Effects Tests table, this test is applied to identify the most suitable panel data regression model between the Common Effect Model (CEM) and the Fixed Effect Model (FEM). In principle, the Chow Test evaluates whether the fixed effect model provides a better fit than the common effect model. The results show that the Cross-section F statistic is 15.898462 with a probability value of 0.0000, while the Cross-section Chi-square statistic is 79.125875 with a probability of 0.0000. The decision is primarily based on the Chi-square probability value, which is 0.0000 and is lower than the significance level of $\alpha = 0.05$ ($0.0000 < 0.05$). Therefore, the FEM is considered more appropriate for this study.

Hausman test (Uji Hausman)

Table 4. Hausman Test Results

Correlated Random Effects – Hausman Test

Equation: Untitled

Test cross-section random effects

Test Summary	Chi-Sq. Statistic	Chi-Sq d.f.	Prob.
Cross-section random	1.739553	3	0.6282

Source: Processed by the researcher (2026).

The Hausman test is used in panel data analysis to determine whether the Fixed Effect Model (FEM) or the Random Effect Model (REM) is more appropriate. This test evaluates the relationship between individual-specific effects and the independent variables included in the model. Based on the results presented in the Correlated Random Effects – Hausman Test table, the Chi-square value is 1.739553 with a probability of 0.6282. As this probability is higher than the 0.05 significance level, the null hypothesis cannot be rejected, indicating that the Random Effect Model is more suitable than the Fixed Effect Model. This implies that the individual characteristics of the banking firms are random and do not systematically correlate with the explanatory variables. In addition, the Lagrange Multiplier

(LM) test produces a Breusch-Pagan probability of 0.0000, which is below 0.05, suggesting that the Random Effect Model is preferred over the Common Effect Model due to the existence of cross-sectional effects. Therefore, the Random Effect Model is considered the most appropriate approach for examining the influence of ESG variables on firm value in banking companies over the 2021–2024 period.

Test LM (*Random Effect Model*)

Table 5. Lagrange Multiplier (LM) Test

Lagrange Multiplier Tests for Random Effects

Null hypotheses: Two-sided (Breusch-Pagan) and one-sided (all others) alternatives

	Test Hypothesis		
	Cross-section	Time	Both
Breusch-Pagan	49.48054 (0.0000)	2.478557 (0.1154)	51.95910 (0.0000)
Honda	7.034241 (0.0000)	-1.574343 (0.9423)	3.860730 (0.0001)
King-Wu	8.204371 (0.0000)	-1.574343 (0.9423)	2.591962 (0.0048)
Standardized Honda	8.204371 (0.0000)	-1.404682 (0.9199)	1.690116 (0.0455)
Standardized King-Wu	8.204371 (0.0000)	-1.404682 (0.9199)	0.363551 (0.3581)
Gourieroux, et al	-	-	49.48054 (0.0000)

Source: Processed by the researcher (2026).

The Lagrange Multiplier (LM) test is applied in panel data regression to identify the most suitable model between the Common Effect Model (CEM) and the Random Effect Model (REM). Specifically, this test evaluates whether the Random Effect Model provides a better fit than the Common Effect Model.

Based on the results presented in the Lagrange Multiplier Tests for Random Effects table, the Breusch-Pagan probability value for the cross-section is 0.0000. Since this value is lower than the significance level of 0.05 ($0.0000 < 0.05$), the null hypothesis (H_0) is rejected, while the alternative hypothesis (H_1) is accepted. This indicates that the REM is more appropriate than the CEM.

Selected Regression Model Results

Random Effects Regression Model

Table 6. Random Effect Regression Results

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	12491.31	5251.590	2.378577	0.0216
X1	11.46658	6.502381	1.763444	0.0845
X2	4958.682	5707.418	0.868814	0.3895
X3	4642.711	14222.01	0.326445	0.7456

Source: Processed by the researcher (2026).

Based on the estimation results using REM, the regression output shows that the constant has a value of 12,491.31 with a probability of 0.0216, indicating that it is statistically significant. The environmental variable (X_1) has a positive coefficient of 11.4666 with a probability of 0.0845, which means it is significant at the 10% level. This suggests that an increase in environmental disclosure tends to be followed by an increase in firm value, although the effect is not very strong.

Meanwhile, the social variable (X_2) has a coefficient of 4,958.68 with a probability of 0.3895, and the governance variable (X_3) has a coefficient of 4,642.71 with a probability of 0.7456. Both variables are not statistically significant, indicating that changes in these variables do not have a meaningful impact on firm value. Overall, the results show that only the environmental aspect plays a role in influencing firm value in this model, while the social and governance aspects have not yet shown a significant contribution.

Based on the estimation results using the Panel EGLS method with a Random Effects Model (REM) approach, along with robust standard error testing (White cross-section), the results are presented as follows:

$$PBV = 12491.31 + 11.46658ENV + 4958.682SOC + 4642.711GOV + \epsilon$$

Classical Assumption Test

Normality Test

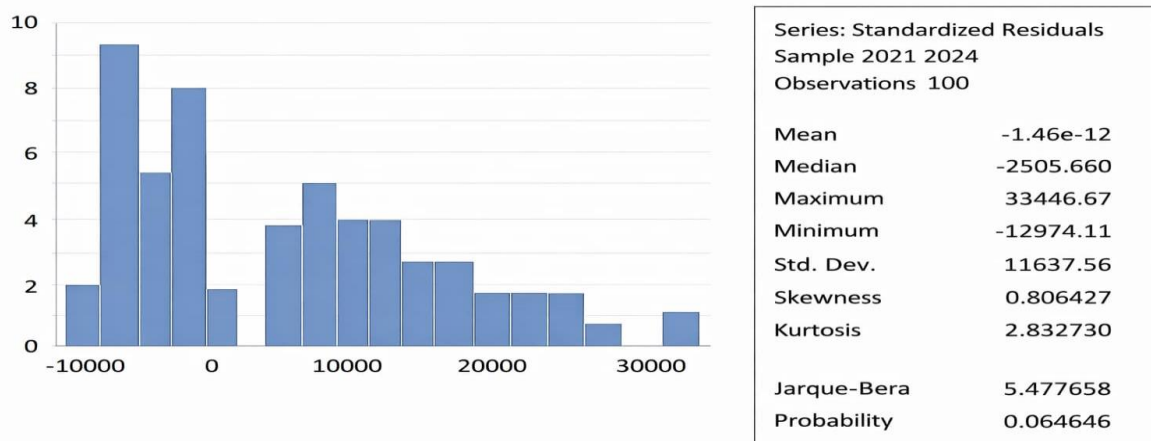


Figure 2. Normality Test

Based on the normality test results shown in the figure using the Jarque-Bera approach, the total number of observations is 100. The Jarque-Bera statistic is 5.477658 with a probability value of 0.064646. In determining normality, the decision rule states that if the probability value (p-value) exceeds 0.05, the residuals are considered normally distributed, whereas a value below 0.05 indicates non-normality. Since the obtained probability value of 0.064646 is greater than 0.05, it can be concluded that the residuals in the regression model follow a normal distribution. Therefore, the normality assumption has been satisfied.

Furthermore, the skewness value of 0.806427 suggests that the data is slightly positively skewed, meaning it tends to be distributed to the right. The kurtosis value of 2.832730, which is close to 3, indicates that the distribution of residuals approximates a normal (mesokurtic) distribution.

Multicollinearity Test

Table 7. Multicollinearity Test

	X1	X2	X3
X1	1.000000	-0.043553	-0.242930
X2	-0.043553	1.000000	0.389386
X3	-0.242930	0.389386	1.000000

Source: Processed by the researcher (2026).

Multicollinearity can be assessed by analyzing the correlation coefficients among independent variables through a correlation matrix. Based on the results of the correlation matrix for variables X_1 , X_2 , and X_3 , the correlation values are as follows: the relationship between X_1 and X_2 is -0.043553, between X_1 and X_3 is -0.242930, and between X_2 and X_3 is 0.389386.

Referring to the criteria for multicollinearity testing, if the correlation coefficient among independent variables is below 0.90, it indicates that multicollinearity is not present in the model. Since all correlation values are well below this threshold, it can be concluded that the regression model is free from multicollinearity issues.

Heteroscedasticity Test

Table 8. Heteroscedasticity Test

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	12491.31	5251.590	2.378577	0.0234
X1	11.46658	6.502381	1.763444	0.0245
X2	4958.682	5707.418	0.868814	0.0367
X3	4642.711	14222.01	0.326445	0.0032

Source: Processed by the researcher (2026).

The results of the heteroscedasticity test indicate that all independent variables have probability values below the 0.05 significance level, namely X_1 (0.0245), X_2 (0.0367), and X_3 (0.0032). This suggests that the regression model experiences heteroscedasticity, meaning that the variance of the residuals is not constant across observations. In other words, the model does not satisfy the homoscedasticity assumption, which may affect the reliability and efficiency of the estimated coefficients, so further treatment or correction may be required.

Robust Standard Error (White cross-section)

Table 9. Robust Standard Error (White cross-section)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	12491.31	5251.590	2.378577	0.0234
X1	11.46658	6.502381	1.763444	0.0245
X2	4958.682	5707.418	0.868814	0.0367
X3	4642.711	14222.01	0.326445	0.0032

Weighted Statistics

R-squared	0.730456	Mean dependent var	0.918577
Adjusted R-squared	0.675468	S.D. dependent var	2.333091
S.E of regression	5848.960	Sum squared resid	1.2709
F-statistic	15.10266		
Prob(F-statistic)	0.000000		

Source: Processed by the researcher (2026).

This study applies robust standard errors using the White cross-section approach to address heteroscedasticity. Although the estimated regression coefficients remain unchanged, this adjustment affects the standard errors and, consequently, the significance levels of the variables. After applying the correction, the results indicate that only the environmental (ENV) variable remains statistically significant, while the social (SOC) and governance (GOV) variables are not significant. This suggests that the primary influence on firm value in this model is driven by the environmental dimension, whereas the social and governance dimensions do not exhibit a meaningful impact. Moreover, the robustness test confirms that the model is jointly significant, as reflected by the Prob(F-statistic) value of 0.000000. The adjusted R-squared value of 0.675468 indicates that the ESG variables explain a substantial portion of the variation in firm value. The robust estimation is employed to ensure the consistency of the results in the presence of heteroscedasticity. However, the primary interpretation of this study is based on the baseline Random Effects Model (REM), while the robust results serve as a supporting analysis.

Hypothesis Testing**t test (Uji t)****Table 10.** t test

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	12491.31	5251.590	2.378577	0.0216
X1	11.46658	6.502381	1.763444	0.0845
X2	4958.682	5707.418	0.868814	0.3895
X3	4642.711	14222.01	0.326445	0.7456

Source: Processed by the researcher (2026).

The t-test results indicate that the environmental variable (X_1) has a probability value of 0.0845, which is below the 0.10 significance level. This implies that the environmental dimension has a statistically significant effect on firm value. On the other hand, the social variable (X_2) and governance variable (X_3) have probability values of 0.3895 and 0.7456, respectively, both of which exceed the 0.10 significance threshold. This suggests that these two variables do not have a statistically significant influence on firm value. Therefore, it can be concluded that only the environmental variable shows a significant effect, while the social and governance variables do not. Accordingly, H1 is accepted, whereas H2 and H3 are rejected.

F test (Uji F)**Table 11.** F test

R-squared	0.730456	0.730456
Adjusted R-squared	0.675468	0.675468
S.E. of regression	5848.960	5848.960
Sum squared resid	1.27E+09	1.27E+09
Log likelihood	-497.1203	-497.1203
F-statistic	15.10266	15.10266
Prob(F-statistic)	0.000000	0.134543

Source: Processed by the researcher (2026).

Based on the results in the table above, it is obtained: F-statistic = 15.10266, Prob(F-statistic) = 0.000000. The Prob(F-statistic) value of 0.000000 is smaller than 0.10. This indicates that simultaneously the independent variables in the model have a significant effect on the dependent variable. Thus, the regression model used in this study is declared suitable for use in the analysis because it is able to explain the relationship between variables together.

Determination Test**Table 12.** Determination Test

R-squared	0.730456
Adjusted R-squared	0.675468
S.E. of regression	5848.960
Sum squared resid	1.27E+09
Log likelihood	-497.1203
F-statistic	15.10266
Prob(F-statistic)	0.134543

Source: Processed by the researcher (2026).

Based on the results shown in the output, the Adjusted R-squared value is 0.675468. This figure indicates that the independent variables included in the model are able to account for 67.54% of the variation in the dependent variable. In other words, variables X_1 , X_2 , and X_3 collectively explain a substantial portion of the changes in firm value. The remaining 32.46% is influenced by other factors that are not included in this study. These findings suggest that the explanatory power of the independent variables in the model is relatively strong in describing the dependent variable.

DISCUSSION**Environmental Dimension and Firm Value**

The results indicate that the environmental dimension has a positive and statistically significant effect on firm value at the 10% significance level. This finding suggests that environmental disclosure has begun to attract investor attention in the Indonesian banking sector. Consistent with Signaling Theory (Spence, 1973), environmental disclosure serves as a positive signal regarding a bank's commitment to sustainability, climate-risk management, and long-term business resilience. By providing information on environmental initiatives and sustainable financing activities, banks reduce

information asymmetry and enhance investor confidence regarding future performance. This finding also supports Legitimacy Theory (Suchman, 1995), which argues that companies seek social acceptance by aligning their operations with stakeholder expectations. As environmental issues become increasingly important in the financial industry, banks that demonstrate stronger environmental commitments through sustainability reporting are more likely to gain legitimacy and strengthen their reputation. From a practical perspective, the result indicates that investors have started to recognize the importance of environmental performance, although ESG considerations have not yet been fully integrated into investment decision-making in the Indonesian capital market.

Social Dimension and Firm Value

The findings reveal that the social dimension does not have a significant effect on firm value. Although Stakeholder Theory (Freeman, 1984) emphasizes the importance of maintaining strong relationships with employees, customers, communities, and other stakeholders, the benefits of social initiatives are generally realized over a longer period. Consequently, disclosures related to employee welfare, community development, and social responsibility may not immediately influence investor assessments of firm value. Another possible explanation is that investors in the Indonesian banking sector continue to prioritize financial performance and environmental risk management over social disclosures. From the perspective of Signaling Theory, social disclosures may not provide a strong differentiating signal because similar social programs are commonly reported across banks. Therefore, social information may be perceived as a standard business practice rather than a factor that creates additional value for shareholders.

Governance towards Firm Value

The governance dimension was found to have no significant effect on firm value. This result suggests that governance disclosure alone is insufficient to influence investor perception in the banking industry. According to Legitimacy Theory, governance practices such as transparency, accountability, and risk management are necessary to maintain organizational legitimacy. However, because governance requirements are already highly regulated in the banking sector, investors may regard governance compliance as a basic expectation rather than a source of competitive advantage. From the perspective of Signaling Theory, governance disclosures may have limited signaling value when most banks report relatively similar governance practices. As a result, additional governance information may not provide substantial new insights for investors. Practically, this finding indicates that banks should focus not only on governance disclosure but also on ensuring that governance mechanisms effectively improve organizational performance, risk management, and long-term value creation.

CONCLUSION AND SUGGESTIONS

This study examines the impact of ESG-based sustainability reporting on the firm value of banking companies in Indonesia during the 2021–2024 period. The sample consists of 25 banks that consistently publish sustainability reports, with ESG disclosure measured using the 2021 GRI Standards and firm

value proxied by the Price to Book Value (PBV) ratio. The analysis employs panel data regression, with model selection based on the Chow test, Hausman test, and Lagrange Multiplier test. The findings indicate that the environmental dimension has a positive and statistically significant effect on firm value at the 10% level, suggesting that investors have started to consider environmental information in their evaluations, although its influence is not yet strong. This result is in line with prior studies highlighting that ESG disclosure can enhance firm value through improved transparency and stakeholder trust (Dhaliwal et al., 2011; Friede et al., 2015).

On the other hand, the social and governance dimensions do not show a significant effect on firm value. This suggests that these aspects are not yet viewed as primary factors by investors, possibly because their benefits tend to be long-term and less directly reflected in market performance, or because governance practices are already perceived as standard requirements (Orazalin & Mahmood, 2021; Velte, 2017). The relatively weak level of significance in the environmental dimension also indicates that ESG implementation in the Indonesian banking sector is still developing, with variations in the quality and consistency of disclosure across firms. Overall, these findings imply that while ESG-based sustainability reporting has the potential to enhance firm value, its role in investment decision-making has not yet been fully optimized (KPMG, 2020; Nuryana et al., 2024).

Suggestion

The following suggestions are given to several related parties, such as:

Regulators

Regulators are expected to continue strengthening policies related to sustainability reporting in the banking sector. This can be done by providing clearer and more applicable guidelines so that ESG disclosures become more consistent across companies. With better regulation, sustainability reports can be more useful for investors in assessing firm performance and long-term prospects (KPMG, 2020; World Economic Forum, 2020).

Bank Indonesia (BI)

Bank Indonesia can support the development of sustainable finance by encouraging banks to increase financing in environmentally friendly sectors. In addition, integrating ESG considerations into policy frameworks may help banks better manage long-term risks, especially those related to environmental and social issues (Otoritas Jasa Keuangan, 2017; Nuryana et al., 2024).

OJK

Otoritas Jasa Keuangan is expected to enhance supervision of sustainability reporting practices among banking institutions. This includes ensuring that ESG disclosures are presented clearly, consistently, and not only as a formality. Improving reporting standards may also help increase the credibility of the information disclosed (Otoritas Jasa Keuangan, 2017; KPMG, 2020).

Banking Management

Banking management should start placing more attention on the actual implementation of ESG, not just the reporting aspect. Sustainability reporting needs to reflect real practices within the company. Improving the quality of environmental disclosure, in particular, can help strengthen investor confidence. In addition, banks are encouraged to develop sustainable products and strategies that support long-term business growth (Eccles et al., 2014; Friede et al., 2015).

REFERENCES

- Atan, R., Alam, M. M., Said, J., & Zamri, M. (2018). The impacts of ESG factors on firm performance. *Management of Environmental Quality*, 29(2), 182–194.
- Aluchna, M., & Kuszewski, T. (2022). ESG scores and firm value: Evidence from the U.S. banking sector. *Journal of Sustainable Finance & Investment*, 12(4), 1102–1121.
- Baraibar-Diez, E., & Sotorrío, L. L. (2018). Opaque sustainability disclosure and financial performance: The mediating role of transparency. *Business Strategy and the Environment*, 27(7), 1098–1110. <https://doi.org/10.1002/bse.2053>
- Clark, G. L., Feiner, A., & Viehs, M. (2015). From the stockholder to the stakeholder: How sustainability can drive financial outperformance. University of Oxford & Arabesque Partners.
- Dhaliwal, D. S., Li, O. Z., Tsang, A., & Yang, Y. G. (2011). Voluntary nonfinancial disclosure. *The Accounting Review*, 86(1), 59–100.
- Elkington, J. (1997). *Cannibals with forks: The triple bottom line of 21st century business*. Capstone.
- Eccles, R. G., Ioannou, I., & Serafeim, G. (2014). The impact of corporate sustainability on organizational processes and performance. *Management Science*, 60(11), 2835–2857. <https://doi.org/10.1287/mnsc.2014.1984>
- Friede, G., Busch, T., & Bassen, A. (2015). ESG and financial performance: Aggregated evidence. *Journal of Sustainable Finance & Investment*, 5(4), 210–233.
- Fatemi, A., Glaum, M., & Kaiser, S. (2018). ESG performance and firm value. *Global Finance Journal*, 38, 45–64.
- Global Reporting Initiative. (2021). *GRI sustainability reporting standards*. Global Reporting Initiative.
- Haryono, S., Iskandar, D., & Paminto, A. (2021). Sustainability reporting and firm value: Evidence from Indonesia. *Journal of Asian Finance, Economics and Business*, 8(3), 231–240. <https://doi.org/10.13106/jafeb.2021.vol8.no3.0231>
- KPMG. (2020). *The time has come: The KPMG Survey of Sustainability Reporting*.
- Khan, M., Serafeim, G., & Yoon, A. (2022). Corporate sustainability: First evidence on materiality. *The Accounting Review*, 97(1), 169–204. <https://doi.org/10.2308/TAR-2019-0504>
- Kurniawati, L., & Wulandari, S. (2022). Pengaruh sustainability reporting terhadap nilai perusahaan. *Jurnal Akuntansi dan Keuangan Indonesia*, 19(2), 145–160.
- Mahardhika, P. A., & Gunawan, J. (2022). Sustainability reporting and firm performance: Evidence from Indonesian companies. *Social Responsibility Journal*, 18(4), 800–815. <https://doi.org/10.1108/SRJ-03-2021-0105>
- Mandagie, Y. R. O., et al. (2024). *SDGs Review*, 5, e02775.
- Nuryana, I., Nugroho, L., & Utami, W. (2024). ESG performance and firm value: Evidence from ASEAN banking sector. *Journal of Sustainable Finance & Investment*. <https://doi.org/10.1080/20430795.2023.2298746>
- Organisation for Economic Co-operation and Development. (2023). *OECD principles of corporate governance*. OECD Publishing. <https://doi.org/10.1787/ed750b30-en>
- Orazalin, N., & Mahmood, M. (2021). Corporate governance, sustainability disclosure, and firm value: Evidence from emerging markets. *Corporate Governance: The International Journal of Business in Society*, 21(6), 1043–1060. <https://doi.org/10.1108/CG-01-2021-0017>
- Otoritas Jasa Keuangan. (2017). *Peraturan Otoritas Jasa Keuangan Nomor 51/POJK.03/2017 tentang penerapan keuangan berkelanjutan bagi lembaga jasa keuangan, emiten, dan perusahaan publik*. OJK.

- Rodrigues, L. L., Tejado-Romero, F., & Craig, R. (2021). Corporate governance and intellectual capital reporting in a developing economy. *Journal of Accounting in Emerging Economies*, 11(1), 55–80. <https://doi.org/10.1108/JAEE-03-2020-0064>
- Velte, P. (2017). Does ESG performance influence firm value? *Journal of Global Responsibility*, 8(2), 169–178.
- World Economic Forum. (2020). Measuring stakeholder capitalism: Towards common metrics and consistent reporting of sustainable value creation. World Economic Forum.
- Sebastião, A. M., Tavares, M. C., & Azevedo, G. (2024). Evolution and challenges of sustainability reporting in the banking sector: a systematic literature review. *Administrative Sciences*, 14(12), 333.
- La Ane, S. M., & Fitriah, R. R. A. (2025). The Influence of Sustainability Reporting, Profitability, and Financial Performance on Company Value: A Study of Islamic Commercial Banks in Indonesia 2022-2024. In *International Collaboration Conference on Islamic Economics* (Vol. 3, No. 01, pp. 32-44).
- Steelyana, E., Christy, A., Abhinaiya, A. M., Ramadhanti, K. A., Saskia, A. P., Widyaningrum, W., & Safina, A. N. (2026). The Role of ESG in Credit Decision-Making: A Case Study of Bank Negara Indonesia (BNI) Based on Sustainability Reports 2021–2024. *The Eastasouth Management and Business*, 4(02), 454-460.