The Influence of ESG Disclosure And Board Size on The Financial Performance of Public Manufacturing

Indri Suliestiyowati SW[1]

[1] Universitas Trisakti, Jakarta, Indonesia

indrisulies.sw@gmail.com

Keywords:

ESG, Financial Performance, Public Manufacturing, Board Size

Abstract

This study aims to explore the relationship between ESG and Board Size with the financial performance of public companies. And focuses on analyzing whether public companies better financial performance in terms of profitability. Research Methods Companies listed on the Indonesia Stock Exchange (IDX) that have annual reports and insulin recommendations that can be accessed. The number of samples taken will be adjusted to the availability of data that meets the criteria above. It is estimated that around 15 to 35 companies were active during the study period. The results of data analysis examining the influence of Environmental, Social, and Governance (ESG) disclosure and Board Size on corporate financial performance, using multiple linear regression analysis with SPSS software. The analysis begins with descriptive statistics to illustrate the distribution of all three variables across 175 samples. Classical assumption tests—including normality, heteroscedasticity, and multicollinearity tests—were conducted to ensure the reliability of the regression model, with results indicating no violations of these assumptions. The regression results reveal that ESG disclosure has a significant negative effect on financial performance, while Board Size has a significant positive effect. These findings are supported by partial t-tests and simultaneous F-tests, both of which yielded statistically significant results at a 95% confidence level. The coefficient of determination (R^2) was found to be 30.5%, indicating that the independent variables explain 30.5% of the variation in financial performance, with the remainder influenced by other factors not included in the model. These findings provide valuable insights for managerial decision-making and corporate policy development that consider ESG aspects and board governance.

INTRODUCTION

In recent years, global awareness of sustainability has strengthened, encouraging companies to focus not only on financial aspects, but also on environmental, social, and governance (ESG) impacts. This phenomenon is driven by the increasing attention of investors, regulators, and the public to the role of companies in creating sustainable long-term value. ESG disclosure, or disclosure of a company's ESG performance, is one of the main indicators in assessing corporate commitment and responsibility to sustainability. Globally, the trend of shifting ESG regulations from voluntary to mandatory has created additional pressure for companies to disclose ESG information in a transparent and credible manner. For example, the implementation of the Corporate Sustainability Reporting Directive (CSRD) in the European Union from 2024–2025 has expanded the scope of ESG reporting, which now also targets non-EU companies operating in the region. Similarly, countries such as the UK, Australia, and Japan have enacted ESG reporting based on the framework of the Task Force on Climate-related Financial

Disclosures (TCFD). In Indonesia, the Financial Services Authority (OJK) through POJK No. 51/POJK.03/2017 also encourages banks and issuers to submit sustainability reports on a regular basis. This development makes ESG disclosure an integral part of corporate financial reporting and evaluation material for global institutional investors. On the other hand, Board Size, or the size of the board of directors, is one of the important elements in the corporate governance structure that also receives significant attention. Larger boards are often associated with a diversity of perspectives, better division of responsibilities, and stronger oversight of management. However, the literature also shows that overly large boards can lead to coordination problems and inefficiencies in decision-making. Therefore, the influence of Board Size on financial performance is often contextual, depending on the characteristics of the industry, organizational culture, and the complexity of the company's operations. The latest phenomenon shows that there is a mutually reinforcing relationship between ESG disclosure and Board Size on financial performance. Recent research (For example: Atan et al., 2023; Saleh et al., 2024) found that companies with larger boards tend to have more effective internal oversight and control systems, thus being able to drive better ESG reporting practices. In this context, Board Size not only has a direct impact on financial performance, but is also a moderation variable that strengthens the influence of ESG disclosure. This reinforces the argument that good governance and ESG openness are intertwined in creating long-term corporate value. Many investors now use ESG indicators as a signal of the quality of long-term management and risk mitigation. Adequate ESG disclosure can increase stakeholder confidence, expand access to funding, and reduce capital costs because it is considered more responsible and adaptive to changes in the external environment. However, there are also empirical findings that show that commitment to ESG sometimes requires large investment costs and does not necessarily have a direct impact on profitability, especially in the short term. This is why it is important to examine how the role of Board Size can help balance ESG compliance with the efficiency of a company's financial performance. Energy companies' annual reports now increasingly include information on how they manage environmental impacts, human rights, and corporate governance. Many countries, including Indonesia, are increasingly introducing regulations that require companies to disclose their ESG information. In Indonesia, the Financial Services Authority (OJK) has begun implementing regulations related to sustainability disclosure, which require companies listed on the Indonesia Stock Exchange to report their ESG aspects.

The application of ESG principles is increasingly being paid attention to by stakeholders, especially by investors who are aware of the importance of non-financial factors in creating long-term value. ESG disclosure provides transparency regarding the company's efforts to address environmental, social, and governance issues. This research is important because it can answer whether ESG disclosures are directly related to financial performance,

By integrating these two factors in a single study, we can gain a more comprehensive understanding of how ESG policies, and board size influence each other to create optimal financial performance. In addition, this research is also relevant to assist companies in formulating policies that are more responsive to global challenges and market needs.

METHODS

The design of this study is quantitative descriptive with a causal approach. Causal research aims to examine the cause-and-effect relationship between independent variables, namely, ESG disclosure, and Board Size, against the dependent variable, namely the company's financial performance.

Quantitative Approach: This approach is used to collect numerical data which is then analyzed using statistical techniques to test the hypotheses that have been developed.

Variable Measurement

In this study, there are two independent variables that are tested for their influence on the company's financial performance as dependent variables. The following is an explanation of the measurement of each variable:

1. ESG Disclosure

Measurement: ESG disclosures are measured using the ESG Disclosure Score which can be calculated based on the amount and quality of information disclosed in the company's annual report and sustainability report. Some of these ESG measurement indicators include policies related to the environment (E), social (S), and governance (G). One of the most frequently used indices is the Global Reporting Initiative (GRI) Standards. Data Source: Annual reports and sustainability reports disclosed by companies.

2. Board Size

Measurement: Based on annual reports and it has been proven in several studies that have proven that compensation given to board members (Board Compensation) can increase company performance, such as research proven by Ataay (2018) and Conyon (2014) gives results that board size has a positive effect on company performance.

3. Financial Performance

Measurement: Financial performance is measured by indicators, namely:

Return on Assets (ROA): Measures the profitability of a company relative to the total assets owned.

Data Source: The company's annual financial statements.

A dependent variable is a variable that is being predicted or estimated, the result of a specific value of an independent variable. The technique for calculating the equation of the value of the dependent variable calculated through the values of the selected independent variable is called multiple regression analysis. In the research conducted, stock returns were identified as dependent variables, while financial ratios such as profitability on asset (ROA) were identified as independent variables.

Based on the explanation of the theoretical foundation above, the researcher needs to describe the operational variables as follows:

Table 3.2: Variable Operationalization

Variabel Penelitian	Simbol	Deskripsi Variabel	Indikator
Return on asset	ROA	Rasio profitabilitas yang diukur melalui perbandingan antara laba bersih dengan total aset	$ROA = \dfrac{net\ profit}{total\ asset}$

Sampling Method

The sampling method used in this study is purposive sampling. Sample selection was carried out based on certain criteria relevant to this study. The sample criteria are as follows:

1. Companies listed on the Indonesia Stock Exchange (IDX) that have an accessible annual report and sustainability report.

2. Companies that have complete data on ESG disclosures and board size during the period under study (e.g. 5 years to the last).

3. Companies operating in the public sector.

Number of Samples: The number of samples taken will be adjusted to the availability of data that meets the above criteria. It is estimated that around 15 to 35 companies were active during the study period.

Data Collection Methods

According to Lind et al. (2018), a population is all individuals or research objects in a group with similar characteristics. Meanwhile, the sample is a part of the population, which represents the characteristics of the said population. Data collection design

The data collected is secondary data collected through the IDX (www.idx.co.id) website, Yahoo Finance, and the official website of the public company as a research sample.

Measurement instrument design

Companies that have complete data on ESG and Board Size disclosures during the period under study (e.g. the last 5 years). The number of samples taken will be adjusted to the availability of data that meets the above criteria. It is estimated that about 15 to 35 companies were active during the research period.

RESULTS AND DISCUSSION

Descriptive Statistical Test

Descriptive statistics is an applied assessment of data by describing the information as it has been collected, without attempting to draw broad or general judgments. Descriptive statistics share a summary of data based on mean, standard deviation, maximum, and minimum.

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
ESG disclosure	175	15.71	87.71	58.0877	17.17819
Board Size	175	3.00	21.00	6.9200	2.46455
Financial performance	175	.00	.39	.0998	.07390
Valid N (listwise)	175				

1. The results of the descriptive test with a sample of 175 studies showed that the minimum (lowest) value of ESG disclosure was 15.71. The maximum (highest) score is 87.71. This shows that the ESG disclosure value ranges from 15.71 to 87.71 with a mean value of 58.09 and a standard deviation value of 17.18. When viewed from the standard value of the division is smaller or less than the mean value, which means that ESG disclosure has evenly distributed data.

2. The results of the descriptive test test with a sample of 175 studies showed that the minimum (lowest) value of Board Size was 3.00. The maximum (highest) score is 21.00. This shows that the Board Size value ranges from 3.00 to 21.00 with a mean value of 6.92 and a standard deviation value of 2.46. When viewed from the standard value of the division is smaller or less than the mean value which means that the Board Size has an even distribution data.

3. The results of the descriptive test test with a sample of 175 studies showed that the minimum (lowest) value of financial performance was 0.00. The maximum (highest) value is 0.39. This shows that the value of financial performance ranges from 0.00 to 0.39 with a mean value of 0.10 and a standard deviation value of 0.07. When viewed from the standard value of the division is smaller or less than the average value (mean) which means that financial performance has evenly distributed data.

Classic Assumption Test

1. Normality Test

The data normality test aims to test whether the sample used has a normal distribution or not. In a linear regression model, this assumption is indicated by a normally distributed residual value. A good regression model is a regression model that has a normal or near-normal distribution, so it is statistically feasible to test. Data normality testing uses the Kolmogorov-Smirnov Test of Normality in the SPSS program. According to Ghozali (2016), the basis for decision-making can be based on probability (asymtotic significance), namely:

1) If the probability > 0.05 then the distribution of the regression model is normal.

2) If the probability < 0.05 then the distribution of the regression model is abnormal

Normality Plot
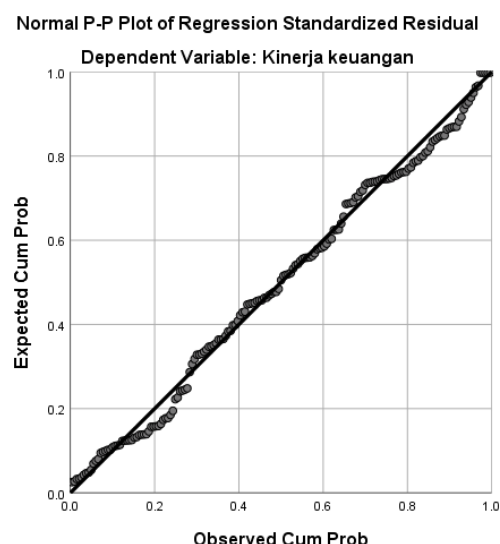
Based on the normality plot above, it can be seen that the points follow a diagonal line so that it can be concluded that the residual value is distributed normally.

Normality Histogram
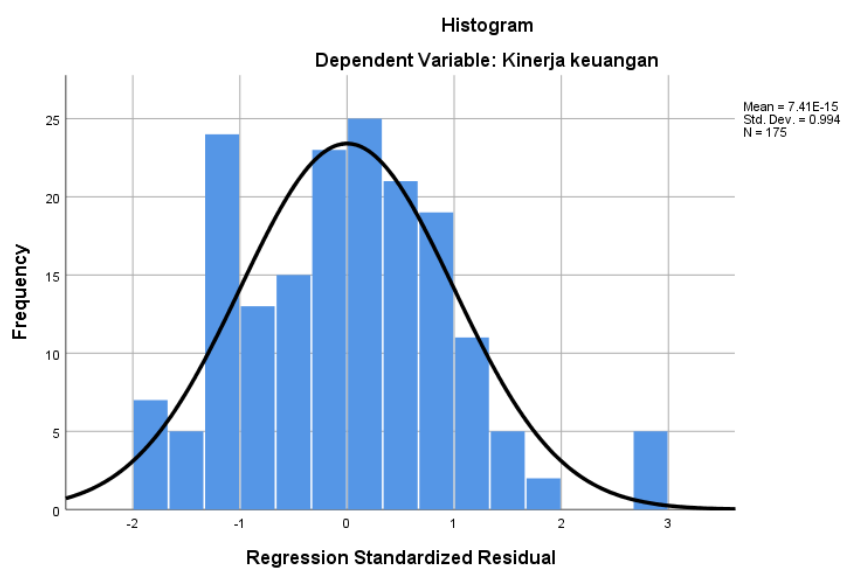
Based on the histogram image above, it shows that there are no values that are tilted to the right or to the left, so it can be concluded that the residual values are normally distributed.

SPSS Output Normality Test

One-Sample Kolmogorov-Smirnov Test	
	Unstandardized Residual
N	175

| Normal Parameters[a,b]	Mean	.0000000
	Std. Deviation	.08408804
Most Extreme Differences	Absolute	.058
	Positive	.058
	Negative	-.036
Test Statistic		.058
Asymp. Sig. (2-tailed)		.200c,d
a. Test distribution is Normal.		
b. Calculated from data.		
c. Lilliefors Significance Correction.		
d. This is a lower bound of the true significance.		

From the table, it is known that the value of Asymp. Sig. (2-tailed) of 0.200 is greater than 0.05. prove that the data is distributed normally.

2. Heteroscedasticity Test

A. Scatterplot Heteroscedasticity Test

According to Ghozali (2018) The heteroscedicity test aims to test whether in the regression model there is variance disparity from the residual of one observation to another. To find out if heteroscedasticity occurs by using a fork on SPSS. With the decision-making on the graph image, there is no heteroscedasticity if there is no visible pattern and the dots are scattered above and below the value of 0 on the Y axis.

SPSS Output Heteroscedasticity Test
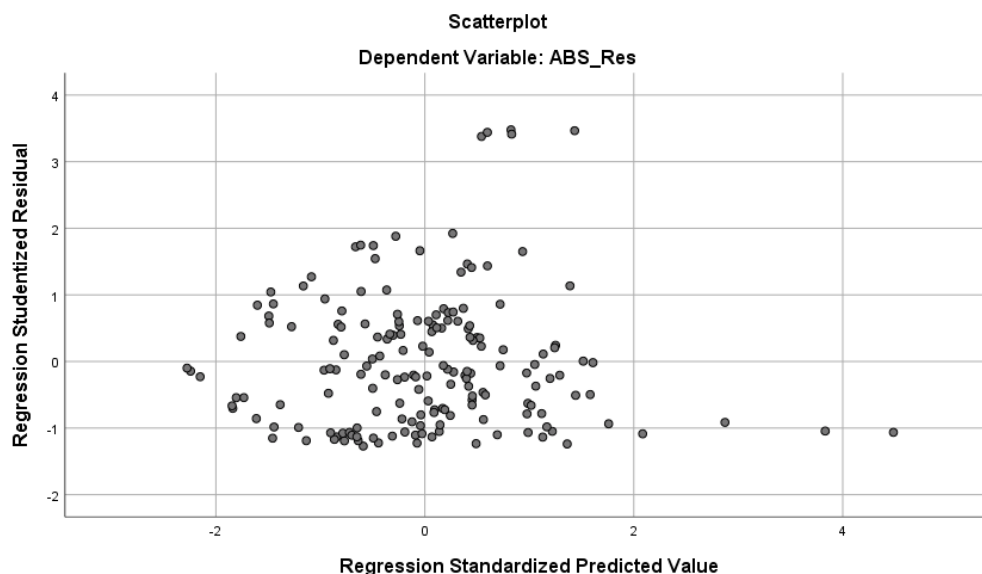
Based on the results of the *scatterplot output* above, it can be seen that the dots are spread out and do not form a clear pattern. Thus, it can be concluded that there is no heteroscedasticity problem.

B. Glejser Heteroscedasticity Test

Heterokedasticity test is a statistical method used to test whether there is a significant difference in variation (dispersion) between groups or sub-samples in a dataset. Heterokedasticity occurs when the variance (dispersion) of data is not constant across its entire range of values.

If the significance value (Sig.) is greater than 0.05, then the conclusion is that there are no symptoms of heteroscedasticity in the regression model. On the other hand, if the significance value (Sig.) is less than 0.05, then the conclusion is that there are symptoms of heteroscedasticity in the regression model.

SPSS Output Heteroscedasticity Test

Coefficient						
Type		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.068	.047		1.440	.152
	ESG disclosure	-.001	.012	-.008	-.103	.918
	Board Size	-.002	.013	-.011	-.140	.889
a. Dependent Variable: ABS_Res						

Based on the spss output above, it is known that the significance value (Sig.) for all the above variables is 0.05, so the conclusion is that there are no symptoms of heteroscedasticity in the regression model.

3.   Multicollinearity Test

The multicollinearity test is a statistical method used to detect the presence of high linear dependencies between two or more independent variables in a regression model. Multicollinearity can occur when there is a strong correlation between independent variables, which can interfere with the interpretation and reliability of regression results.

If the VIF value is < 10.00, it means that there is no multicollinearity in the regression model, on the contrary, if the VIF value is > 10.00, it means that multicollinearity occurs in the regression model.

SPSS Output Multicollinearity Test

Coefficient								
Type		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIVID
1	(Constant)	-1.795	.077		-23.203	.000		
	ESG disclosure	-.141	.020	-.473	-6.968	.000	.878	1.139
	Board Size	.052	.022	.165	2.432	.016	.878	1.139
a. Dependent Variable: Financial performance								

From the above output, the VIF value for all variables is less than 10.00 and the tolerance value is close to 1, it can be concluded that there is no multicollinearity in the regression model.

Regression Test

1.   Multiple Linear Regression Test

Multiple Linear Regression SPSS Output

Coefficient						
		Unstandardized Coefficients		Standardized Coefficients		
Type		B	Std. Error	Beta	t	Sig.
1	(Constant)	-1.795	.077		-23.203	.000
	ESG disclosure	-.141	.020	-.473	-6.968	.000
	Board Size	.052	.022	.165	2.432	.016
a. Dependent Variable: Financial performance						

To determine the multiple regression equation of the influence of ESG disclosure and Board Size on financial performance , the regression coefficient analysis was carried out as follows:

$Y = a + b_1x_1 + b_2x_2$

$Y = -1.795 - 0.141\ X1 + 0.052\ X2$

Where:

X1 = ESG disclosure

X2 = Board Size

Y = Financial performance

From the regression equation above, it can be interpreted as follows:

1) a = -1.795 shows that if the values of X1 and X2 remain (unchanged) then the value of the constant Y is -1.795.

2) b1 = - 0.141 states that if X1 increases, then Y will decrease by - 0.141 assuming there is no constant addition of the value of X2.

3) b2 = 0.052 states that if X2 increases, then Y will increase by 0.052 assuming there is no constant addition of the value of X1.

Hypothesis Test

1.   Partial T Test

A partial t-test is a statistical method used to test whether a particular independent variable significantly affects the dependent variable in a multiple linear regression model, when control for other independent variables has been performed. The partial ttest allows us to evaluate the individual contribution of a specific independent variable to the dependent variable, by controlling for the influence of other independent variables.

SPSS Output Partial T Test

Coefficient						
Type		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-1.795	.077		-23.203	.000
	ESG disclosure	-.141	.020	-.473	-6.968	.000
	Board Size	.052	.022	.165	2.432	.016
a. Dependent Variable: Financial performance						

Furthermore, to determine the value of tTable in the distribution table t is searched using the formula $\alpha/2 = 0.05 = 0.025$ with a free degree of N-k-1 which is $175 - 2 - 1 = 172$, then the tTable is obtained as 1.974. If the value of the tcal is > t of the table and the significance value is < 0.05, then it can be concluded that the variable has a significant effect.

1) The ESG disclosure value (X1) was calculated at -6,968. Because the calculation is larger than the table, which is -6,968 > -1,974 and the significance value (Sig.) 0.000 < 0.05, it can be interpreted that there is a significant influence between ESG disclosure on financial performance

2) The variable value of Board Size (X2) was obtained as 2.432. Because the calculation is larger than the table which is 2,432 > 1,974 and the significance value (Sig.) 0.016 < 0.05, it can be interpreted that there is a significant influence between Board Size on financial performance

2. Simultaneous F Test

Simultaneous F-test is a statistical method used to test together whether a group of independent variables significantly affects the dependent variables in a multiple linear regression model. This test aims to examine the null hypothesis that the regression coefficient of all independent variables is zero together. Simultaneous F Test SPSS Output

NEW ERA						
Type		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	.540	2	.270	37.772	.000b
	Residual	1.230	172	.007		
	Total	1.771	174			
a. Dependent Variable: Financial performance						
b. Predictors: (Constant), Board Size, ESG disclosure						

Based on the spss output table, a Fcount of 37,772 was obtained and then determined Ftable. The distribution table F is searched at α = 0.05 with the free degree N-k-1 which is 175 - 2 − 1 = 172, then Ftable 3.05 is obtained (can be seen in the ftable distribution). Therefore, it can be concluded that the Fcal is greater than the Ftabel which is 37,772 > 3.05 and the significant value is 0.000 < 0.05, so it can be interpreted that there is a significant influence between ESG disclosure and Board Size on financial performance

3.   Coefficient Determination Test

This analysis is used to determine the magnitude of the influence of independent variables on dependent variables, usually asked in percentages. This determination coefficient can be calculated using the formula:

Kd = x 100%r^2

Where:

Kd = Coefficient of Determination

r = Correlation Coefficient

SPSS Output Coefficient Determination

Model Summary				
Type	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.552a	.305	.297	.08458
a. Predictors: (Constant), Board Size, ESG disclosure				

From the spss output table above, the Determination Coefficient Test Summary was obtained a determination coefficient (R square) of 0.305 or 0.305 x 100 = 30.5% which has the understanding that the influence of the independent variables (X1 and X2) on the bound variables (Y) is 30.5% and the rest is influenced by other factors that the researcher did not research.

CONCLUSION

Recent phenomena show that ESG disclosure and Board Size are two important elements that complement each other in influencing a company's financial performance. Amid increasing global and national regulations that require ESG disclosure, companies can no longer ignore the sustainability aspect of their business strategy. Transparent ESG disclosure can improve reputation, investor trust, and cheaper access to funding. However, the impact on financial performance is not always immediately apparent, especially in the short term. In this context, Board Size plays a strategic role as a governance mechanism that can drive the quality of ESG disclosure while leading companies to efficient and long-term oriented decision-making. A large and diverse board of directors has a better capacity to oversee management, absorb ESG complexities, and integrate them into a company's financial strategy.;
These findings underscore the importance of alignment between corporate governance and sustainability commitments in achieving stable and sustainable financial performance.

REFERENCES

Herni Kurniawati and Fanny Andriani Setiawan. (2022). The Effect of Board Compensation and Board Size on the Financial Performance of Indonesian Manufacturing Public Companies. Serina IV Untar Journal 2022.

A Prayer for Utopia. (2024). Environmental, Social, and Governance Disclosure on the Financial Performance of Energy Sector Companies in Indonesia. Journal of Trial Balance (JUTRIANCE), Volume 2, Number 1, April 2024 Pages 52-61.

Emelie Vlaviorine and Luky Patricia Widianingsih. (2023). Renewable Energy Use, ESG Score, Capital Cost and Operational Costs on Financial Performance. Journal of Contemporary Accounting (Jako) – Vol 15 No 2 – MAY 2023 – Pages 97-112.

Regina Putri Heryana and Harry Z. Soeratin. (2025) Analysis of the Influence of ESG on Corporate Financial Performance with Digital Transformation as a Moderating Variable. Journal of Business Economics and Management, Vol. 01 No. 03 January 2025 Page. 373-380.

Hilmy Muhammad Hartomo, Agustinus Santosa Adiwibowo. (2023). The Effect of Environmental, Social, Governance (ESG) Disclosure on Company Performance. Diponegoro Journal Of Accounting, Volume 12, Number 4, Year 2023, Pages 1-14.