The Moderating Role of Profitability and Firm Size in ESG Disclosure Towards Firm Value

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ABSTRACT

In this article, we examine the impact of ESG disclosure on firm value, with profitability and firm size serving as moderating variables. It utilizes balanced panel data from companies consistently listed in the IDX ESG Leaders index at any point in the observation period from January 2023 to March 2024. The data is derived from ESG score announcements by the Indonesia Stock Exchange and company financial reports. Moderated regression analysis is conducted using EViews software. The study employs two proxies for the dependent variable as a robustness test. The findings demonstrate that ESG disclosure has a negative and significant effect on firm value, as measured by Tobin's Q and Price-to-Book Value (PBV). Moreover, profitability and firm size moderate this relationship by reducing its negative impact. The implications of these results show that ESG disclosure is not always received positively by the market, where this has an impact on reducing firm value. Nonetheless, this impact can be minimized by profitability and firm size, which serve as additional signals for increasing market acceptance of ESG disclosures. Further research is recommended to expand the sample and observation period, add other variables that influence firm value, analyze without data transformation, or focus research on certain sectors.

Keywords

ESG Disclosure, Firm Value, Profitability, Firm Size.

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INTRODUCTION

Over the past decade, global attention towards sustainable development has increased. Indonesia has supported the UN's SDGs agenda through Peraturan Otoritas Jasa Keuangan (POJK) Nomor 51/POJK.03/2017, which requires companies to prepare sustainability reports starting from 2018 and full implementation by 2025. Financial Services Authority (OJK) has also developed and implemented the Sustainable Financial Roadmap Phase I (2015-2019) and Phase II (2021-2025) to guide sustainable development, focusing on environmental, social, and governance (ESG) aspects and promoting a
comprehensive sustainable financial ecosystem (Otoritas Jasa Keuangan, 2015; Otoritas Jasa Keuangan, 2021).

Li et al. (2018) emphasize that good ESG disclosure will be more attractive to investors and other stakeholders. According to the results of PwC’s Global Investor Survey 2022, as a response to climate change and SDGs, ESG currently becomes a factor in investment decision-making and a priority for investors in business. In this regard, effective corporate governance considerations reach 49%, while greenhouse gas emissions reduction reaches 44%. Therefore, ESG implementation and disclosure by companies become a concern for investors and are considered beneficial for investors who intend to invest for a long-term period.

Previous studies have demonstrated that ESG disclosure, as measured by ESG scores, has an impact on firm value (Aydoğmuş et al., 2022; Chang & Lee, 2022; Delvina & Hidayah, 2023; Fuadah et al., 2022; and Melinda & Wardhani, 2020). However, other studies contradict these findings and indicate that ESG disclosure has no effect on firm value. (Arofah & Khomsiyah, 2023; Igbinovia & Agbadua, 2023; Junius et al., 2020; Kartika et al., 2023; and Sumarno et al., 2023).

Several previous studies have recommended using moderating factors in future research exploring the relationship between ESG disclosure and firm value. The suggested moderating factors include profitability (Arofah & Khomsiyah, 2023 and Raheliamelinda & Handoko, 2024) and firm size (Abdi et al., 2022; Adhi & Cahyonowati, 2023; and Prayogo et al., 2023).

Several studies indicate that profitability can significantly impact firm value (Hidayat & Khotimah, 2022; Husna & Satria, 2019; Putra et al., 2021; and Sumartono et al., 2020). High profitability indicates that the company has substantial financial resources. This enables the company to invest in comprehensive ESG initiatives, thereby enhancing investor confidence and increasing firm value. Based on this, it is assumed that profitability can moderate the relationship between ESG disclosure and firm value, aligning with the findings of Sumartono et al. (2020).

Other studies have demonstrated that the size of a company can significantly impact its firm value. (Arsyada et al., 2022; Azhar, 2020; Hidayat & Khotimah, 2022; Sondakh, 2019; and Widiyati, 2020). Larger companies typically possess greater resources to enhance ESG disclosure, which could potentially increase firm value. Consequently, this study proposes that firm size may moderate the connection between ESG disclosure and firm value, a proposition bolstered by Abdi et al. (2022), Adhi & Cahyonowati (2023), and Prayogo et al. (2023).
Based on the explanation above, researchers found that there were inconsistencies in the results of previous studies regarding ESG disclosure on firm value. Researchers also followed previous studies recommendations to add moderating factors in testing this relationship (Abdi et al., 2022; Behl et al., 2022; Delvina & Hidayah, 2023; Tahmid et al., 2022; Toti & Johan, 2022; Wu et al., 2022), change the observation period (Toti & Johan, 2022), as well as replacing one of the research samples with an index launched by the IDX such as IDX ESG Leaders (Rizqi & Munari, 2023). Apart from that, this study uses two different indicators in measuring firm value, namely Tobin’s Q and Price-to-Book Value (PBV). This is based on differences in research results by Jeanice & Kim (2023) and Fuadah et al. (2022). Jeanice & Kim (2023) found that ESG disclosure did not affect firm value, while Fuadah et al. (2022) found an effect using Tobin's Q. This difference occurred even though the unit of analysis for both was the same, namely companies listed on the Indonesian Stock Exchange (IDX) in the 2018-2020 period.

The study posed questions about the role of profitability and firm size in the ESG disclosure's impact on firm value, namely: does ESG disclosure significantly affect firm value, and do profitability and firm size moderate this relationship? Findings from this study not only contribute to existing literature but also address gaps in previous studies on the influence of ESG disclosure on firm value.

RESEARCH METHOD

This study uses a quantitative approach with data collection techniques using secondary data sources. The secondary data used are the issuer's financial reports and the attachment to the IDX announcement regarding the evaluation of the IDXESGL index during the observation period, namely January 2023 to April 2024. The observation time point for this study is at the time the financial reports are published, with the point being the final deadline for submitting financial reports on the IDX in each period. In this study, financial data is taken from financial report data for the relevant year at the time of publication. Then, the ESG score data used is the ESG score presented in the attachment to the IDX announcement regarding the IDXESGL index which was effective at the time the financial report was published.

Share price data used to measure firm value is collected using the window period concept, namely an observation period involving the days before and after the event date (Hartono, 2017), where it is the day before and after the attached date of the IDXESGL index announcement. This was done to analyze the impact of available ESG scores on share prices, as well as to analyze the moderating
influence of financial information on ESG disclosure on firm value as reflected in its share price. In this study, the window period used for stock prices was taken for 11 days around the date of the attachment to the announcement of the IDXESGL index on the stock exchange day, namely on the date of the event, as well as 5 days before and 5 days after the date of the event.

In this study, the panel data regression analysis method is used to test the effect of ESG disclosure on firm value. The regression equation in this study uses Moderated Regression Analysis (MRA) which is formulated as follows:

**Empirical model equation 1:**

\[
TQ_{it} = \alpha + \beta_1 ESGD_{it} + \beta_2 ROA_{it} + \beta_3 LNTA_{it} + \beta_4 ESGD_{it} ROA_{it} + \beta_5 ESGD_{it} LNTA_{it} + \epsilon_{it}
\]

**Empirical model equation 2:**

\[
PBV_{it} = \alpha + \beta_1 ESGD_{it} + \beta_2 ROA_{it} + \beta_3 LNTA_{it} + \beta_4 ESGD_{it} ROA_{it} + \beta_5 ESGD_{it} LNTA_{it} + \epsilon_{it}
\]

Information:

- \(TQ\): firm value with Tobin's Q proxy
- \(PBV\): firm value with the PBV proxy
- \(\alpha\): constant (intercept)
- \(\beta_1\) to \(\beta_5\): regression coefficient
- \(ESGD\): ESG disclosure
- \(ROA\): profitability
- \(LNTA\): firm size
- \(ESGD*ROA\): interaction between ESGD & ROA
- \(ESGD*LNTA\): interaction between ESGD & LNTA
- \(\epsilon\): error component
- \(i\): cross-section units
- \(t\): time series units
- \(it\): the i-th cross-section unit in the t-th time series unit

In determining the sample, the sampling technique used in this study is a non-probability sampling technique using a purposive sampling method, which uses several criteria from the population (Purwohedi, 2022). The following is a sample selection table in this study:

<table>
<thead>
<tr>
<th>Population: List of companies included in the IDX ESG Leaders index during the observation period.</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>33</td>
<td></td>
</tr>
</tbody>
</table>

Table 1. Sample Determination
Descriptions | Total
---|---
Criteria: Listed companies that are not included in the IDX ESG Leaders (IDXESGL) index when publishing financial reports at the point of the observation period. | (6)
Total sample of companies | 27
Total observation sample for 2 periods | 54

Source: data processed by researchers (2024)

This study uses EViews software to analyze the data. The tests carried out in this study include the estimation model selection test, classical assumption test, partial regression test (T-test), model feasibility test (F-test), coefficient of determination test (R²-test), and robustness test for compare the results if the dependent variable proxy is replaced.

RESULT AND DISCUSSION
Descriptive Statistics

| Table 2. Descriptive Statistics Results |
|---|---|---|---|---|---|
| | TQ | PBV | ESGD | ROA | LNTA |
| Mean | 1.448080 | 3.827320 | 20.58111 | 2.779907 | 31.65501 |
| Median | 0.775744 | 2.258989 | 19.24000 | 4.316000 | 31.37803 |
| Maximum | 8.593722 | 39.38221 | 29.00000 | 29.28700 | 35.31545 |
| Minimum | 0.110374 | 0.243008 | 12.67000 | -167.0980 | 28.98961 |
| Std. Dev. | 1.913940 | 6.558084 | 4.455285 | 25.00289 | 1.706824 |
| Skewness | 2.195456 | 4.312841 | 0.134485 | -5.929485 | 0.778898 |
| Kurtosis | 6.840693 | 21.92287 | 1.959037 | 41.09059 | 2.840757 |
| Jarque-Bera | 76.19631 | 973.0740 | 2.600884 | 3580.938 | 5.517198 |
| Probability | 0.000000 | 0.000000 | 0.272411 | 0.000000 | 0.063381 |
| Observations | 54 | 54 | 54 | 54 | 54 |

Source: EViews 12 SV output, data processed by researchers (2024)

Table 2 shows that the mean value of firm value, whether measured by Tobin's Q (TQ) or Price-to-Book Value (PBV), shows a value greater than 1, indicating that the average market value of the sample company is higher than its book value. The standard deviation value of 1.9139 for TQ and 6.5580 for PBV indicates that there is variation in the distribution of data around the average. The minimum value for TQ and PBV is below 1, indicating an undervalued
company, while the maximum value indicates that there are companies in the sample that have very high firm value.

For the ESG disclosure variable (ESGD), the average value of 20.58 indicates that the companies in this sample generally have good performance in disclosing ESG practices. In this study, the lower the ESG score, the better the assessment of the company's ESG practices, indicating low ESG risk. The range of values for the ESGD variable is from a minimum of 12.67 to a maximum of 29.00. The standard deviation of 4.4552 for the ESG disclosure variable indicates that there is moderate variation in the assessment of ESG practices among the companies in the sample.

The profitability variable (ROA) has an average of 2.7798, but with a high standard deviation, indicating significant variation in company performance in the sample. The minimum ROA value, namely -167.0984, reflects very poor financial performance. On the other hand, the maximum value of ROA reached 29.2866, indicating the highest achievement in company profitability in this study sample.

For the firm size variable (LNTA), the average firm size calculated using the natural logarithm of total assets is 31.6550, indicating that the companies in the sample have a moderate size. The value of 28.9896 reflects the value of the company in the sample with the smallest size, and conversely, the maximum value of 35.3154 is the largest value for the size of the company in the sample. The standard deviation of 1.7068 indicates that there is moderate variation in firm size among the sample. These variations indicate that the sample includes companies with varying sizes of total corporate assets.

For the TQ, PBV, and ROA variables, a probability value of 0.0000 appears, which indicates that the data does not follow a normal distribution. The histogram distribution graph for TQ and PBV shows a data distribution that is skewed to the right (positively skewed) with a TQ skewness value of 2.1954 and PBV of 4.3128. Meanwhile for ROA, the skewness value is -5.9294 and the histogram distribution graph shows the data is skewed to the left (negatively skewed). According to Ghozali (2018), the graphic form for TQ and PBV is a substantial positive skewness graphic, while ROA is substantial negative skewness. Because the data for the three variables do not follow a normal distribution, in this study the TQ, PBV and ROA data used in all tests are the results of data that has been transformed. The transformation used for TQ and PBV is to transform the data into logarithm form directly, while for ROA it is transformed into logarithm form with the logarithm formula (K-X), where X is the ROA data and K is a constant large enough to ensure that the K value minus ROA is positive. This is done because the ROA data contains negative values.
From this treatment, data transformation is expected to increase the validity of the results of the analysis carried out in this study.

**Estimation Model Selection Test**

<table>
<thead>
<tr>
<th>Test</th>
<th>Dependent Variable</th>
<th>Prob. Cross-section Chi-Square</th>
<th>Prob. Cross-section Random</th>
<th>Cross-section Breusch-Pagan</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chow Test</td>
<td>TQ</td>
<td>0.0000</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>PBV</td>
<td>0.0000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hausman Test</td>
<td>TQ</td>
<td>0.7054</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>PBV</td>
<td>0.2550</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lagrange Multiplier Test</td>
<td>TQ</td>
<td>0.0000</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>PBV</td>
<td>0.0000</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Source: EViews 12 SV output, data processed by researchers (2024)*

From the table regarding the estimation model selection tests, it can be concluded that for this study, both with empirical model 1 which uses the dependent variable Tobin's Q and empirical model 2 which uses the dependent variable PBV, the best estimation model used is the Random Effect Model.

**Classic Assumption Test**

**Normality Test**

<table>
<thead>
<tr>
<th>Model</th>
<th>Probability Jarque-Bera</th>
</tr>
</thead>
<tbody>
<tr>
<td>Empirical Model 1</td>
<td>0.666022</td>
</tr>
<tr>
<td>Empirical Model 2</td>
<td>0.270705</td>
</tr>
</tbody>
</table>

*Source: EViews 12 SV output, data processed by researchers (2024)*

With the regression model used, the normality test results for empirical model 1 and empirical model 2 both show a Jarque-Bera probability value greater than or equal to a significance level of 0.05, so that the residual normality assumption is met.

**Multicollinearity Test**

<table>
<thead>
<tr>
<th></th>
<th>ESGD 1.000000</th>
<th>ROA -0.018298</th>
<th>LNTA 0.347061</th>
</tr>
</thead>
<tbody>
<tr>
<td>ESGD</td>
<td>1.000000</td>
<td>-0.018298</td>
<td>0.347061</td>
</tr>
<tr>
<td>ROA</td>
<td>-0.018298</td>
<td>1.000000</td>
<td>-0.26000</td>
</tr>
<tr>
<td>LNTA</td>
<td>0.347061</td>
<td>-0.26000</td>
<td>1.000000</td>
</tr>
</tbody>
</table>

*706*
The results of the multicollinearity test show that the correlation between ESGD and ROA, ESGD and LNTA, and ROA and LNTA each shows a coefficient value of less than 0.8, which means there is no significant multicollinearity between variables.

### Heteroscedasticity Test

<table>
<thead>
<tr>
<th>Variable</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>ESGD</td>
<td>0.2936</td>
</tr>
<tr>
<td>ROA</td>
<td>0.2512</td>
</tr>
<tr>
<td>LNTA</td>
<td>0.7901</td>
</tr>
</tbody>
</table>

Source: EViews 12 SV output, data processed by researchers (2024)

The results of the heteroscedasticity test show that the probability value for each variable is greater than the significance level of 0.05. This shows that there is no heteroscedasticity in the regression model, either with the dependent variable Tobin's Q or with the dependent variable PBV.

### Autocorrelation Test

<table>
<thead>
<tr>
<th>Model</th>
<th>Durbin-Watson stat</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model 1</td>
<td>1.972248</td>
</tr>
<tr>
<td>Model 2</td>
<td>1.897252</td>
</tr>
</tbody>
</table>

Source: EViews 12 SV output, data processed by researchers (2024)

The results of the autocorrelation test for the model with the dependent variables Tobin's Q and PBV show that the Durbin-Watson stat value ranges from 0 to 4 with a value close to 2 indicating the absence of autocorrelation.

### Moderated Regression Equation

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>Std. Error</th>
<th>t-Statistic</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
<td>-100.4048</td>
<td>24.4383</td>
<td>-4.108500</td>
<td>0.0002</td>
</tr>
<tr>
<td>ESGD</td>
<td>4.893906</td>
<td>1.155024</td>
<td>4.237060</td>
<td>0.0001</td>
</tr>
<tr>
<td>ROA</td>
<td>40.59176</td>
<td>10.41454</td>
<td>3.897605</td>
<td>0.0003</td>
</tr>
<tr>
<td>LNTA</td>
<td>0.288902</td>
<td>0.138972</td>
<td>2.078851</td>
<td>0.0430</td>
</tr>
<tr>
<td>ESGD*ROA</td>
<td>-1.923563</td>
<td>0.493149</td>
<td>-3.900570</td>
<td>0.0003</td>
</tr>
<tr>
<td>ESGD*LNTA</td>
<td>-0.018052</td>
<td>0.006163</td>
<td>-2.929239</td>
<td>0.0052</td>
</tr>
</tbody>
</table>

Source: EViews 12 SV output, data processed by researchers (2024)
Table 9.
Regression Results for Empirical Model 2

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>Std. Error</th>
<th>t-Statistic</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
<td>-110.3549</td>
<td>26.20057</td>
<td>-4.211930</td>
<td>0.0001</td>
</tr>
<tr>
<td>ESGD</td>
<td>5.250415</td>
<td>1.238119</td>
<td>4.240638</td>
<td>0.0001</td>
</tr>
<tr>
<td>ROA</td>
<td>43.77591</td>
<td>11.15870</td>
<td>3.923030</td>
<td>0.0003</td>
</tr>
<tr>
<td>LNTA</td>
<td>0.386143</td>
<td>0.143502</td>
<td>2.690864</td>
<td>0.0098</td>
</tr>
<tr>
<td>ESGD*ROA</td>
<td>-2.078186</td>
<td>0.528395</td>
<td>-3.933020</td>
<td>0.0003</td>
</tr>
<tr>
<td>ESGD*LNTA</td>
<td>-0.018124</td>
<td>0.006392</td>
<td>-2.835197</td>
<td>0.0067</td>
</tr>
</tbody>
</table>

Source: EViews 12 SV output, data processed by researchers (2024)

Empirical Model 1 Moderated Regression Equation, namely with the Dependent Variable Tobin's Q as follows:
TQ = -100.4048 + 4.8939ESGD + 40.5917ROA + 0.2889LNTA - 1.9235ESGD*ROA - 0.01805ESGD*LNTA

Empirical Model 2 Moderated Regression Equation, namely with the Dependent Variable PBV as follows:
PBV = -110.3549+ 5.2504ESGD + 43.7759ROA + 0.3861LNTA - 2.0781ESGD*ROA - 0.0181ESGD*LNTA

In this study, better ESG practices are indicated by a smaller ESG score, meaning low ESG risk. Thus, the positive coefficient of the ESG variable from the results of this equation implies that the better the ESG practices, the firm value as proxied by TQ and PBV tends to decrease. Negative coefficients on the moderation interactions of ESG and ROA as well as ESGD and LNTA, indicate the existence of negative moderation. This means that the positive influence of ESG disclosure on firm value can be reduced if profitability or firm size is high.

Partial Regression Coefficient Test (T-Test)
The T-test results refer to table 7 and table 8 by looking at the partial probability value of each variable. The results of the T test analysis show that ESG disclosure has a significant influence on firm value, both when using Tobin's Q and PBV as a measure of firm value. With a positive coefficient, this indicates that companies with higher ESG scores tend to have higher market value. Meanwhile, in this study, a positive indication of ESG practices is shown by a smaller ESG score, namely with low ESG risk, this indicates that good ESG practices actually tend to reduce firm value. The ESG disclosure coefficient (ESGD) in the regression with Tobin's Q as the dependent variable is 4.8939 (p-value 0.0001), while in the regression with PBV as the dependent variable it is 5.2504 (p-value 0.0001). With a p-value ≤ 0.05, the hypothesis that ESG disclosure has a significant effect on firm value is accepted.
In the results of the T-test on the interaction between ESG disclosure and profitability, there is evidence that this interaction has a significant negative influence on firm value. The interaction coefficient in the regression with Tobin's Q as the dependent variable is \(-1.9235\) (p-value 0.0003), while in the regression with PBV as the dependent variable it is \(-2.0781\) (p-value 0.0003). With a p-value \(\leq 0.05\), the hypothesis that profitability moderates the effect of ESG disclosure on firm value is accepted.

The T-test results show that the interaction between ESG disclosure and firm size has a significant negative effect on firm value. The interaction coefficient in the regression with Tobin's Q as the dependent variable is \(-0.0180\) (p-value 0.0052), while in the regression with PBV as the dependent variable it is \(-0.0181\) (p-value 0.0067). With a p-value \(\leq 0.05\), the hypothesis that firm size moderates the effect of ESG disclosure on firm value is accepted.

**Model Feasibility Test (F-Test)**

<table>
<thead>
<tr>
<th>Model</th>
<th>F-Statistic</th>
<th>Prob(F-statistic)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Empirical Model 1</td>
<td>5.623978</td>
<td>0.000370</td>
</tr>
<tr>
<td>Empirical Model 2</td>
<td>4.975009</td>
<td>0.000947</td>
</tr>
</tbody>
</table>

*Source: EViews 12 SV output, data processed by researchers (2024)*

The F-test results in empirical model 1, the probability value of 0.0003 is smaller than the significance level used in the study (0.05), while for empirical model 2, it is 0.0009. These two values indicate that the overall regression model is significant at the 0.05 significance level. This means that the variables in the model, namely ESG disclosure, profitability, firm size, as well as the interaction between ESG disclosure and profitability and firm size together have a significant influence on firm value.

**Determination Coefficient Test (R\(^2\) Test)**

<table>
<thead>
<tr>
<th>Model</th>
<th>Adjusted R-squared</th>
</tr>
</thead>
<tbody>
<tr>
<td>Empirical Model 1</td>
<td>0.303730</td>
</tr>
<tr>
<td>Empirical Model 2</td>
<td>0.272728</td>
</tr>
</tbody>
</table>

*Source: EViews 12 SV output, data processed by researchers (2024)*

The adjusted R-Squared value of 0.303730 for empirical model 1 and 0.282828 for empirical model 2 indicates that after considering the number of independent variables in the model, the model's ability to explain variations in firm value, both as measured by Tobin's Q and PBV, remains significant. Overall, these results indicate that the independent variables selected in the regression
model—ESG disclosure, profitability, firm size, as well as the interaction between ESG disclosure and profitability and firm size—provide a sizable contribution in explaining variations in firm value.

**Robustness Test**

In this study, a robustness test is used to validate the results of the regression, namely by changing the dependent variable Tobin's Q to PBV. The following is a comparison of the results of empirical model 1 and empirical model 2.

### Table 12.
**Comparison of T-Test Results with Tobin's Q and PBV**

<table>
<thead>
<tr>
<th>Dependent Variable Proxies</th>
<th>Coefficient Remarks</th>
<th>Significance Remarks</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tobin's Q</td>
<td>PBV</td>
<td>Tobin's Q</td>
<td>PBV</td>
</tr>
<tr>
<td>ESGD</td>
<td>Positive</td>
<td>Positive</td>
<td>Significant</td>
</tr>
<tr>
<td>ROA</td>
<td>Positive</td>
<td>Positive</td>
<td>Significant</td>
</tr>
<tr>
<td>LNTA</td>
<td>Positive</td>
<td>Positive</td>
<td>Significant</td>
</tr>
<tr>
<td>ESGD_ROA</td>
<td>Negative</td>
<td>Negative</td>
<td>Significant</td>
</tr>
<tr>
<td>ESGD_LNTA</td>
<td>Negative</td>
<td>Negative</td>
<td>Significant</td>
</tr>
</tbody>
</table>

*Source: data processed by researchers (2024)*

### Table 13.
**Comparison of F-Test Results with Tobin's Q and PBV**

<table>
<thead>
<tr>
<th>Significance Remarks</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tobin's Q</td>
<td>PBV</td>
</tr>
<tr>
<td>Prob(F-statistic)</td>
<td>Significant</td>
</tr>
</tbody>
</table>

*Source: data processed by researchers (2024)*

### Table 14.
**Comparison of R² Test Results with Tobin's Q and PBV**

<table>
<thead>
<tr>
<th>Coefficient of Determination Value</th>
<th>Tobin’s Q</th>
<th>PBV</th>
</tr>
</thead>
<tbody>
<tr>
<td>R-squared</td>
<td>0.3694</td>
<td>0.3413</td>
</tr>
<tr>
<td>Adjusted R-Squared</td>
<td>0.3037</td>
<td>0.2727</td>
</tr>
</tbody>
</table>

*Source: data processed by researchers (2024)*

Overall, the durability test results obtained consistent results in all tests. A comparison of the results of the T-test and F-test on the two models shows consistent results that ESG disclosure has a significant effect on firm value, thus strengthening the validity of the study findings, and that profitability and firm size moderate this relationship. In the R² test, the small difference in the R²-
Squared and adjusted R-Squared values between the two models show the consistency of the results and the robustness of the study findings to changes in firm value proxies. Thus, the results of this study are robust and can be generalized to the population of companies in the IDXESGL index, while supporting the research hypothesis and providing a significant contribution to the understanding of the factors that influence firm value.

**The Impact of ESG Disclosure on Firm value**

In the context of the research sample during the observation period, the results of this study show that companies that consistently meet strict ESG criteria actually experience a decline in value as ESG disclosure increases. This confirms that the market responds less positively to information about good ESG practices among the companies in this sample.

The results of this study can also be explained with signaling theory. Positive signals of ESG disclosures could lead investors to think that investing in ESG diverts resources from a company’s core operations to the detriment of short-term profits. According to this theory, companies need to be truly committed to ESG practices to avoid misleading signals or disappointing the market, so as to increase firm value in the long term.

This research is fully supported by Prayogo et al. (2023), who found that ESG disclosure has a negative and significant impact on firm value. This shows that there is skepticism towards ESG information. In addition, investors are more likely to respond positively to financial information that can increase their wealth than non-financial information such as ESG (Prayogo et al., 2023).

The results of this study are almost supported by previous studies by Aydoğmuş et al., 2022; Chang & Lee, 2022; Delvina & Hidayah, 2023; Fuadah et al., 2022; and Melinda & Wardhani, 2020 who found that there is a positive and significant correlation between ESG disclosure and firm value. Their studies shows that companies that make good ESG disclosures demonstrate higher transparency and responsibility. This attracts more investors who care about ESG, ultimately increasing demand for shares and firm value.

Meanwhile, the findings of this study contradict the findings of research conducted by Arofah & Khomsiyah (2023), Igbinovia & Agbadua (2023), Juniuz et al. (2020), Kartika et al. (2023), and Sumarno et al. (2023). They stated that ESG disclosure has not significantly influenced firm value due to the lack of understanding and utilization of ESG information by investors, as well as variations in ESG disclosure practices among companies. However, it is expected that as time goes by and awareness increases, ESG factors will become increasingly important in investment assessment.
The Moderating Role of Profitability in ESG Disclosures on Firm value

The study results show that when companies have high profitability, this can reduce the negative effect of ESG disclosure on firm value. This shows that high profitability can provide additional value to the relationship between ESG disclosure and company valuation. Therefore, it is important for companies to continue to pay attention to their financial performance in addition to optimizing ESG practices in a commitment to sustainability.

In signal theory, this finding can be interpreted as meaning that companies that have a high level of profitability are able to become a positive signal in reducing the negative influence of ESG disclosure on firm value. This shows that companies need to strengthen in managing the interaction between ESG disclosure and profitability to maximize the signals received by the market to be positive and support increasing firm value.

The results of this study contrast with the study results of Arofah & Khomsiyah (2023) and Rahelliamelinda & Handoko (2024). They explained that profitability was able to weaken the positive relationship between ESG disclosure and firm value. Rahelliamelinda & Handoko (2024) explain that this is due to investors' higher preference for high financial returns as investment results, compared to ESG implementation which often requires large costs.

The Moderating Role of Firm size on ESG Disclosure on Firm value

These findings of this study indicate that profitability is able to reduce the negative effect of ESG disclosure on firm value. This is because large companies may have the ability to bear the additional costs associated with ESG disclosure. These results suggest that small companies need to strengthen strategies in ESG disclosure to differentiate themselves from competitors and attract investors interested in sustainability issues, which can ultimately increase the value of their companies.

From the perspective of signaling theory, this finding can be interpreted to mean that large firms may already have strong market influence and large resources. Therefore, profitability can be a supporting signal that can weaken the negative signal from ESG disclosure on its impact on firm value.

The findings of this study indicate that firm size can influence the relationship between ESG disclosure and firm value, in line with study conducted by Abdi et al. (2022), Adhi & Cahyonowati (2023), and Prayogo et al. (2023). The moderation results contained in this study are in line with previous findings. This study finds that company size weakens the negative influence of ESG disclosure and firm value. In general, they explain that large companies have higher credibility, greater resources, and the ability to implement ESG initiatives effectively and efficiently. This can increase investor and stakeholder confidence.
in large companies' commitment to ESG practices, which can ultimately increase the value of their companies.

CONCLUSION

This study aims to test the effect of ESG disclosure on firm value, as well as testing the moderating role of profitability and firm size on ESG disclosure on firm value. The sample used in this study is listed companies that are consistently included in the IDX ESG Leaders index at the point of observation, namely when the company's financial report is published, using data from the major evaluation of the IDXESGL index in March, during the period January 2023 to March 2024.

By carrying out several tests and analyses, empirical evidence shows that ESG disclosure as measured by ESG scores has a significant and negative influence on firm value, both as measured by Tobin's Q and PBV. This means that better ESG practices and disclosures can reduce firm value. Therefore, it is important for companies to implement ESG initiatives and review ESG disclosure strategies, ensuring relevant information is conveyed to create corporate value.

Profitability as measured by return on assets (ROA) and firm size as measured by the natural logarithm of total assets have also been empirically proven to be able to moderate the relationship between ESG disclosure and firm value. Both show that the moderating role weakens the negative relationship between ESG disclosure and firm value. These findings have the implication that companies need to strengthen their financial condition while conducting a careful evaluation of their ESG strategies. So with high profitability and good ESG practices, companies can convince stakeholders thereby increasing the value of the company. Apart from that, large companies also need to develop stronger and measurable strategies to prove that their sustainability practices are not just symbolic, but provide real added value.

This study has several limitations that need to be noted. First, this study sample is limited to only companies listed in the IDX ESG Leaders (IDXESGL) index, so the study results may not fully represent all companies in Indonesia. In addition, the time period used in this study is also limited, so it cannot reflect changes in ESG dynamics and practices that may occur in other periods. Second, the data used in this study only includes three main variables, namely ESG disclosure, profitability, and firm size, which may not comprehensively cover all factors that influence firm value. Therefore, the findings of this study need to be interpreted with caution, and further research is needed to overcome these limitations and strengthen the results obtained. Recommendations for future researchers are to expand the research sample to cover more companies and
extend the research period to observe changes in ESG dynamics and trends and their impact on firm value in a more comprehensive and sustainable manner. In addition, one could also consider adding additional variables that have the potential to influence firm value, as well as directing research to specific sectors to uncover industry-specific dynamics that may influence the relationship between ESG and firm value.

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