



Strategic: Journal of Education Business management



Homepage journals: <https://ejournal.upi.edu/index.php/strategic/>

Impact of ESG Scores on Financial Performance: Evidence from Non-Financial Companies Listed on the Indonesia Stock Exchange

A.A Junia¹, I.F. Prasetya²

Universitas Pendidikan Indonesia

*Correspondence: E-mail: annisajunia@upi.edu

ABSTRACT

This study examines the impact of Environmental, Social, and Governance (ESG) scores on the financial performance of non-financial companies listed on the Indonesia Stock Exchange (IDX) over the period 2020–2024. ESG scores are sourced from Morningstar Sustainalytics, and financial performance is measured using Return on Assets (ROA) as a proxy for operational efficiency. Using a cross-sectional dataset of 85 non-financial companies, Ordinary Least Squares (OLS) regression analysis reveals a positive but statistically insignificant relationship in the full sample ($\beta = 0.156$, $t = 1.409$, $p = 0.163$). After excluding five identified statistical outliers, the relationship becomes positive and significant at the 5% level ($\beta = 0.152$, $t = 2.337$, $p = 0.022$), suggesting that lower ESG risk exposure is modestly associated with improved asset efficiency. These findings have implications for corporate sustainability strategy, investor decision-making, and regulatory policy in Indonesia's emerging capital market.

Keywords: ESG scores; return on assets; financial performance; corporate sustainability; Indonesia Stock Exchange

ARTICLE INFO

Article History:

Submitted/Received 15 July 2025

First Revised 12 Aug 2025

Accepted 30 Aug

First Available online 30 Sept 2025

Publication Date 30 Sept 2025

Keyword: ESG Scores; Return on Assets; Financial Performance; Corporate Sustainability; Indonesia Stock Exchange

1. INTRODUCTION

The past decade has witnessed a rapid proliferation of sustainability-oriented investment frameworks, with Environmental, Social, and Governance (ESG) criteria emerging as a central lens through which institutional and retail investors assess corporate risk and long-term value creation. ESG has evolved from a non-financial screening tool into a quantitative indicator that informs portfolio allocation, capital market valuations, and strategic corporate governance ([Friede, Busch, & Bassen, 2015](#)). Globally, ESG-labelled assets under management exceeded USD 35 trillion in 2023, with continued growth driven by regulatory mandates for sustainability disclosure across major economies.

In the Indonesian context, the Financial Services Authority ([Otoritas Jasa Keuangan, OJK](#)) has implemented the Sustainable Finance Roadmap, placing heightened expectations on ESG integration among publicly listed companies. Non-financial firms on the Indonesia Stock Exchange (IDX) are increasingly subject to sustainability reporting requirements, and investors are beginning to demand transparency regarding ESG-related risks and opportunities. Despite this momentum, empirical evidence on whether ESG engagement translates into tangible improvements in financial performance remains limited within the Indonesian market.

The theoretical underpinnings of the ESG–financial performance relationship are grounded in stakeholder theory ([Freeman, 1984](#)), which posits that firms managing relations with all stakeholders generate superior long-term value; resource-based theory ([Barney, 1991](#)), which holds that sustainability competencies represent rare and inimitable competitive advantages; and legitimacy theory ([Suchman, 1995](#)), which argues that alignment with societal norms reduces reputational and regulatory risk. However, empirical evidence remains mixed. A meta-analysis by [Friede et al. \(2015\)](#) covering more than 2,000 studies found that approximately 63% reported a positive ESG–financial performance relationship, while a significant minority reported neutral or negative results, attributable to methodological heterogeneity and context-specific factors.

This study contributes to the literature by empirically analyzing the relationship between externally validated ESG risk scores from Morningstar Sustainalytics and five-year mean Return on Assets (ROA) for 85 non-financial companies listed on the IDX. Unlike prior Indonesian studies that rely on self-reported sustainability indices, this research uses objective and internationally standardized ESG risk ratings. The findings aim to provide evidence-based guidance for corporate managers, investors, and policymakers operating in Indonesia's emerging capital market.

The remainder of this paper is organized as follows. Section 2 describes the data, sample, and research methodology. Section 3 presents the empirical results and discussion. Section 4 concludes with implications and directions for future research.

2. Research Methodology

2.1. Data and Sample

This study employs a quantitative cross-sectional research design. The sample consists of 85 non-financial companies listed on the IDX for which ESG risk scores from Morningstar Sustainalytics were available as of the 2023 assessment cycle. Financial sector companies were excluded due to their structurally distinct asset bases and regulatory environments, which make ROA comparisons with non-financial firms methodologically problematic ([Gujarati & Porter, 2009](#)).

ESG scores were obtained from the Morningstar Sustainalytics ESG Risk Ratings database, which provides company-level risk assessments updated annually. Financial performance data were extracted from audited annual reports for fiscal years 2020 through 2024, sourced from the IDX Electronic Reporting System (IDXNet) and company investor relations disclosures. Five-year mean ROA (2020–2024) was computed to provide a stable, representative measure of financial performance that smooths out year-specific shocks.

2.2. Variable Operationalization

Table 1. Variable Definitions and Measurement

Variable	Type	Measurement	Source
ROA (%)	Dependent	5-year mean net income / total assets × 100	IDX Annual Reports 2020–2024
ESG Score	Independent	Sustainalytics ESG Risk Rating (0–100; higher = greater ESG risk)	Morningstar Sustainalytics (2023)

Note: A lower ESG score indicates better ESG risk management ([Sustainalytics, 2023](#)).

2.3. Analytical Method

The primary analytical tool is Ordinary Least Squares (OLS) simple linear regression to estimate the relationship between ESG scores and mean ROA:

$$ROA_P_i = \alpha_0 + \alpha_1 ESGScore_i + \varepsilon_i$$

where ROA_P_i denotes the percentage-form mean ROA for company i , $ESGScore_i$ is the Sustainalytics ESG risk rating, α_0 is the intercept, α_1 is the coefficient of primary interest, and ε_i is the error term.

The following classical assumption diagnostics were conducted prior to interpretation: (1) the Shapiro-Wilk test for normality of regression residuals; (2) the Breusch-Pagan Lagrange Multiplier test for heteroskedasticity; and (3) the Durbin-Watson statistic for residual autocorrelation. Outlier identification was conducted using the interquartile range (IQR) method, and a sensitivity model excluding detected outliers was estimated to assess the robustness of the main findings.

3. RESULTS AND DISCUSSION

3.1. Descriptive Statistics

Table 2 presents the descriptive statistics for both variables. The 85 sampled companies exhibit a mean ESG risk score of 29.06 (SD = 9.76), placing the average firm in the medium ESG risk category (20–30) as classified by Sustainalytics. Scores range from 7.11 (negligible risk) to 54.02 (severe risk), reflecting considerable heterogeneity in sustainability risk management across Indonesian non-financial firms.

Mean ROA averages 8.69% (SD = 9.96%), ranging from −44.27% (GOTO) to 36.41% (UNVR). The large dispersion indicates significant variation in operational efficiency across the sample. Five companies were identified as statistical outliers using the IQR method: GOTO and BUKA recorded deeply negative average ROA due to structural losses in their early post-IPO phases, while ITMG, SIDO, and UNVR registered unusually high positive ROA driven by sector-specific advantages in commodities and consumer goods.

Table 2. Descriptive Statistics

Variable	N	Mean	Median	Std. Dev.	Min.	Max.	IQR
ESG Score	85	29.06	28.07	9.76	7.11	54.02	13.08
ROA (%)	85	8.69	7.92	9.96	−44.27	36.41	8.88

Note: ROA is expressed as a percentage. ESG score from Morningstar Sustainalytics (higher = higher ESG risk).

3.2. Classical Assumption Tests

The Shapiro-Wilk test on regression residuals yields $W = 0.816$ ($p < 0.001$), indicating a significant departure from normality in the full-sample model, consistent with the influence of extreme outliers. The Breusch-Pagan LM test returns a statistic of 1.110 ($p = 0.292$), confirming homoskedastic errors—variance in the error term is constant across ESG score levels. The Durbin-Watson statistic of 0.162 indicates apparent positive serial correlation; however, as the data are cross-sectional, this reflects the ordering of observations by ROA magnitude rather than true temporal autocorrelation and does not invalidate the OLS estimates.

3.3 Regression Results

Table 3 presents OLS regression results for both the full sample (Model 1) and the outlier-adjusted sample (Model 2). In Model 1 ($n = 85$), the ESG score coefficient is positive ($\beta_1 = 0.1559$) but does not reach statistical significance ($t = 1.409$, $p = 0.163$). The model explains only 2.33% of variance in ROA (Adjusted $R^2 = 0.0116$), and the 95% confidence interval for β_1 straddles zero $[-0.064, 0.376]$.

In Model 2, following outlier exclusion ($n = 80$), the ESG coefficient remains similar in magnitude ($\beta_1 = 0.1519$) and becomes statistically significant at the 5% level ($t = 2.337$, $p =$

0.022). The model fit improves notably, with $R^2 = 0.0655$ and Adjusted $R^2 = 0.0535$, and the 95% confidence interval no longer encompasses zero [0.023, 0.281].

Table 3. OLS Regression Result: Effect of ESG Score on ROA (%)

Parameter	Model 1 (Full, n = 85)	Model 2 (No Outliers, n = 80)
Intercept (α_0)	4.1580	4.2276
ESG Score (β_1)	0.1559	0.1519*
Standard Error	0.1107	0.0650
t-statistic	1.409	2.337
p-value	0.163	0.022
95% CI for β_1	[-0.064, 0.376]	[0.023, 0.281]
R^2	0.0233	0.0655
Adjusted R^2	0.0116	0.0535
F-statistic	1.984	5.463
Breusch-Pagan LM (p)	1.110 (0.292)	—
Shapiro-Wilk W (p)	0.816 (<0.001)	—

Note: Dependent variable is mean ROA (%). * $p < 0.05$. Model 2 excludes five IQR-identified outliers: GOTO, BUKA, ITMG, SIDO, UNVR.

3.4 Discussion

The results are directionally consistent with the dominant strand of the ESG–financial performance literature: companies with better ESG risk management (lower Sustainability scores) tend to exhibit higher average ROA. The positive coefficient ($\beta_1 \approx 0.15$) implies that a one-unit improvement in ESG risk score is associated with approximately 0.15 percentage point higher mean ROA—a modest but meaningful effect in the context of Indonesia’s emerging market.

Several mechanisms may explain this association. First, companies with effective ESG risk management face fewer regulatory penalties, litigation costs, and reputational incidents, sustaining stable operational margins—consistent with the risk reduction hypothesis ([Lins, Servaes, & Tamayo, 2017](#)). Second, governance-oriented ESG improvements, such as board independence and financial transparency, reduce agency costs and improve capital allocation efficiency ([Eccles, Ioannou, & Serafeim, 2014](#)). Third, responsible employment practices reduce labor turnover and improve productivity, lowering human capital costs that directly affect ROA.

The sensitivity of results to the five outliers is noteworthy. GOTO and BUKA are technology-sector companies whose post-IPO business models prioritized user growth over accounting profitability, suppressing ROA regardless of ESG quality. SIDO and UNVR’s extreme positive ROA reflects brand equity and pricing power specific to the consumer goods sector rather than ESG performance alone. This underscores the importance of incorporating industry fixed effects and firm-level controls in future panel data studies.

The low R^2 values across both models are consistent with the broader literature, where ESG scores alone explain only a small fraction of cross-sectional ROA variation. Financial performance is shaped by capital intensity, leverage, market structure, business cycle dynamics, and management quality factors beyond the scope of this bivariate cross-sectional analysis. Future research should incorporate control variables such as firm size, leverage, sales growth, and sector classification to yield more precise estimates of the ESG–performance relationship.

4. CONCLUSION AND RECOMMENDATIONS

4.1 Conclusion

This study empirically examined the relationship between ESG risk scores and financial performance (ROA) for 85 non-financial companies listed on the IDX over the period 2020–2024. The key findings are as follows. In the full sample, ESG scores exhibit a positive but statistically insignificant association with mean ROA ($\beta = 0.156$, $p = 0.163$). After excluding five extreme statistical outliers, the relationship becomes positive and significant at the 5% level ($\beta = 0.152$, $p = 0.022$, Adjusted $R^2 = 5.35\%$). Diagnostic tests confirm that the error variance is homoskedastic, while residual non-normality in the full sample reinforces the need for robust estimation in future research.

These findings partially support the hypothesis that lower ESG risk exposure is associated with higher operational efficiency. The evidence suggests that ESG engagement is not merely a compliance exercise but can contribute modestly to financial performance improvement, particularly when extreme outliers driven by sector-specific structural characteristics are accounted for.

4.2 Recommendations

Based on the findings, the following recommendations are offered to relevant stakeholders. For companies, corporate managers are encouraged to strengthen ESG risk management practices and integrate sustainability goals into long-term strategic planning, as evidence suggests that proactive ESG engagement can contribute to operational efficiency and reputation stability, with downstream benefits for profitability. For investors, ESG scores should be treated as one signal within a broader multifactor investment framework rather than a standalone predictor of financial performance, and sector-adjusted ESG analysis is advisable given the substantial variation in ESG–performance dynamics across industries.

Regarding regulators, particularly OJK and IDX, continuing to strengthen mandatory ESG disclosure requirements will enhance the comparability and reliability of sustainability data, thereby supporting more efficient capital allocation in Indonesia's capital market. Finally, for future research, subsequent studies should employ panel data regression with firm and year fixed effects to enable causal inference, incorporate firm-level control variables such as size, leverage, and growth, decompose ESG into its environmental, social, and governance sub-dimensions, and extend the analysis to market-based performance measures such as Tobin's Q and abnormal stock returns.

REFERENCES

- Barney, J. (1991). Firm resources and sustained competitive advantage. *Journal of Management*, 17(1), 99–120. <https://doi.org/10.1177/014920639101700108>
- Creswell, J. W. (2014). *Research design: Qualitative, quantitative, and mixed methods approaches* (4th ed.). SAGE Publications.
- Damodaran, A. (2012). *Investment valuation: Tools and techniques for determining the value of any asset* (3rd ed.). Wiley.
- 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>
- Freeman, R. E. (1984). *Strategic management: A stakeholder approach*. Pitman Publishing.
- Friede, G., Busch, T., & Bassen, A. (2015). ESG and financial performance: Aggregated evidence from more than 2000 empirical studies. *Journal of Sustainable Finance & Investment*, 5(4), 210–233. <https://doi.org/10.1080/20430795.2015.1118917>
- Gujarati, D. N., & Porter, D. C. (2009). *Basic econometrics* (5th ed.). McGraw-Hill.
- Lins, K. V., Servaes, H., & Tamayo, A. (2017). Social capital, trust, and firm performance: The value of corporate social responsibility during the financial crisis. *Journal of Finance*, 72(4), 1785–1824. <https://doi.org/10.1111/jofi.12505>
- Otoritas Jasa Keuangan (OJK). (2021). *Roadmap for sustainable finance in Indonesia 2021–2025*. Financial Services Authority of Indonesia.
- Suchman, M. C. (1995). Managing legitimacy: Strategic and institutional approaches. *Academy of Management Review*, 20(3), 571–610. <https://doi.org/10.5465/amr.1995.9508080331>
- Sustainalytics. (2023). ESG risk ratings methodology abstract. Morningstar Sustainalytics. <https://www.sustainalytics.com/>