ESG, ASSET QUALITY, AND FINANCIAL PERFORMANCE: EVIDENCE FROM THE INDONESIAN MANUFACTURING SECTOR

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Abstract

Analyzing the effect of interaction between ESG and asset quality on the 2019-2023 financial performance from manufacturing firm indexed on Indonesia Stock Exchange is the goal of this research. Firms published annual reports are the source for research data. If the data were unavailable on the IDX website, the researchers retrieved it from the companies' official websites. The findings exhibit that there is no significant effect on ESG interaction with financial performance, as measured by ROA, while asset quality, measured by the quick ratio, positively affects financial performance. Contribution made by offering further insight of the interaction between ESG practices and financial performance in manufacturing firms indexed on the IDX during the 2019–2023 period. The interaction among ESG and financial performance has been explored by previous studies, but most studies have focused on global firms or broader sectors. By focusing on Indonesia's manufacturing sector, this study provides empirical insights into how ESG factors interact with asset quality and financial performance in an emerging market context where ESG regulations are still evolving and implementation challenges persist. Thus, this research contributes to the literature by addressing a significant gap in ESG studies, which have predominantly examined developed markets or boarder sectors.

Keywords: ESG, Asset Quality, Financial Performance, Manufacturing Firms

1. Introduction

There is an increasing importance in firms for environmental, social, and governance (ESG) issues in recent years. This shift is driven by heightened public awareness of sustainability and growing regulatory pressures encouraging the adoption of sound ESG practices (BEI, 2022). Manufacturing companies in Indonesia are also responding to this trend, with a rising number voluntarily or mandatorily adopting ESG initiatives. According to the Indonesia Stock Exchange, there is 11 additional manufacturing firms that published sustainability reports, from 96 firms in 2022 to 107 firms in 2023.

The adoption of sound ESG practices is posited to positively influence a firm's asset quality. By mitigating operational and reputational risks, improving resources efficiency and fostering long term resilience, ESG initiatives can protect and enhance the value of a company's assets. Empirical support for this link comes from a study by The Boston Consulting Group (2021), which found that companies with strong ESG performance typically demonstrate superior asset quality compared to their peers with weaker ESG commitments.

This relationship between responsible conduct and asset stewardship aligns with stakeholder theory, which posits that a firm is accountable not only to its shareholders but to a broad spectrum of constituents, including employees, customers, suppliers, and the wider society. Effective asset management, underpinned by high asset quality, is crucial to meeting these diverse stakeholder expectations. Ultimately, maintaining high

quality assets can lead to improved financial performance and reduced financial distress, thereby creating value for all stakeholders.

Building on this theoretical and empirical foundation, recent research by Budiman et al. (2023) provides direct evidence for the Indonesian context, finding that ESG performance and asset quality jointly exert a positive influence on the financial performance of manufacturing firms listed on the IDX. However, given the rapid evolution of ESG norms and market conditions, further investigation with more recent data is warranted. Therefore, this study seeks to extend this line of inquiry by analyzing the connection between ESG practices, asset quality, and the financial performance of manufacturing firms listed on the Indonesia Stock Exchange from 2019 to 2023.

Consequently, this research is designed to offer significant theoretical and practical contributions. Theoretically, it aims to strengthen the empirical evidence on the ESG asset quality performance nexus within an emerging market context, specifically in the capital intensive and environmentally salient manufacturing sector. It also serves to test the applicability of Stakeholder Theory in contemporary Indonesian business dynamics. Practically, the findings are expected to guide corporate managers in designing integrated ESG strategies that bolster asset integrity and financial outcomes, aid investors in making informed decisions, and assist regulators in crafting policies that promote sustainable business practices and systemic financial stability.

2. Theoretical Background

Stakeholder theory (Freeman, 1984) provides a foundational framework for understanding corporate adoption of Environmental, Social, and Governance (ESG) practices. The theory posits that long term corporate success depends on satisfying a broad constellation of stakeholders including employees, customers, communities, regulators, and the environment rather than shareholders alone. In emerging economies such as Indonesia, these stakeholder pressures are increasingly institutionalized. Regulatory initiatives like the Financial Services Authority (OJK) Regulation No. 51/POJK.03/2017 on Sustainable Finance and mandatory sustainability reporting requirements by the Indonesia Stock Exchange (IDX) compel firms, especially in manufacturing with significant environmental and social footprints, to align their strategies with stakeholder expectations through substantive ESG engagement.

From this theoretical perspective, robust ESG performance functions as a critical legitimizing mechanism. It builds trust, enhances reputation, and secures the social license to operate factors particularly vital in Indonesia's manufacturing sector, which faces intense scrutiny over environmental compliance (e.g., waste management, emissions) and social issues (e.g., labor standards, community relations). Consequently, firms with strong ESG profiles are better positioned to attract long term investors, secure preferential financing, and mitigate regulatory and reputational risks, thereby laying a foundation for superior financial performance.

Agency theory (Jensen & Meckling, 1976) complements this view by highlighting the conflicts of interest between principals (owners) and agents (managers), which can lead to suboptimal decision-making in resource allocation and asset management. The governance dimension of ESG directly mitigates these agency problems through mechanisms such as independent board oversight, effective audit committees, transparent disclosure, and stringent ethical guidelines. In contexts where corporate governance standards are evolving, as in many Indonesian firms, strong ESG governance acts as a vital control system, aligning managerial actions with long term value creation and

curbing opportunistic behaviors that could impair asset quality, such as excessive risk taking or poor maintenance of productive assets.

Building on stakeholder theory, firms that excel in ESG performance are expected to cultivate stronger stakeholder relationships, translating into financial advantages such as customer loyalty, employee productivity, and lower cost of capital. Empirical evidence from Asian emerging markets supports this proposition. For instance, Zhao et al. (2018) demonstrated a positive ESG performance link in China's energy sector, and Dalal and Thaker (2019) found similar results in India. In the specific context of Indonesia, Budiman et al. (2023) documented that ESG initiatives enhance financial outcomes among IDX listed manufacturers, especially when coupled with sound asset management.

Nevertheless, the ESG financial performance relationship in emerging markets can be nuanced. Institutional voids, inconsistent implementation, and prevailing short term profit pressures may attenuate the immediate financial returns from ESG investments. Despite these contextual challenges, the core theoretical expectation remains superior ESG performance should, on average, lead to better financial results through enhanced stakeholder capital and risk mitigation. Thus, we propose the first hypothesis that ESG performance has a positive effect on the financial performance of manufacturing firms in Indonesia.

Furthermore, agency theory implies that high-quality asset management buttressed by effective governance reduces operational inefficiencies and enhances profitability. Firms with strong asset quality, often reflected in metrics like the Quick Ratio, demonstrate prudent liquidity management, lower default risk, and greater operational flexibility. In the manufacturing sector, where production cycles and supply chain coordination demand meticulous working capital management, superior asset quality directly facilitates revenue generation and cost control. Empirical studies in the Indonesian context affirm this logic. Silvia (2017) found that asset quality indicators significantly predict profitability in local manufacturing firms, and Pratama and Yuliana (2021) reported that liquidity ratios, as proxies for asset quality, positively influence Return on Assets (ROA). Therefore, drawing from agency theory and corroborating empirical evidence, we hypothesize that asset quality has a positive effect on the financial performance of manufacturing firms in Indonesia.

3. Methods
3.1 Research design and data sources
This study employs a quantitative research design using panel data from manufacturing firms listed on the Indonesian Stock Exchange (IDX) for the period 2019–2023. The financial sector was excluded from the sample due to its distinct regulatory framework and financial reporting structure, which could confound the analysis. The primary sources of data were the companies officially published annual reports and sustainability reports, which were systematically collected from the IDX website; when unavailable, the researchers retrieved the documents directly from the companies' official investor relations websites. Data for the Environmental, Social, and Governance (ESG) scores were sourced from the Refinitiv Eikon database, a globally recognized provider of ESG metrics. The observation period was selected to capture recent developments in corporate ESG practices and financial performance, particularly during the post-pandemic recovery phase. A purposive sampling technique was used to select firms with complete and consistent data, and panel regression analysis was applied to examine the relationships among variables while controlling for firm and time effects.

3.2 Populations and samples

The research population comprises all manufacturing firms consistently listed on the IDX from 2019 to 2023. A purposive sampling technique was applied with the following criteria:

1) Classified under the manufacturing sector based on the IDX industry classification
2) Published complete annual financial reports for the entire observation period (2019-2023)
3) Had an ESG score available in the Refinitiv Eikon database for the relevant years. The final sample consisted of 74 firm year observations for the ROA model and 88 firm year observations for the ROE model, after accounting for missing data in specific variables

3.3 Definition Operational Variable

The variables used in this study and their measurements are detailed in Table 1.

Table 1. Definition Operational Variable

Variable	Variable Name	Symbol	Measurement
Dependent	Financial Performance 1: ROA	ROA	Net Income / Total Assets
	Financial Performance 2: ROE	ROE	Net Income / Total Shareholders' Equity
Independent	ESG Performance	ESG	Composite ESG score from Refinitiv Eikon (Scale: 0-100)
	Asset Quality	Current Ratio	Current Assets / Current Liabilities
		Quick Ratio	(Current Assets - Inventory) / Current Liabilities
		Cash Ratio	Cash & Cash Equivalents / Current Liabilities
		Debt to Asset Ratio	Total Debt / Total Assets
Control	Firm size	SIZE	Natural logarithm of total assets
	Firm age	AGE	Number of years since company establishment
	Leverage	LEV	Total Debt / Total Equity

3.4 Data Analysis Model

To examine the relationship between the independent variables and the dependent variables while controlling firm specific factors, this study employs a panel data regression analysis. Two separate regression models were estimated to capture the distinct dynamics of operational profitability (ROA) and shareholder return (ROE). The general form of the regression models is as follows:

Model 1 (ROA):

$$ROA_{it} = \beta_0 + \beta_1 ESG_{it} + \beta_2 CurrentRatio_{it} + \beta_3 QuickRatio_{it} + \beta_4 CashRatio_{it} + \beta_5 DAR_{it} + \beta_6 SIZE_{it} + \beta_7 AGE_{it} + \beta_8 LEV_{it} + \varepsilon_{it}$$

Model 2 (ROE):

$$ROE_{it} = \beta_0 + \beta_1 ESG_{it} + \beta_2 CurrentRatio_{it} + \beta_3 QuickRatio_{it} + \beta_4 CashRatio_{it} + \beta_5 DAR_{it} + \beta_6 SIZE_{it} + \beta_7 AGE_{it} + \beta_8 LEV_{it} + \varepsilon_{it}$$

3.5 Hypothesis Testing

Prior to conducting hypothesis testing, a series of diagnostic checks were performed on the panel data for each regression model to validate the underlying classical assumptions and ensure the robustness of the estimates. The residuals of the models were tested for normality using the Kolmogorov-Smirnov test. Multicollinearity among the independent variables was assessed by examining the Variance Inflation Factor (VIF) and Tolerance values. The presence of heteroscedasticity was evaluated using the Glejser test, while autocorrelation was detected through the Runs Test.

The results confirmed that all required assumptions were satisfactorily met for both models, thereby lending credibility to the subsequent regression analyses (detailed outputs of these diagnostic tests are available upon request). The overall significance of each regression model was evaluated using the F-test, and the individual influence of the independent variables was assessed with the t-test. A p-value threshold of less than 0.05 was applied to determine statistical significance. All data processing and statistical analyses were executed using SPSS software, version 26.

4. Results And Discussion

4.1. Sample and Preliminary Tests

The population of this study comprises all firms listed on the Indonesian Stock Exchange (IDX) from 2019 to 2023, excluding financial sector companies due to their distinct regulatory frameworks. A purposive sampling method was applied to select the final sample, which consists solely of manufacturing firms that published complete financial and ESG data for the observation period. Prior to regression analysis, the panel data for each model underwent diagnostic checks to validate the classical assumptions. The results confirmed that the data satisfied the requirements for normality (Kolmogorov-Smirnov test), multicollinearity ($VIF < 10$, $Tolerance > 0.1$), homoscedasticity (Glejser test), and no autocorrelation (Runs test), ensuring the robustness of the subsequent regression estimates.

4.2. Regression Results for the ROA Model

The findings from the panel data regression analysis with Return on Assets (ROA) as the dependent variable are presented in Table 2. The overall model is statistically significant (F-statistic = 114.377, $p < 0.001$), indicating a good model fit. Contrary to the first hypothesis (H1), the coefficient for the ESG variable is negative and statistically insignificant ($\beta = -0.00008257$, $p = 0.277$). This result suggests that, within the scope of this study, ESG performance did not exert a significant direct influence on the operational profitability (ROA) of Indonesian manufacturing firms.

Table 2. Regression Test Results for ROA Model

Model	Unstandardized B	Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.
(Constant)	1.966	.099		19.871	.000
Current Ratio	-.015	.002	-.554	-6.822	.000
Quick Ratio	.024	.003	.653	6.902	.000
Cash Ratio	-.013	.004	-.262	-3.733	.000
DAR	-.093	.009	-.528	-10.205	.000
ESG	-0.00008257	.000	-.040	-1.096	.277
SIZE	-.061	.003	-1.435	-19.420	.000
AGE	.001	.000	.376	10.028	.000

Model	Unstandardized B	Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.
lev	7.985E-16	.000	.924	11.984	.000

Source: Data analyzed by the author using SPSS (2024)

The analysis of asset quality proxies reveals a more nuanced picture. Supporting the second hypothesis (H2), the Quick Ratio demonstrate a positive and highly significant effect on ROA ($\beta = 0.024$, $p < 0.001$). This indicates that firms with stronger short-term liquidity, excluding less liquid inventory, are associated with more efficient asset utilization and higher profitability. However, other liquidity measures present contrasting insights. Both the Current Ratio ($\beta = -0.015$, $p < 0.001$) and the Cash Ratio ($\beta = -0.013$, $p < 0.001$) show significant negative relationship with ROA. This finding may imply that excessively high levels of current assets or cash could reflect suboptimal asset allocation or conservative financial management, potentially leading to lower returns. Furthermore, the Debt to Asset Ratio (DAR) exhibits a strong negative influence ($\beta = -0.093$, $p < 0.001$), aligning with the notion that higher financial leverage increases risk and interest burdens, thereby eroding operational returns.

4.3. Regression Results for the ROE Model

To comprehensively assess financial performance, a second model was estimated using Return on Equity (ROE) as the dependent variable. The results, presented in Table 3, reveal critical divergences from the ROA model, particularly concerning the ESG variable. The overall model remains statistically significant (F-statistic = 31.197, $p < 0.001$).

Table 3. Regression Test Results for ROE Model

Model	Unstandardized B	Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.
(Constant)	2.516	.289		8.690	.000
Current Ratio	-.024	.005	-.666	-4.570	.000
Quick Ratio	.044	.008	.912	5.265	.000
Cash Ratio	.002	.008	.030	.258	.797
DAR	.081	.027	.275	2.949	.004
ESG	-.001	.000	-.430	-5.912	.000
SIZE	-.082	.009	-1.155	-8.722	.000
AGE	.003	.000	.876	13.059	.000
lev	1.479E-15	.000	.974	7.288	.000

Source: Data analyzed by the author using SPSS (2024)

Notably, the ESG coefficient in the ROE model is negative and highly significant ($\beta = -0.001$, $p < 0.001$). This stark contrast to its insignificant effect on ROA indicates that while ESG performance did not impact operational profitability, it was associated with lower returns to equity holders during the observed period. This result necessitates a deeper examination, as it suggests potential short-term costs associated with ESG investments that directly reduce distributable earnings to shareholders before long-term benefits materialize.

The effects of asset quality proxies in the ROE model also show important variations. Consistent with the ROA findings, the Quick Ratio maintains a strong positive effect ($\beta = 0.044$, $p < 0.001$), and the Current Ratio a negative one ($\beta = -0.024$, $p < 0.001$). However, the Cash Ratio becomes statistically insignificant ($p = 0.797$), and the Debt to

Asset Ratio (DAR) shows a significant positive effect ($\beta = 0.081$, $p = 0.004$). This positive relationship between leverage and ROE is a classic demonstration of the financial leverage effect, where the use of debt amplifies returns to shareholders when the firm's operational returns exceed the cost of debt.

4.4. Discussion of Findings

The empirical results yield several key insights. First, the context-dependent nature of the ESG-financial performance link is clearly evident. The finding that ESG has an insignificant effect on ROA but a significant negative effect on ROE highlights that its financial implications are not uniform and depend heavily on the performance metric examined. This ambiguity in the Indonesian context may be attributed to several factors aligned with agency theory: managers might prioritize short-term accounting profitability (ROA) while the immediate costs of ESG initiatives such as investments in green technology or community programs reduce net income available to shareholders (ROE). This is consistent with Mulyani and Putra (2021), who noted the muted short-term impact of ESG in Indonesia's manufacturing sector, often due to inconsistent implementation and measurement.

Second, the analysis affirms that asset quality is a multidimensional construct with complex impacts. The consistent positive effect of the Quick Ratio across both models underscores the universal value of efficient, inventory-lean liquidity management for both operational efficiency and shareholder returns, supporting Pratama and Yuliana (2021). The negative impact of the Current and Cash Ratios on ROA, however, suggests a potential trade-off where excessive liquidity may indicate underutilized assets, hindering profitability. The dual role of leverage is particularly instructive: while high DAR harms operational asset efficiency (ROA), it can enhance returns to equity holders (ROE), illustrating the critical risk-return trade-off managers must navigate.

These results offer a more detailed perspective compared to Budiman et al. (2023), who found a joint positive effect. While our study confirms the strong, positive role of certain asset quality metrics (Quick Ratio), it reveals a more complex and initially costly relationship for ESG, particularly from the shareholders' perspective. This divergence underscores the importance of considering multiple dimensions of financial performance and suggests that in emerging markets like Indonesia, the tangible financial payoff from ESG may require a longer gestation period to outweigh its initial costs.

5. Conclusion

According on the analysis, this research concludes that financial performance which gauged by return on assets (ROA) does not influence significantly by environmental, social, and governance (ESG) factors in manufacturing firms in Indonesia. Although ESG issues are receiving increased attention driven by public awareness and regulatory pressures their effect on short-term financial outcomes such as ROA remains limited. External factors, including economic uncertainty, low awareness, and inconsistent ESG implementation among Indonesian companies, hinder the measurable interaction effect of ESG on financial performance. Agency theories support this finding, which stated that managers often prioritize short-term, tangible results, whereas the benefits of ESG practices typically emerge over the longer term.

In contrast, the Quick Ratio connection with ROA demonstrates a positive and significant effect, indicating that asset quality reflected through strong liquidity contributes to more efficient asset utilization and profitability. This supports earlier studies showing that companies with well-managed assets, especially in terms of

liquidity, tend to achieve stronger financial performance. These findings offer practical insights for managers in Indonesia's manufacturing sector. While ESG adoption is essential for long-term sustainability, effective asset management particularly through maintaining liquidity ratios such as the Quick Ratio can have a more immediate impact on financial outcomes. Therefore, a balanced strategy that integrates ESG initiatives with efficient asset management may help companies achieve both sustainable and financially optimal performance.

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