

Research Article

The Effects of Environmental, Social, and Governance (ESG) Disclosure Score on the Financial Performance of Energy and Mining Companies in Indonesia

Irgi Maulana Putra ^{1*}, Muhammad Saiful Hakim ²

¹⁻² Management Science Program, Institut Teknologi Sepuluh Nopember, Surabaya, East Java, Indonesia

* Corresponding Author: 6031242005@student.its.ac.id

Abstract: This study aims to analyze the effect of Environmental, Social, and Governance (ESG) disclosure on the financial performance of companies in the energy and mining sectors in Indonesia. The research employs a quantitative method using multiple linear regression to examine the influence of the ESG pillars Environmental, Social, and Governance both individually and collectively on Return on Assets (ROA) and Return on Equity (ROE). The results indicate that overall ESG Pillar disclosure has a positive coefficient but does not have a statistically significant effect on corporate financial performance. The Social pillar shows a significant effect in improving ROE, while the Environmental and Governance pillars, despite having positive and negative coefficients respectively, do not exhibit statistically significant impacts on company profitability. This study highlights the importance of ESG integration particularly the Social aspect into the business strategies of energy and mining companies in Indonesia to enhance competitiveness, sustainability, and investor trust.

Keywords: Corporate Financial Performance; ESG; ROA; ROE; Sustainability.

1. Introduction

Over the past decade, the application of sustainability principles and Environmental, Social, and Governance (ESG) has become a crucial factor in global business strategy, along with increasing attention to non-financial aspects in assessing company performance (Friede, Busch, & Bassen, 2015). Growing awareness of environmental impact, social responsibility, and good governance has encouraged investors, regulators, and consumers to prioritize companies that implement sustainable business practices (Eccles, Ioannou, & Serafeim, 2014). This indicates a paradigm shift from a sole focus on financial results to a more holistic assessment of corporate sustainability (Khan, Serafeim, & Yoon, 2016). In Indonesia's Energy and Mining sector, the adoption of ESG is becoming increasingly important as the industry faces pressure from environmental regulations and strict social demands, particularly regarding carbon emissions and labor issues (Purnamasari & Suharti, 2021). Resource-intensive energy and mining operations not only impact the environment but also pose reputational risks that can significantly affect a company's long-term performance (Kolk & Pinkse, 2010, pp. 219-220). Therefore, the implementation of ESG has become an important instrument in managing these risks while strengthening the company's competitiveness at the national and global levels (Awaysheh et al., 2020).

From a financial perspective, ESG disclosure is believed to improve corporate financial performance through several mechanisms, including better risk management, increased operational efficiency, and attracting long-term investors (Chen, Feldmann, & Tang, 2015). The use of indicators such as Return on Assets (ROA) and Return on Equity (ROE) in ESG research is commonly used to measure the effectiveness of resource utilization and company profitability (Velte, 2017). Several studies show a positive correlation between ESG scores and financial performance, although the results of the research are heterogeneous (Orlitzky, Schmidt, & Rynes, 2003). However, empirical findings on the influence of ESG on company performance in Indonesia and globally still show varying results. Some studies show a

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significant positive influence, but other studies highlight the absence of a significant effect or even a negative influence, which may be due to differences in industry context, company size, and macroeconomic conditions (Friede et al., 2015; Setiawan & Ekaputra, 2022). Therefore, contextual studies that consider the characteristics of the manufacturing industry in Indonesia and macroeconomic variables such as Gross Domestic Product (GDP) are needed to produce more relevant and applicable findings.

Theoretically, the relationship between ESG scores and financial performance can be explained through several main approaches, namely stakeholder theory, legitimacy theory, and resource-based view (Khamisu & Paluri, 2024). Stakeholder theory states that companies that manage and respond to stakeholder interests through good ESG practices tend to gain support, loyalty, and trust, which can ultimately improve financial performance (Friede et al., 2015). Legitimacy theory emphasizes that companies need to align their actions and disclosures with prevailing social values and norms in order to gain legitimacy from society, thereby reducing regulatory, litigation, and external pressures that could potentially reduce profitability (Tan et al., 2025). Meanwhile, the resource-based view sees ESG capabilities as strategic resources that are difficult to imitate and can become a long-term competitive advantage reflected in increased asset utilization effectiveness and return on equity (Khamisu & Paluri, 2024). Based on global and national phenomena, the contributions and risks of the energy and mining sector, the inconsistency of previous research results, and relevant theoretical foundations, this study entitled "The Effect of Environmental, Social, and Governance (ESG) Scores on Financial Performance in Energy and Mining Companies in Indonesia" aims to empirically analyze the effect of ESG scores on financial performance as measured by ROA and ROE in energy and mining companies in Indonesia (Devianti, 2025; Wayan et al., 2025).

This study focuses on six energy and mining companies in Indonesia, with the aim of examining the impact of the adoption of each ESG (Environmental, Social, Governance) pillar and the combined ESG score on financial performance in terms of company profitability and financial risk. This approach is expected to provide a more comprehensive picture of how ESG practices can be an effective business strategy amid the current economic dynamics in Indonesia (Lestari & Meylani, 2020). In addition, this study will consider macroeconomic control variables such as GDP to capture the influence of national economic conditions on the relationship between ESG and company performance. This understanding is important given that macroeconomic factors can moderate or influence the effectiveness of ESG implementation in improving financial results (Nguyen et al., 2020).

2. Literature Review

2.1 Stakeholder Theory

Stakeholder theory states that companies are not only responsible to shareholders, but also to all parties that can influence or be influenced by the achievement of organizational goals, such as employees, customers, suppliers, government, and the community (Freeman, 1984). This theory emphasizes that the long-term success of a company depends on its ability to manage and balance the interests of various stakeholder groups through responsible practices, including in environmental, social, and governance aspects (Freeman, 1984). In the context of ESG, stakeholder theory explains that the implementation of ESG policies and practices is a company's strategy to respond to stakeholder expectations and build long-term mutually beneficial relationships, which in turn can support improved financial performance (Freeman, 1984; Eccles et al., 2014).

2.2 Legitimacy Theory

Legitimacy theory assumes that organizations operate within a framework of social values and norms constructed by society, so that the survival of a company depends on the extent to which its activities are considered legitimate, appropriate, and socially acceptable (Suchman, 1995). Legitimacy is defined as the perception or assumption that an entity's actions are desirable or appropriate within a system of socially constructed norms, values, beliefs, and definitions, so that companies will strive to align their behavior and disclosures with societal expectations (Suchman, 1995). In the context of ESG, legitimacy theory views sustainability disclosure and practices as strategic means for companies to obtain, maintain, or restore social legitimacy by demonstrating a commitment to ethics, transparency, and

sustainability (Suchman, 1995; Lee & Raschke, 2023). Thus, credible ESG implementation and reporting can reduce regulatory risk, public pressure, and reputational threats, thereby helping to maintain the sustainability of a company's operations and performance (Suchman, 1995; Lee & Raschke, 2023).

2.3 Agency Theory

Agency theory explains the contractual relationship between company owners (principals) and managers (agents), in which managers are given the authority to manage the company but have interests and information that are not always in line with those of the owners (Jensen & Meckling, 1976). These differences in interests and information asymmetry give rise to agency conflicts that can result in agency costs in the form of monitoring costs, guarantee costs, and residual losses due to managers' behavior that does not fully maximize shareholder welfare (Jensen & Meckling, 1976). In this framework, good corporate governance is necessary to align the interests of managers and owners through incentive mechanisms, supervision, and transparent reporting (Jensen & Meckling, 1976).

ESG governance principles such as independent boards of directors, effective audit committees, and comprehensive information disclosure can serve as mechanisms to reduce agency conflicts and improve management accountability (Jensen & Meckling, 1976; Eccles et al., 2014). With increased transparency and oversight through ESG reporting, shareholders and other stakeholders can assess managerial performance more objectively, thereby encouraging decision-making that is more aligned with the company's long-term goals (Jensen & Meckling, 1976; Eccles et al., 2014).

2.4 Sustainability Theory

Sustainability theory asserts that the goal of a company is not only to maximize financial profits, but also to create long-term value for society and the environment, so that company performance needs to be assessed simultaneously from economic, social, and environmental dimensions (Elkington, 1997). Elkington (1997) introduced the triple bottom line concept, which summarizes the three main pillars of profit (economic), people (social), and planet (environment) that must be managed in a balanced manner for a company to be considered sustainable (Elkington, 1997). Within this framework, a company's success is measured by its ability to maintain economic viability while minimizing negative impacts on the environment and contributing positively to social welfare (Elkington, 1997). ESG principles are the operational embodiment of sustainability theory because they encourage companies to integrate environmental, social, and governance considerations into their daily business strategies and practices (Elkington, 1997; Eccles et al., 2014). Companies that consistently apply a sustainability approach are believed to be more resilient in the face of crises, have a better reputation, and are more attractive to investors who care about social and environmental issues, which can ultimately improve long-term financial performance (Elkington, 1997; Friede et al., 2015).

2.5 Resource Base Value Theory

The resource-based view (RBV) explains that sustainable competitive advantage is derived from a company's valuable, rare, difficult to imitate, and not easily replaceable internal resources and capabilities (Barney, 1991). These resources can be tangible or intangible assets, such as technology, knowledge, organizational processes, reputation, and relationships with stakeholders, which enable companies to achieve above-average performance compared to their competitors (Barney, 1991). From an RBV perspective, ESG practices and capabilities, such as a strong environmental management system, transparent governance, and good social relations with the community, can meet the VRIN (valuable, rare, inimitable, non-substitutable) criteria, thereby becoming a source of long-term competitive advantage (Barney, 1991; Awaysheh et al., 2020). Well-developed ESG capabilities have the potential to increase operational efficiency, reduce risk, improve reputation, and facilitate access to funding, which can ultimately be reflected in an increase in a company's ROA and ROE (Barney, 1991; Awaysheh et al., 2020).

2.6 Shareholder & Stakeholder Theory

Shareholder theory assumes that the main objective of a company is to maximize shareholder welfare by increasing company value and profits (Friedman, 1970). In this theory,

managers are seen as having a fiduciary duty to act in the interests of shareholders, so that business decisions are primarily assessed based on their impact on the financial returns of capital owners (Friedman, 1970; Izazi, 2022). Corporate social responsibility in this perspective is often understood as merely complying with applicable laws and generating profits without harming shareholders (Friedman, 1970). Meanwhile, stakeholder theory states that companies are not entities that only operate for their own interests and those of shareholders, but must provide benefits to all stakeholders, such as shareholders, creditors, consumers, suppliers, the government, the community, and other parties (Freeman, 1984; Ghozali & Chariri, 2007). In this theory, managers are seen as having a moral and economic obligation to consider the interests of various stakeholder groups in a balanced manner when making decisions (Freeman, 1984; Izazi, 2022).

Stakeholder theory views that the sustainability of a company is greatly influenced by the support and “power” of stakeholders, for example through the supply of capital, labor, regulatory permits, and social acceptance (Ghozali & Chariri, 2007). In the context of ESG, stakeholder theory supports the view that companies need to integrate environmental, social, and governance aspects as a form of responsibility to stakeholders and as a strategy to maintain business sustainability (Freeman, 1984; Ghozali & Chariri, 2007).

3. Method

This study employs a quantitative explanatory research design aimed at testing causal relationships between variables using numerical data and statistical analysis. The research was conducted using secondary data during the 2016–2022 period focusing on energy and mining companies in Indonesia. The population consists of energy and mining companies in Indonesia, while the sample includes six companies selected through purposive sampling based on the criterion that they provide complete ESG disclosures during the observation period. The data used in this research are secondary data obtained from Bloomberg Terminal for Environmental, Social, and Governance (ESG) and financial data, while macroeconomic data on GDP growth were obtained from the Central Statistics Agency. The research instrument is a structured dataset containing variables including Environmental (ENV), Social (SOC), Governance (GOV), Return on Assets (ROA), Return on Equity (ROE), and GDP growth. Data collection was conducted through documentation techniques by compiling financial and ESG data from the specified databases. Data analysis techniques include descriptive statistics to describe the characteristics of the data and panel data regression analysis to examine the effect of ESG on financial performance, using estimation approaches such as Common Effect Model (CEM), Fixed Effect Model (FEM), and Random Effect Model (REM), followed by classical assumption tests including multicollinearity and heteroscedasticity to ensure the validity and reliability of the regression model.

4. Results and Discussion

4.1 Descriptive Statistical Analysis

This study aims to examine the effect of ESG disclosure on financial performance in energy and mining companies in Indonesia. ESG is used as an independent variable, while ROA and ROE are dependent variables. GDP growth rate serves as a control variable. The analysis of this research data involves the use of descriptive statistics and Stata version 13 software for inferential analysis. Data distribution uses descriptive statistics. The results of the descriptive statistical analysis are presented in Table 1 below.

Table 1. Descriptive Statistic.

Variable	Obs	Mean	Std. dev	Min	Max
Id	42	3.50	1.7285	1	6
Tahun	42	2019	2.0242	2016	2022
ROE	42	16.8788	16.5577	0.35	75.85
ROA	42	10.3333	11.4839	0.21	55.73
ESG	42	53.7869	13.1111	23.84	75.80
ENV	42	45.8979	21.6398	2.51	81.79
SOC	42	35.7521	11.2099	16.23	61.58

GOV	42	79.9119	11.1083	50.87	89.86
GDP	42	3.89	2.5138	-2.07	5.31

4.2 Model Specification Test

Chow Test

The Chow test is conducted using the following decision rule: if the probability value is greater than 0.05, the selected model is the Common Effect Model (CEM). Conversely, if the probability value of the Chow test is less than 0.05, the Fixed Effect Model (FEM) is deemed more appropriate. The results of the Chow test are presented in the following table:

Table 2. Chow Test Results.

Model	Variabel Dependen	Chow Test	
		Prob>F	Model
Model 1	ROA	0,0033	FEM
Model 2	ROE	0,0012	FEM
Model 3	ROA	0,0088	FEM
Model 4	ROE	0,0018	FEM

Referring to the results of the Chow test, it was found that the probability value of 0.0033 < 0.05. Therefore, it can be concluded that the appropriate model to be used is the Fixed Effect Model (FEM).

Hausman Test

The Hausman test follows the decision rule that if the probability value is less than 0.05, the suitable model is the Fixed Effect Model (FEM). Conversely, if the probability value exceeds 0.05, the appropriate model is the Random Effect Model (REM). The results are presented as follows:

Table 3. Hausman Test Results.

Model	Variabel Dependen	Chow Test	
		Prob>F	Model
Model 1	ROA	0,0000	FEM
Model 2	ROE	0,0000	FEM
Model 3	ROA	0,0000	FEM
Model 4	ROE	0,0000	FEM

The probability value is 0.0000 < 0.05. Therefore, the most appropriate model to be used in the final estimation is the Fixed Effect Model (FEM). Since both specification tests have been conducted and consistently indicate that FEM is the best model, the third test the Lagrange Multiplier (LM) test is no longer required.

Multikolinierity Test

Multicollinearity can be detected by examining the correlation values among the independent variables. Multicollinearity is indicated when the correlation coefficient between independent variables exceeds 0.8. The following table presents the results of the multicollinearity test:

Table 4. Model 1 Multicollinearity Test.

	ROA	ESG	GDP
ROA	1.0000		
ESG	0.5680	1.0000	
GDP	0.2211	-0.1156	1.0000

Table 5. Model 2 Multicollinearity Test.

	ROA	ESG	GDP
ROA	1.0000		
ESG	0.5113	1.0000	
GDP	0.2513	-0.1156	1.0000

Table 6. Model 3 Multicollinearity Test.

	ROA	ENV	SOC	GOV	GDP
ROA	1.0000				
ENV	0.5974	1.0000			
SOC	0.6299	0.8291	1.0000		
GOV	0.2518	0.5945	0.7122	1.0000	
GDP	0.2211	-0.1785	-0.0589	-0.0044	1.0000

Table 7. Model 4 Multicollinearity Test.

	ROE	ENV	SOC	GOV	GDP
ROE	1.0000				
ENV	0.5449	1.0000			
SOC	0.5615	0.8291	1.0000		
GOV	0.2201	0.5945	0.7122	1.0000	
GDP	0.2513	-0.1785	-0.0589	-0.0044	1.0000

Referring to the results of the multicollinearity test, it was found that all variable coefficients in Model 1 and Model 2 do not exceed the value of 0.8, indicating that no multicollinearity occurs among the independent variables in these models. However, in Model 3 and Model 4, certain variables have coefficients exceeding 0.8, which indicates the presence of multicollinearity. These results do not meet the requirements of the multicollinearity test, where the correlation coefficients among independent variables must be less than 0.80. Therefore, further testing was conducted by examining the Variance Inflation Factor (VIF) and Tolerance (1/VIF) values. The assessment criteria are as follows:

- a. If the VIF value is < 10, multicollinearity is not present.
- b. If the VIF value is ≥ 10, it indicates the presence of high multicollinearity.

Table 8. Model 3 & Model 4 Multicollinearity Test.

Variable	Model 3	Model 4
	VIF	VIF
SOC	4.25	4.25
ENV	3.38	3.38
GOV	2.04	2.04
GDP	1.06	1.06
Mean VIF	2.68	2.68

Heteroscedasticity Test

Heteroscedasticity is indicated when the probability value obtained from the test is less than 0.05. Conversely, if the probability value is greater than 0.05, the data are considered to exhibit homoscedasticity. The results of the heteroscedasticity test are presented in the following table:

Table 9. Heterokedasticity Test Results.

Model	Variabel Dependen	Prob > Chi2	Prob > F Robust Std Error
Model 1	ROA	0.0001	0.2279
Model 2	ROE	0.0016	0.1264
Model 3	ROA	0.0016	0.1264
Model 4	ROE	0.0487	0.0612

Based on the results of the heteroscedasticity test, it was found that hetero-scedasticity is present, and the results do not meet the requirement of the hetero-scedasticity test, which states that the probability value must be greater than 0.05. Therefore, the regression model needs to be corrected using the robust standard error method to address this issue. Based on the Fixed Effect regression results with ro-bust standard errors, the Prob > F value obtained is greater than 0.05. This indicates that the corrected model no longer contains heteroscedasticity, and the residual variance has become constant (homoscedastic). Thus, the improved regression model can be used for further analysis because it has satisfied the classical as-sumption of homoscedasticity.

4.3 Regression Analysis Results

Based on the results of the model specification tests, it is concluded that the Fixed Effect Model (FEM) is the most appropriate regression model for this study. The parameter estimates of this model are presented in Table 10 below.

Table 10. Regression Test Results.

	(1) ROA	(2) ROE	(3) ROA	(4) ROE
ESG	0.503 (0.131)	0.730 (0.113)		
ENV			0.0986 (0.264)	0.138 (0.157)
SOC			0.751 (0.061)	1.053* (0.048)
GOV			-0.741 (0.077)	-0.983 (0.073)
GDP	1.314 (0.101)	2.095 (0.078)	1.344 (0.075)	2.124 (0.060)
_cons	-21.85 (0.262)	-30.51 (0.254)	32.90 (0.144)	43.21 (0.176)
N	42	42	42	42
R²	0.313	0.330	0.510	0.500
adj. R²	0.278	0.296	0.457	0.446
F	2.017	2.452	3.049	4.657

p-values in parentheses

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Model 1 : $ROA_{it} = \beta_0 + \beta_1 ESG_{it} + \beta_2 GDP_{it} + e_{it}$

Model 2: $ROE_{it} = \beta_0 + \beta_1 ESG_{it} + \beta_2 GDP_{it} + e_{it}$

Model 3 : $ROA_{it} = \beta_0 + \beta_1 ENVI_{it} + \beta_2 SOC_{it} + \beta_3 GOV_{it} + \beta_4 GDP_{it} + e_{it}$

Model 4 : $ROE_{it} = \beta_0 + \beta_1 ENVI_{it} + \beta_2 SOC_{it} + \beta_3 GOV_{it} + \beta_4 GDP_{it} + e_{it}$

With,

ROA : Return on Assets

ROE : Return on Equity

ENVI : Environmental

SOC : Social

GOV : Governance

ESG : ESG Score

GDP : Growth Gross Domestic Product

e : Error term

4.4 Testing the Hypothesis Results

a. Hypothesis 1

When the three ESG pillars are combined into a single overall score, the test results show that ESG as a whole also has no significant effect on ROA or ROE. The p-values are 0.131 (ROA) and 0.113 (ROE), respectively, so the hypothesis regarding the effect of total ESG on financial performance cannot be accepted.

b. Hypothesis 2

The test results show that the Environmental pillar has no significant effect on ROA or ROE. This can be seen from the p-values of 0.264 (ROA) and 0.157 (ROE), respectively, both of which are above the significance threshold of 0.05. Thus, the hypothesis that Environmental affects financial performance cannot be accepted.

c. Hypothesis 3

Unlike the Environmental pillar, the Social pillar shows stronger results. In the ROE model, the Social variable provides significant results with a p-value of 0.048 and a positive coefficient of 1.053. This indicates that the higher the disclosure of a company's social aspects, the higher the profitability generated through ROE. Meanwhile, for ROA, the p-value of 0.061 is slightly above the significance threshold, so the effect is marginally significant.

d. Hypothesis 4

Testing of the Governance pillar shows that this variable does not have a significant effect on ROA or ROE. The p-value for ROA is 0.077 and for ROE is 0.073, which are still above the significance threshold of 0.05, although they are close. In addition, the direction of the coefficient is negative, indicating that increased governance disclosure does not necessarily improve financial performance.

4.5 Analysis and Discussion

a. The Effect of ESG on Financial Performance

A multitude of recent studies lend support to the finding that the overall ESG score does not exert a statistically significant impact on accounting-based financial performance indicators, such as ROA and ROE. For instance, research on Indonesian listed companies indicates that ESG disclosure exerts no significant effect on ROA, ROE, or Tobin's Q, suggesting that total ESG does not directly translate into better short-term financial performance (Sukaryono & Tasrim, 2025). Evidence from other markets indicates that composite ESG disclosure scores may not have a significant effect on ROA and ROE. This suggests that investors and operations may not always immediately internalize ESG information into profitability measures (Shobhwani & Lodha, 2024)

These findings are consistent with the regression results, which indicate that the combined ESG score yields p-values above conventional significance thresholds (0.131 for ROA and 0.113 for ROE). Therefore, the hypothesis that total ESG significantly

affects financial performance cannot be accepted. Empirical research on Indonesian companies further indicates that the market may assign a higher value to certain ESG dimensions or long-term effects compared to short-term accounting returns. This observation contributes to the understanding that ESG can be strategically significant even in instances where its aggregate score does not demonstrate a substantial contemporaneous effect on ROA or ROE (Shobhwani & Lodha, 2024; Sukaryono & Tasrim, 2025)

b. The Influence of Environmental Factors on Financial Performance

A multitude of empirical studies lend credence to the notion that the Environmental pillar does not invariably exert a substantial influence on accounting-based financial performance metrics, such as ROA and ROE. A study of Indonesian manufacturing firms reveals that environmental performance, as measured by PROPER ratings, exerts no significant influence on profitability. This finding suggests that enhancements in environmental performance do not immediately translate into increased return on assets (ROA) in the short term (Jamali, 2023). A subsequent Indonesian study concentrating on state-owned enterprises determined that environmental disclosure itself does not have a substantial impact on ROA or ROE, despite the significance of environmental certifications for legitimacy and risk management (Widiatami et al., 2024)

These results align with the findings of the test, wherein the Environmental pillar yielded p-values of 0.264 (ROA) and 0.157 (ROE), both above the 0.05 threshold. This indicates that the hypothesis proposing a significant impact of Environmental factors on financial performance must be rejected. Furthermore, it is posited that environmental initiatives may yield costs or long-term benefits that are not fully captured by current-period ROA and ROE. This phenomenon contributes to the statistical insignificance of the Environmental pillar in regression models utilizing short horizon accounting measures (Jamali, 2023; Widiatami et al., 2024).

c. Social Influence on Financial Performance

A multitude of recent studies lend credence to the notion that social disclosure can exert a more robust and favorable influence on profitability (particularly return on equity (ROE) in comparison to the environmental pillar. In Indonesia, studies of listed firms indicate that higher levels of Corporate Social Responsibility (CSR) or social disclosure are associated with significantly higher returns on equity (ROE). This suggests that firms with stronger social initiatives tend to generate better equity-based returns (Imbang et al., 2024; Yasir & Santoso, 2025). This finding is consistent with the conclusion drawn from the analysis that the social pillar possesses a substantial and favorable coefficient in the ROE model. This suggests that enhancing the disclosure of social aspects can potentially lead to an increase in profitability for shareholders.

Concurrently, numerous studies have documented that CSR or social disclosure exerts either a weaker or only marginally significant impact on ROA, a finding that aligns with the p-value of 0.061, which is situated just above the conventional 0.05 threshold (Imbang et al., 2024; Nurdin, 2024). The findings of this study suggest that social initiatives may be more strongly reflected in equity-based performance (ROE) than in asset-based performance (ROA). This observation supports the hypothesis that the social pillar exerts a stronger and statistically significant influence on ROE, while its effect on ROA is only marginal.

d. The Effect of Governance on Financial Performance

A multitude of studies lend support to the conclusion that the disclosure of governance or governance-related variables does not invariably result in a substantial positive impact on accounting-based performance metrics, such as return on assets (ROA) and return on equity (ROE). In an Indonesian ESG disclosure study, governance disclosure was found to have no significant effect on ROA, while for ROE the governance component even showed a negative effect, indicating that higher governance disclosure does not automatically translate into better profitability (Anggraini et al., 2024). Research on non-bank firms has yielded analogous findings. Governance-related disclosure and board characteristics have been shown to have no significant effect on ROE, thereby suggesting that certain governance mechanisms or disclosures are not directly linked to short-term equity returns (Anggraini et al., 2024).

These results align with the regression outputs, where the Governance pillar generates p-values of 0.077 (ROA) and 0.073 (ROE), both marginally above the 0.05

threshold. The coefficients reveal a negative association, suggesting that increased governance disclosure does not necessarily enhance financial performance and may even be associated with reduced profitability in the short term. A number of Indonesian studies on good corporate governance and profitability in the mining sector have documented that specific governance mechanisms have no significant effect on profitability. This finding serves to reinforce the view that stronger governance or its disclosure is not always associated with higher ROA or ROE (Azmy et al., 2019; Suherman et al., 2024)..

5. Conclusion

The overall ESG score does not have a significant effect on financial performance. The aggregate ESG score shows a positive coefficient but remains insignificant for both ROA and ROE. This finding indicates that total ESG disclosure has not yet provided measurable short-term financial impacts for energy and mining companies in Indonesia.

The Environmental pillar has no significant effect on either ROA or ROE.

P-values above the significance level suggest that environmental performance and disclosure do not contribute meaningfully to company profitability. This may be due to the high costs associated with environmental initiatives and the long-term nature of their benefits, which are not fully reflected in short-term financial indicators.

The Social pillar has a significant positive effect on ROE, but only a marginal effect on ROA. This finding indicates that stronger disclosure of social aspects such as corporate social responsibility, workplace safety, and community relations can enhance equity-based profitability. However, the impact on asset-based returns remains weak, suggesting that the benefits are more visible to shareholders than to overall asset efficiency.

The Governance pillar has no significant effect on ROA or ROE and even shows a negative coefficient. Although corporate governance is a key component of sustainability, the findings suggest that increased governance disclosure has not yet improved short-term profitability. The negative coefficient may indicate that implementation and compliance costs have not translated into immediate financial gains for energy and mining companies.

This study concludes that ESG aspects have not been fully internalized into the short-term financial performance of Indonesia's energy and mining companies, except for the social dimension, which shows a significant effect on ROE. These findings indicate that investors and stakeholders may be more responsive to social factors than to environmental or governance aspects within this sector. The study reinforces the literature that ESG benefits particularly in natural resource based industries tend to be more evident in the long term. Therefore, ESG integration remains essential as a corporate sustainability strategy, especially for enhancing legitimacy, competitiveness, and investor trust.

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