



ESG Factors and Financial Performances: Evidence from Listed Company in Indonesia

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Abstract. The Environmental, Social, and Governance (ESG) framework is a comprehensive instrument to assess an organization's ethical and sustainable impact. Organizations that perform well in all ESG aspects are considered to be in a good position for success across time because they can manage risks effectively and develop lasting relationships with stakeholders. This study aims to assess whether ESG affects financial performance. The ESG score was employed in this research to evaluate ESG implementation, while the Return on Assets indicator was used to determine financial performance concerning profitability. The subject of the study is 61 listed companies in Indonesia that have been included in the ESG-Based Index in 2020–2023. The Panel Data Regression approach is used in this study to analyze the effect of ESG factors on Profitability. According to the fixed effect model, this research indicates that the ESG score positively impacts profitability performance. Businesses that invest in social projects or sustainable practices with a good strategy can see an immediate impact. However, some companies may not see immediate benefits but can experience long-term advantages such as enhanced reputation, reduced risks, and increased efficiency. These factors contribute to improved profitability over time, demonstrating the long-term financial benefits of ESG activities.

Keywords: Environmental, Social, and Governance, Financial Performance, Profitability, Return on Asset, ESG Score.

1 Introduction

A company's profitability is often utilized as a key indicator to gauge its financial performance and success. Profitability reflects the company's capability to generate profits from its operations, offering a measure of overall efficiency and the effectiveness of company policies [1]. Central to evaluating a company's success in complex market dynamics, profitability influences investor confidence and capital acquisition. Companies continually strive to enhance profitability to ensure sustained business growth and attract investment. Among various profitability ratios, Return on Asset (ROA) is pivotal in assessing a company's efficiency in utilizing its assets to generate returns, thereby serving as a crucial indicator in this study [2].

In recent years, the Indonesian Stock Exchange (BEI) has introduced ESG-based indices to measure the performance of companies excelling in Environmental, Social, and Governance (ESG) aspects [3]. However, an observable trend within ESG-based indices reveals a decline in profitability, notably in the average ROA from 2020 to 2023. This trend highlights companies' dynamic challenges in balancing profitability with sustainable practices. As global sustainability awareness grows, Indonesian companies increasingly incorporate ESG aspects into their operations, supported by regulatory frameworks like the Roadmap Sustainable Finance Phase II by the Financial Services Authority (OJK) [4]. Despite the positive implications of ESG integration, research presents mixed findings on its impact on profitability. Some studies indicate a positive relationship between ESG disclosure and profitability, while others suggest a negative or insignificant effect [5], [6].

The landscape of ESG investment is undergoing rapid transformation, marked by a growing collaboration among stock exchanges, regulators, and investors. By August 2021, 106 stock exchanges globally had joined the Sustainable Stock Exchange Initiative (SSEi). Among these, 26 exchanges have mandated ESG disclosure for listed companies, while 60 have issued guidelines on ESG disclosure [7]. Their attention increasingly measures investors' influence to ESG-related factors. In 2020, ESG investable assets totaled nearly USD 40 trillion, accounting for approximately 30% of global asset management [1]. Meta-studies investigating the link between financial performance and ESG issues reveal a consistent relationship, showing that strong ESG performance correlates with lower capital costs, better stock performance, and improved operational efficiency [8].

Empirical studies indicate that ESG frameworks are significantly linked to firm value and risk reduction. Integrating ESG activities into corporate strategies has been shown to positively impact a company's financial performance, enhancing firm value [8]. Moreover, engaging in ESG practices can mitigate financial risks and reduce asset-pricing risk factors [5], [6]. Despite these positive associations, the relationship between ESG activities and financial performance remains complex and, at times, contentious [5].

2 Methods

This research is classified as quantitative, employing both descriptive and verification analyses. Secondary data were collected from financial reports and Morningstar Sustainability for ESG Scores. The study investigates the impact of Environmental, Social, and Governance (ESG) Scores as the independent variable and company profitability, measured by Return on Assets (ROA) as the dependent variable. The analysis incorporates classical assumption tests, including linearity, heteroskedasticity, and autocorrelation tests. Panel data regression methods were utilized, considering the common, fixed, and random effect models. Model selection was based on the results of the Chow test, the Lagrange Multiplier test, and the Hausman test.

The sample consists of 61 companies listed on the ESG Index of the Indonesia Stock Exchange (IDX) from 2020 to 2023, selected through purposive sampling to ensure the

availability of complete ESG data over the study period. This research aims to establish causal relationships between ESG Scores and profitability through a rigorous quantitative approach.

3 Results and Discussion

Descriptive statistics provide an overview of the sample size, minimum value, maximum value, average value, and standard deviation of the data used in the study. The table showing the descriptive statistics in this research is as follows (see Table 1):

Table 1. Descriptive Statistics Analysis Results

Description	Frequency ESG Score	Frequency Profitability
Mean	23.40025	0.058162
Median	23.16000	0.042650
Maximum	42.99000	0.348900
Std. Dev	6.552789	0.072840
Observations	244	244

Source: Author Work

The independent variable, ESG Score, has an average value of 23.40025 across 244 samples. The maximum value is 42.9900, while the minimum value is 7.4400. The median and standard deviation are 23.1600 and 6.552789, respectively. The dependent variable, Profitability, has an average value of 0.058162 across 244 samples. The maximum value is 0.348900, while the minimum value is -0.520100. The median and standard deviation are 0.042650 and 0.072840, respectively.

3.1 Classical Assumption Tests

Before conducting regression analysis, it is necessary to assess the adequacy of the model in the research. Classical assumption tests are performed for this assessment.

Linearity Test.

Table 2. Linearity Test Result

	Value	df	Probability
t-statistic	1.222169	241	0.2228
F-statistic	1.493698	(1,241)	0.2228
Likelihood ratio	1.507624	1	0.2195

Source: Author Work

The obtained F-Statistic value (Table 2) for the data is 0.2228, greater than the significance level of 0.05, or $0.2228 \geq 0.05$. Therefore, it can be concluded that this result indicates that the assumption of linearity in the data is satisfied.

Autocorrelation Test. The autocorrelation test aims to ensure that the regression model used does not experience autocorrelation, meaning there is no significant correlation between errors in previous and current periods.

Table 3. Autocorrelation Test

R-squared	0.020616	Mean dependent var	1.299402
Adjusted R-squared	0.016569	S.D. dependent var	1.201614
S.E. of regression	1.191618	Akaike info criterion	3.196664
Sum squared resid	343.6286	Schwarz criterion	3.225329
Log likelihood	-387.9930	Hannan-Quinn criter.	3.208208
F-statistic	5.094053	Durbin-Watson stat	0.612975
Prob(F-statistic)	0.024901		

Source: Author Work

Based on the autocorrelation test results above (Table 3), the Durbin-Watson regression result indicates the model's DW value of 0.612975. With a sample size of 61, the Durbin-Watson autocorrelation test shows a DW value of 0.612975. This result suggests that the DW value falls between -2 and +2. Therefore, it can be concluded that there is no autocorrelation among the variables under study.

Heteroskedasticity Test

Table 4. Heteroskedasticity Test

Heteroskedasticity Test: Glejser
Null hypothesis: Homoskedasticity

F-statistic	2.902940	Prob. F(1,242)	0.0897
Obs*R-squared	2.892237	Prob. Chi-Square(1)	0.0890
Scaled explained SS	3.522461	Prob. Chi-Square(1)	0.0605

Source: Author Work

The results of the Heteroskedasticity Test above show that the probability value of the independent variable is 0.0890, which is greater than the significance level $\alpha = 5\%$ ($0.9319 > \alpha$) and ($0.8860 > \alpha$). This indicates that there is no heteroskedasticity, or in other words, homoskedasticity is present.

3.2 Panel Data Regression Test

After performing regression analysis selection using the Chow Test and Hausman Test on panel data, the Fixed Effect Model was found to be the most suitable model for this study. Here are the data processing results using the Fixed Effect Model in this research (Table 5).

Table 5. Panel Data Regression Fixed Effect Model

Variable	Coefficient	Std Error	t-Statistic	Prob
C	-0.504413	0.802841	-0.6282	0.5304
X	0.579966	0.256963	2.2570	0.0249

Source: Author Work

Based on the results of the Fixed Effect Model, the regression model formed is as follows:

$$Y = -0.504413 + 0.579966 * X \quad (1)$$

From this regression model, it can be explained that when $\alpha =$ the constant - 0.50, it means that if the independent variable, ESG Score, is considered constant (with a value of 0), the Profitability Ratio (ROA) is estimated to have a value of -0.50%. The regression coefficient value of ESG Score (X) is 0.57. This indicates that for every increase of 1 unit in ESG Score, Profitability (ROA) is expected to increase by 0.57%, holding other factors constant.

3.3 Hypothesis Testing

The t-test measures the influence of each independent variable on the dependent variable. In the t-test, the commonly used confidence level is $\alpha = 0.05$.

Table 6. Hypothesis testing results t-test

Variable	Coefficient	Std Error	t-Statistic	Prob
C	-0.504413	0.802841	-0.628285	0.5304
X	0.579966	0.256963	2.257001	0.0249

Source: Author Work

Thus, based on the results of the t-test (Table 6), the regression coefficient for ESG Score is 2.257001, with a significance level (α) of 5% and a probability of 0.0249 ($0.0249 < 0.05$). Therefore, the null hypothesis (H_0) is rejected, and the alternative hypothesis (H_a) is accepted, indicating that ESG Score significantly affects Profitability.

3.4 Discussion

Based on the research, the ESG score positively impacts profitability performance, according to the fixed effect model. While businesses may not always see immediate benefits from ESG activities, these investments can pay off in the long run. By investing in social projects or sustainable practices, companies can strengthen their reputation, reduce risks, and increase efficiency, contributing to improved profitability over time.

This finding is in line with the findings of previous research; in both domestic and international academic studies, it has been observed that while ESG initiatives may increase a company's short-term costs, they tend to enhance its performance in the medium and long term. Traditional theories have long posited that the primary goal of a company is to maximize shareholders' wealth [8]. For instance, when a company engages in an expensive environmental remediation program requiring significant capital investment, it can adversely impact its short-term profitability [5]. However, such investments often lead to improved operational efficiency, better risk management, and enhanced reputation over time, ultimately benefiting the company and its shareholders in the long run, and it can affect increased profitability [5], [6], [9], [10].

4 Conclusion

This study aims to identify the impact of Environmental, Social, and Governance (ESG) Scores on company profitability, measured explicitly by Return on Assets (ROA). The research framework was developed further to discuss the relationship between ESG practices and financial performance. This study focuses on 61 companies listed on the ESG Index of the Indonesia Stock Exchange (IDX) from 2020 to 2023. The results of this research, which involved a comprehensive analysis using panel data regression methods and classical assumption tests, indicate a significant relationship between ESG Scores and company profitability. The study found that higher ESG Scores are associated with improved profitability, as measured by ROA, in the medium and long term. This positive and significant influence suggests that companies with robust ESG practices perform better financially. Therefore, it can be concluded that integrating ESG activities into corporate strategies positively impacts company profitability. Companies must focus on enhancing their ESG initiatives to achieve better financial performance and contribute to sustainable business practices.

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