

THE EFFECT OF ENVIRONMENTAL SOCIAL AND GOVERNANCE (ESG) DISCLOSURE, LEVERAGE, AND ASSET MANAGEMENT EFFICIENCY ON PROFITABILITY (ANALYSIS OF ENERGY SECTOR COMPANIES LISTED ON THE INDONESIA STOCK EXCHANGE FOR THE PERIOD 2023-2024)

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Abstract

This study investigates the impact of Environmental, Social, and Governance (ESG) disclosure, leverage, and asset management efficiency on the profitability of energy companies listed on the Indonesia Stock Exchange from 2023-2024. A quantitative approach was employed, using panel data analysis on a sample of 50 financial reports. The findings revealed that while ESG disclosure does not have a significant direct impact on Return on Equity (ROE), and leverage has a significant negative impact on the ROE, total asset turnover (TATO) does significantly and positively influence ROE. This suggests that asset management efficiency is the primary driver of profitability in the Indonesian energy sector, while ESG practices and leverage strategies require further development to demonstrate a tangible impact on financial performance.

Keywords : *ESG Disclosure, Leverage, Asset Management Efficiency, Profitability, Return on Equity (ROE).*

INTRODUCTION

The energy sector plays an important role in the global and national economy. In Indonesia, this sector is one of the five sectors contributing to the highest national Gross Domestic Product (GDP) from 2020-2024 as seen in the following graph:

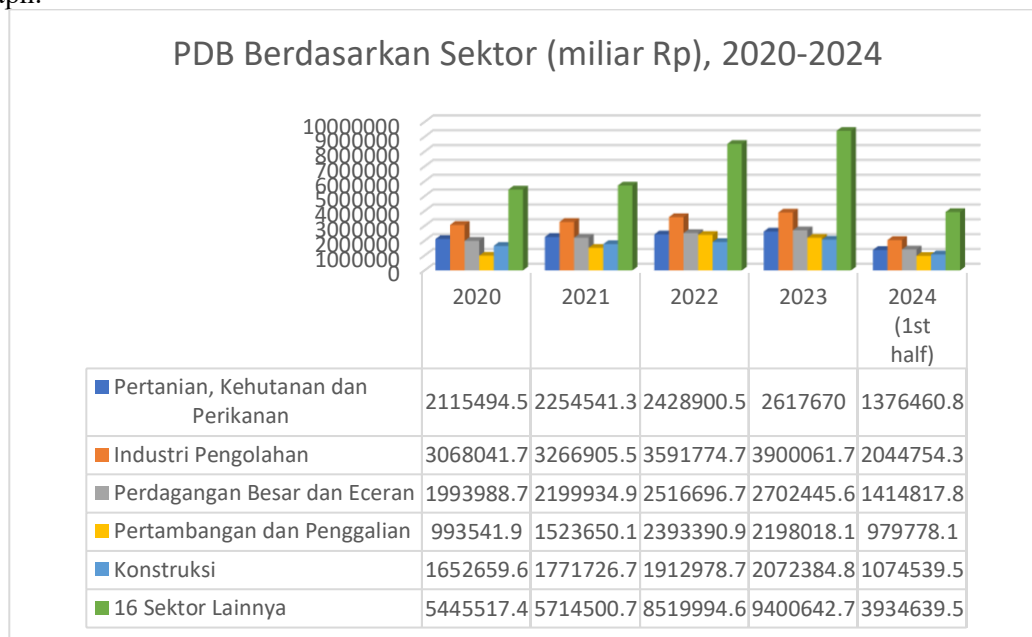


Figure 1 GDP by Sector

Source: BPS, 2024 (processed by the author)

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The graph above shows the significant contribution of the energy sector sub-sector, namely mining and quarrying, to the Indonesian economy. In the period 2020-2024, the energy sector's GDP tends to increase. In 2020, the contribution of this sector was recorded at IDR993,541.9 billion and continued to increase significantly to IDR1,523,650.1 billion in 2021. This upward trend continued in 2022 with a contribution reaching IDR2,393,390.9 billion (Central Bureau of Statistics, 2024). Fluctuations in the balance sheet and sales of the energy sector during the period 2022-2024 show some downward trends that have the potential to affect the company's Return on Equity (ROE) because ROE reflects the company's efficiency in generating profits from shareholders' equity. (Andriani et al., 2023). One of the main indicators is liabilities which decreased from Q3 2022 by 7,235.47 billion IDR to 5,727.65 billion IDR in Q3 2023. This decrease may reflect the company's efforts to pay off financial obligations or debt restructuring to reduce financial burdens. In addition, the decrease in equity that has occurred since early 2023 is also a concern. In Q1 2023, equity was recorded at 7,180.93 billion IDR, but experienced a gradual decline to reach 6,483.14 billion IDR in Q3 2023. In the context of ROE, a decrease in equity that is not accompanied by an increase in profit can indicate a risk to the company's profitability, so investors need to further examine the factors that cause this trend. Another factor that has the potential to have a major impact on ROE is sales fluctuations.

The data shows that there was a sharp decline in the company's revenue from Q4 2022 of 10,480.07 billion IDR to only 2,839.51 billion IDR in Q1 2023. If this downward trend in sales is not immediately addressed, then net profit, which is the main component in calculating ROE, could continue to be depressed, thereby reducing the company's attractiveness to investors. Overall, the downward trend in liabilities, equity, and sales during the 2022-2024 period indicates a challenge for the energy sector in maintaining profitability and stable financial performance. Therefore, further analysis of the factors influencing this decline, as well as the strategies implemented by the company in dealing with it, is important for stakeholders, especially investors considering long-term investment prospects. On the other hand, the energy sector faces a dilemma because it is the largest contributor to carbon emissions, contributing up to 75.7% of total carbon emissions in 2021 (World Resources Institute, 2024). In this regard, energy sector companies are facing demands to implement sustainability through the principles of Environmental, Social, and Governance (ESG), this is reflected in the significant increase in investor preferences in choosing corporate assets that implement ESG. (Kräussl et al., 2024).

ESG as one of the business strategies to improve reputation, attract investors, and support corporate sustainability, is an important component in facing environmental and social risks in the future. Companies with high ESG scores tend to have better financial performance, because they are able to attract more investment. (Saxena et al., 2023). This is in line with the view that companies committed to sustainable practices can create long-term value for stakeholders. (Feder, 2020). In the context of the energy sector, companies that integrate ESG principles into their strategies not only meet regulatory demands, but also increase their competitiveness in a market that is increasingly focused on sustainability. (Ekechukwu & Simpa, 2024). In addition to sustainability issues, capital structure management is one of the crucial aspects in determining the financial stability of energy companies. Leverage, as measured by the Debt-to-Equity Ratio (D/E Ratio), is the company's ability to pay off all its obligations (Hadi & Rahayu, 2019 in (Albab et al., 2022)). Leverage aims to show how much debt a company has to finance its operating activities. (Maulani et al., 2021). In leverage, even a small intervention can produce big changes (Fischer & Riechers, 2019). In the context of energy sector companies, high debt usage can increase financial risk, especially in volatile market situations such as oil price fluctuations. (Shaferi et al., 2020).

In addition to ESG integration and leverage, asset management efficiency is also a crucial factor that cannot be ignored in determining a company's financial performance. In this case, Total Asset Turnover (TATO) plays an important role in ensuring that every asset owned can be optimized to generate income, thereby increasing the company's profitability and financial stability. Research by (Setyaningsih & Ismunawan, 2024) shows that TATO has a significant influence on the financial performance of coal companies listed on the Indonesia Stock Exchange. The results of the analysis show that companies with higher TATO tend to be able to generate greater sales from total assets owned, which in turn contributes to increased profitability. This is reinforced by the results of research by (Larasati et al., 2023) which states that TATO shows a positive influence on Profitability. TATO is an important indicator that reflects how well a company is utilizing its assets to generate revenue. An increase in TATO indicates that a company can manage its assets more efficiently, which has the potential to increase revenue and profitability. Thus, both in the context of coal companies and energy companies, TATO serves as a key indicator that can help management and investors in evaluating the company's financial performance and operational efficiency. Based on the above explanation, the problem with the financial performance of energy sector companies is suspected to be caused by the integration of ESG principles and management of capital structures by companies that are not yet good, as well as inefficient asset management. The research gap in this study lies in the inconsistent results of several

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studies. Research(Fu & Li, 2023)shows a positive and significant relationship between ESG performance and financial performance. In contrast to research(Lazzolino et al., 2023)which states otherwise that the use of ESG does not have a significant effecton financial performance. Research by(Sari, 2020)states that leverage has a significant influence on the company's financial performance. In contrast to(Krisdamayanti, C. D & Retnani, 2020)which states that leverage has no effect on the company's financial performance. This shows that the company's management cannot manage loan funds optimally, which results in a decline in financial performance. Research by(Nasution et al., 2019)stated that TATO has a significant influence on the company's financial performance. In contrast to(Herdiyana et al., 2020)which states that TATO does not have a significant effect on financial performance.

LITERATURE REVIEW

Financial management

Financial management theory focuses on the management of a company's financial resources through three main decisions: investment, financing, and risk management decisions. An investment decision is a policy taken to invest capital in one or more assets with the aim of obtaining profits in the future. This relates to how a person should allocate funds into various forms of investment that can provide the desired results.(Ayu Wulandari & Iramani, 2014). Funding decisions relate to the sources of funds that will be used to finance investments that have been deemed feasible. Each source of funds used has a cost that is usually referred to as the cost of funds.(Komala et al., 2021). On the other hand, risk management is an effort to manage potential risks by monitoring risk sources, tracking them, and taking a series of steps to reduce the impact caused.(Waluyo, 2023).

Financial management is used as*grand theory*by researchers in conducting this study to analyze the effect of ESG scores, leverage (DER), and asset management (TATO) on the financial performance of energy sector companies. Investment decisions are relevant to the implementation of ESG as a sustainability strategy to improve reputation, operational efficiency, and long-term risk mitigation. Funding decisions are reflected in leverage, which shows the capital structure preferences of energy companies in financing large-scale projects with high risks. Meanwhile, TATO is chosen as a risk mitigation tool because it increases asset efficiency, strengthens cash flow, reduces liquidity risk, reduces dependence on debt, and maintains financial stability and profitability.

Financial Ratios

Financial ratios are mathematical comparisons that reflect the financial balance of a company. By using ratios as an analysis tool, analysts can evaluate the financial condition of a company, whether it is in good or bad condition. This assessment becomes more effective when the ratio is compared to the average standard commonly used in the industry as a reference.(Krusdewinta et al., 2024). Financial ratios are chosen as the middle theory because they provide a clear analytical framework to understand how leverage factors (D/E Ratio) and Total Asset Turnover affect a company's financial performance, as measured by (ROE). The applied theory used in this study is based on the relationship between independent variables and dependent variables analyzed to understand the factors that affect a company's profitability (ROE).

Profitability

Profitability according to(Hamzah, 2021)is the company's ability to generate profit. The higher the company's profitability level, the greater the profit obtained.(Lestari & Wulandari, 2019)added, profitability is the company's ability to make a profit. This ratio also measures the level of effectiveness of company management, which is reflected in the profit obtained through sales and income from investments. Profitability indicators are the main tool in assessing a company's financial performance, which reflects the company's effectiveness in generating profits from its resources. Some commonly used indicators are Return on Assets (ROA), Return on Equity (ROE), and Net Profit Margin (NPM). In this study, the measurement used is ROE, ROE indicates the level of return for shareholders, also plays a role in investment decisions, as studied by Anggraini & Indrati (2025). ROE (Return on Equity) is a financial ratio that measures how efficient a company is in generating profits from shareholder equity. ROE is calculated by dividing net income by total equity, then multiplied by 100% to get a percentage. The higher the ROE, the more effective the company is in using its capital to generate profits, so it is often used by investors to assess the profitability and financial performance of a company. ROE is calculated using the formula:

$$ROE = \frac{\text{Laba Bersih}}{\text{Ekuitas}} \times 100\%$$

(Furhmann, 2024)

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Environmental, Social, Governance (ESG) Disclosure

According to an article published by(British Columbia The ESG Center of Excellence, 2024), ESG (Environmental, Social, and Governance) is a framework used to evaluate the sustainability and ethical impact of a business. According to(Arviani, 2022), Environmental, Social, and Governance (ESG) is a standard used by companies in their business and investment practices, which covers three main aspects: Environment, Social, and Governance. Companies that implement ESG seek to integrate their business policies to be in line with the sustainability of these three aspects. ESG emerged as an initiative from the private sector to answer the need for sustainable economic development. ESG is used to evaluate a company's performance in three main dimensions: Environment, Social, and Governance. Each dimension has specific indicators that help in assessing performance related to sustainability and corporate social responsibility.(Nurfajrina, 2024).

Leverage

Leverage is the use of external financial resources to increase a company's profit potential. Leverage refers to the use of debt or other financial instruments to fund a company's operations in order to increase returns to shareholders. High levels of leverage can increase profit potential, but also increase financial risk.(Wilson, 2024). The leverage indicator used in this study is the Debt to Equity Ratio (DER) is a ratio used to evaluate how much debt a company has compared to its equity. Mathematically, DER is calculated using the formula:

$$DER = \frac{\text{Total Hutang}}{\text{Total Ekuitas}}$$

(Maulani et al., 2021)

Asset Management (Total Asset Turn Over)

Total Asset Turn Over is a financial ratio that measures how efficiently a company uses its total assets to generate revenue. This ratio shows how much sales are generated for each unit of assets owned by the company. The higher this ratio, the more effective the company is in utilizing its assets to generate revenue. TATO is measured by the formula:

$$TATTOO = \frac{\text{Penjualan}}{\text{Rata-Rata Total Aset}}$$

(Beers, 2024)

Previous Research

Previous research used as a reference in this study includes various studies on the influence of ESG disclosure, leverage, and asset management on company profitability in various sectors. In terms of the influence of ESG disclosure on profitability, research by (Landi & Sciarelli, 2019) shows that the application of ESG criteria by investors does not have a significant positive impact on the abnormal returns of companies listed on the FTSE MIB in Italy in the period 2007-2015. Meanwhile, (Zhao et al., 2018) found that electricity generation companies in China with high ESG performance experienced increased profits. (Nugroho & Hersugondo, 2022) also revealed that overall ESG disclosure has a significant positive effect on profitability, while CSR disclosure has a significant negative effect. Furthermore, (Kusumawardhani et al., 2023) examined the role of ESG as a moderating variable, which strengthens the relationship between profitability and firm value, although it has no effect on the Debt to Equity Ratio (DER).

In a study of leverage and profitability, (Nguyen et al., 2019) analyzed real estate companies in Vietnam and found that leverage had no impact on Return on Sales (ROS) and Return on Capital Employed (ROCE), but had a negative impact on Return on Assets (ROA) and positive on Return on Equity (ROE). (Iqbal & Usman, 2018) showed that leverage had a significant negative effect on ROE, but positive on ROA in the textile sector in Pakistan. Another study by (Sari, 2020) revealed that foreign ownership and leverage had a significant effect on financial performance, with Debt to Equity Ratio (DER) having a significant negative effect. (Putri & Dewi, 2019) in their study on the banking sector in Indonesia found that leverage had a significant negative effect on the company's financial performance. Furthermore, in terms of asset management and profitability, (Nasution et al., 2019) concluded that Total Asset Turnover (TATO) has a significant effect on ROE in the automotive sector in Indonesia. (Larasati et al., 2023) studied energy companies on the Indonesia Stock Exchange and found that environmental performance and TATO have a significant positive effect on company profitability. (Setyaningsih & Ismunawan, 2024) studied coal companies listed on the IDX and found that independent variables simultaneously affect stock prices, with TATO

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having an effect on financial performance. Finally, (Ambari et al., 2020) concluded that in the manufacturing sector, only TATO has a significant effect on profitability (ROE). This study is different from previous studies because it focuses on the energy sector in Indonesia for the period 2022-2024, thus providing a new perspective in understanding the relationship between ESG, leverage, and asset management on financial performance in the context of the domestic energy industry.

Conceptual Framework

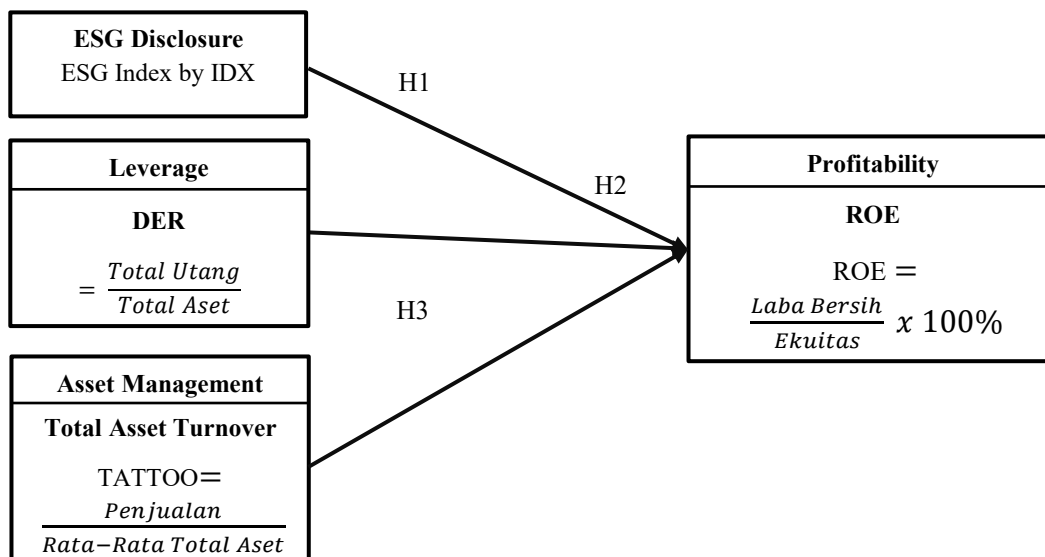


Figure 1 Research paradigm
Source: processed by researchers, 2025

Hypothesis

H1: ESG Disclosure has a significant effect on financial performance.

H2: Leverage (DER) has a significant effect on financial performance.

H3: Asset Management Efficiency (TATO) has a significant impact on profitability

METHOD

Research Object

Objects This study is ESG Disclosure, Leverage, Asset Management Efficiency, and Financial Performance. The study was conducted using two types of variables, namely independent variables (X) and dependent variables (Y). The independent variables in this study are ESG Disclosure (X1), Leverage (X2), Asset Management Efficiency (X3), then the dependent variable is profitability (Y). The study will be conducted at energy sector companies listed on the Indonesia Stock Exchange. The research method is one way to get the results of the research itself, as defined by Sugiyono (2019:2), the research method is basically a scientific way to obtain data with certain purposes and uses. Therefore, each study requires an appropriate method to obtain the data to be studied in the study. In this study, the method used by the researcher is a quantitative method with an associative approach. According to (Sugiyono, 2019:17), quantitative method is a research method based on the philosophy of positivism, used to research a specific population or sample, data collection using research instruments, data analysis is quantitative statistical, with the aim of testing the established hypothesis. The associative method is a study that aims to examine the relationship between two or more variables (Sugiyono, 2019:65).

Population and Sample

Population is a generalization area consisting of: objects/subjects that have a certain quantity and characteristics determined by the researcher to be studied and then conclusions drawn. (Hamid et al., 2019:16). The population in this study is all energy sector companies listed on the Indonesia Stock Exchange. The sample is part of the number and characteristics possessed by the population (Hamid et al., 2019:16). The sampling mechanism used in this study is the purposive sampling technique. The purposive sampling technique is a sampling determination technique with certain considerations (Hamid et al., 2019:21).

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Data collection technique

Secondary data is data collected from other sources, not directly from the object. This data usually comes from documents, journals, reports, and mass media.(Itbox, 2023). Secondary data used in this study are financial report data, indexes, charts, and other data relevant to the needs of this study which are accessed from the BEI website (<https://www.idx.co.id/>), (<https://www.bloomberg.com/>), Trading Economics (<https://tradingeconomics.com>), Investing (<https://www.investing.com>). Literature study is a method of data collection that involves reviewing books, searching literature, and examining records and reports related to the research.(Fajri, 2022). The literature study conducted in this research was carried out by reading references ranging from books and journals in printed or electronic form that have a correlation with the research.

Data Analysis Techniques

The researcher will use Spss 30 software to test and apply the analysis method used. The researcher uses panel data that is time-series and cross-section data. The cross-section data used in the study is the company's annual report that meets the sample criteria carried out by the researcher, which is 50 financial reports of companies listed on the Indonesia Stock Exchange (IDX). The time series data in this study is for the period from 2023 to 2024.

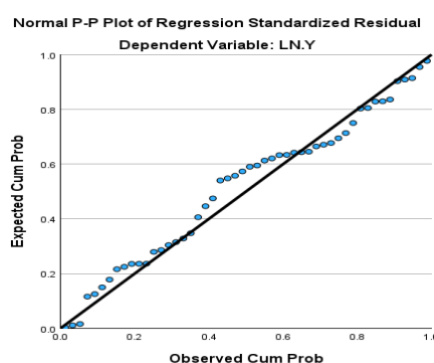
RESULT AND DISCUSSION

Descriptive Statistical Analysis Results

The results of descriptive statistics, the ESG variable has an average of 0.68804 with a relatively low data spread, indicating that sample companies generally have fairly high and consistent ESG scores. The DER variable has an average of 0.91230 with a fairly large standard deviation, indicating variations in capital structure between companies, although in general companies use more equity than debt. The TAT variable shows an average of 0.63066, reflecting fairly good asset use efficiency with moderate variation. Meanwhile, ROE has an average of 0.16134, which means that the company is able to generate a net profit of around 16.1% of its equity, although there are quite significant differences in profitability between companies. Overall, the data shows diversity in financial performance and sustainability among the companies studied.

Classical Assumption Test

Normality Test



Source: SPSS ver 30 (processed by the author, 2025)

In the normality test after outliers and data transformation into natural logarithm form, it is known that on the P-plot graph the points follow a diagonal straight line, and on the histogram the graph is on the specified bell line and the significant value in the Kolmogorov-Smirnov test is obtained at $0.064 > 0.05$ which means that the data is normally distributed.

Multicollinearity Test

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Coefficients^a

Model		Collinearity Statistics	
		Tolerance	VIF
1	LN.X1	.660	1.514
	LN.X2	.730	1.371
	LN.X3	.829	1.206

a. Dependent Variable: LN.Y

Based on the results of the multicollinearity test in the table above, all independent variables (LN.X1(ESG), LN.X2(DER), LN.X3(TAT)) show a Tolerance value greater than 0.1 and a VIF value less than 10. Thus, it can be concluded that there is no multicollinearity between the independent variables in this regression model. This means that each independent variable does not have a strong linear relationship with each other, so there is no problem in using the three variables simultaneously in the regression analysis of ROE as the dependent variable.

Heteroscedasticity Test

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.392 ^a	.154	-.037	1.41679

a. Predictors: (Constant), LNX2.LNX3, LN.X3_KUADRAT, LN.X1, LN.X2_KUADRAT, LN.X2, LN.X3, LN.X1_KUADRAT, LNX1.LNX2, LNX1.LNX3

Based on the Model Summary output, the following information was obtained:

- Chi Square count = $n * R \text{ Square}$ = $50 * 0.154 = 7.7$
- Chi Square table = 16.919 (df = 9, $\alpha = 0.05$)
- Chi Square count (7.7) < Chi Square table (16.919)

Because χ^2 count (7.7) < χ^2 table (16.919), there is no indication of heteroscedasticity so that the regression model is declared to have passed the classical assumption test of heteroscedasticity according to the White test. Thus, the residual variance in the model can be considered homogeneous (homoscedastic), and the model is suitable for further analysis.

Autocorrelation Test

Runs Test

	Unstandardized Residual
Test Value ^a	.19556
Cases < Test Value	25
Cases >= Test Value	25
Total Cases	50
Number of Runs	24
Z	-.572
Asymp. Sig. (2-tailed)	.568

a. Median

Based on the output results, it is obtained that the significance value (Asymp. Sig. 2-tailed) is 0.568. Because the significance value is greater than the 5% significance level ($0.568 > 0.05$), it can be concluded that there is no autocorrelation in the regression model. Thus, there is no autocorrelation, and the model has met the classical assumptions of regression related to residual autocorrelation.

Coefficient of Determination

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.637 ^a	.406	.367	.94977

a. Predictors: (Constant), LN.X3, LN.X2, LN.X1

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The results of the determination coefficient test show that the R Square value is 0.406 and the Adjusted R Square is 0.367, which means that the logarithmized ESG, DER, and TATO variables are able to explain 36.7% to 40.6% of the variation in the dependent variable. This means that around 36.7%–40.6% of the changes that occur in the dependent variable can be explained by the three independent variables, while the rest is influenced by other factors outside the model.

Correlation Coefficient

The results of the correlation calculation between LN ESG, LN DER, LN TATO, and LN ROE with the help of SPSS 30 software are as follows:

Model Summary									
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	df1	df2	Sig. F Change
1	.637 ^a	.406	.367	.94977	.406	10.478	3	46	<.001

a. Predictors: (Constant), LN.X3, LN.X2, LN.X1

The multiple correlation coefficient (R) value of 0.637 indicates a fairly strong relationship between the independent variables consisting of ESG (LN.X1), DER (LN.X2), and TATO (LN.X3) to the dependent variable, namely ROE (LN.Y). The strength of this relationship is included in the strong category because it is in the range of 0.60–0.799. Furthermore, the results of the model significance test through the F Change value of 10.478 with a significance level of Sig. F Change <0.001 indicate that this regression model is simultaneously significant. This indicates that simultaneously, the three independent variables have a correlation with ROE although not all are necessarily significant individually.

Multiple Regression Analysis

Multiple regression analysis was conducted to determine the extent of the influence of the independent variables on the dependent variable, by considering the value of each coefficient. The results are presented below:

Coefficients ^a					
Model		Unstandardized Coefficients		Standardized Coefficients	
		B	Std. Error	Beta	t
1	(Constant)	-1.717	.242		-7.084
	LN.X1	.028	.513	.008	.055
	LN.X2	-.582	.166	-.467	-3.514
	LN.X3	1.349	.290	.581	4.659

a. Dependent Variable: LN.Y

Based on the table above, it can be seen that the value of the multiple linear regression equation in this study is as follows:

$$\text{LN.Y} = -1.717 + 0.028(\text{LN.X1}) - 0.582(\text{LN.X2}) + 1.349(\text{LN.X3})$$

From the multiple linear regression equation above, it can be concluded:

- The constant (Intercept) of -1.717 indicates that if the logarithmized ESG, DER, and TATO values are equal to zero, then the estimated ROE logarithm value is -1.717. However, in a practical context, this constant value has no direct economic meaning because the condition of all independent variables being zero is unrealistic.
- The regression coefficient LN.ESG (X1) of 0.028 indicates that every one unit increase in the natural logarithm of ESG will increase the logarithm of ROE by 0.028, assuming other variables are constant.
- The regression coefficient LN.DER (X2) of -0.582 indicates that every one unit increase in the natural logarithm of DER will decrease the logarithm of ROE by 0.582, assuming other variables remain constant.
- The regression coefficient LN.TATO (X3) of 1.349 shows that every one unit increase in the natural logarithm of TATO will increase the logarithm of ROE by 1.349, assuming other variables remain constant.

F Test (Stimulus Effect)

The F test is used to determine whether simultaneously (together) the independent variables ESG (X1), DER (X2), and TATO (X3) have a significant effect on the dependent variable ROE (Y). With the basis for decision making:

The F-table value with df1 = 3 (number of independent variables), df2 = 46 (nk = 50-4) at $\alpha = 0.05$ is 2.81.

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Testing criteria:

If $F\text{-count} > F\text{-table}$, or $\text{Sig.} < 0.05$, then the Hypothesis is accepted.

Here are the results of the F test:

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	28.355	3	9.452	10.478	<.001 ^b
	Residual	41.495	46	.902		
	Total	69.850	49			

a. Dependent Variable: LN.Y

b. Predictors: (Constant), LN.X3, LN.X2, LN.X1

Based on the results of the ANOVA test in the table above, the F-count value is 10.478 with a significance of <0.001 . This value is much smaller than the specified significance level ($\alpha = 0.05$), and the F-count is greater than the F-table of 2.80 ($F\text{-count} > F\text{-table}$), so it can be concluded that the regression model used is statistically significant. Thus, the hypothesis stating that there is a significant simultaneous influence between ESG Disclosure, DER, and TATO on ROE is accepted. This means that simultaneously the three independent variables have a significant effect on the company's financial performance.

The effect of ESG (X1) on ROE (Y)

Based on the results of partial testing (t-test) conducted in this study, it is known that the ESG Disclosure variable does not have a significant effect on Return on Equity (ROE) in energy sector companies listed on the Indonesia Stock Exchange for the period 2023–2024. This is indicated by the significance value exceeding the threshold of 0.05, so the first hypothesis (H1) which states that ESG Disclosure has a significant effect on ROE is rejected. This finding contradicts the financial management theory which states that the implementation of sustainability principles through Environmental, Social, and Governance (ESG) practices can improve operational efficiency, reduce risk, and attract investor interest, which will ultimately increase profitability (Wulandari & Iramani, 2014; Feder, 2020). Within the framework of this theory, companies with a high commitment to sustainability should be able to create more value for shareholders.

In addition, these results are also inconsistent with several previous studies, such as:

- Fu & Li (2023) found that ESG has a significant positive effect on financial performance,
- Zhao et al. (2018) stated that companies with high ESG performance experienced increased profits, and
- Nugroho & Hersugondo (2022) showed that overall ESG disclosure has a positive impact on profitability.

However, this finding actually strengthens the results of previous studies by Landi & Sciarelli (2019) and Lazzolino et al. (2023) which stated that ESG does not have a significant impact on financial performance. This indicates that although ESG is a global trend and demand, its implementation in the Indonesian energy sector may still be a formality or has not been strategically integrated into operations and financial decision-making. Another factor that may cause this insignificance is the difference in focus of each company in implementing ESG. Many energy companies are still in the early stages of ESG integration, or are more focused on compliance than value creation. In addition, the possibility of a time lag between ESG implementation and its impact on financial performance could also be the reason why this relationship is not immediately significant in the period studied (2023–2024). Thus, it can be concluded that ESG Disclosure has not become a determining factor for profitability (ROE) in Indonesian energy sector companies in the short term, and commitment and strengthening of ESG strategies are still needed so that they can have a real impact on financial performance in the future.

The effect of DER (X2) on ROE (Y)

Based on the results of the partial test (t-test), this study shows that the leverage variable as measured by the Debt to Equity Ratio (DER) has a significant negative effect on Return on Equity (ROE) in energy sector companies listed on the Indonesia Stock Exchange for the period 2023–2024. With a significance value below 0.05 and a negative coefficient, it can be concluded that the higher the company's DER, the lower the return on equity (ROE) generated. These results support the theory of capital structure in financial management which states that excessive use of debt can increase the company's financial risk and interest expense (Hadi & Rahayu, 2019). When high debt burdens are not balanced by increased operating income, net income will be eroded and returns to shareholders (ROE) tend to decline. This is especially relevant in the volatile and capital-intensive energy sector, so carelessness in managing leverage will have a direct impact on profitability.

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Empirically, this finding is in line with several previous studies, including:

- Sari (2020) stated that DER has a significant negative effect on financial performance,
- Iqbal & Usman (2018) in the textile sector of Pakistan found that DER has a negative effect on ROE, and
- Putri & Dewi (2019) concluded that leverage has a negative impact on profitability in the Indonesian banking sector.

This significant negative result also confirms that the leverage level in Indonesia's energy sector is still relatively high, and in some cases, debt financing has not been balanced with efficient use of capital or adequate sales growth. As a result, the financial burden of debt is greater than the benefits of leverage in increasing profits. However, this result is different from the findings of Nguyen et al. (2019) which stated that DER actually has a positive impact on ROE in the Vietnamese property sector, indicating that the leverage effect is highly contextual depending on the sector, income stability, and financing strategy of the company. Thus, capital structure management is very important for energy companies in Indonesia. The decline in ROE due to high leverage indicates that external funding strategies need to be re-evaluated so as not to reduce the company's financial competitiveness, especially in facing the ever-changing global energy challenges.

The effect of TATO (X3) on ROE (Y)

The results of the partial test (t-test) show that the variable of asset management efficiency, measured using Total Asset Turnover (TATO), has a significant positive effect on Return on Equity (ROE) in energy sector companies listed on the Indonesia Stock Exchange for the period 2023–2024. This means that the more efficient the company is in managing its assets to generate sales, the greater the return on equity (ROE) obtained. This finding is in line with the financial management theory which states that efficiency in asset utilization will increase the company's revenue and net profit. In the context of operational and investment decision making, TATO reflects how optimally the company's resources are used to support financial performance. The higher the TATO ratio, the more effective the company is in converting assets into revenue, thereby boosting profits and strengthening the company's financial position (Krusdewinta et al., 2024).

Empirically, the results of this study are in line with a number of previous studies, including:

- Nasution et al. (2019) showed that TATO had a significant effect on ROE in the automotive sector,
- Setyaningsih & Ismunawan (2024) who proved that TATO influences the financial performance of coal companies,
- Larasati et al. (2023) found that TATO has a significant positive effect on the profitability of energy companies in Indonesia, and
- Ambari et al. (2020) in the manufacturing sector, which stated that only TATO had a significant effect on profitability.

These results reinforce that asset-based operational efficiency is a key factor in increasing the profitability of the energy sector, which is known to have large fixed assets and a high cost structure. Efficiency in turning assets into revenue also reflects good managerial performance, and provides a positive signal to investors regarding the company's ability to manage its capital. However, this finding differs from the research of Herdiyana et al. (2020) which stated that TATO did not have a significant effect on ROE. This difference is likely due to variations in industry, company size, and different asset management strategies. Thus, it can be concluded that TATO is an important indicator in explaining the profitability of energy sector companies, and companies need to continue to improve the efficiency of asset use to maintain or even improve financial performance amidst dynamic industry challenges.

CONCLUSION

Based on the results of the analysis that has been conducted on energy sector companies listed on the Indonesia Stock Exchange, several important conclusions were obtained relating to the influence of ESG (Environmental, Social, and Governance), DER (Debt to Equity Ratio), and TAT (Total Asset Turnover) on financial performance as measured by Return on Equity (ROE):

1. ESG (Environmental, Social, and Governance) does not have a significant effect on the company's financial performance partially. Although the direction of the relationship shows a positive tendency, the influence is not statistically strong enough to be stated as contributing directly to ROE. This indicates that the company's sustainability practices have not yet had a real impact on profitability in the short term or have not been fully responded to by the market and investors. Thus, the first hypothesis is not proven.

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2. DER (Debt to Equity Ratio) also does not show a significant effect on ROE partially. Although there are indications that a larger funding structure from debt tends to reduce profitability, statistically the effect is not yet convincing. This shows that the use of debt has not been directly correlated with the company's financial performance as viewed from the return on equity side. Thus, the second hypothesis is also not proven.
3. TAT (Total Asset Turnover) is proven to have a significant and positive influence on ROE. This indicates that the company's efficiency in managing its assets to generate sales is an important factor that drives increased financial performance. Companies that are able to maximize asset turnover tend to have a higher return on equity. Therefore, the third hypothesis can be accepted.

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