Volume 8 No.2 / 1 Oktober 2026
ISSN : 2088-6136 E-ISSN : 2721-9291

The Effect Of Roa, Roe, Npm, And Eps On Stock Prices In The Energy Sector Industry Listed On The Idx

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ABSTRACT

This study aims to examine the impact of ROA, ROE, NPM, and EPS on the stock value of energy companies listed on the Indonesia Stock Exchange from 2022 to 2024. Data were analyzed using multiple linear regression, and the outcomes display that return on assets has partially insignificant negative effect on stock price, return on equity has partially insignificant negative effect on stock price, net profit margin has partially insignificant negative effect on stock price, and earnings per share has significant positive effect on stock price. For laypeople interested in investing in the stock market, it is recommended that they use return on assets, return on equity, net profit margin, and lastly earnings per share as guidelines when making investment decisions.

Keywords: *Return On Asset, Return On Equity, Net Profit Margin, Earnings Per Share and Stock price*

INTRODUCTION

Financial ratios such as Return on Assets (ROA), Return on Equity (ROE), Net Profit Margin (NPM), and Earnings Per Share (EPS) are widely used to explain stock price movements, yet prior findings remain inconsistent. This issue is particularly evident in the

energy sector, where stock prices are highly volatile and often do not reflect firms' financial performance.

This study addresses this gap by examining the effect of ROA, ROE, NPM, and EPS on stock prices of energy companies listed on the Indonesia Stock Exchange during 2022–2024, aiming to provide clearer empirical evidence on which indicators truly matter.

LITERATURE REVIEW

Financial ratios are widely used as fundamental indicators in evaluating stock prices, particularly profitability ratios such as Return on Assets (ROA), Return on Equity (ROE), Net Profit Margin (NPM), and Earnings Per Share (EPS). ROA measures a company's ability to generate profit from its assets, while ROE reflects how efficiently equity is utilized to produce returns for shareholders. NPM indicates the effectiveness of cost management in generating net income, and EPS represents the amount of profit earned per share, making it highly relevant for investors in assessing firm value.

Previous studies have produced inconsistent findings regarding the influence of these ratios on stock prices. Several studies argue that higher profitability leads to increased investor confidence, thereby driving stock prices upward. In contrast, other studies find that profitability ratios such as ROA, ROE, and NPM do not significantly affect stock prices, suggesting that financial performance alone is insufficient to explain market behavior. These contradictions indicate that stock prices are not solely determined by internal financial factors, but are also influenced by external variables such as market sentiment, macroeconomic conditions, and industry-specific dynamics.

In the context of the energy sector, this issue becomes more complex due to high volatility and sensitivity to global factors such as commodity prices and geopolitical conditions. As a result, the relationship between financial performance and stock prices may differ from other sectors. Despite the extensive use of ROA, ROE, NPM, and EPS in prior research,

there is still a lack of consistent empirical evidence regarding their impact, particularly in the energy sector within recent periods.

Therefore, this study seeks to address this gap by re-examining the effect of ROA, ROE, NPM, and EPS on stock prices of energy sector companies listed on the Indonesia Stock Exchange during 2022–2024, with a focus on identifying which financial indicators provide the most reliable explanation for stock price movements.

METHODS

This study employs a quantitative research design to examine the effect of financial ratios on stock prices. A quantitative approach is used to objectively analyze the relationship between variables using statistical methods.

Sampling

The population consists of energy sector companies listed on the Indonesia Stock Exchange (IDX) during 2022–2024. This study uses purposive sampling with the following criteria: (1) companies consistently listed during the observation period, (2) companies publishing complete financial statements, (3) companies reporting positive net income, and (4) companies providing complete data for all variables. Based on these criteria, 48 companies were selected, resulting in 144 firm-year observations.

Data Collection

The study uses secondary data obtained from financial statements and annual reports accessed through the official IDX website. The data include financial information required to calculate ROA, ROE, NPM, EPS, and stock prices.

Measures

The dependent variable is stock price, while the independent variables are Return on Assets (ROA), Return on Equity (ROE), Net Profit Margin (NPM), and Earnings Per Share (EPS). ROA is measured as net income divided by total assets, ROE as net income divided by total equity, NPM as net income divided by net sales, and EPS as net income divided by the number of outstanding shares.

Model and Hypothesis Testing

Data are analyzed using multiple linear regression to examine the effect of independent variables on stock prices. Prior to regression analysis, classical assumption tests are conducted, including normality, multicollinearity, autocorrelation, and heteroscedasticity tests, to ensure the validity of the model.

Hypothesis testing is performed using the t-test to evaluate the partial effect of each independent variable and the F-test to assess the simultaneous effect of all variables. Additionally, the coefficient of determination (R^2) is used to measure the explanatory power of the model.

RESULTS

This study analyzes 144 firm-year observations from energy sector companies listed on the Indonesia Stock Exchange during 2022–2024. The analysis was conducted using multiple linear regression to examine the effect of ROA, ROE, NPM, and EPS on stock prices.

Prior to regression analysis, classical assumption tests were performed. The normality test indicates that the residuals are normally distributed, supported by the Kolmogorov-Smirnov significance value of 0.058 (> 0.05). The multicollinearity test shows that all variables have Variance Inflation Factor (VIF) values below 10, indicating no multicollinearity issue. The Durbin-Watson value of 1.421 suggests no autocorrelation, while the Glejser test results indicate no heteroscedasticity problem, as all significance values exceed 0.05. These results confirm that the regression model meets the required assumptions.

The regression analysis produces the following equation:

$$P = 515.557 + 4693.229\ ROA + 2639.346\ ROE - 12.494\ NPM + 2.617\ EPS$$

The model shows a coefficient of determination (Adjusted R^2) of 0.544, indicating that 54.4% of the variation in stock prices can be explained by the independent variables, while the remaining 45.6% is influenced by other factors.

The F-test result shows a significance value of 0.000 (< 0.05), indicating that ROA, ROE, NPM, and EPS simultaneously have a significant effect on stock prices. However, the t-test results reveal that only EPS has a significant positive effect on stock prices (p-value = 0.000). In contrast, ROA (p = 0.567), ROE (p = 0.569), and NPM (p = 0.651) do not have a significant effect.

These findings indicate that, although profitability ratios are commonly used by investors, not all of them significantly influence stock prices in the energy sector. The results highlight that EPS is the most relevant indicator in explaining stock price movements, while other ratios fail to show significant effects, contradicting some prior expectations.

Table 1 Multiple Linear Regression Analysis

Multiple Linear Regression Analysis

Model	Understandardized B	Coeficients Std. Error	Standardized Coeficients Beta
1 (Constant)	515.557	493.695	
ROA	4693.229	8171.415	.094
ROE	2639.346	4621.986	.090
NPM	-12.494	27.591	-.026
EPS	2.617	.253	.652

a. Dependent Variable: Stock Price

Source: Processed Application Data, 2025

Table 2 F and Coefficient of Determination Test

Model	F	R Square	Adjusted R Square	Sig.
1	41.500	.544	.531	0.000

α. Predictors:(Costant), return on asset, return on equities, net profit margin, earnings per share

b. Dependent Variable: Stock Price

Source: Processed Application Data, 2025

DISCUSSION

This study aims to examine the effect of financial performance, measured by Return on Assets (ROA), Return on Equity (ROE), Net Profit Margin (NPM), and Earnings Per Share (EPS), on stock prices in the energy sector. The findings provide important insights into which financial indicators are most relevant in explaining stock price movements.

The results show that, simultaneously, all variables significantly affect stock prices, indicating that financial performance remains an important factor in investment decisions. However, partial testing reveals that only EPS has a significant positive effect, while ROA, ROE, and NPM do not show significant influence. This suggests that not all profitability ratios are equally considered by investors in the energy sector.

These findings are consistent with prior studies that emphasize the importance of EPS as a direct indicator of shareholder value, as it reflects the actual earnings received per share. In contrast, the insignificant results for ROA, ROE, and NPM indicate that broader profitability measures may not be the primary concern for investors. One possible explanation is that stock prices in the energy sector are heavily influenced by external factors such as global commodity prices, geopolitical conditions, and market sentiment, which may weaken the direct impact of internal financial performance indicators.

The results also highlight a contradiction with some previous studies that found significant effects of profitability ratios on stock prices. This inconsistency suggests that the relationship between financial performance and stock prices is context-dependent, particularly in sectors characterized by high volatility such as energy.

From a managerial perspective, these findings imply that companies should pay greater attention to improving earnings per share, as it is more directly valued by investors. For investors, the results suggest that relying solely on traditional profitability ratios may not be sufficient, and greater emphasis should be placed on EPS when making investment decisions in the energy sector.

CONCLUSION

This study concludes that, among the financial ratios examined, only Earnings Per Share (EPS) has a significant influence on stock prices in the energy sector. While ROA, ROE, and NPM are commonly used indicators of financial performance, they do not show a significant effect in this context.

These findings imply that EPS is a more relevant indicator for investors in evaluating stock prices, particularly in sectors characterized by high volatility such as energy. Therefore, investment decisions should prioritize indicators that directly reflect returns to shareholders.

Future studies are recommended to explore additional factors beyond financial ratios to obtain a more comprehensive understanding of stock price determinants.

LIMITATION

This study has several limitations. First, the analysis is limited to the energy sector, which may reduce the generalizability of the findings to other industries. Second, the study only considers financial ratios, without incorporating external variables such as macroeconomic factors or market sentiment, which may also influence stock prices.

Future research is recommended to expand the scope by including additional variables, such as dividend policy, leverage ratios, and macroeconomic indicators, as well as extending the observation period and comparing across different sectors. Such

approaches may provide a more comprehensive understanding of the determinants of stock prices.

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