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The Effect of EPS, TATO, CR, PBV on Stock Prices of Energy Companies on the IDX (2021-2024)

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ABSTRACT

This study aims to determine the relationship between Earnings Per Share, Total Asset Turnover, Current Ratio, and Price Book Value on the stock prices of energy sector companies on the Indonesia Stock Exchange over four years, 2021-2024. Earnings Per Share describes a company's ability to generate net profit, Total Asset Turnover indicates the company's efficiency in utilizing its assets, Current Ratio indicates the company's ability to meet short-term liquidity needs, while Price Book Value describes how the market assesses a company's value based on its book value. This study uses a quantitative method with an associative approach. The sample selection method uses a purposive sampling method, by selecting energy sector companies that are continuously listed on the Indonesia Stock Exchange and issue complete financial reports during the study period. The data used are secondary data obtained from annual financial reports and stock price data published on the official website. To analyze the data, the researcher used multiple linear regression with the help of the SPSS program to examine the effect of all independent variables on stock prices. The results show that Earnings Per Share and Price Book Value have a positive and significant effect on stock prices, while Total Asset Turnover and Current Ratio do not have a significant effect. These findings indicate that investors in the energy sector pay more attention to the level of profitability and market value of a company than to the efficiency of assets and the company's liquidity capabilities in making investment decisions.

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1. INTRODUCTION

Stocks are a popular investment instrument because they offer profits in the form of capital gains and dividends. Stock price movements are often used to gauge a company's performance in the capital market. One sector attracting investor attention is the energy sector due to its crucial role in supporting economic activity. Energy companies are characterized by capital-intensive and high-risk businesses. This situation causes energy sector stock prices to fluctuate.

During the 2021-2024 period, share prices of energy companies on the Indonesia Stock Exchange experienced volatile fluctuations. This was influenced by various factors, such as economic recovery after the pandemic, changes in global energy prices, and government policies related to the energy sector.

Some companies have posted quite good financial performance, but this isn't always accompanied by rising share prices. This indicates differences in investor responses to corporate financial information. Therefore, research is needed to identify the factors influencing energy sector share prices.

Table 1. Development of Energy Sector Indicators

Year	Oil Price (USD/barrel)	Coal Production (million tons)	Coal Exports (million tons)	Renewable Energy Contribution (%)	Energy Sector to GDP (%)	Return IDX Energy (%)
2021	70	614	435	11.5	7.1	18
2022	100	687	494	12.2	8.3	66
2023	85	775	518	13	7.9	-7
2024	82	710	510	13.7	7.5	-3

Source: Ministry of Energy and Mineral Resources and Central Statistics Agency

Based on Table 1, during the 2021-2024 period, the energy sector in Indonesia experienced quite dynamic development. Oil prices increased significantly in 2022, then decreased in 2023 and 2024. This decline occurred in line with the normalization of global energy prices after a sharp spike in 2022, which caused a slowdown in the energy sector's performance. Coal production and exports generally showed an upward trend, although in 2024 there was a slight decline compared to the previous year. Furthermore, domestic energy consumption and the energy sector's contribution to Gross Domestic Product (GDP) showed an increasing trend year after year. This condition illustrates that, sectorally, the energy industry has an increasingly important role in the economy during the study period.

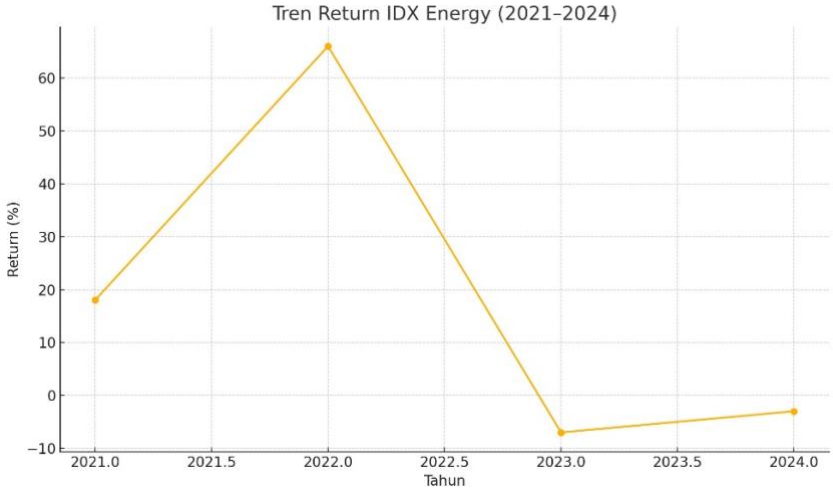
Table 2. Macroeconomic Conditions and IDX Energy Returns

Year	Oil Price (USD/barrel)	BI Interest Rate (%)	Return IDX Energy (%)	Indonesian inflation (%)	IHSG Return (%)
2021	70	3.5	18	1.87	10.1
2022	100	5.25	66	5.51	4.1
2023	85	6	-7	2.61	-0.5
2024	82	6	-3	2.8	3.5

Source: Indonesia Stock Exchange, Financial Services Authority, and Investing.com

Table 2 shows that oil prices and Indonesia's macroeconomic conditions experienced significant changes during the 2021-2024 period. In 2022, oil prices and inflation experienced significant increases, accompanied by rising interest rates. However, IDX energy returns showed sharp fluctuations, with significant increases in 2023 and 2024. This indicates that the movement of energy sector stock returns does not always align with macroeconomic conditions or global energy prices.

Graph 1. IDX Energy Return Trend



Source: Indonesia Stock Exchange

Graph 1 shows the IDX energy return trend during the 2021-2024 period, which experienced quite sharp fluctuations. IDX energy returns increased significantly in 2022, then experienced a drastic decline in 2023, reaching negative values. This condition was influenced by a correction in energy sector stock prices due to the normalization of corporate earnings and profit-taking by investors. In 2024, despite some improvement, index returns still have not returned to the high levels of the previous year.

Previous studies have shown varying results regarding the influence of financial ratios on stock prices. For example, Bahri et al., (2025) found that several financial ratios, such as ROA, ROE, PER, and DER, significantly influenced stock prices in banking companies, while CR, PBV, and EPS did not significantly influence them in the 2019-2023 period. Research by Febriani et al., (2025) showed that variables such as ROA, CR, DER, and TATO influenced stock prices in property and real estate companies on the Indonesia Stock Exchange for the 2019-2023 period. Meanwhile, Munir et al., (2025) stated that the EPS and PBV ratios partially influenced stock prices in technology sub-sector companies on the IDX.

Research by Widyaningrum & Anggrainie, (2024) shows that CR affects the stock prices of energy sector companies. The results of this study indicate that a company's liquidity level is one of the factors investors consider when determining whether the stock is worth investing in. Furthermore, research by Moerdianto et al., (2022) and Mansur et al., (2024) shows that EPS influences the stock prices of energy sector companies. This finding indicates that a company's ability to generate profits is a major factor influencing stock price formation. Anton et al., (2024) stated that CR and TATO also influenced the stock prices of energy sector companies in the 2018-2022 period. This indicates that a company's liquidity level and asset efficiency also influence investor assessments in the capital market. Research by Tania et al., (2024) found that PBV also affects stock prices. PBV reflects how the market assesses a company's value, making it an important indicator in investment decision-making.

In this study, the authors conducted empirical tests on several variables, including EPS, TATO, CR, and PBV, in a single study. Furthermore, this study used the most recent period, 2021-2024, thus hopefully reflecting more current market conditions. The focus on the energy sector is also an added value, as this sector has distinct characteristics compared to other sectors.

2. METHODS

2.1. Types and Research Approaches

This research uses a quantitative method with an associative approach, namely research that aims to examine the relationships and impacts between variables. Quantitative methods are used because the data obtained are in the form of numbers that can be analyzed using statistical methods. Associative

methods are often used in capital market research to examine the relationship between financial ratios and stock prices. According to Subastyan (2024), a quantitative approach can be used effectively to explore the relationship between a company's financial performance and stock price movements.

2.2. Research Object

The research subjects were companies in the energy sector listed on the Indonesia Stock Exchange for four years, from 2021 to 2024. The energy sector was chosen because its business requires significant capital and is dependent on global economic conditions and commodity prices.

2.3. Data Source

The data used in this study is secondary data, obtained indirectly from published sources. Secondary data was chosen because it is objective and can be used to analyze company performance based on history. The data sources for this study were taken from the annual financial reports of companies in the energy sector and stock price data published by the Indonesia Stock Exchange. According to Danang & Rumintjap, (2025), secondary data from financial reports and capital markets is very important and can be used in financial research.

2.4. Population and Sample

The population in this study includes all companies in the energy sector listed on the Indonesia Stock Exchange for the period 2021-2024. The research sample was selected using purposive sampling, which involves selecting samples based on predetermined criteria. This technique ensures that the sample is appropriate to the research objectives and the available data. According to Dayanti et al., (2024), the purposive sampling method is often used in financial research because it can provide samples that meet research needs.

2.5. Data collection technique

The data collection technique in this study was conducted through a literature review using financial reports and official publications. The data used came from the annual reports of energy sector companies listed on the Indonesia Stock Exchange for the period 2021-2024, as well as stock price data obtained from the official IDX website. (Maulana & Andni, 2024) stated that the use of secondary data from company financial reports is a relevant method in research analyzing the effect of financial ratios on stock prices.

2.6. Descriptive Statistical Analysis

Descriptive analysis is used to provide an overview of research data. This analysis includes the minimum, maximum, average, and standard deviation values of each research variable. Descriptive statistics help researchers understand the characteristics of the data before conducting further analysis.

2.7. Classical Assumption Test

Classical assumption tests are used to ensure that the regression model meets the necessary statistical requirements to ensure unbiased and efficient estimation results. These tests include tests for normality, multicollinearity, heteroscedasticity, and autocorrelation.

A normality test is performed to determine whether the residual data has a normal distribution. This test is conducted visually, using a histogram graph and a Normal P-P Plot as a basis for evaluating the residual distribution pattern.

A multicollinearity test was conducted to determine the correlation between independent variables in a regression model. A model is declared free of multicollinearity if the Variance Inflation Factor (VIF) value is <10 and the tolerance value is >0.10.

The heteroscedasticity test is used to determine whether there is inequality of variance in the residuals. The test is conducted using the Glejser test, with the criterion that if the significance value is >0.05, heteroscedasticity does not occur.

The autocorrelation test aims to determine the correlation between residuals from different periods. The test is performed using the Durbin-Watson value, where the model is declared to be free of autocorrelation if the value is between -2 and +2.

2.8. Multiple Linear Regression Analysis

The analytical method used in this study is multiple linear regression. This analysis is used to demonstrate the influence of EPS, TATO, CR, and PBV on stock prices. The regression model used in this study is formulated as follows:

$$Y = \alpha + \beta_1 EPS + \beta_2 TATO + \beta_3 CR + \beta_4 PBV + e$$

Notation:
Y = stock price
α = constant
β_1 - β_4 = regression coefficient
e = error term
The regression coefficient shows the direction and magnitude of the influence of each independent variable on stock prices.

2.9. Hypothesis Test

Hypothesis test is used to determine the validity of previously formulated hypotheses. The t-test is used to determine the partial effect of each independent variable on the dependent variable, with the criterion that if the significance value is <0.05, the hypothesis is accepted.

The F-test was conducted to determine whether the independent variables simultaneously influence the dependent variable at a 5% significance level. Meanwhile, the coefficient of determination (R^2) was used to assess the model's ability to explain variations in changes in the dependent variable. The results of the hypothesis testing were then used as the basis for formulating research conclusions.

3. FINDINGS AND DISCUSSION

3.1. Findings

3.1.1. Descriptive Statistics

Table 3. Descriptive Statistics

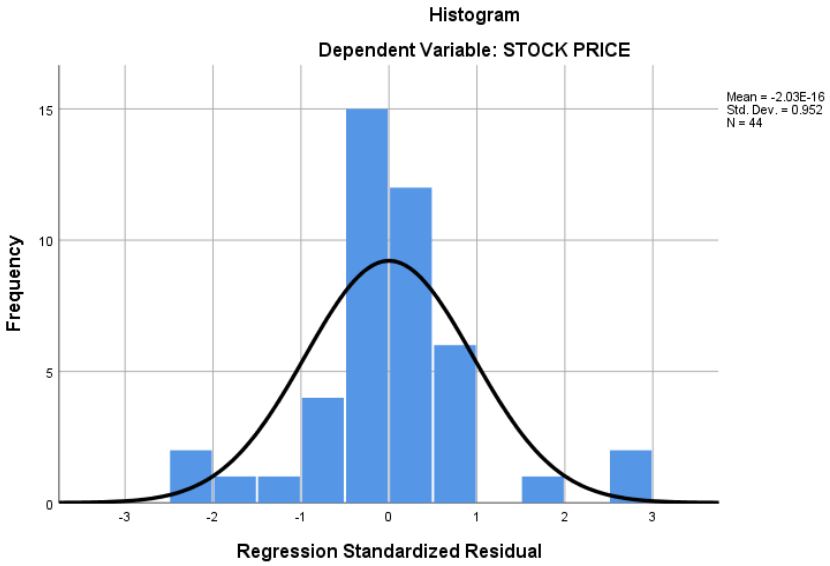
Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
EPS	44	2.370	1094.000	123.43114	205.162093
TATO	44	.001	3.183	1.11830	.733881
CR	44	.799	9.576	1.92636	1.780328
PBV	44	.232	32.624	3.57775	6.517689
STOCK PRICE	44	131.000	10050.000	1408.66886	2281.942647
Valid N (listwise)	44				

Based on Table 3, the EPS variable has the highest average value compared to other variables. This indicates that energy sector companies had a fairly good level of earnings per share during the study period.

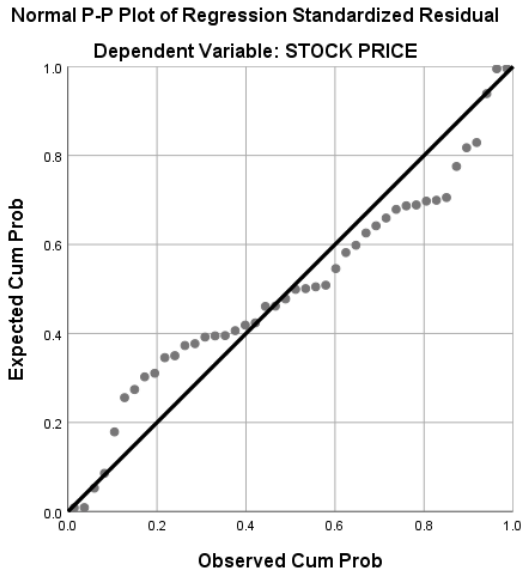
3.1.2. Normality Test

Graph 2. Histograms



Based on graph 2, it can be seen that the data distribution forms a bell-shaped curve. This indicates that the residual data tends to be normally distributed, although not completely symmetrical.

Graph 3. Normal P-P Plot



Graph 3 shows that the data points are distributed around the diagonal line and follow its direction. Although there are slight deviations in some areas, the overall distribution of the points remains close to the diagonal line.

Therefore, based on the analysis of the two graphs, it can be concluded that the residual data in the regression model is normally distributed.

3.1.3. Multicollinearity Test

Based on the test results, all independent variables have a tolerance value greater than 0.1 and a Variance Inflation Factor (VIF) value less than 10. This indicates that there is no multicollinearity between the independent variables in the regression model.

3.1.4. Heteroscedasticities Test

Table 4. Heteroscedasticity Test Results

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics	
		B	Std. Error	Beta	t	Sig.	Tolerance	VIF
1	(Constant)	465.670	155.267		2.999	.005		
	EPS	.089	.279	.045	.319	.751	.966	1.036
	TATO	-86.396	81.767	-.155	-1.057	.297	.878	1.138
	CR	-48.633	33.462	-.211	-1.453	.154	.891	1.122
	PBV	24.691	9.341	.392	2.643	.012	.853	1.172

a. Dependent Variable: ABS_RES

The results of the heteroscedasticity test using the Glejser method indicate that the Price Book Value variable has a significance value of 0.012 (<0.05), thus indicating the presence of heteroscedasticity. Meanwhile, the other variables have significance values greater than 0.05, thus not experiencing heteroscedasticity.

3.1.5. Autocorrelation Test

Table 5. Autocorrelation Test Results

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.970[a]	.940	.934	586.520241	.940	152.974	4	39	.000	1.203

a. Predictors: (Constant), PBV, EPS, CR, TATO

b. Dependent Variable: STOCK PRICE

Based on the test results, the Durbin-Watson value was 1.203. This value indicates that there is no strong autocorrelation in the regression model.

3.1.6. Multiple Linear Regression Analysis

Table 6. Coefficients

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics	
		B	Std. Error	Beta	t	Sig.	Tolerance	VIF
1	(Constant)	-117.795	246.931		-.477	.636		
	EPS	3.614	.444	.325	8.147	.000	.966	1.036
	TATO	-116.058	130.039	-.037	-.892	.378	.878	1.138
	CR	3.256	53.217	.003	.061	.952	.891	1.122
	PBV	336.479	14.856	.961	22.650	.000	.853	1.172

a. Dependent Variable: STOCK PRICE

Based on the analysis results, the following regression equation was obtained: Y = -117.795 + 3.614(EPS) - 116.058(TATO) + 3.256(CR) + 336.479(PBV).

3.1.7. Coefficient of Determination (R^2)

Based on table 5, the R Square value is 0.940 and the Adjusted R Square is 0.934. This indicates that 93.4% of stock price variations can be explained by the variables EPS, TATO, CR, and PBV. While the remaining 6.6% is influenced by other variables outside the research model.

3.1.8. F-Test

Table 7. F-Test Results

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	210496042.737	4	52624010.684	152.974	.000[b]
	Residual	13416233.718	39	344005.993		
	Total	223912276.455	43			

a. Dependent Variable: STOCK PRICE

b. Predictors: (Constant), PBV, EPS, CR, TATO

The results of the F test show a significance value of 0.000 (<0.05), so it can be concluded that simultaneously the variables EPS, TATO, CR, and PBV have a significant effect on share prices.

3.1.9. T-Test

Based on Table 7, the partial test results show that the EPS and PBV variables have a positive and significant influence on stock prices, as indicated by their respective significance values of 0.000 (<0.05). This indicates that an increase in EPS and PBV will be followed by an increase in stock prices. Meanwhile, the TATO and CR variables do not have a significant effect on stock prices because they have significance values of 0.378 and 0.952 (>0.05), respectively. Thus, it can be concluded that only the EPS and PBV variables partially influence stock prices, while TATO and CR do not.

3.2. Discussion

3.2.1. The Effect of EPS on Stock Prices

Based on the test results, EPS has been shown to influence share price increases. This indicates that investors pay attention to a company's ability to generate earnings per share. The higher the EPS, the greater investor interest in purchasing the company's shares, resulting in an increase in share price. These research findings align with Zuhdi & Nurmasari, (2025), who stated that EPS has a positive effect on share prices.

3.2.2. The Effect of TATO on Stock Prices

The research findings show that TATO has no significant effect on stock prices. This suggests that a company's effectiveness in utilizing assets to generate sales is not yet a primary consideration for investors when investing in energy sector companies. Investors prioritize a company's ability to generate profits and market value over its asset turnover rate. These findings align with research by Mahmudah et al., (2024), which found that TATO has no significant effect on the stock prices of energy sector companies.

3.2.3. The Effect of CR on Stock Prices

The research results show that CR has no significant effect on stock prices. This suggests that a company's ability to meet short-term obligations does not necessarily influence investors' decisions to purchase shares. Investors are more likely to focus on profitability and company prospects than on its liquidity level.

3.2.4. The Effect of PBV on Stock Prices

The research results demonstrate that PBV has a significant positive effect on stock prices. This indicates that investors consider a company's market value before making an investment. The higher the PBV, the higher the market's valuation of the company, leading to a tendency for stock prices to rise. These findings align with Rahmawati, (2023) study, which found that PBV influences stock prices.

3.2.5. The Effect of EPS, TATO, CR, and PBV on Stock Prices

All independent variables simultaneously influence the stock prices of energy sector companies. This indicates that EPS, TATO, CR, and PBV can collectively influence a company's stock price movements. Investors should consider not only a single financial ratio but also the company's overall condition when making investment decisions.

4. CONCLUSION

The results of the study indicate that EPS and PBV have a significant positive effect on stock prices, while TATO and CR do not. This study is expected to provide a clear picture of the influence of financial ratios on stock prices.

Based on the conclusions obtained, investors are advised to pay more attention to EPS and PBV variables in their investment analysis, as both variables have been shown to significantly influence stock prices. Furthermore, researchers conducting future research are encouraged to add other variables that may influence stock prices to provide more comprehensive and in-depth research results.

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