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## The Effect Of Profitability Ratio On Share Prices Of Energy Companies Listed On Idx

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### Abstract

The supply and demand for the stock itself play a big role in determining the price of the stock. The stock price will typically increase as more people purchase shares, and vice versa, as more individuals sell their shares, the stock price will often decline. This study aims to evaluate the significance of ROA, ROE, and NPM's impacts on stock prices. This study looked at energy and component firms that were listed on the Indonesia Stock Exchange between 2017 and 2021. 8 companies that served as sample sizes in this study. Documentation and relevant books about study issues are used to collect data. Using the analysis's findings, it was discovered that ROA, ROE and NPM have a significant impact on stock prices simultaneously.

**Keywords : ROA, ROE, NPM, stock price.**

### Introduction

The motivation for an investor to invest his funds in the form of shares is to get benefits in the form of dividends and capital gains. However, investors in addition to expecting profits must also pay attention to risks that can later cause losses. One of the risks is to incorrectly estimate and identify stock prices. Given these risks, investors must be able to identify by making an in-depth assessment of the stocks to be purchased (Novita Ika Dyamayanti, Renea Shinta Aminda, 2003).

Each investment vehicle has very different levels of risk and return. Risks can arise from price fluctuations, rising interest rates, weakening corporate capabilities and other factors. Before investing, it is important to understand the three risk profiles: the first is conservative, with a low tolerance for investment risk; the second is moderate, with a medium tolerance for investment risk; and the third is aggressive, with a high tolerance for investment risks like stock price fluctuations, interest rate increases, and others (Rahayu et al., 2022).

Investors should reevaluate their options in light of financial basic research, including financial performance, business rivalry, industry potential, market analysis, macro and microeconomics, before making a decision. Investors use fundamental research to identify healthy companies and identify equities that are worthwhile purchases (Eka Putra, 2021).

In investment and portfolio management books, investing is placing funds in the hope of obtaining additional money or profits. Investment is essentially of a number of funds now in the expectation of future profits (Adnyana, 2020). According to (Suhara et al., 2022) Stock price is the price made by transactions between sellers and buyers of shares motivated by business profits.

With the stock price, we can find out the current trend of a company's stock price movement, whether it is stable, whether it is rising or decreasing. The decline in stock prices is several factors such as return on assets (ROA), return on equity (ROE), net profit margin (NPM) (budiyono & Santoso, 2019).

(Sari & Triyonowati, 2019) examined the effect of ROA, ROE, and NPM on stock prices in telecommunications companies on the stock exchange. The results of the study showed. Return on assets (ROA) has a positive and significant effect on stock prices, while Return on equity (ROE) has an insignificant effect on stock prices, and Net profit margin (NPM) has an insignificant effect on share prices in telecommunications companies.

(Putri Romadhan & Satrio, 2019) studied how the Indonesia Stock Exchange's LQ45 stock prices were affected by ROA, ROE, NPM, and EPS. The findings demonstrated that return on assets (ROA) did not significantly affect stock prices, while return on equity (ROE) and net profit margin (NPM) did.

## Methods

### Population and Sample

According to (Eka Putra, 2021) A population is a generalization area made up of things or persons that have particular amounts and attributes that are chosen by researchers to analyze before drawing conclusions. The sample is a reflection of the population's size and makeup. A portion of the population's current number was employed to create the study sample. Purposive sampling methods are used in the sample collection process. The following are the conditions for sampling:

1. All Energy companies that present company financial statements during the study period.
2. All companies that have complete data in accordance with the profitability ratio factors to be studied.
3. All Energy companies that are consistently in the Energy index during the period 2017-2021.
4. Companies that had a positive net profit during the observation period.

Based on the criteria that have been set, the researchers took 8 population member companies as samples from Energy companies during the 2017-2021 period.

### Data Type

To support this study, the author uses quantitative data, which is quantifiable data or numerical (digital) information from the company's financial statements. The subjects of this thesis are companies listed on the Indonesia Stock Exchange (IDX) in the automotive subsector.

### Data Sources

In this study, the source of data used is secondary data, where the data obtained is existing information, either in the form of facts, writings or historical reports compiled in published and unpublished archives.

### Data Collection Techniques

Data collection techniques are useful techniques for authors to collect data used to support this study.

1. Literature Studies  
The collection of information by researchers from books, references, and related literature that is connected to research problems is related to decision studies.
2. Documentation  
Documentation is a technique for information storage, archiving and more. The information received is financial reporting information related to research published on the Indonesia Stock Exchange (IDX).

### Variable Operational Definition

#### Share Price

According to (Suhara et al., 2022) Stock price is the value of shares in rupiah resulting from actions taken by stock exchange members to buy and sell shares.

#### Return On Asset (ROA)

According to (Waskito dan Faizah, 2021) to generate profits. This ratio calculates the amount of investment a business has made using all of its resources, such as finances or assets. You can contrast this ratio with the current bank interest rate.

$$ROA = \frac{\text{Laba Bersih Setelah Pajak}}{\text{Total Aktiva}} \times 100\%$$

### Return On Equity (ROE)

According to (Waskito dan Faizah, 2021)) A measure called return on equity computes net profit after tax using own capital and demonstrates how effectively own capital is used. A greater ratio shows that the company owner's position is improving, while a lower ratio shows that it is deteriorating.

$$ROE = \frac{\text{laba bersih setelah pajak}}{\text{pendapatan total}} \times 100\%$$

### Net Profit Margin (NPM)

(Partomuan, 2021) stated that net profit margin is the ratio between, i.e. sales after deducting all costs including taxes, and sales.

$$NPM = \frac{\text{Laba Bersih Setelah Pajak}}{\text{Penjualan}} \times 100\%$$

### Data Analysis Methods

Data analysis using evIEWS 10 with the following data analysis techniques: (1) panel data regression analysis, (2) standard assumption test, (3) multiple regression analysis, (4) multiple coefficients, (5) hypothesis test with T test and F test.

### Results

#### Panel Data Regression Analysis

##### 1. Test Chow

**Table 1 Chow Test Results**

Redundant Fixed Effects Tests			
Equation: Untitled			
Test cross-section fixed effects			
Effects Test	Statistic	d.f.	Prob.
Cross-section F	18.986023	(7,29)	0.0000
Cross-section Chi-square	68.787856	7	0.0000

**Source : processed data evIEWS 10**

The Fixed Effect Model (FEM) is the best model, according to the results of the chow test data above, where both F and chi-square cross section profitability values are lower than alpha 0.05.

2. Uji Hausman

**Table 2 Hausman Test Results**

Correlated Random Effects - Hausman Test			
Equation: Untitled			
Test cross-section random effects			
Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	1.322294	3	0.7238

Source : processed data eviws 10

Based on the Hausman test results above the probability value of  $0.72 > 0.05$  (alpha), the Random Effect Model (REM) is the optimal model to adopt.

3. Test Lagrange

**Table 3 Lagrange Test Results**

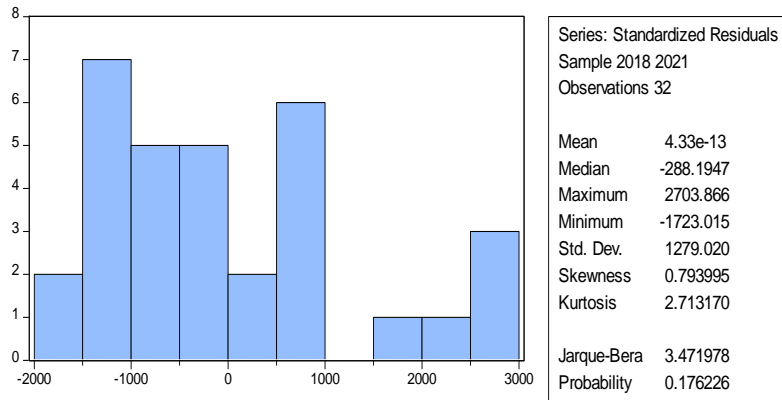
Null (No Rand.Effect)	Cross-Section	Period	Both
alternative	One-side	One-side	
Breusch-Pagan	30.89438	1.678814	32.57320
	(0.0000)	(0.1951)	(0.0000)
Honda	5.558271	-1.295691	3.014100
	(0.0000)	(0.9025)	(0.0013)
King-Wu	5.558271	-1.295691	1.960338
	(0.0000)	(0.9025)	(0.0250)
GHM	-	-	30.89438
	-	-	(0.0000)

Source : processed data eviws 10

That nili problem is evident from the output above. One can reject the null hypothesis by comparing a Breusch-Pagan (BP) of 0.0000 to an alpha of 0.05. Random Effect Model models are therefore the most appropriate models to utilize, according to the LM test.

## Classical Assumption Test

### 1. Normality Test



Source : processed data views 10

From the data above after fixing it can be seen that the probability value is  $0.17 > 0.05$  (alpha). So it can be concluded that the data is normally distributed.

### 2. Heteroscedasticity Test

**Table 4 Heteroscedasticity Test Results**

Variable	Coefficient	Std. Error	T_Statistic	Prob
C	873.3054	269.6671	3.238458	0.0031
ROA	77.91173	76.84369	1.013899	0.3193
ROE	3.334405	5.144255	0.648180	0.5221
NPM	-13.91272	27.07896	-0.513783	0.6114

Source : processed data views 10

Based on the previously mentioned information, it is known that each variable's probability value, such as ROA ( $X_1$ )'s 0.32, ROE ( $X_2$ )'s 0.52, and NPM ( $X_3$ )'s 0.61, is  $> 0.05$  (alpha), indicating that heteroscedasticity problems aren't present.

### 3. Multicollinearity Test

**Table 5 Multicollinearity Test Results**

	ROA	ROE	NPM
ROA	1.000000	-0.090205	0.841179
ROE	-0.090205	1.000000	-0.118207
NPM	0.841179	-0.118207	1.000000

Source: processed data views 10

From the information shown above, it is clear that Return on Asset has the highest probability value among all the independent variables included in this analysis.

#### 4. Auto Correlation Test

**Table 6 Autocorrelation Test Results**

Durbin-Watson stat	2.192183
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**Source: processed data eviws 10**

Based on the above Durbin-Watson result, 2.192183, ranging from -2 to 2, this can be concluded that the data is devoid of symptoms or autocorrelation issues.

Based on the findings of the classical assumption test conducted in this study, it can be said that the four classical assumption tests for panel data do not encounter any issues with the data during the classical assumption testing process.

#### Multiple Linear Regression Analysis

**Table 7 Multiple Linear Regression Results**

Variable	Coefficient	Std. Error	T_Statistic	Prob
Harga Saham	1182.742	518.0963	2.282860	0.0302
ROA	-66.93150	29.47343	-2.270910	0.0310
ROE	10.55724	5.926621	1.781325	0.0857
NPM	38.71586	16.44797	2.353838	0.0258

**Source: processed data eviws 10**

The multiple linear regression equation can be calculated using the Random Effect Model approach using the data presented above:

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + e$$

$$\text{Share Price} = 1182.742 - 66.9315 \text{ ROA} + 10.5572 \text{ ROE} + 38.7158 \text{ NPM}$$

The positive constant value in the equation above indicates that the independent variable has a positive influence. The constant value of 11182.742 indicates that if the values of the independent variables Return on Asset ( $X_1$ ), Return on Equity ( $X_2$ ), and Net Profit Margin ( $X_3$ ) are all equal to 0, then the stock price is 11182.742.

The regression coefficient, which has a value of -66.93150, states that if the variable Stock Price ( $Y$ ) rises or falls by one unit, the variable Return on Asset ( $X_1$ ) will also rise or fall by 66.93%. The findings of multiple linear regression analysis show directions that are neither directly proportional nor inversely proportional, which is against theory.

The regression coefficient of 10.55724 states that if the variable Return on Equity ( $X_2$ ) rises or falls by one unit, the variable Stock Price ( $Y$ ) will rise or fall by 10.55%. The results of multiple linear regression analyses show directions that are neither directly proportional not inversely proportional, therefore contradict theory.

The regression coefficient of the variable Net Profit Margin ( $X_3$ ) drops or increases by one unit, then the variable Stock Price ( $Y$ ) increases or decreases by 38.71%. The results of multiple linear regression analyses show directions that are neither directly proportional nor inversely proportional, which contradicts theory.

## Test the hypothesis

### 1. T Test

**Table 8 T Test Results**

Variable	Coefficient	Std. Error	T_Statistic	Prob
Harga Saham	1182.742	518.0963	2.282860	0.0302
ROA ( $X_1$ )	-66.93150	29.47343	-2.270910	0.0310
ROE ( $X_2$ )	10.55724	5.926621	1.781325	0.0857
NPM ( $X_3$ )	38.71586	16.44797	2.353838	0.0258

Source: processed data evIEWS 10

#### a. Return On Asset (ROA)

The probability value of Return On Asset ( $X_1$ ) alpha value ( $\alpha$ ) is 0.03 of 0.05, according to calculations made with EvIEWS 10. Thus, over the period of 2017–2021, it can be concluded that Return On Asset ( $X_1$ ) has an impact and is considerable on the Share Price ( $Y$ ) of energy businesses.

#### b. Return On Equity (ROE)

The probability value of Return On Equity ( $X_2$ ) alpha value ( $\alpha$ ) is 0.08 of 0.05, according to calculations made with EvIEWS 10 (see figure). Thus, over the period of 2017–2021, it can be concluded that Return On Equity ( $X_2$ ) has no impact and is not substantial on the Share Price ( $Y$ ) of energy businesses.

#### c. Net Profit Margin

Based on calculations with EvIEWS 10, it can be shown that the probability value of Net Profit Margin ( $X_3$ )'s alpha value ( $\alpha$ ) is 0.02 from 0.05. Therefore, it can be inferred that for the years 2017 through 2021, Net Profit Margin ( $X_3$ ) has a considerable impact on Energy Company Share Price ( $Y$ ).

### 2. Test F

**Table 9 F Test Results**

F Hitung	2.86
F Tabel	2.02
Prob (F-statistic)	0.00

Source: processed data evIEWS 10

The probability value of the F test results is 0.00 0.05 (alpha) based on EvIEWS 10 computations. The Share Price ( $Y$ ) of Energy firms over the period of 2017–2021 may therefore be inferred to be

significantly influenced by Return On Asset ( $X_1$ ), Return On Equity ( $X_2$ ), and Net Profit Margin ( $X_3$ ) simultaneously.

### Test Coefficient of Determination ( $R^2$ )

**Table 10 Test Results of Coefficient of Determination ( $R^2$ )**

Adjusted R-squared	0.108797
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Source: processed data results eviws 10

The aforementioned information leads to the conclusion that the independent variables in this study, namely Return On Assets, Return On Equity, and Net Profit Margin, may be responsible for 0.10 or 10% of the variation. And other factors contribute for the remaining 0.90, or 90%, of the variance.

### Conclusion

The following conclusions of this study may be reached based on the findings of the research discussion titled "The Effect of Profitability Ratio on Stock Prices in Energy Companies Listed on the Indonesia Stock Exchange for the 2017-2021 " : 1) The stock price of energy businesses will be significantly impacted by the findings of the partial analysis of the Return On Asset variable for the years 2017 until 2021. 2) The stock price of energy companies for the years 2017 to 2021 was not significantly impacted by the results of the partial analysis of the Return On Equity variable. 3) The stock price of energy companies for the years 2017 to 2021 is significantly affected by the results of a partial analysis of the Net Profit Margin variable. 4) The stock price of the energy subsector from 2017 until 2021 is significantly impacted by the findings of the simultaneous analysis of the variables Return On Assets, Return On Equity, and Net Profit Margin.

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