



The influence of Return on Equity (ROE), Earnings Per Share (EPS), and Price to Book Value (PBV) on stock prices of mining companies listed on the Indonesia Stock Exchange (IDX) from 2019 to 2023

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Abstract

This study aims to test and analyze the effect of Return On Equity (ROE), Earning Per Share (EPS), and Price to Book Value (PBV) on Stock Prices. The object of research in this study is the Mining Sector Companies listed on the Indonesia Stock Exchange (IDX) in 2019-2023. This study was conducted using secondary data in the form of financial reports published on the Indonesia Stock Exchange (IDX). The sample used in this study is a Mining company that is registered and active in the capital market and shares the required data consecutively during the 2019-2023 period. The total population is 11 Mining companies and after the sample selection process using the purposive sampling method, 8 Mining companies were obtained. The data analysis method used is quantitative analysis including classical assumption tests, multiple linear regression, hypothesis testing (t-test), F-test, and coefficient of determination (R²). The results of the study with the t-test showed that the Return On Equity (ROE) variable partially did not have a significant effect on the Stock Price. While the Earning Per Share (EPS) and Price to Book Value (PBV) variables partially had an effect on the stock price. The results of the F-test showed that the Return On Equity (ROE), Earning Per Share (EPS) and Price to Book Value (PBV) variables simultaneously had a significant effect on the Stock Price.

Keywords: Return On Equity, Earning Per Share, Price to Book Value, and Stock Price

INTRODUCTION

The capital market plays an important role in the economy because it serves two functions: economic and financial functions. The capital market has an economic function because it provides a facility to bring together two interests: those who have excess funds (investors) and those who need funds (issuers). The capital market also has a financial function because it offers the possibility and opportunity to obtain returns for the fund owners, depending on the investment characteristics chosen. One of the instruments traded in the capital market is stocks, which are a sign of ownership in a company or a limited liability company. Stocks are represented by a piece of paper that indicates that the owner of the paper is the owner of the company that issued the security (Basri and Mayasari, 2024, pratama and erawati 2014, nurdesmeri dan wijayanto 2019)

Stocks are one of the potential investment vehicles. The purpose of investing is to generate money or obtain returns greater than the wealth that has been spent. However, investing certainly carries both profit and loss elements, so when making an investment, one will always seek ways to avoid losses from the investment. In stock investing, there are three

factors to consider: the expected rate of return, the rate of risk, and the availability of funds to be invested. Risk refers to the possibility or deviation from the expected return compared to the actual return. Meanwhile, return refers to the profit or rate of return from the investment itself (Basri and Mayasari, 2019, Kasmir 2019)

In the mining sector, stocks are considered a vital sector for the country. There are two types of stock analysis in this sector: technical analysis and fundamental analysis. Fundamental analysis is an analysis where stock prices reflect or explain information about the company's financial statements. In fundamental analysis, the main factors that determine whether the company is good or not are assets, liabilities, and equity. To make accurate stock investment decisions, a financial ratio approach is used, such as EPS, PER, PBV, and ROE.

According to CNBC Indonesia, the mining sector on the Indonesia Stock Exchange (IDX) is still considered to be 'good' for investors to enter amidst the rising energy commodity prices and the national economic recovery. According to Bernadus Wijaya, CEO of PT Sucor Sekuritas, mining is one of the key sectors supporting Indonesia's economic recovery. The potential for capital gain in the gold mining stock sector is also very high. As the gold mining companies you invest in grow, the higher the stock price of those companies. Therefore, we are required to be meticulous in choosing gold mining companies that are worth investing in. In addition, to gain high capital gains, as a shareholder, you must also be sharp in determining when to sell the stock. With the development of mining companies in Indonesia, the prices of gold mining stocks can continue to rise. Not only that, the price of gold, which cannot fall freely, minimizes the risks you face when investing in gold mining stocks. One of the largest gold mining companies in Indonesia is PT Freeport. To clarify stock price analysis, here is a table of the price index movement of mining sector companies listed from 2019 to 2024. The following is the empirical data that can be presented:



Figure 1

Source: Idx 2024

Based on figure 1 this graph suggests that, although the mining sector started strong in mid-2019, there was a gradual decline in stock prices throughout the year, culminating in a sharp drop in early 2020. The overall downward trend could be attributed to a mix of market factors, including the early signs of global economic slowdowns and the looming COVID-19 pandemic, which had a significant negative impact on stock markets globally. The stock prices start high at 1745 IDR in June 2019 and gradually decline throughout the months,

reaching 1239 IDR in February 2020. This suggests a steady decrease in investor confidence or market performance in the mining sector.

METHOD

This study utilizes a quantitative research method, which is designed to test specific theories by analyzing the relationships between variables. Quantitative research involves the collection and analysis of numerical data, often using statistical methods to interpret the findings. According to Sugiyono (2017:8), "quantitative research is a research method based on positivist philosophy, used to examine specific populations or samples, collect data using research instruments, and analyze data statistically to test predetermined hypotheses." This study employs secondary data obtained from the financial reports of mining sector, covering the period 2019 to 2023. The research aims to analyze the influence of EPS, PER, PBV, and ROE. The study uses multiple regression analysis to evaluate the impact of independent variables on stock price. Statistical tests such as normality test, multicollinearity test, heteroscedasticity test, autocorrelation test, and hypothesis testing (t-test and F-test) (ghozali,2018) are employed to ensure the validity and reliability of the results. These tests help determine whether the financial ratios significantly affect the profitability of mining sector. The findings of this research can contribute to financial management strategies in the mining industry, providing insights into how EPS, PER, PBV, and ROE efficiency influence corporate performance.

RESULT

Multiple Linear Regression Analysis

The purpose of multiple linear regression analysis is to observe the response changes concerning various independent factors and the dependent variable.

Figure 1 presents the regression equation based on the findings from the multiple regression line using the ordinary least squares (OLS) method:

Results of Multiple Linear Regression Test				
Model	Unstandardized Coefficients	Standardized Coefficients	t	Sig.
	B	Std. Error	Beta	
1	(Constant)	0.136	0.06	2.277
	ROE	-0.281	0.151	-0.158
	EPS	2.83	0.222	0.879
	PBV	0.062	0.01	0.491
Source: Data processed, 2024 SPSS				

Based on the results of the regression analysis conducted in SPSS, the multiple linear regression equation in this study can be expressed as follows:

$$Y = 0.136 - 0.281X_1 + 2.830X_2 + 0.062X_3 + e$$

Where:

- Y = Stock Price
- X_1 = ROE

- X_2 = EPS
- X_3 = PBV
- e = Residual Error

The evaluation of research findings from this regression equation can be described as follows:

1. The constant value is 0.136, which means that if the independent variables, namely ROE, EPS, PBV, and Stock Price, are constant or 0, the dependent variable (stock price) will be 0.136.
2. The regression coefficient for ROE has a value of -0.281. This negative coefficient indicates an inverse relationship between the ROE variable and the stock price of mining companies listed on the Indonesia Stock Exchange. This suggests that as ROE increases, it could decrease the stock price by 0.281.
3. The regression coefficient for EPS is 2.830. This positive coefficient indicates a direct relationship between the EPS variable and the stock price of mining companies listed on the Indonesia Stock Exchange. This means that as a company's EPS increases, it can increase the stock price by 2.830.
4. The regression coefficient for PBV is 0.062. This positive coefficient indicates a direct relationship between the PBV variable and the stock price of mining companies listed on the Indonesia Stock Exchange. This suggests that as the PBV value increases, it can increase the stock price by 0.062.

t-Test (Partial Test)

The t-test is used to determine the significance of each independent variable in explaining the dependent variable. The selection criteria used in this study are:

1. If the t-statistic significance value is greater than 0.05, the independent variable does not significantly affect the dependent variable.
2. If the t-statistic significance value is less than 0.05, the independent variable significantly affects the dependent variable.

Coefficients				
Model	Unstandardized Coefficients	Standardized Coefficients	t	Sig.
	B	Std. Error	Beta	
1	(Constant)	0.136	0.06	2.277
	ROE	-0.281	0.151	-0.158
	EPS	2.83	0.222	0.879
	PBV	0.062	0.01	0.491

Figure 2
 t-Test Results for Current Ratio (Partial Test)
 Source: Data processed using SPSS

Results of Significance Test on Regression Coefficients:

1. **ROE:** The first hypothesis states that ROE significantly affects stock prices. The t-value is -1.863, and the significance value is 0.072, which is greater than 0.05 with a significance level of 5%. Therefore, ROE does not have a significant effect on stock prices in the mining sector listed on the Indonesia Stock Exchange from 2021-2023. The hypothesis is rejected.
2. **EPS:** The second hypothesis states that EPS significantly affects stock prices. The t-value is 5.985, and the significance value is 0.000, which is less than 0.05 with a significance level of 5%. Therefore, EPS has a significant effect on stock prices in the mining sector listed on the Indonesia Stock Exchange from 2021-2023. The hypothesis is accepted.
3. **PBV:** The third hypothesis states that PBV significantly affects stock prices. The t-value is 12.765, and the significance value is 0.000, which is less than 0.05 with a significance level of 5%. Therefore, PBV has a significant effect on stock prices in the mining sector listed on the Indonesia Stock Exchange from 2021-2023. The hypothesis is accepted.

F-Test (Simultaneous Test)

Model Summary					
Model	Sum of Squares	df	Mean Square	F	Sig.
1	Regression	12.043	3	4.014	67.155
	Residual	2.152	36	0.06	
	Total	14.195	39		
a. Dependent Variable: Stock Price					
b. Predictors: (Constant), PBV, EPS, ROE					

The F-test determines whether the independent variables, when combined in the model, have a simultaneous effect on the dependent variable.

Figure 3

F-Test Results (Simultaneous Test)

Source: Data processed using SPSS

The calculated F-value is 67.155, and the significance value is 0.000. Since the significance is less than 0.05, it can be concluded that the variables ROE, EPS, and PBV, simultaneously, have a significant effect on the stock price of mining companies listed on the Indonesia Stock Exchange from 2019-2023.

Coefficient of Determination (R^2 Test)

The coefficient of determination (R^2) is used to measure the accuracy of the multiple linear regression model. It represents the proportion of variance in the dependent variable explained by the independent variables.

Model Summary					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	0.921	0.848	0.836	0.2445	1.295
a. Predictors: (Constant), PBV, EPS, ROE					
b. Dependent Variable: Stock Price					

Figure 4
Results of Coefficient of Determination (R^2 Test)
Source: Data processed using SPSS 2024

The R-squared (R^2) value is 0.833334, as shown in Figure 6. The results of the coefficient of determination show that the Adjusted R^2 value is 0.836. This value indicates that the stock price variable can be explained by the variables ROE, EPS, and PBV by 83.6%, while the remaining 16.4% is influenced by other variables.

DISCUSSION

The Effect Of ROE On Stock Prices

The first hypothesis (H1) shows that ROE does not significantly affect stock prices. Although ROE indicates a company's efficiency in generating profits from shareholder equity, it may not directly influence stock prices. High ROE derived from low equity or unsustainable growth can be seen as a risk signal. Additionally, market factors such as sentiment and macroeconomic conditions play a significant role in stock price movements. In this study, PT Golden Energy Mines Tbk had the highest ROE (1.25%) but did not influence its stock price, unlike PT Indo Tambang Raya (ITMG), which had higher stock prices despite lower ROE. Investors often prioritize dividends and technical indicators, rather than just analyzing financial ratios like ROE. ROE's relationship with stock prices was found to be inverse, aligning with other findings such as those by Khairudin and Wandita (2017), who also highlighted complex factors influencing stock prices beyond just ROE.

The Effect of EPS on Stock Prices

The second hypothesis (H2) shows that EPS significantly affects stock prices. A higher EPS indicates good financial performance, which attracts investors and increases stock prices. EPS reflects profit generated per share, and a consistent increase signals effective management, leading to positive market expectations and higher stock prices. This finding is consistent with Khairudin and Wandita's (2017) research.

The Effect of PBV on Stock Prices

The third hypothesis (H3) shows that PBV significantly affects stock prices. PBV compares a company's market price to its book value, and a higher PBV indicates growth potential and attracts investors. High PBV suggests high market expectations for the company's performance, while low PBV may indicate undervaluation. However, an excessively high PBV without adequate performance could signal overvaluation. This study's findings align with research by Liya Ariyani et al. (2018), confirming that PBV significantly influences stock prices.

CONCLUSSION

Based on the results of the tests and discussions regarding ROE, PBV, and EPS on stock prices in the mining sector companies listed on the Indonesia Stock Exchange during the 2019-2023 period, the following conclusions can be drawn:

The partial test results show that ROE does not have a significant effect on stock prices for mining sector companies listed on the Indonesia Stock Exchange from 2019-2023. Therefore, the first hypothesis is rejected. The partial test results show that EPS significantly affects stock prices for mining sector companies listed on the Indonesia Stock Exchange from 2019-2023. Therefore, the second hypothesis is accepted. The partial test results show that PBV significantly affects stock prices for mining sector companies listed on the Indonesia Stock Exchange from 2019-2023. Therefore, the third hypothesis is accepted.

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