

Original Article

The Influence of Financial Ratios and Investment Decisions On Stock Prices

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Abstract:

Financial and market ratios describe a relationship based on considerations between a certain amount and another amount. This ratio explains the good or bad condition of a company's financial position, especially when the figure is compared to the comparative figure used as a standard. The financial ratios in this study include leverage and profitability, while the market ratio is related to investment decisions. The documentation method is used in collecting research data with secondary data types in the form of annual reports of pharmaceutical sub-sector companies on the Indonesia Stock Exchange for the period 2019-2023. The findings show that partially *Debt to Equity* and *Return on Equity* do not affect stock prices. *Price Earning Ratio* has a positive effect on stock prices.

Keywords: Financial Ratios, Market Ratios

Introduction

The pharmaceutical sub-sector industry is a mainstay industrial sector of the future, providing brilliant performance and making significant contributions to the national economy, and playing an important role in improving the quality of life of the community through the provision of quality medicines and health products. Therefore, pharmaceutical sub-sector companies must improve their performance so that they can at least survive in the face of unstable economic conditions and achieve company goals (Agustin et al., 2020).

Before deciding to invest, you need to know the stock price, as an investor you also need to know what factors can affect stock price movements, both internal and external factors. Prospective investors must know the financial condition of a company before investing, be it capital, receivables and profits generated by the company to find out, it is necessary to pay attention to its financial statements. Financial statements are information that describes the condition of a company (Ariani et al., 2022). Piristina & Khairunnisa, (2019) Investment decisions are decisions taken to invest capital in one or more assets to provide benefits in the future.

Investors see company profitability as an indicator, the higher the company's



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profit, the higher *the return* received by the investment ([Oktani & Benarda, 2024](#)) . Profitability has a positive and insignificant relationship to stock prices ([Bandawaty & Nurfitri, 2022](#)) . This is different from the statement ([Bobsaid & Wahyuati, 2020](#)) that profitability has a negative and significant relationship to stock prices. *Leverage* has a positive relationship with stock prices ([Tiwouw et al., 2021](#)) . This explains that the higher the debt, the higher the loan capital from creditors. [Anggriani & Mahmudi, \(2022\)](#) has a positive relationship with stock prices. This shows that it influences or means the direction of a positive relationship as a factor that influences stock prices in a company.

The next financial ratio related to stock prices is PER. PER indicates the amount of rupiah that investors must pay to obtain one rupiah of company profit. Stocks with high growth rates generally have high PER ([Hanafi, 2010](#)). Several previous studies have stated that PER has a positive and significant influence on stock prices ([Yulianti, 2011; Suroto, 2012](#)).

Methods

Data collection using *documentation research* is a secondary data collection method that refers to information in the company's annual report. The collected data is then systematically arranged to test the hypothesis of the influence of profitability, investment decisions and *leverage* on stock prices using multiple linear regression analysis. The data is processed on a computer with SPSS *for Windows software ver 25* ([Ghozali, 2018, p. 160](#)) , including several tests such as classical assumptions as prerequisites that must be met and hypothesis testing.

Multicollinearity Test

The classical assumption test is an analysis carried out to provide an assessment or certainty that the regression equation obtained has accuracy in estimation, is unbiased, and consistent. ([Ghozali, 2018, pp. \(107–108\)](#)) The multicollinearity test aims to test whether the regression model finds a correlation between independent variables. A good regression model should not have a correlation between independent variables. If the independent variables are correlated with each other, then these variables are not orthogonal. Orthogonal variables are independent variables whose correlation value between independent variables is equal to zero.

Autocorrelation Test

The autocorrelation test aims to test whether the linear regression model between the disturbance error in period t and the disturbance error in period $t-1$ (previously). If there is a correlation, then it is called an autocorrelation problem. Autocorrelation arises because sequential observations over time are related to each other. There are several ways that can be used to detect the presence or absence of autocorrelation. One of them is by using the Urbin Watson Test (DW test) ([Ghozali, 2018, pp. 111–112](#))

Heteroscedasticity Test

The heteroscedasticity test aims to test whether in the regression model there is inequality of variance from the residuals of one observation to another. If the variance from the residuals of one observation to another remains, it is called Homoscedasticity and if it is different, it is called Heteroscedasticity. ([Ghozali, 2018, pp. 137–138](#)) .

Multiple Linear Regression Analysis

Multiple regression analysis is carried out by researchers to predict changes in

the value of the dependent variable if two or more values of the independent variables are increased or decreased (Ghozali, 2021, p. 145) .

$$Y = a + b_1X_1 + b_2X_2 + b_3X_3 + e$$

Hypothesis Test (t-Test)

The t-statistic test basically shows how far the influence of one explanatory/independent variable individually explains the independent variable (Ghozali, 2021, p. 148) .

Results

Multicollinearity Test

The regression model is declared free from multicollinearity if the *tolerance value* > 0.10 and VIF < 10.

Table 1 Multicollinearity Test

Variables	Statistical collinearity		Tolerance Standard	Standard VIF	information
	Tolerance	VIF			
ROE (X1)	0.919	1,089	> 0.1	< 10	There is no multicollinearity
PER (X2)	0.913	1,095	> 0.1	< 10	
DER (X3)	0.938	1,066	> 0.1	< 10	

Source: SPSS Output

Based on table 1, it can be seen that the *tolerance value* for all independent variables is more than 0.10 and the VIF value for all independent variable values is less than 10.0. So it can be concluded that the variables *Return On Equity Ratio*, *Price Earning Ratio*, and *Debt to Equity Ratio* on Stock Prices do not find symptoms of multicollinearity between independent variables because there is no VIF value that is more than 10.0 and *tolerance value* that is less than 0.10

Autocorrelation Test

New problems arise if there is a linear correlation between the disturbance error of period t (existing) and the disturbance error of period t-1 (previous). One measure to determine whether or not there is an autocorrelation problem is the Durbin-Watson (DW) test. The following are the results of the autocorrelation test in table 2.

Table 2 Autocorrelation Test

Durbin-Watson Value	dL	dU	provision	Information
1,951	1,3384	1.6589	Du < Dw < 4-Du (1.6589 < 1.951 < 2.3411)	No autocorrelation occurs

Source: SPSS Output

It can be said that there is no autocorrelation because it is known from table 2 that the *Durbin Watson value* is 1.951. The decision-making requirements in the autocorrelation test can be known by comparing the *Durbin Watson* table value with the *Durbin Watson value* in the summary model.

Heteroscedasticity Test

A good regression model is one that does not experience heteroscedasticity. The method used to determine the presence or absence of heteroscedasticity symptoms is through the *Glejser test*.

Table 3 Autocorrelation Test

Model	Unstandardized Coefficients	Standardized Coefficients	t	Sig.
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		B	Std. Error	Beta		
1	(Constant)	769,902	187,484		4.106	.000
	(ROE)	877,622	754,597	.191	1.163	.252
	(PER)	.356	.527	.111	.675	.504
	(DER)	-190,788	119,671	-.258	-1,594	.120

a. Dependent Variable: ABRESID

Source: Out SPSS

The results of the *Glejser* test above can be interpreted to mean that in the regression analysis there are no symptoms of heteroscedasticity, showing a significant value (*p-value*) for the ROE variable of 0.252, the PER variable of 0.504, and the DER variable of 0.120.

Multiple Linear Regression Analysis

Table 4
Multiple Linear Regression Test Results

		Unstandardized Coefficients		Standardized Coefficients
Model		B	Std. Error	Beta
1	(Constant)	1881.688	312.839	
	(ROE)	161.698	1259.132	.031
	(PER)	1.917	.879	.350
	(DER)	-335.023	199.685	-.265

Source: SPSS Output

Stock price = 1881.688 + 161.698 ROE + 1.917 PER + -335.023 DER + e

- The constant value *a* of 1881.688 shows that *Return on Equity Ratio*, *Price Earning Ratio* and *Debt to Equity Ratio* are considered constant, so the share price value of the pharmaceutical sub-sector company is 1881.688.
- The regression coefficient of *Return on Equity* (X_1) is 161,698. This shows that if *Return on Equity (ROE) increases* by one unit, the stock price will increase by 161,698, assuming other variables remain constant.
- The regression coefficient of *Price Earning Ratio* (X_2) is 1.917. This means that if the *Price Earning Ratio (PER)* increases by one unit, then the *Price Earning Ratio (PER)* will increase by 1.917. assuming other variables remain constant.
- The regression coefficient for *Debt to Equity ratio* (X_3) is -335.023. This means that the *debt to equity ratio (DER)* with a negative value of -335.023 explains that if the DER increases by one unit, there will be a decrease of -335.023 units against the Y variable (Stock price).

Correlation Coefficient (R)

Table 5 Model Summary^b

Model	R	R Square	Adjusted R Square	f _{Table}	f
1	.392 ^a	.154	.083	2.87	2,184

a. Predictors: (Constant), (DER), (ROE), (PER)

b. Dependent Variable: STOCK PRICE

Source: SPSS Output

Based on table 5, the simultaneous correlation coefficient is 0.392 or 39.2% if connected based on the correlation table, it has a fairly low relationship (0.20-0.399) between the independent variables *Return On Equity Ratio* (X₁), *Price Earning Ratio* (X₂) and *Debt to Equity Ratio* (X₃) with the dependent variable, namely Stock Price (Y).

Coefficient of Determination (R²)

Based on table 5, the coefficient of determination (R²) with an *R Square* value of 0.154 means that the independent variables *Return On Equity Ratio* (X₁), *Price Earning Ratio* (X₂) and *Debt to Equity Ratio* (X₃) have an influence on Stock Price (Y) of 15.4% while the remaining 84.6% is influenced by other independent variables that were not studied.

Hypothesis Test (t-Test)Table 6 t-test Coefficients ^a

Model		t	Sig.
1	(Constant)	6.015	.000
	(ROE)	.128	.899
	(PER)	2.180	.036
	(DER)	-1.678	.102

a. Dependent Variable: STOCK PRICE

The Influence of *debt to equity Ratio* on Stock Prices

From the results of partial testing, the effect of DER on stock prices with a value of t count -1.678 < 1.688 and a sig value of 0.102 > 0.05 which means there is no effect on stock prices. Based on the theory that the higher the DER, the greater the company's exposure to risk. Stock demand will be affected as a result of investors considering this risk before making investment decisions. The higher the DER, the greater the risk of the company being unable to pay its debts, such as the risk of bankruptcy which is widely avoided by investors. Investors will avoid high DER values because they see the ratio value as a significant part of their own capital to meet the company's obligations. This is the same as research ([Dekrijanti et al., 2023](#)) which confirms the statement of research results that DER does not have a significant effect on stock prices.

The Effect of *Return on Equity* on Stock Prices

The results of this study found that the significance value of *Return On Equity* (ROE) was 0.899 > 0.05 indicating that ROE had no effect on stock prices. So it can be concluded that profitability has no effect on stock prices. ROE is a company generating profits using its equity. A good ROE means that the company is able to manage and make capital efficient and is able to manage capital well so that it produces sustainable and increasing ROE over time, indicating that the company's management is smart and wise in managing it. Based on the ROE level, investors can assess how the company manages its capital. So the better the ROE, the more investor confidence will increase in investing their capital in a company. These results are in line with the signal theory where investors can

obtain appropriate information based on the ROE value. This is the same as research ([Janaina & Yudiantoro, 2022](#)) .

The Effect of *Price Earning Ratio* on Stock Prices

The influence of PER on stock prices in this study, the significance value of the PER variable is $0.036 < 0.05$, then it will be stated that it has no significant effect, indicating that there is an influence of the independent variable *Price Earning Ratio* (X₂) on stock prices (Y). *Price Earning Ratio* is generally used to determine how much price investors must pay to get profit. With a high *Price Earning Ratio* value, it indicates that the stock price will be more expensive and this shows that the company is able to grow well. However, a high *Price Earning Ratio* can also be obtained because the company is unable to get optimal profit. However, companies that have good projections because maybe the company is expanding its business so that the profit obtained is to cover the company's operational costs in running the expansion. This research is in line with research conducted by ([Firdaus & Kasmir, 2021](#)) .

Conclusion

Debt to Equity and *Return on Equity* partially do not have a significant effect on Stock Price. *Price Earning Ratio* is proven to have a significant and positive effect on Stock Price in pharmaceutical sub-sector companies on the Indonesia Stock Exchange for the period 2019 to 2023.

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