The Influence of Fundamental and Macroeconomic Analysis on Stock Price

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ABSTRACT

Investments that provide quite promising returns are stock investments. To see whether stocks can be profitable or not, simply investors often look in terms of changes in stock prices. The purpose of this study is to analyze the effect of fundamental and macroeconomic analysis on stock prices. Fundamental analysis is measured by return on assets (ROA), current ratio (CR), and debt to equity ratio (DER), while macroeconomic analysis is measured by inflation and interest rates. The data used in this study is secondary data in the form of company financial reports indexed by LQ45 for the 2018-2022 period. This study uses multiple linear regression analysis. The results showed that from the fundamental factors, the ROA variable had a positive and significant effect on the stock price of the LQ45 index. Meanwhile, the CR and DER variables don't affect the stock price of the LQ45 index. From macroeconomic factors, namely inflation and interest rates, they don't affect the stock price of the LQ45 index. Simultaneously the variables ROA, CR, DER, Inflation, and Interest Rates don't affect the stock price of the LQ45 index.

INTRODUCTION

At this time people are starting to realize the importance of an investment. The capital market is a means to make investments. Investments that provide promising benefits are stock investments. According to investors, stock investment is an investment option that has a high level of profit and advantages, but it is worth the risk. To see whether stocks can be profitable or not, simply investors often look in terms of changes in stock prices. The rise and fall of stock prices greatly affect investors' decision making to invest in the short and long term (Rahmat & Fatima, 2022) . Stock prices can be influenced by micro factors and macro factors. Micro factors are also known as the company's fundamental factors, namely factors within the company that can affect the company's performance. While macro factors are factors that are outside the company but have an influence on the ups and downs of company performance (Rachman & Sutrisno, 2013) .

The fundamental factors in this study are return on assets (ROA), debt to equity ratio (DER), and current ratio (CR). Return on assets (ROA) is a company's ability to generate profits with its total assets. Debt to equity ratio (DER) is the balance between the company's debt and its own capital. The current ratio (CR) is a ratio that compares the company's current assets with short-term debt (Brigham & Houston, 2018). The macro factors in this study are inflation and interest rates. Inflation is an increase in goods and services in general and continuously within a certain period of time. The BI 7-Day (Reserve) Repo Rate is a policy interest rate that reflects the attitude or monetary policy stance set by Bank Indonesia and announced to the public (www.bi.go.id).

The Indonesia Stock Exchange (IDX) has 38 types of stock price indices. One type of index on the Indonesia Stock Exchange is LQ45. The LQ45 index can describe and represent the stock market in Indonesia because the LQ45 measures the performance of 45 stocks that have large liquidity and market capitalization and are supported by good company fundamentals (IDX, 2023).

Figure 1. Development of the LQ45 Index for the 2019-2023 period

Source: Yahoo Finance (2023)

In 2020 the LQ45 index experienced a drastic decline reaching its lowest point of 624.76. From 2021 to 2023, the movement of the LQ45 stock price index will continue to fluctuate with an upward trend until it reaches its highest point in April 2022, which is 1,085.44. The LQ45 stock price index, which initially showed a downtrend and dropped drastically in 2020, then experienced an uptrend in 2022. It is estimated that this was influenced by internal and external factors. Internal factors such as the condition and performance of the company itself while external factors are macroeconomic factors as a whole (Nuryasman & Yessica, 2017) .This research is based on two theories, namely Signal Theory and Arbitrage Pricing Theory (APT). Signal theory is a theory that explains companies that provide a signal to users of financial statements. These signals can contain information or promotions that illustrate that the company is better than other companies (Brigham & Houston, 2019). A good signal theory will show that the company has good prospects in the future and illustrates good company value so that investors will be interested in buying lots of shares which will ultimately increase the company's stock price (Kamila & Nurmatias, 2022)

Arbitrage Pricing Theory is an asset pricing model based on the idea that the return of an asset can be predicted using the relationship that exists between the same asset and risk factors in general. Ross (1976) in (Dingkol et al., 2020) formulates a theory called the Arbitrage Pricing Theory (APT), this theory is based on the idea that 2 investment opportunities that have identical characteristics cannot be sold at different prices, more This theory assumes that the level of profit can be influenced by various factors in the economy and in the industry. The correlation between the return rates of two securities occurs because the securities are affected by the same factors. Several previous studies regarding this research have previously been carried out by several researchers (Dingkol et al., 2020) , (Rokhaniyah, 2020) , and (Veronica & Pebriani, 2020) . Some of these previous studies still have weaknesses. So on that basis, this study aims to analyze the influence of fundamentals and macroeconomics on stock prices in LQ45 companies.

RESEARCH METHOD

The type of research used in this study is a type of quantitative research. The data collection technique in this study is a documentation technique, namely the technique of collecting and recording financial reports obtained from the official website of the company and the official website of the IDX. The data analysis technique used is multiple linear regression analysis with the help of the SPSS 23 program for windows. The population in this study are all companies that are on the LQ45 index listed on the Indonesia Stock Exchange (IDX) during the 2018-2022 period, a total of 49 companies. The sampling technique used in this study is a non-profitability sampling technique using purposive sampling method. Some of the sample criteria to be used are:

Table 1. Sample Criteria

Criteria	Amount
Companies listed on the IDX and included in the LQ45 index for the 2018-2022 period	45
Companies that are not always in the LQ45 index for the 2018-2022 period	(14)
Companies in the banking sector that are in the LQ45 index for the 2018-2022 period	(5)
Number of companies	26
Number of samples 26x5	130
Outliers data	(54)
Total data	76

Source: Data that has been processed by the author, 2023

RESULTS AND DISCUSSION

Results of Descriptive Statistics

Table 2. Descriptive Statistics

	Minimum	Maximum	Means	Std.Deviation
ROA	-.06	.18	.0672	.04689
CR	.34	3.35	1.7545	.65498
DER	-.10	1.32	.6130	.40769
Inflation	.02	.06	.0267	.00929
Interest Rate	.04	.06	.0480	.00864

Source: Results of SPSS Data Processing, 2023

Based on the table 2 it can be explained that the results of descriptive statistics regarding the variables in this study include:

a. The ROA variable has a minimum value of -0.06, a maximum value of 0.18, an average value of 0.0672, and a standard deviation value of 0.04689.
b. The CR variable has a minimum value of 0.34, a maximum value of 3.35, an average value of 1.7545, and a standard deviation value of 0.65498
c. The DER variable has a minimum value of -0.10, a maximum value of 1.32, an average value of 0.6130, and a standard deviation value of 0.40769
d. The inflation variable has a minimum value of 0.02, a maximum value of 0.06, an average value of 0.0267, and a standard deviation value of 0.00929.
e. The Interest Rate variable has a minimum value of 0.04, a maximum value of 0.06, an average value of 0.0480, and a standard deviation value of 0.00864.

Classical Assumption Test Results
Normality Test

Table 3. Normality Test Results

		Unstandardized Residuals
N		76
Normal Parameters	Means	.0000000
	Std.Deviation	1.09116439
Most Differences	Extreme absolute	.097
	Positive	.097
	Negative	-.0.87
Test Statistics		.097
Asymp. Sig. (2-tailed)		.072

Source: Results of SPSS Data Processing, 2023

Based on the results of table 3, it is known that the Asym-sig (2-tailed) value for all variables is greater than alpha 5%. Thus it can be concluded that all data from the variables studied, namely ROA, CR, DER, Inflation, Interest Rates, and Stock Prices follow a normal distribution pattern. This means that the first classical assumption has been fulfilled and the model is suitable for use as a data analysis tool.

Heteroscedasticity Test

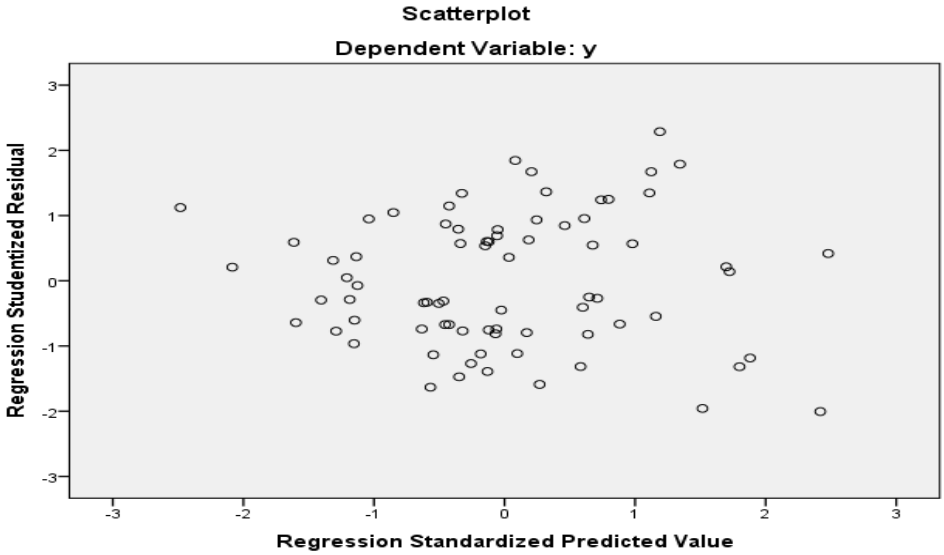

Figure 2. Heteroscedasticity Test
Source: Results of SPSS Data Processing (2023)

Based on Figure 2, it can be seen that the scattered points do not form a certain pattern. However, the dots spread up and above the number 0, this indicates that there is no heteroscedasticity. Thus it can be concluded that there are differences in the variance of the residuals from one observation to another.

Multicollinearity Test

Table 4. Multicollinearity Test Results

Variable	Tolerance	VIF
ROA	.941	1.063
CR	.922	1.085
DER	.941	1.063
Inflation	.462	2.164
Interest Rate	.459	2.178

Source: Results of SPSS Data Processing, 2023

a. Based on the table above, the tolerance and VIF values of the ROA variables are 0.941 and 1.063 because the tolerance value is > 0.1 and the VIF value is < 10. It can be concluded that there are no symptoms of multicollinearity in the independent variables.
b. Based on the table above, the tolerance and VIF values of the CR variables are 0.922 and 1.085 because the tolerance value is > 0.1 and the VIF value is < 10. It can be concluded that there are no symptoms of multicollinearity in the independent variables.
c. Based on the table above, the tolerance and VIF values of the DER variables are 0.941 and 1.063 because the tolerance value is > 0.1 and the VIF value is < 10. It can be concluded that there are no symptoms of multicollinearity in the independent variables.
d. Based on the table above, the tolerance and VIF values of the Inflation variables are 0.462 and 2.164 because the tolerance value is > 0.1 and the VIF value is < 10. It can be concluded that there are no symptoms of multicollinearity in the independent variables.
e. Based on the table above, the tolerance and VIF values of the Interest Rate variables are 0.459 and 2.178 because the tolerance value is > 0.1 and the VIF value is < 10. It can be concluded that there are no symptoms of multicollinearity in the independent variables.

Autocorrelation Test

Table 5. Autocorrelation Test Results

R	R Square	Adjusted R Square	Std Error of the Estimate	Durbin-Watson
.418[a]	.175	.116	1.12964	.755

Source: Results of SPSS Data Processing, 2023

Based on table 5, the results of the autocorrelation test with Durbin-Watson show the number 0.755. The calculated Durbin-Watson value of 0.755 is in an area where there is no autocorrelation so that it can be said that this regression model is free from autocorrelation.

Multiple Linear Regression Analysis

Table 6. Multiple Linear Regression Analysis Test

	Unstandardized Coefficients B	Std. Error	Standardized Coefficients Betas	t	sig
(Constant)	7.328	.893		8.204	.000
ROA	9.315	2.867	.364	3.248	.002
CR	.141	.207	.077	.680	.499
DER	-.191	.330	-.065	-.578	.565
Inflation	-30.470	20.642	-.236	-.1476	.144
Interest Rate	2.044	22.267	.144	.900	.371

Source: Results of SPSS Data Processing, 2023

Based on the table above, the multiple linear regression equation is obtained as follows: Stock Price (Y) = 7.328 + 9.315X1 + 0.141X2 + (-0.191) X3 + (-30.470)X4 + 2.044X5 + e

Based on the regression equation above, it can be explained as follows:

a. The constant (a) = 7.328. This value means that if there is no ROA, CR, DER, inflation, interest rate (zero value), then stock price is 7.329.
b. Coefficient X1 (b1) = 9.315. This value means that if ROA increases, stock price will increase by 9.315.
c. Coefficient X2 (b2) = 0.141. This value means that if CR increases, stock price will increase by 0.141.
d. Coefficient X3 (b3) = -0.191. This value means that if DER decreases, stock price will increases by -0.191.
e. Coefficient X4 (b4) = -30.470. This value means that if inflation decreases, stock price will increase by -30.470.
f. Coefficient X5 (b5) = 2.044. This value means that if interest rate increases, stock price will increase by 2.044.

Hypothesis Test Results Simultaneous Test (Test F)

Table 7. Simultaneous Test (Test F)

Model	Sum of Squares	Df	Mean Square	F	Sig
Regression	18.890	5	3.778		
Residual	89.298	70	1.276		.018[b]
Total	108.188	75		2.962	

Source: Results of SPSS Data Processing, 2023

Based on the table 7 it can be seen that the F value is 2.962 with a significance level is 0.018 > 0.05. So it can be concluded that simultaneously all the independent variables (ROA, CR, DER, Inflation, Interest Rate) have no significant effect on the dependent variable (Stock Price).

Partial Test (T Test)

Table 8. Partial Test (t test)

	Unstandardized Coefficients B	Std. Error	Standardized Coefficients Betas	t	sig
(Constant)	7.328	.893		8.204	.000
ROA	9.315	2.867	.364	3.248	.002
CR	.141	.207	.077	.680	.499
DER	-.191	.330	-.065	-.578	.565
Inflation	-30.470	20.642	-.236	-.1476	.144
Interest Rate	2.044	22.267	.144	.900	.371

Source: Results of SPSS Data Processing, 2023

Partial test (t test) is used to determine the effect of each independent variable on the dependent variable as follows:

The Effect of ROA on Stock Price

For ROA variable (X1), the tcount value is 3.248 with a significance level of 0.002. When compared with the ttable value, then tcount (3.248) > ttable 1.667) and a significance level of 0.002 < 0.05. This means that partially ROA has a positive and significant effect on stock price of the LQ45 index.

The Effect of CR on Stock Price

For CR variable (X2), the tcount value is 0.680 and the significance level is 0.499. When compared with the ttable value, then tcount (0.680) < ttable (1.667) and a significance level of 0.499 > 0.05. This means that partially CR has a positive and insignificant effect on stock price of the LQ45 index.

The Effect of DER on Stock Price

For DER variable (X3), the tcount value is -0.578 and the significance level is 0.565. When compared with the ttable value, then tcount (-0.578) < ttable (1.667) and a significance level of 0.565 > 0.05. This means that partially DER has a negative and insignificant effect on stock price of the LQ45 index.

The Effect of Inflation on Stock Price

For inflation variable (X4), the tcount value is -1.476 and the significance level is 0.144. When compared with the ttable value, then tcount (-1.476) < ttable (1.667) and a significance level of 0.144 > 0.05. This means that partially inflation has negative and insignificant effect on stock price of the LQ45 index.

The Effect of Interest Rate on Stock Price

For interest rate variable (X5), the tcount value is 0.900 and the significance level is 0.371. When compared with the ttable value, then tcount (0.900) < ttable (1.667) and a significance level of 0.371 > 0.05. This means that partially interest rate negative and insignificant effect stock price of the LQ45 index.

Determinant Coefficient Test (R2)

Table 9. Determinant Coefficient Test

R	R Square	Adjusted R Square	Std Error of the Estimate
.418[a]	.175	.116	1.12964

Source: Results of SPSS Data Processing, 2023

Based on the results in table 8, the coefficient of determination data processing shows that the Adjusted R Square (R^2) value is 0.175. It can be said that the dependent variable (stock price) can be fully explained by the independent variables (ROA, CR, DER, inflation, interest rates) of 17.5%. While 82.5% is explained by other variables outside this research model.

CONCLUSION

Based on the testing and analysis that has been done, it can be concluded that from the fundamental factors the ROA variable has a positive and significant effect on the stock price of the LQ45 index. Meanwhile the CR and DER variables have no effect on the stock price of the LQ45 index. From macroeconomic factors, namely inflation and interest rates, they have no effect on the stock price of the LQ45 index. Simultaneously the variables ROA, CR, DER, Inflation, and Interest Rates have no effect on the stock price of the LQ45 index.

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