

Analysis of the Effect of Return on Asset, Return on Equity, Earning Per Share, And Price to Earning Ratio on Stock Price with Dividend Per Share as an Intervening Variable (Case Study of LQ45 Stock Index In (2016-2022))

Reza Wahyudi¹, Azhar Maksum², Iskandar Muda Damanik³

^{1,2,3}Department of Accounting, Faculty of Economics and Business Universitas Sumatera Utara, Indonesia

Corresponding Author: Reza Wahyudi

DOI: <https://doi.org/10.52403/ijrr.20260759>

ABSTRACT

This research aims to examine the effects of Return on Asset (ROA), Return on Equity (ROE), Earning per Share (EPS), and Price to Earnings Ratio (PER) on Stock Price with the Dividend per Share (DPS) ratio as an intervening variable. The object of this research was 45 companies listed in the LQ 45 Index of the Indonesia Stock Exchange during 2016—2022. The sample was selected using the purposive sampling method, namely 12 companies that were consecutively listed in the LQ 45 Index and regularly distributed dividends during 2016—2022. The analytical methods used in this research were multiple linear regression analysis and path analysis.

The results of this research show that the variables Return on Equity (ROE), Earning per Share (EPS), Price-to-Earnings Ratio (PER), and Dividend per Share (DPS) have a positive and significant effect on Stock Price. Meanwhile, the Return on Assets (ROA) variable has a negative effect on Stock Price. The ratios of Earning per Share (EPS) and Price-to-Earnings Ratio (PER) have a positive and significant effect on Dividend per Share (DPS). Meanwhile, the Return on Asset (ROM) and Return on Equity (ROE) variables have no effect on the Dividend per

Share (DPS) variable. The Dividend per Share (DPS) variable can only mediate the effect of the Return on Assets (ROA) variable on Stock Price.

Keywords: Return on Asset, Return on Equity, Earning per Share, Price to Earning Ratio, Dividend per Share, Share Price

INTRODUCTION

Today's rapid technological development has greatly simplified human activities. One example is investing, particularly in stocks, which has made it easier to buy and sell shares quickly and anywhere. It has resulted in a growing number of stock investors. As of July 2022, the Credit Guarantee Corporation (LPS) recorded 9.3 million capital market investors (Leading Indonesian Financial Literacy, 2020). The number of investors has grown 3.7-fold, or 370 percent, since the Covid-19 pandemic. This number is also dominated by young investors under 30, who represent 59.4 percent of total individual investors in Indonesia.

The Indonesia Stock Exchange has an LQ45 index consisting of blue-chip stocks, namely those with large capitalizations, frequent trading, and a long-standing presence on the exchange. The LQ45 Index aims to complement the Jakarta Composite Index

(JCI) by providing an objective, reliable tool for financial analysts, investment managers, investors, and capital market observers to monitor the price movements of actively traded stocks.

The LQ45 Index measures the price performance of 45 high-liquidity, large-cap stocks with sound company fundamentals. The LQ45 Index consists of 45 stocks from companies that meet certain criteria, including being among the top 60 companies with the highest market capitalization in the last 12 months and the highest transaction value on the regular market in the last 12 months. Investors can benefit from purchasing shares in the LQ45 Index, including greater flexibility in buying and selling whenever they wish, thanks to the index's adequate liquidity, as evidenced by daily transaction volume of over IDR 100 billion. Several factors influence the value of the LQ45 stock price index, such as the recent COVID-19 pandemic. As researched by Puspitaningrum and Septina (2022), the average LQ45 stock price before the pandemic was Rp9,179.5 per share with a standard deviation of Rp14,670.11. Meanwhile, the average stock price during the pandemic was Rp6,469.7 per share with a standard deviation of Rp8,517. Therefore, it can be concluded that the average stock price of LQ45 companies declined significantly during the pandemic.

Buying stocks certainly requires thorough analysis to determine which stocks will provide high returns. According to Ramdhani and Aisyah (2018:37), one stock price analysis technique is fundamental analysis, which analyzes financial statements as reflected in financial ratios. Companies with strong financial ratios reflect strong company performance. Fundamental analysis attempts to predict future stock prices by estimating the value of fundamental factors, which can then be used to calculate stock prices. One fundamental factor in stock analysis is the profitability ratio, which measures a company's ability to generate profits. Companies with strong financial

performance will generate maximum profits, thus providing a high return on investment for shareholders, both in the form of rising stock prices and maximum dividends.

According to Nawangwulan (2018), a company's rising profits can be an opportunity for potential investors, and vice versa. A high profit level will send a positive signal to potential investors, indicating the company's strong ability to maximize its resources and generate the highest possible profits. It is of course in line with the wishes of investors and potential investors who will buy shares of companies that have a good profitability ratio and result in more demand than supply on the stock exchange and will increase the price of these shares on the stock exchange.

In this study, researchers will use four profitability ratios as independent variables: Return on Assets (ROA), Return on Equity (ROE), Earnings per Share (EPS), and Price to Earnings Ratio (PER).

In addition to analyzing fundamental factors to assess stock prices through profitability ratios, investors also pay attention to a company's dividend policy. It is because the primary goal of investors investing in the capital market is not only to achieve high returns through capital gains, but also to receive dividends from the company in which they invest.

According to Handoko (2017), dividends are the distribution of company profits to shareholders, the amount of which is proportional to the number of shares held. For investors, dividend payments are a signal of a company's prospects.

For investors, information regarding dividend payments can be more important than earnings announcements. A high, predictable level of profitability can influence a company's value. A moderate dividend policy is expected to strengthen the influence of profitability on company value. A cash dividend policy for shareholders will further increase the company's value. Thus, the company will be able to maximize its value if investors' expectations of receiving

returns in the form of cash dividends are met. Information about the cash dividend policy provides signals about the company's prospects.

Profitability is a signal that investors closely monitor. The higher the profits generated, the more promptly decisions must be made regarding them. The proportion of dividends declared to shareholders must be appropriate, because the larger the dividend, the smaller the retained earnings available for various company activities. A company announcing a small dividend will create the perception that the company is incapable of generating profits. Research by Sariyati et al. (2023) and Haryani (2018) states that the Return on Assets (ROA) ratio has a partial positive effect on stock prices. Meanwhile, research by Nurlia (2019) shows a negative relationship between Return on Assets (ROA) and stock price, with a coefficient of -207.595.

Research conducted by Karnawi (2017) and Azizah (2018) found that Return on Equity (ROE) has a partial positive effect on stock prices. Meanwhile, Romadhan and Satrio (2019) found that Return on Equity (ROE) negatively impacts stock prices.

Hawa's (2017) research found that Earnings per Share (EPS) has a positive and significant effect on stock prices. Nurlia's (2016) research found that Earnings per Share (EPS) has a negative and significant effect on stock prices.

Research by Rahmadewi and Abundanti (2018), Octovian (2020), and Ali et al. (2022) found that the Price-Earnings Ratio (PER) positively affects stock prices. However, this contradicts the findings of Rifani & Arifin (2022) and Novasari (2018), who found that the Price-Earnings Ratio (PER) had no significant effect on stock prices.

Research conducted by Oktaviani (2017), Alfiah and Marsudi (2017), and Najib and Triyonowati (2017) stated that the Dividend Per Share (DPS) ratio partially has a positive and significant effect on stock prices, in contrast to the results of research conducted by Najiyah & Lahaya (2021), which stated

that Dividend Per Share (DPS) has a negative and significant effect on stock prices. Based on the research by Wati (2009) and Efni (2013), the Return on Asset (ROA) and Return on Equity (ROE) ratios affect the Dividend Per Share (DPS) ratio. Then other research with the same dependent variable, namely the Dividend Per Share (DPS) ratio, was conducted by Anesia (2011), Ifadhila (2016), Nasution (2019), and Fathurrahman et al., (2019) showing that the Earning Per Share (EPS) ratio and the Price to Earnings Ratio (PER) ratio affect the Dividend Per Share (DPS) ratio.

Jacob (2017) suggests that dividend policy can mediate the effect of profitability on firm value. This finding aligns with research conducted by Erlangga (2009), Martini (2015), Deitiana (2013), Ifadhila (2016), Rochmah and Fitria (2017), and Galih (2021), which states that dividend policy can mediate the effect of profitability on firm value.

Based on the background, theory, and previous research described above, there are conflicting findings that pose an unresolved mystery regarding the factors influencing stock prices. Therefore, the researcher is interested in conducting a study entitled "Analysis of the Effect of ROA, ROE, EPS, and Per on Stock Prices with Dps as an Intervening Variable in the LQ45 Stock Index (2016-2022 Period)."

LITERATURE REVIEW

Stock price

According to Wardhani et al. (2022), a stock price is the price a company sets for other entities seeking ownership rights in the company. The higher the stock price, the greater the company's ability to generate profits for investors. The laws of supply and demand strongly influence stock prices. Stock prices tend to rise when there is excess demand and fall when there is excess supply. There are two types of analysis commonly used to determine stock prices (Jogiyanto, 2003):

1. Technical analysis determines stock

prices using market data such as stock prices, trading volume, and market indexes.

2. Fundamental Analysis or Company Analysis, which determines stock prices using fundamental data, such as data from a company's financial statements, including profits, dividends paid, sales, growth, prospects, and industry conditions.

Various variables influence supply and demand, both rational and irrational. Rational influences, as described by Samsul (2006), include company performance, interest rates, inflation, growth rates, foreign exchange rates, or stock price indices in other countries. Irrational influences include market rumors, following dreams, whispers from friends, or price manipulation. In general, price increases or decreases can occur simultaneously. Stock price changes theoretically begin with investors estimating income and risk to determine stock value using the company's historical data. The results of this revaluation are compared with the stock price and then used as the basis for stock decision-making (whether to buy or sell). Stock prices in this study are measured by:

$$\text{Stock Price} = (\text{T1 Price} - \text{T0 Price}) / \text{T0 Price} \times 100\%$$

Note:

T1 Price = Closing Price at the end of the year

T0 Price = Opening Price at the beginning of the year

Return on Assets

According to Hanafi (2008), the Return on Assets (ROA) ratio measures a company's ability to generate net profit per unit of assets. The higher a company's ROA ratio, the greater its profitability. Investors should consider the ROA ratio when investing in stocks, as it serves as an indicator of a company's efficiency in using assets to generate profits.

The ROA ratio measures the rate of return on assets and indicates how effectively a company manages its assets to generate profits. Therefore, the higher the ROA ratio, the stronger the signal it sends to potential investors about purchasing the company's shares. It will increase buying volume, which exceeds the offering volume, increasing in the company's share price on the Indonesia Stock Exchange.

$$\text{ROA} = \text{Net profit} / \text{Total assets} \times 100\%$$

Return on Equity

According to Lestari and Sugiharto (2007), the Return on Equity (ROE) ratio measures the net profit generated from the capital invested by company owners. The Return on Equity (ROE) ratio is calculated by dividing net profit by total capital. A higher ROE ratio indicates to shareholders that the rate of return on investment is increasing. It provides a positive signal to potential investors regarding the company's stock purchase. It will increase the volume of purchases of the company's shares, exceeding the offering volume, and in the company's share price on the Indonesia Stock Exchange. Therefore, the Return on Equity (ROE) ratio is an important metric for investors to determine the percentage return on capital invested in the company through in shares.

$$\text{ROE} = \text{Net profit} / \text{Total equity} \times 100\%$$

Earnings Per Share

According to Darmadji (2012), the Earnings per Share (EPS) ratio reflects a company's ability to generate profit for each outstanding share. A higher EPS ratio indicates a better company's ability to generate net profit per outstanding share. It provides a positive signal to potential investors about the amount of stock the company has issued, thereby increasing demand for the shares, which in turn increases the share price.

EPS = Net Income / Number of Outstanding Shares

Price to Earnings Ratio

According to Brigham (2010), the Price-Earnings Ratio (PER) is the ratio of a stock's price to its earnings per share. It indicates how much investors are willing to pay for each reported profit. According to Darmadji (2012), the Price-Earnings Ratio (PER) reflects the market's assessment of a company's ability to generate profits. The Price to Earnings Ratio (PER) indicates the amount of funds investors spend to obtain each rupiah of the company's profit. According to Hanafi (2010), "Companies expected to grow at a high rate (which means they have good prospects) usually have a high Price to Earnings Ratio (PER). Conversely, companies expected to experience low growth will also have a low Price to Earnings Ratio (PER)."

Based on the above theory, a higher Price-Earnings Ratio (PER) indicates greater investor (market) confidence in the company's ability to generate profits. A higher Price-Earnings Ratio (PER) indicates greater demand for the company's shares. This increased demand leads to an increase in the company's share price, or a positive correlation between the Price to Earnings Ratio (PER) and the share price.

Companies with a high Price to Earnings Ratio (PER) tend to have higher Dividend Per Share (DPS) levels. It reflects investor confidence in the company, as investors assess the company's ability to deliver maximum returns in the future, both through rising share prices and cash dividends.

PER = Share Price / Earnings per share

Dividend Per Share

According to Syamsuddin (2011), the Dividend Per Share (DPS) ratio describes the amount of earnings per share that will

be distributed. For investors, the dividend payout rate is a signal of a company's prospects. It is in line with Brigham's (2011) signaling hypothesis, which states that "investors consider dividend changes as signals and management forecasts of earnings." A company's dividend policy can be seen from the dividend payout ratio per share, or Dividend Per Share (DPS). The Dividend Per Share (DPS) ratio determines the amount of profit the company distributes as dividends per outstanding share. In signaling theory, this signal triggers a market reaction because investors' positive views of the company's future are reflected in an increase in the share price.

DPS = Total Dividend / Number of shares outstanding

Framework

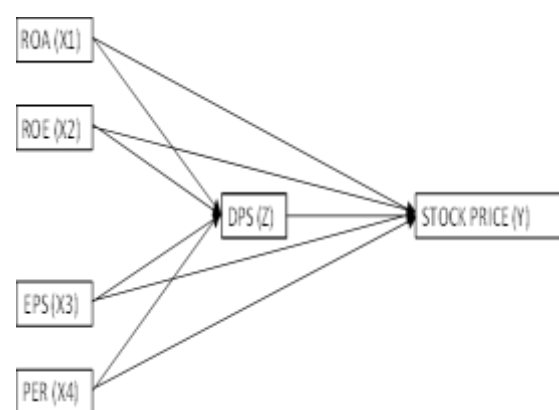


Figure 1. Conceptual Framework

H1: Return on Assets (ROA) has a positive effect on stock prices.

H2: Return on Equity (ROE) has a positive effect on stock prices.

H3: Earnings per Share (EPS) has a positive effect on stock prices.

H4: Price to Earnings Ratio (PER) has a positive effect on stock prices.

H5: Dividends per Share (DPS) have a positive effect on stock prices.

H6: Return on Assets (ROA) has a positive effect on dividends per share (DPS).

H7: Return on Equity (ROE) has a positive effect on dividends per share (DPS).

H8: Earnings per Share (EPS) has a positive effect on dividends per share (DPS).

H9: Price to Earnings Ratio (PER) has a positive effect on dividends per share (DPS).

H10: Dividends per Share (DPS) can mediate the effect of Return on Assets (ROA) on stock prices.

H11: Dividend per share (DPS) can mediate the effect of return on equity (ROE) on stock prices.

H12: Dividend per share (DPS) can mediate the effect of earnings per share (EPS) on stock prices.

H13: Dividend per share (DPS) can mediate the effect of price-earnings ratio (PER) on stock prices.

MATERIALS & METHODS

This research is a causal effect study. This research is designed to examine the influence of facts and phenomena and to seek factual information, namely, research that is explanatory regarding the influencing factors (Sekaran, 2003). The population in this study comprises 45 companies included in the LQ 45 index of the Indonesia Stock Exchange, selected based on specific criteria and considerations from 2016 to 2022. The sample in this study, using a purposive sampling technique, consists of 12 companies with an observation period of 7 years from 2016 to 2022, yielding 110 observations in this study is 110.

The research data is secondary data obtained from the annual financial reports of 12 companies included in the LQ 45 index of the Indonesia Stock Exchange from 2016 to 2022. The data used are a pooled cross-sectional time series, which combines data across companies (cross-section) and over time (time series) (Supomo and Indriantoro, 2002). SPSS software was used for data processing. The method used in this study was path analysis.

RESULT

A. Classical Assumptions of Sub-Structure 1 Equation

Sub-Structure 1 Normality Test

In this study, the normality test used the nonparametric Kolmogorov-Smirnov statistical test. The data showed a normal distribution when the Asymp.Sig. value was greater than the predetermined alpha value of 0.05, with the following results:

Table 1. Sub-Structure 1 Normality Test Results

One-Sample Kolmogorov-Smirnov Test		
		Unstandardized Residual
N		84
Normal Parameters**	Mean	.0E+00
	Std. Deviation	.337
Most Extreme Differences	Absolute	.074
	Positive	.038
	Negative	-.074
Test Statistic		.074
Asymp. Sig. (2-tailed)		.200
a. Test distribution is Normal.		
b. Calculated from data.		

Source: Research Results, 2024 (Processed Data)

The results of the Normality Test in Table 1 above show that the Asymp.Sig (2-tailed) value is 0.200, above the significance level (0.05). In other words, the residual variables are normally distributed. Based on these results, the regression equation for the research variables is normally distributed.

Multicollinearity Test for Sub-Structure 1

A good regression model is one in which there is no correlation among the independent variables, as indicated by a Variance Inflation Factor (VIF) value of no more than 10 and a Tolerance value of more than 0.1. It indicates that the regression model does not exhibit multicollinearity between the independent variables. The results of the multicollinearity test are shown in the following table:

Table 2. Results of the Multicollinearity Test for Sub-Structure 1

Coefficients ^a			
Model	Collinearity Statistics		
		Tolerance	VIF
1	ROA	,192	5,197
	ROE	,172	5,726
	EPS	,336	2,975
	PER	,538	1,859
	DPS	,374	2,673

a. Dependent Variable: Stock Price

Source: Research Results, 2024 (Processed Data)

Based on the results in Table 2, it can be seen that the independent variables, namely Return on Assets (ROA), Return on Equity (ROE), Earnings Per Share (EPS), Price to Earnings Ratio (PER), and Dividend Per Share (DPS), have a Tolerance value greater than 0.10. The VIF value is, on average, only 5, which is less than 10. Therefore, it can be concluded that this regression model does not experience multicollinearity. Therefore, the regression model is suitable for use.

B. Classical Assumptions of Two Sub-Structure Equations (2)

Normality Test for Sub-Structure 2

Table 3. Results of the Normality Test for Sub-Structure 2

One-Sample Kolmogorov-Smirnov Test			
		Unstandardized Residual	
N			88
Normal Parameters ^a	Mean	DE-7	
	Std. Deviation	,30570002	
Most Extreme Differences	Absolute	,074	
	Positive	,038	
	Negative	-,074	
Test Statistic		,074	
Asymp. Sig. (2-tailed)		,200	

a. Test distribution is Normal.

Source: Research Results, 2024 (Processed Data)

Based on the results of the Normality Test in Table 3, the Asymp.Sig value (2-tailed) is 0.200 above the significant value (0.05); in other words, the residual variable is normally distributed. Based on these results, it can be concluded that the regression equation of the research variables is normally distributed.

Multicollinearity Test for Sub-Structure 2

Table 4. Results of Multicollinearity Test for Sub-Structure 2

Coefficients ^a			
Model	Collinearity Statistics		
		Tolerance	VIF
1	ROA	,192	5,197
	ROE	,175	5,726
	EPS	,538	1,859
	PER	,374	2,873
	DPS		

a. Dependent Variable: DPS

Source: Research Results, 2024 (Processed Data)

Based on the results in Table 4, it can be seen that the independent variables, namely Return on Assets (ROA), Return on Equity (ROE), Earnings Per Share (EPS), and Price to Earnings Ratio (PER), have a Tolerance value greater than 0.10 and a VIF value whose average is only 5, which means less than 10. Therefore, it can be concluded that this regression model does not experience multicollinearity. Therefore, the regression model is suitable for use.

C. Path Analysis

Before conducting the analysis, the author will present a path diagram of the causal relationship in Figure 5.3 between the variables Return on Assets (X1), Return on Equity (X2), Earnings Per Share (X3), Price to Earnings Ratio (X4), Dividend Per Share (Z), and Stock Price (Y). It is based on existing theories, as follows:

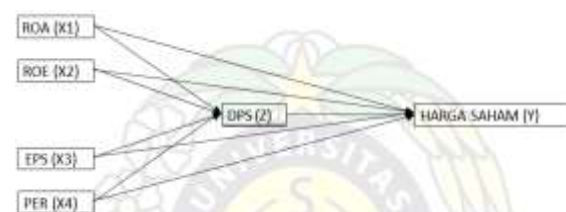


Figure 2. Path Diagram Model of Variables X1, X2, X3, X4, and Z Against Y

To conduct path analysis, the relationship structure in the path diagram above will be divided into two models. The first substructure path diagram model (1) in

Figure 5.4 relates the variables Return on Assets (X1), Return on Equity (X2), Earnings Per Share (X3), Price to Earnings Ratio (X4), and Dividend Per Share (Z) to Stock Price (Y), as follows:

$$Y = pYx1 + pYx2 + pYx3 + pYx4 + pYz + e$$

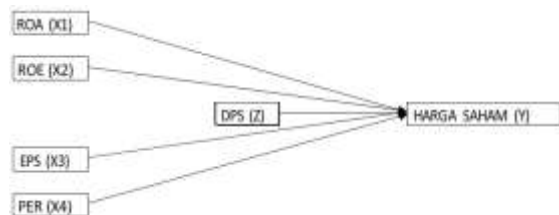


Figure 3. Sub-structural Path Diagram Model 1

Meanwhile, the second Sub-structural Path equation (2) in Figure 5.5, which connects the variables Return on Assets (X1), Return on Equity (X2), Earnings Per Share (X3), and Price to Earnings Ratio (X4) to Dividend Per Share (Z), is as follows:

$$Z = pZx1 + pZx2 + pZx3 + pZx4 + e$$

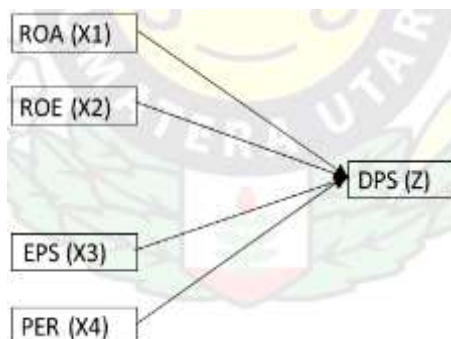


Figure 4. Substructure Path Diagram Model 2

D. Sub-Structure Path Analysis 1 Multiple Linear Regression Test

Table 5. Results of Multiple Linear Regression and t-Test of Path Substructure

Model		Coefficients ^a			t	Sig.
		Unstandardized B	Standardized Coefficients	Std. Error		
1	(Constant)	5.095		.294	17.357	.000
	ROA	3.278	.870	.420	3.770	.000
	ROE	.472	.269	.218	1.754	.042
	EPS	.001	.000	.367	4.932	.000
	PER	.041	.004	.634	9.362	.000
	DPS	.469	.075	.508	0.774	.000

a. Dependent Variable: Stock Price

Source: Research Results, 2024 (Processed Data)

Based on the data in Table 5, the multiple linear regression equation is obtained as follows:

$$Y = 5.095 + 3,279 (ROA) + 0,472 (ROE) + 0,001 (EPS) + 0,041 (PER) + 0,469 (DPS)$$

The results of the multiple linear regression test above can be concluded as follows:

- 5.095 indicates that if the Return on Assets (ROA), Return on Equity (ROE), Earnings Per Share (EPS), Price to Earnings Ratio (PER), and Dividend Per Share (DPS) variables are zero (0), then the Stock Price value is 5.095.
- 3.278 indicates that if the Return on Assets (ROA) variable increases by 1, the Stock Price value increases by 3.278.
- 0.472 indicates that if the Return on Equity (ROE) variable increases by 1, the Stock Price value increases by 0.472.
- 0.001 indicates that if the Earnings Per Share (EPS) variable increases by 1, the Stock Price value increases by 13.57.
- 0.041 indicates that if the Price to Earnings Ratio (PER) increases by 1, the stock price increases by 0.041.
- 0.469 indicates that if the Dividend Per Share (DPS) increases by 1, the stock price increases by 0.469.

Partial test (t-Test)

This test assesses whether the independent variable (X) has a positive, significant influence on the dependent variable (Y).

The acceptance/rejection criteria are as follows:

- If the calculated t-value is greater than the t-value, then H_0 is rejected, indicating an effect.
- If the calculated t-value < t-value, then H_0 is accepted, indicating no effect.

The t-test used was one-tailed, so the t-value was 0.05 (80) = 1.664. The t-test results were performed using SPSS. Based on the data in Table 5 above, the t-test results are as follows:

- Return on Assets (ROA)

The calculated t-value for the Return on

Assets (ROA) variable is 3.770, and the t-value is 1.664. Therefore, the calculated t-value is $>$ t-value ($3.770 > 1.664$), and the significance value is $0.00 < 0.05$. It indicates that the Return on Assets (ROA) variable has a positive and significant effect on stock prices.

2. Return on Equity (ROE)

The calculated t-value for the Return on Equity (ROE) variable is 1.754, and the t-table value is 1.664. Therefore, the calculated t-value is greater than the t-table value ($1.754 > 1.664$), and the p-value is $0.043 < 0.05$. It indicates that the Return on Equity (ROE) variable has a positive and significant effect on stock prices.

3. Earnings Per Share (EPS)

The calculated t-value for the Earnings Per Share (EPS) variable is 4.532, and the t-table value is 1.664. Therefore, the calculated t-value is greater than the t-table ($4.532 > 1.664$), and the significant value is $0.000 < 0.05$. It indicates that the Earnings Per Share (EPS) variable has a positive, significant effect on stock prices.

4. Price to Earnings Ratio (PER)

The calculated t-value for the Price to Earnings Ratio (PER) variable is 9.392, and the t-table value is 1.664. Therefore, the calculated t-value is greater than the t-table ($9.392 > 1.664$), and the significance value is $0.000 < 0.05$. It indicates that the Price-to-Earnings Ratio (PER) variable has a positive, significant effect on stock prices.

5. Dividend Per Share (DPS)

The calculated t-value for the Dividend Per Share (DPS) variable is 6.274, and the t-table value is 1.663. Therefore, the calculated t-value is greater than the t-table ($6.274 > 1.664$), and the significance value is $0.006 < 0.05$. It indicates that the Dividend Per Share (DPS) variable has a positive, significant effect on stock prices.

Simultaneous Test (F-Test)

This test is conducted to determine whether or not the independent variables influence the dependent variable. The acceptance/rejection criteria are as follows:

1. If the calculated F-value exceeds the F-table value, then H_0 is rejected, indicating an effect.
2. If the calculated F-value $<$ F-table, then H_0 is accepted, indicating no effect.

The F-table value is 2.63. The calculated F-value will be obtained using SPSS and then compared with the F-table at the α level of 5%. The results of the F-test for this study can be seen in the following table:

Table 6. Results of the F-Test Sub-Structure 1

ANOVA ^a					
Model		Sum of Squares	df	Mean Square	F
1	Regression	38.964	5	7.993	65.948
	Residual	9.454	78	.121	
	Total	49.418	83		

a. Dependent Variable: Stock Price
b. Predictors: (Constant), DPS, ROE, PER, ROA, EPS

Source: Research Results, 2024 (Processed Data)

Table 6 shows that the calculated F-test $>$ F-table = $65.948 > 2.63$, and the significance value = $0.000 < 0.05$. It means that H_0 is rejected. Therefore, it can be concluded that the independent variables, namely Return on Assets (ROA), Return on Equity (ROE), Earnings Per Share (EPS), Price to Earnings Ratio (PER), and Dividend Per Share (DPS), have a simultaneous positive and significant effect on the dependent variable, namely Stock Price.

Coefficient of Determination Test

This test is conducted to determine the extent to which the independent variables explain the dependent variable. The results of the coefficient of determination test are shown in the following table:

Table 7. Results of the Coefficient of Determination Test for Sub-Structure 1

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.899 ^a	.809	.796	.34814

a. Predictors: (Constant), DPS, ROE, PER, ROA, EPS

Source: Research Results, 2024 (Processed Data)

Based on the results of the coefficient of determination test in Table 7, the R-squared value is 0.809, or 80.9%. These results

indicate that the variables Return on Assets (ROA), Return on Equity (ROE), Earnings Per Share (EPS), Price to Earnings Ratio (PER), and Dividend Per Share (DPS) account for 80.9% of the variation in stock price. The remaining 19.1% is the influence of research variables outside this study.

Path Analysis Test

This test is used to determine the direct effect of the independent variables, namely Return on Assets (ROA), Return on Equity (ROE), Earnings Per Share (EPS), Price to Earnings Ratio (PER), and Dividend Per Share (DPS), on the dependent variable, stock price. The R-squared value for the first substructure (1) is 0.809, or 80.9%. To find the value of $e1$, use the formula $e1 = \sqrt{1 - 0.809} = 0.19$. Thus, the results of the path analysis of substructure one (1) in Figure 5 are as follows:

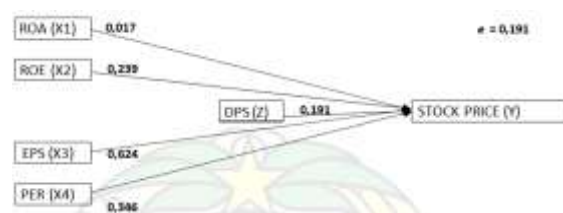


Figure 5. Results of Path Analysis of Substructure 1

Based on the figure above, the variables Return on Assets (ROA), Return on Equity (ROE), Earnings Per Share (EPS), Price to Earnings Ratio (PER), and Dividend Per Share (DPS) have a positive effect on stock prices.

Sub-Structure Path Analysis 2 Multiple Linear Regression Test

Table 8. Results of Multiple Linear Regression and t-Test for Sub-Structure Path 2

Coefficients ^a						
Model	Unstandardized Coefficients			Standardized Coefficients	t	Sig.
	B	Std. Error	Beta			
1	(Constant)	3.614	0.172		21.045	.000
	ROA	3.423	1.249	.411	2.739	.080
	ROE	0.732	0.396	.298	1.848	.088
	EPS	0.002	0.000	.008	10.584	.000
	PER	0.023	0.006	.329	3.814	.000

a. Dependent Variable: Stock Price

Source: Research Results, 2024 (Processed Data)

Based on the data in Table 8, the multiple linear regression equation is as follows:

$$Y = 3,614 + 3,423 (\text{ROA}) + 0,732 (\text{ROE}) + 0,002 (\text{EPS}) + 0,023 (\text{PER})$$

The results of the multiple linear regression test above can be concluded as follows:

- 3.614 indicates that if the Return on Assets (ROA), Return on Equity (ROE), Earnings Per Share (EPS), and Price to Earnings Ratio (PER) variables are zero (0), then the Dividend Per Share (DPS) value is 3.614.
- 3.423 indicates that if the Return on Assets (ROA) variable increases by 1, the Dividend Per Share (DPS) value increases by 3.423.
- 0.732 indicates that if the Return on Equity (ROE) variable increases by 1, the Dividend Per Share (DPS) value increases by 0.732.
- 0.002 indicates that if the Earnings Per Share (EPS) variable increases by 1, the Dividend Per Share (DPS) value increases by 0.002.
- 0.023 indicates that if the Price to Earnings Ratio (PER) increases by 1, the Dividend Per Share (DPS) value increases by 0.023.

Partial test (t-Test)

The t-test is one-tailed, so the t-table is 0.05 (80) = 1.664. The t-test results were performed using SPSS. Based on the data in Table 8 above, the t-test results are as follows:

- Return on Assets (ROA)

The calculated t-value for the Return on Assets (ROA) variable is 2.739, and the t-table value is 1.664. Therefore, the calculated t-value is greater than the t-value ($2.739 > 1.664$), and the significance value is $0.08 > 0.05$. It indicates that the Return on Assets (ROA) variable affects the Dividend Per Share (DPS) variable.

- Return on Equity (ROE)

The calculated t-value for the Return on Equity (ROE) variable is 1.484, and the t-

table value is 1.664. Therefore, the calculated t-value is less than the t-table ($1.484 < 1.664$), and the sig. value is $0.06 > 0.05$. It indicates that Return on Equity (ROE) does not affect Dividend Per Share (DPS).

3. Earning Per Share (EPS)

The calculated t-value for the Earnings Per Share (EPS) variable is 10.584, and the t-table value is 1.664. Therefore, the calculated t-value is greater than the t-table ($10.584 > 1.664$), and the sig. value is $0.000 < 0.05$. It indicates that Earnings Per Share (EPS) has a positive and significant effect on Dividend Per Share (DPS).

4. Price to Earnings Ratio (PER)

The calculated t-value for the Price to Earnings Ratio (PER) variable is 3.814, and the calculated t-value is 1.664. Therefore, the calculated t-value is greater than the calculated t-value ($3.814 > 1.664$), and the significance value is $0.000 < 0.05$. It indicates that the Price-to-Earnings Ratio (PER) variable has a positive, significant effect on Dividend Per Share (DPS).

Simultaneous Test (F Test)

The F-table value is 2.63, and the calculated F-value will be obtained using SPSS and compared with the F-table at the α level of 5%.

Table 9. F-Test Results for Sub-Structure 2

ANOVA ^a					
Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	36.203	4	9.051	33.032	.000 ^b
Residual	21.646	70	.311		
Total	57.849	83			

a. Dependent Variable: DPS

b. Predictors: (Constant), PER, EPS, ROA, ROE

Source: Research Results, 2024 (Processed Data)

Table 9 shows that the calculated F-test $>$ F-table = $33.032 > 2.63$, and the significance value = $0.000 < 0.05$. It means that H_0 is rejected. Therefore, it can be concluded that the variables Return on Assets (ROA), Return on Equity (ROE), Earnings Per Share (EPS), and Price to Earnings Ratio (PER) have a simultaneous positive and significant effect on Dividend Per Share (DPS).

Coefficient of Determination Test

Table 10. Results of the Coefficient of Determination Test for Sub-Structure 2

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.791 ^a	.626	.607	.52345

a. Predictors: (Constant), PER, EPS, ROA, ROE

Source: Research Results, 2024 (Processed Data)

Based on the results of the coefficient of determination test in Table 10, the R-squared value was 0.626, or 62.2%. These results indicate that the influence of Return on Assets (ROA), Return on Equity (ROE), Earnings Per Share (EPS), and Price to Earnings Ratio (PER) on Dividend Per Share (DPS) is 62.2%. In comparison, 37.8% is due to research variables outside this study.

Path Analysis Test

This test is used to determine the direct effect of Return on Assets (ROA), Return on Equity (ROE), Earnings Per Share (EPS), and Price to Earnings Ratio (PER) on Dividend Per Share (DPS). The R-squared value for the second substructure (2) is 0.626, or 62.6%. To find the value of e_1 , use the formula $e_1 = \sqrt{1 - 0.626} = 0.61$. So the results of the analysis of sub-structure path one (2) in Figure 6 are known, namely:

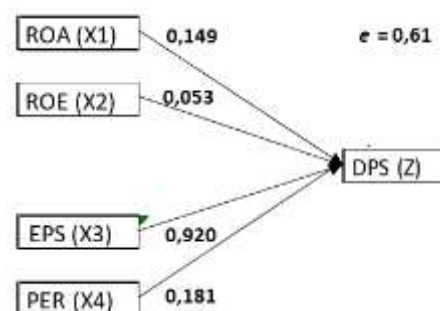


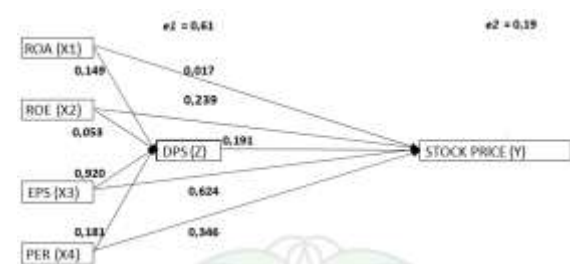
Figure 6. Results of Sub-structure Path Analysis 2

Based on Figure 6, the Return on Asset (ROA), Return on Equity (ROE), Earnings Per Share (EPS), and Price to Earnings Ratio

(PER) variables have a positive influence on Dividend Per Share (DPS).

Path Analysis Results

This test examines whether the intervening variable, dividend policy, as proxied by the Dividend Per Share (DPS) ratio, can mediate the effect of the independent variables, Return on Assets (ROA), Return on Equity (ROE), Earnings Per Share (EPS), and Price to Earnings Ratio (PER), on the dependent variable, Stock Price. The path analysis results are shown in Figure 9 as follows:



Source: Research Results, 2024 (Processed Data)

CONCLUSION

Based on the results of testing and analyzing the effects of Return on Assets (ROA), Return on Equity (ROE), Earnings Per Share (EPS), and Price to Earnings Ratio (PER) on Stock Price (Y) through Dividend Per Share (DPS) as a mediating variable, the following conclusions can be drawn:

1. The Return on Assets (ROA) ratio positively affects the stock price.
2. The Return on Equity (ROE) ratio has a positive, significant effect on stock prices.
3. The Earnings Per Share (EPS) ratio has a positive and significant effect on the stock price.
4. The Price-to-Earnings Ratio (PER) has a positive, significant effect on stock prices.
5. The Dividend Per Share (DPS) ratio has a positive, significant effect on stock price.
6. The Return on Assets (ROA) ratio does not affect the Dividend Per Share (DPS).
7. The Return on Equity (ROE) ratio does not affect the Dividend Per Share (DPS).

8. The Earnings Per Share (EPS) ratio has a positive and significant effect on the Dividend Per Share (DPS).
9. The Price-to-Earnings Ratio (PER) has a positive and significant effect on Dividend Per Share (DPS).
10. The Dividend Per Share (DPS) variable can mediate the effect of Return on Assets (ROA) on Stock Price.
11. The Dividend Per Share (DPS) variable cannot mediate the effect of Return on Equity (ROE) on Stock Price.
12. The Dividend Per Share (DPS) variable cannot mediate the effect of Earnings Per Share (EPS) on Stock Price.
13. The Dividend Per Share (DPS) variable cannot mediate the effect of the Price-to-Earnings Ratio (PER) on Stock Price.

Limitations

The researchers acknowledge that this study has limitations, which may make the results less accurate than actual events. These limitations include:

1. The study period was only 7 years, from 2016 to 2022.
2. The study population was limited to 45 companies listed on the LQ 45 index of the Indonesia Stock Exchange, with a sample of 12. The stock price, which serves as the dependent variable in this study, is the year-end closing price and thus does not reflect the company's current-year stock price.

Declaration by Authors

Acknowledgement: None

Source of Funding: None

Conflict of Interest: No conflicts of interest declared.

REFERENCES

1. Ali, K., Chisti, K. A., & Malik, I. A. (2022). Impact of Earnings Per Share on Stock Prices and Price to Earnings Ratio. *Economics and Business Quarterly Reviews*, 5(2), 147-152. ISSN 2775-9237 DOI: 10.31014/aior.1992.05.02.421
2. Alfiah, Wiwik Nur., Lestariningsih, Marsudi. (2017). Pengaruh DPS, EPS, NPM, ROA

- Terhadap Harga Saham Perusahaan Perbankan di BEI. *Jurnal Ilmu dan Riset Manajemen*, 9, 1-17.
3. Anesia Prasetyani. (2011). Pengaruh Dividend Per Share Tahun Sebelumnya dan Earning Per Share Terhadap Dividend Per Share pada Perusahaan Manufaktur yang Terdaftar di BEI. Skripsi. Universitas Pembangunan Nasional "Veteran" Yogyakarta
 4. Azizah, Ulul Nur. (2018). Pengaruh Profitabilitas, Solvabilitas, Likuiditas, Aktivitas Dan Nilai Pasar Terhadap Return Saham Perusahaan Manufaktur Yang Terdaftar Di Bursa Efek Indonesia (Skripsi). Universitas Negeri Yogyakarta. Yogyakarta.
 5. Brigham, Eugene F., Dan J.F. Houston. (2010). *Dasar-Dasar Manajemen Keuangan*. Edisi 11. Salemba Empat. Jakarta.
 6. Brigham, Eugene. F & Joel F. Houston. (2011). *Financial Management*. Singapore: Cengage Learning Asia
 7. Darmadji, T & Fakhrudin. (2006). *Pasar Modal di Indonesia Pendekatan Tanya Jawab*. Jakarta: Salemba Empat.
 8. Deitiana, Tita. (2013). Pengaruh Current Ratio, Return on Equity dan Total Asset Turn Over Terhadap Dividend Payout Ratio dan Implikasinya Pada Harga Saham Perusahaan LQ 45. *Jurnal Bisnis dan Akuntansi*, Vol. 15, No. 1.
 9. Efni, Yulia. (2013). Analisis Kebijakan Pendanaan, Kepemilikan Manajerial dan Aliran Kas Bebas terhadap Kebijakan Dividen pada Perusahaan Non Manufaktur yang terdaftar di Bursa Efek Indonesia (BEI). Jurusan Manajemen Fakultas Ekonomi Universitas Riau.
 10. Erlangga, Enggar Galih (2009). Pengaruh Kinerja Keuangan terhadap Nilai perusahaan dengan pengungkapan CSR, Good Corporate Governance, dan Kebijakan Dividen sebagai Variabel Pemoderasi. Diss. Universitas Muhammadiyah Yogyakarta.
 11. Fathurrahman, Farid., Bahri, Syamsul., Pawestri, Hartini P. (2021). Pengaruh NPM, DER, EPS, Suku Bunga, Dan Inflasi Terhadap Harga Saham Perusahaan Manufaktur 2016-2019. *Conference on Economic and Business Innovation (CEBI)*, 1(1), 74–90. Retrieved from <https://jurnal.widyagama.ac.id/index.php/cebi/article/view/93>
 12. Galih, Renaning. (2021). Pengaruh Perataan Laba, CSR Disclosure, dan Kebijakan Dividen Terhadap Reaksi Pasar pada Perusahaan Manufaktur yang Terdaftar di Bursa Efek Indonesia pada Tahun 2015–2019. Diss. STIE Perbanas Surabaya.
 13. Hanafi, Mamduh M. (2008). *Manajemen Keuangan Edisi 1*. Yogyakarta: BPFE
 14. Hanafi, M. M. (2010). *Manajemen Keuangan*. BPFE. Yogyakarta.
 15. Hartono, Jogiyo. (2003). *Teori Portofolio dan Analisis Investasi edisi kelima*. Yogyakarta: BPFE-UGM.
 16. Haryani, Sri. (2018). Pengaruh Inflasi, Nilai Tukar Rupiah Per Dolar AS, Tingkat Suku Bunga BI, DER, ROA, CR, dan NPM Terhadap Return Saham Industri Real Estate And Properti yang Terdaftar Di Bursa Efek Indonesia (Skripsi). Universitas Negeri Yogyakarta. Yogyakarta.
 17. Hawa, Iqomah Bidari. (2017). Pengaruh ROA, DER, NPM dan EPS Terhadap Harga Saham Pada Perusahaan Properti. *Jurnal Ilmu dan Riset Manajemen*, Vol 6, No 11, Hal 2-14. ISSN: 2461-0593
 18. Ifadhila, I. (2016). Pengaruh Earnings Per Share (EPS) dan Price to Earnings Ratio (PER) terhadap Harga Saham dengan Dividend Per Share (DPS) sebagai Variabel Moderasi pada Perusahaan yang Terdaftar di Jakarta Islamic Index (JII). Universitas Islam Negeri Alauddin Makassar.
 19. Jacob, J., & Taslim, F. A. (2017). The Impacts of Liquidity, Activity, and Profitability Towards Company Value with Dividend Policy as Intervening Variables. *IOSR Journal of Business and Management (IOSRJB)*, 19(10), 1–7.
 20. Karnawi, K. (2017). Analysis of the effect of return on equity (ROE) and debt to equity ratio (DER) on stock price on the cement industry listed in the Indonesian Stock Exchange (IDX) in the year of 2011–2015. *Journal of Business and Management*, 19(5), 66-76.
 21. Lestari, Maharani Ika dan Toto Sugiharto. (2007). Kinerja Bank Devisa Dan Bank Non Devisa Dan Faktor-Faktor Yang Mempengaruhinya. *Proceeding PESAT (Psikologi, Ekonomi, Sastra, Arsitek & Sipil)*. 21-22 Agustus, Vol.2. Fakultas Ekonomi Universitas Gunadarma.
 22. Martini, P. D. (2015). Pengaruh Kebijakan Utang Dan Profitabilitas Terhadap Nilai Perusahaan: Kebijakan Dividen Sebagai

- Variabel Pemoderasi. *Jurnal Ilmu & Riset Akuntansi*, 3(2).
23. Najib, F., & Triyonowati. (2017). Pengaruh DPS, ROA, Inflasi, dan Kurs Terhadap Harga Saham Pada Perusahaan Telekomunikasi. *Jurnal Ilmu dan Riset Manajemen*, 6(7), 1–19
 24. Najiyah, F., dan Lahaya, I. A. (2021). Pengaruh dividend Per Share dan Return on Equity serta Net Profit Margin terhadap Harga Saham pada Perusahaan Sektor Property Real Estate dan Building Construction yang Terdaftar di Bursa Efek Indonesia. *Jurnal Akuntansi* 18 (1), 2021 63-71.
 25. Nasution, Muhammad Rezkyta. (2019). Kebijakan Dividen pada Perusahaan Perbankan yang Terdaftar di Bursa Efek Indonesia Periode 2015-2017. *Fakultas Ekonomi, UPN Veteran Yogyakarta*.
 26. Nawangwulan, Arieska D., Ilat, Ventje., dan Warongan, Jessy D.L. (2018). Pengaruh Total Revenue Dan Laba Bersih Terhadap Harga Saham (Studi Pada Perusahaan Manufaktur Yang Terdaftar Di Bursa Efek Indonesia. *Jurnal Riset Akuntansi Going Concern* 13(3), 2018, ISSN: 174-183.
 27. Novasari, Ema. (2018). Pengaruh Earning Per Share (EPS) dan Net Profit Margin (NPM) terhadap Harga Saham Perusahaan Subsektor Farmasi yang Terdaftar di Bursa Efek Indonesia. (Skripsi). IAIN Padangsidimpuan.
 28. Nurlia. (2016). Pengaruh Return on Asset, Return on Equity, Earning Per Share, dan Current Ratio Terhadap Harga Saham Pada Perusahaan Sub Sektor Otomotif dan Komponen yang Terdaftar Di BEI. Program Studi Manajemen Fakultas Ekonomi Universitas Balikpapan
 29. Nurlia, dan Juwari. (2019). Pengaruh Return On Asset, Return On Equity, Earning Per Share dan Current Ratio Terhadap Harga pada Perusahaan Sub Sektor Otomotif dan Komponen yang Terdaftar di Bursa Efek Indonesia Periode 2011-2015). *Jurnal Sekuritas*, Vol. 1, No. 3.
 30. Octovian, R., & Sahrnisa, S. (2020). Pengaruh Debt to Equity Ratio (Der), Price To Earning Ratio (Per) Dan Inventory Turnover Ratio Terhadap Harga Saham Pada Pt Lippo Cikarang Tbk Periode 2009-2018. *Jurnal Ilmiah Feasible (JIF)*, 2(1), 38-52.
 31. Oktaviani, Pramita Riza. (2017). Pengaruh Price Earning Ratio, Earning Per Share, Dividend Per Share, Dan Dividend Payout Ratio Terhadap Harga Saham Pada Perusahaan Pertambangan Di Bursa Efek Indonesia. *Diss. STIESIA Surabaya*.
 32. Puspitaningrum, G., & Septina, F. (2022). Analisis Kinerja Keuangan dan Harga Saham LQ45 pada Periode Sebelum dan Selama Pandemi COVID-19. *Jurnal Perspektif*, 20(2), 115–124. <https://doi.org/10.31294/jp.v20i2.12937>.
 33. Rahmadewi, Pande Widya., Abundanti, Nyoman. (2018). Pengaruh Eps, Per, Cr, Dan Roe Terhadap Harga Saham Di Bursa Efek Indonesia. *Bali: E-Jurnal Manajemen Unud*, Vol. 7, No. 4, 2018: 2106-2133.
 34. Ramdhani. S. A., & Aisyah, M. (2018). Faktor Fundamental Terhadap Harga Saham. *Jurnal Analisis Bisnis Ekonomi*.
 35. Rifani, M., & Arifin, M. (2022). Pengaruh Earning Per Share (EPS), Dividend Per Share (DPS), dan Price to Earnings Ratio (PER) Terhadap Harga Saham PT. Bank Rakyat Indonesia, Tbk Periode 2015-2019. *Smart Business Journal*, 1(2), 7-14. Retrieved from <https://ppjp.ulm.ac.id/journal/index.php/jiabi/article/view/12792/7802#>
 36. Rochmah, S. A., & Fitria, A. (2017). Pengaruh kinerja keuangan terhadap nilai perusahaan: kebijakan dividen sebagai variabel moderating. *Jurnal Ilmu Dan Riset Akuntansi (JIRA)*, 6(3).
 37. Romadhan Y. P, Satrio B. (2019). Pengaruh ROA, ROE, NPM Dan EPS Terhadap Harga Saham LQ45 Di Bursa Efek Indonesia. *Jurnal Ilmu dan Riset Manajemen*, Vol 8 (6), 1-19.
 38. Samsul, Muhamad. (2006). *Pasar Modal Dan Manajemen Portofolio*. Surabaya: Penerbit Erlangga.
 39. Sariyati, Guyub, and Stevanus (2023). "Effect Of Return On Asset, Debt To Equity Ratio And Book Value Per Share On The Stock Price Of Telecommunications Sector Companies Contained In LQ45 With Price To Book Value As An Intervening Variable (2016-2021 Period)". *Effect Of Return On Asset, Debt To Equity Ratio And Book Value Per Share On The Stock Price Of Telecommunications Sector Companies Contained In LQ45 With Price To Book Value As An Intervening Variable (2016-2021 Period)* 117 (1): 16-16.
 40. Sekaran, Uma (2003), *Research Methods For*

- Business: A Skill Building Aproach. New York, USA: John Wiley and Sons, Inc.
41. Supomo, Bambang & Indriantoro, Nur. (2002). Metodologi Penelitian Bisnis, Cetakan Kedua, Yogyakarta; Penerbit BFEE UGM.
 42. Syamsuddin, Lukman. (2009). Manajemen Keuangan Perusahaan : Konsep Aplikasi dalam Perencanaan, Pengawasan, dan Pengambilan Keputusan, Edisi Baru. , Jakarta: Raja Grafindo Prasada.
 43. Wardhani, R. S., Vehtasvili, Aprilian, R. I., Yanto, Suhdi, Yunita, A., & Agustina, D. (2022). Mengenal saham. K-Media.
 44. Wati, Yulia Hendra. (2009). Analisis pengaruh deviden dan capital gain terhadap

volume perdagangan saham pada perusahaan manufaktur yang terdaftar di bursa efek Indonesia. Diss. Universitas Muhammadiyah Surakarta.

How to cite this article: Reza Wahyudi, Azhar Maksum, Iskandar Muda Damanik. Analysis of the effect of return on asset, return on equity, earning per share, and price to earning ratio on stock price with dividend per share as an intervening variable (case study of LQ45 stock index in (2016-2022). *International Journal of Research and Review*. 2026; 13(7): 549-563. DOI: <https://doi.org/10.52403/ijrr.20260759>
