The Impact of Profitability, Dividend Policy, and Financial Leverage on Stock Price Volatility of LQ45 Index for the Period 2019 - 2023

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Abstract. Stock price volatility is one aspect that can influence investors in making investment decisions. This study aims to determine the effect of ROA, DPR, and DER on stock price volatility. The research was conducted on LQ45 index companies listed on the Indonesia Stock Exchange for the period 2019-2023 with a sample of 17 companies, using purposive sampling as the sampling method. The data analysis technique used is Multiple Linear Regression. Based on the results of the classical assumption tests, the data meet the requirements without significant issues. The partial test results show that ROA variable does not have a significant effect on stock price volatility. DPR variable has a significantly positive effect on stock price volatility. DER variable has a negative effect on stock price volatility. Simultaneous test results indicate that ROA, DPR, and DER variables collectively influence stock price volatility.

Keywords: ROA, DPR, DER, Stock Price Volatility.

1. Introduction

In the digital era, accessing information about financial management has become easier. By planning finances wisely, we can avoid unnecessary expenses, allowing us to redirect funds to investments that can generate passive income with minimal effort. This approach enables individuals to optimize their financial potential and achieve long-term financial stability.

According to [1], investment is a strategy for allocating a portion of funds or resources to gain significant future profits. This highlights the importance of wise planning and management of financial assets to ensure sustainable economic growth. By understanding investment principles, individuals or companies can build a strong and sustainable portfolio to achieve long-term financial goals

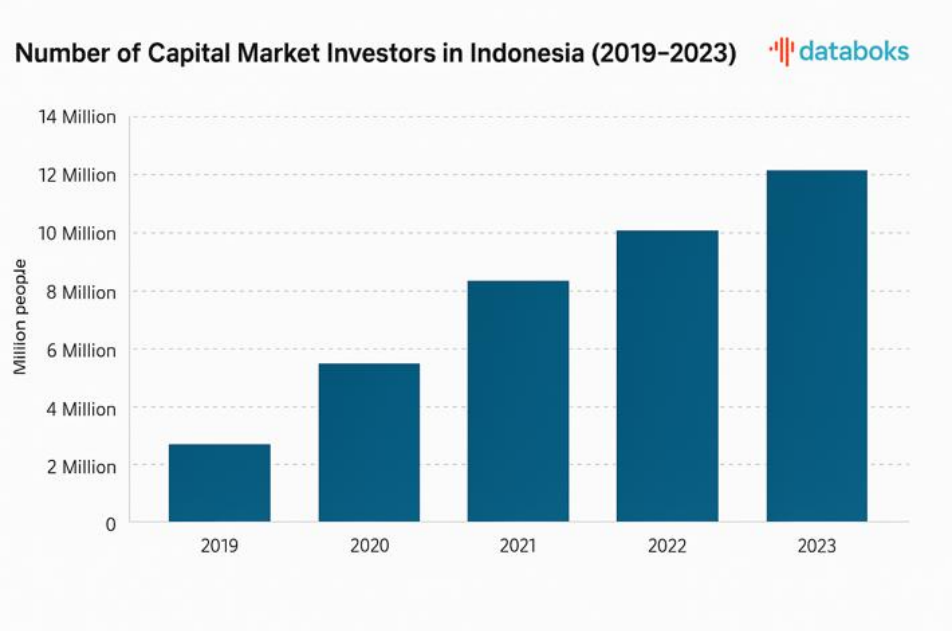
There are two categories of investment: real investment and financial investment. Real investment occurs when funds are invested in physical assets such as property, land, or factories.

ICBEESS 2024, August 01, Gresik, Indonesia

DOI 10.4108/eai.1-8-2024.2354970

Financial investment, on the other hand, involves financial instruments like bonds and common stocks [2]. For example, an investor might purchase shares in a specific company as a form of financial investment. Financial investments are typically made in the capital market, where stocks and bonds are traded.

Investing in the capital market can be described as placing capital into an issuer or company, resulting in a proof of ownership reflected in the investor's portfolio. By holding this ownership document, investors hope to earn returns greater than the amount of capital invested [3]. Below is the data on the growth of the number of investors in the Indonesian capital market from 2019-2023:



Source: [23]

Figure 1. Graph of Investor Growth in the Indonesian Capital Market from 2019-2023

Figure 1 shows a significant increase in the number of investors in the capital market each year. In 2019, there were 248 million people involved in this investment. This figure sharply increased to 388 million in 2020, indicating a growing interest despite the Covid-19 pandemic. The pandemic did not stop the growth, with the number of investors reaching 748 million in 2021. By 2023, the number of investors in the Indonesian capital market reached 1216 million, marking a significant 18% increase from 2022, which had 1031 million investors.

Investors usually use stock prices as a basis for consideration because a company's value is reflected in its stock price. Stock prices will change under certain conditions, depending on market conditions, both from the financial performance of the company issuing the stock and

the investors' desire to buy the stock. The fluctuations in stock prices can be observed through volatility.

According to [4], stock price volatility is a measure used to describe the risk of a stock. It represents the systematic risk faced by investors holding common stocks. High stock price volatility can make it difficult for investors to predict future stock prices and increases the uncertainty of returns, as companies with volatile stock prices have relatively harder-to-forecast future profits. If a stock has high volatility, it indicates that the stock price fluctuates rapidly.

Signal theory emphasizes that company information can be responded to differently by investors, where the level of investor confidence in the company results in stock price fluctuations or stock price volatility. Volatility is a statistical measure of the price fluctuations of a security or commodity over a certain period [5]. According to [5], stock price volatility is a concern for market participants in the capital market because it can be used as a reference to determine the right investment strategy. Stocks with unpredictable prices are those that change very quickly, thus having high volatility. The following graph shows the stock price volatility of companies in the LQ45 Index listed on the Indonesia Stock Exchange (IDX) for the period 2019-2023:

Source: Trading View, (Data processed, 2024)

Figure 2. Stock Price Volatility Graph of LQ45 Index Companies Listed on the Indonesia Stock Exchange (IDX) in 2019 – 2023

Based on Figure 2, it is evident that the LQ45 index experienced fluctuations throughout the period from January 2019 to 2023. The lowest index decline occurred in 2021, with a stock price of 948.46, and in 2020, with a price of 965.45, which decreased from the previous year in 2019, which was 10222.08. The following year, in 2022, saw an increase to 951.99. The highest index increase occurred in 2023, reaching 982.42. The declines in 2020 and 2021 were due to the impact of the Covid-19 pandemic. Blue-chip stocks with high liquidity and large market capitalization included in the LQ45 index on the Indonesia Stock Exchange were also affected by the pandemic, experiencing significant stock price volatility.

Companies listed in the LQ45 index are selected from a total of 45 companies based on stock trading liquidity criteria. The LQ45 index is known as a collection of stocks with high liquidity and market capitalization. Only stocks from top-tier companies that meet strict criteria can be included in this index. Below is the list of companies consistently listed in the LQ45 index from 2019-2023:

Table 1. List of Companies Consistently Listed in the LQ45 Index from 2019-2023

No.	Code	Name of Company
1	ADRO	Adaro Energy Tbk.
2	AKRA	AKR CorporindoTbk.
3	ANTM	Aneka Tambang (Persero) Tbk.
4	ASII	Astra International Tbk.
5	BBCA	Bank Central Asia Tbk.
6	BBNI	Bank Negara Indonesia (Persero) Tbk.
7	BBRI	Bank Rakyat Indonesia (Persero) Tbk.
8	BBTN	Bank Tabungan Indonesia (Persero) Tbk.
9	BMRI	Bank Mandiri (Persero) Tbk.
10	BRPT	Barito PasificTbk.
11	CPIN	Charoen Pokphand Indonesia Tbk.
12	EXCL	XL Axiata Tbk.
13	ICBP	Indofood CBP Sukses Makmur Tbk.
14	INCO	Vale Indonesia Tbk.
15	INDF	Indofood Sukses Makmur Tbk.
16	INDY	Indika Energy Tbk.
17	INKP	Indah Kiat Pulp & Paper Tbk.
18	INTP	Indocement Tunggal PrakasaTbk.
19	ITMG	Indo TambangrayaMegahTbk.
20	KLBF	Kalbe FarmaTbk.
21	MEDC	Medco EnergiInternasionalTbk.
22	PGAS	Perusahaan Gas Negara (Persero) Tbk.

No.	Code	Name of Company
23	PTBA	Bukit AsamTbk.
24	SCMA	Surya Citra Media Tbk.
25	SMGR	Semen Indonesia (Persero) Tbk.
26	TLKM	Telekomunikasi Indonesia (Persero) Tbk.
27	TPIA	Chandra Asri Petrochemical Tbk.
28	UNTR	United Tractors Tbk.
29	UNVR	Unilever Indonesia Tbk.

Source: IDX (Data processed)

In the table above, there are about 29 companies out of 45 that have consistently been listed in the LQ45 index from 2019 to 2023. Companies listed in the LQ45 index are generally those with high liquidity and consistently pay dividends each year, representing leading firms in the stock market.

Stock price changes reflect the company's performance. Unstable stocks will continue to fluctuate, making them difficult to predict. The higher the volatility, the more vulnerable the company is to achieving future profits. Investors need data that affects stock price volatility. To avoid losses, investors need to select the right companies, which can attract investor interest by providing information such as financial reports.

Financial statements are tools for assessing the financial situation of an organization over a certain period and are crucial in business disputes. Financial statements can be used as analytical material for investment decisions as they depict the company's condition. Investors need to analyze company data such as profitability, dividend policy, and financial leverage to understand stock price volatility.

Profitability measures a company's ability to generate profit at certain levels of sales, assets, and equity [6]. High profitability signals a positive indicator for investors to buy the company's stock, which can be measured by Return on Assets (ROA). ROA measures the company's ability to generate profit from its assets.

Dividend policy determines whether a company's profit will be distributed to shareholders as dividends or retained for future investments [9]. The Dividend Payout Ratio (DPR) measures the amount of dividend paid to shareholders.

Leverage refers to the use of assets and funds with fixed costs to enhance shareholder returns. The higher the leverage, the greater the stock price volatility. The Debt Equity Ratio measures how much the company uses debt compared to equity to finance its operations [10].

Based on the gap, the researcher is motivated to reanalyze the fundamental factors affecting stock price volatility in different sectors. Therefore, this study is titled "The Effect of Profitability, Dividend Policy, and Financial Leverage on Stock Price Volatility in LQ45 Period 2019-2023," aiming to assess whether these factors influence LQ45 stock prices.

Research Problem Statement

Based on the background information above, the author can formulate the problem as follows:

1. Does profitability affect the volatility of LQ45 stock prices for the period 2019-2023?
2. Does dividend policy affect the volatility of LQ45 stock prices for the period 2019-2023?
3. Does financial leverage affect the volatility of LQ45 stock prices for the period 2019-2023?

Research Objectives

Based on the background and formulation of the problem, the author can explain that the purpose of this research is to:

1. To determine if profitability affects the volatility of LQ45 stock prices for the period 2019-2023
2. To determine if dividend policy affects the volatility of LQ45 stock prices for the period 2019-2023.
3. To determine if financial leverage affects the volatility of LQ45 stock prices for the period 2019-2023.

2. Literature Review

Theoretical Foundations

Stock price volatility refers to the fluctuations or swings in stock prices. Higher volatility indicates that a stock's price is highly unpredictable, often experiencing sharp rises and falls. Such volatility is frequently leveraged by short-term traders to gain profits from erratic price movements [4].

Profitability ratios are tools used to measure the percentage of profit a company earns relative to its size or assets. These ratios, such as Return on Assets (ROA), are crucial for assessing a company's ability to generate profit from its operations, regardless of the sources of its capital. Profitability ratios indicate the efficiency of a company in managing its daily operations to generate profit. ROA specifically measures the net profit generated from each unit of total assets, calculated by dividing net profit by total assets [6].

Dividend policy involves management's decision-making process regarding the distribution of dividends, including the amount and pattern of cash distribution to shareholders. The Dividend

Payout Ratio (DPR) is used to measure this policy by dividing the dividend per share by the net income per share. This ratio helps determine how much of the earnings are distributed to shareholders as dividends [9].

Leverage ratios measure the proportion of a company's assets that are financed by debt. The Debt-to-Equity Ratio (DER) is used to assess this by comparing total debt, including current liabilities, to total equity. This ratio is essential for understanding the extent to which creditors' funds are used compared to the owners' equity. It indicates how much of the company's equity is used as a guarantee for its debts [10].

The Relationship Between Profitability Ratios and Stock Price Volatility

Profitability is a crucial ratio for a company, reflecting the potential returns for investors if they invest in the company. Profitability represents a company's financial performance and its ability to generate profit. It can be measured using Return on Assets (ROA), which indicates how effectively a company generates profit from its assets. A higher ROA signifies better asset productivity and can attract investors, increasing demand for the company's stock and subsequently raising its price [6].

[6] notes that ROA measures a company's ability to generate profit from its total assets. A high ROA suggests effective asset utilization and can positively impact stock prices, indicating that higher profitability leads to higher stock prices.

However, studies by [14], [15], and [17] find no significant impact of profitability on stock price volatility. Other factors, such as stock liquidity, global market movements, and government policies, also influence stock volatility. Thus, while profitability ratios are important, they may not fully account for stock price volatility, as other factors play a role.

The Relationship Between Dividend Policy and Stock Price Volatility

Dividend policy determines how much of a company's current profits will be paid out as dividends versus retained for reinvestment. It dictates the percentage of dividends to be distributed to shareholders, with dividends only payable if retained earnings are positive. If retained earnings are negative despite current profits, the company cannot distribute dividends [9].

The Dividend Payout Ratio (DPR) represents the percentage of profits paid to shareholders as dividends each year. Companies with a low DPR are often perceived as more valuable due to their potential for growth [5]. According to [9], DPR measures how much profit is distributed as dividends to shareholders. Announcements of dividend payments can impact stock price reactions. Higher dividends may lead to more investors holding onto their shares, reducing the difference between buyers and sellers, and thereby stabilizing the stock price.

Research by [9] indicates that a company's dividend payout ratio and the value of dividends distributed can influence stock price changes in the market. A high DPR tends to attract investors, which can affect stock price volatility. A well-managed dividend policy can reduce investment risk and influence stock price stability [4]. This is supported by studies by [6],[9], and [10], which find that dividend policy affects stock price volatility.

However, other studies, such as those by [10], [14], and [15], conclude that dividend policy does not significantly impact stock price volatility. They suggest that factors such as economic conditions, market sentiment, and other variables play a more significant role in influencing stock price volatility.

The Relationship Between Financial Leverage and Stock Price Volatility

Financial leverage refers to a company's ability to meet its short-term and long-term obligations, specifically measuring how much the company is financed through debt. It reflects the extent to which a company uses debt to finance its activities. Higher Debt-to-Equity Ratio (DER) implies greater risk for the company, as it relies more on debt to fund its operations, which can reduce profits due to the obligation to pay interest [10]

Leverage ratios are used to measure the proportion of a company's funding that comes from debt. A higher DER indicates a higher risk because the company must manage interest payments on its debt, potentially reducing profits and making the stock less attractive to investors. According to [11], higher DER is associated with increased risk in meeting debt obligations, leading to greater stock price volatility

[12] notes that companies with substantial unpaid liabilities may cause investors to withdraw their shares due to a lack of strong assurance from the company, leading to increased volatility. [10] argue that higher leverage implies greater risk to the company's liquidity, thus increasing stock price volatility. This is consistent with findings by [9], [10] and [11], which suggest that leverage positively impacts stock price volatility. Higher debt relative to equity increases risk and can reduce profits due to interest obligations.

However, research by [14], [13], and [16] indicates that financial leverage does not significantly affect stock price volatility. They suggest that other factors, such as stock liquidity, overall financial performance, economic conditions, and other variables, play a more significant role in influencing stock price volatility, contrasting with studies supporting the impact of financial leverage.

Hypothesis

[7] states that a hypothesis is a preliminary answer to the research problem stated in a sentence. The hypotheses for my research are as follows:

H1 : Profitability affects the stock price volatility of LQ45 for the period 2019-2023.

H2 : Dividend policy affects the stock price volatility of LQ45 for the period 2019-2023.

H3 : Financial leverage affects the stock price volatility of LQ45 for the period 2019-2023.

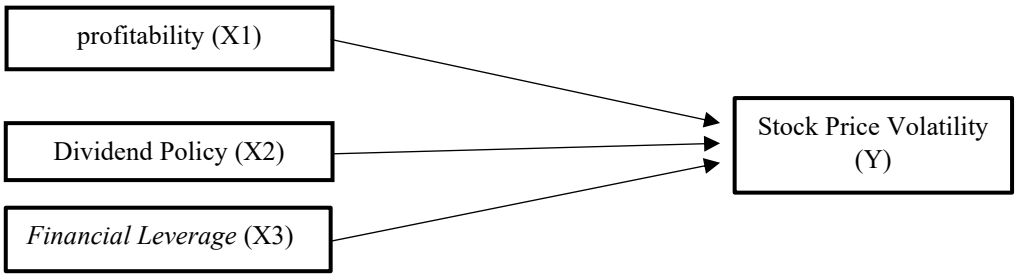


Figure 3. Conceptual Framework

3. Research Method

Types of Research

The research approach used in this study is quantitative. According to [7], quantitative research methods are based on the philosophy of positivism, used to study specific populations or samples, utilizing research tools to collect data, and performing quantitative data analysis to test a set hypothesis.

The objective of this research is to examine variables related to the study: profitability measured by Return on Assets (ROA), dividend policy measured by Dividend Payout Ratio (DPR), and financial leverage measured by Debt-to-Equity Ratio (DER), which are independent variables, while volatility is the dependent variable. The research object consists of companies listed on the Indonesia Stock Exchange (IDX) included in the LQ45 index for the period 2019-2023.

Research Location

The research location refers to the place used as the subject for addressing the research problem. The location or source of this research is the Indonesia Stock Exchange (IDX). The study utilizes annual financial reports from companies listed on the IDX that are part of the LQ45 index for the years 2019-2023.

Population and Sample

According to [7], a population is a generalization area consisting of objects or subjects determined by the researcher for the study, from which conclusions are drawn. The population in this research consists of all companies listed in the LQ45 index, totaling 45 companies. According to [7], a sample is a part of the quantity and characteristics possessed by the population. In this study, sampling was conducted using purposive sampling, which is a technique for selecting samples based on specific considerations [7].

The criteria for selecting samples as research objects are as follows:

1. Companies listed in the LQ45 index.
2. Companies listed in the LQ45 index during the period 2019-2023.
3. Companies using Indonesian Rupiah in their financial reports for the years 2019-2023.
   Based on these criteria, it can be observed that some companies in the food and beverage subsector do not meet the predetermined selection criteria. The criteria for selecting research objects can be seen in Table 2 below.

Table 2. Criteria for Selecting Research Objects

Research Object Selection Criteria	**Quantity**
Companies included in the LQ45 index	45
Companies not included in the LQ45 index during the period 2019-2023	(15)
Companies not using the rupiah currency in financial statements for 2019-2023	(5)
Companies not regularly distributing dividends	(8)
Total sample used for research	17

Based on these criteria, the number of samples used as research objects for the period 2019-2023 is 17 companies.

Type and Source of Data

The type of data used in this research is secondary data, which is a source of research data obtained indirectly through intermediary media. Secondary data generally includes evidence, records, or historical reports, magazines, and articles that have been compiled in archives, both published and unpublished. In this study, data was obtained from the official website www.idx.co.id. The data collected includes financial reports and stock prices of companies listed in the LQ45 index for the period 2019–2023, registered on the Indonesia Stock Exchange (IDX).

Data Collection Techniques

Data collection involves the methods and processes used to gather the necessary data to ensure that the final research results present valid and reliable information. The data collection techniques used in this study are observation and documentation methods. The observation method is used to gather research data that can be directly observed by the researcher. The documentation method involves collecting information based on secondary data sources. This data is obtained from the Indonesia Stock Exchange (IDX) on the official website www.idx.com.

Identification and Operationalization of Research Variables

This study consists of independent and dependent variables :

a. Independent Variables
   According to [7], independent variables are those that cause or influence the dependent variable. In this study, the independent variables are Profitability (X1), Dividend Policy (X2), and Financial Leverage (X3).
b. Dependent Variable
   [7] defines the dependent variable as the one that is influenced or determined by the independent variables. In this study, the dependent variable is Stock Price Volatility (Y).

Stock Price Volatility

Stock price volatility refers to the movement of stock prices either up or down. This study uses historical volatility, which is based on past stock price data. Mathematically, the historical volatility for each stock can be calculated using the formula :

PVOL = PVOL = $\sqrt{\frac{1}{n}\sum ln\left(\frac{Ht}{Lt}\right)}$

Note:
PVOL: Price Stock Volatility
n: number of periods
∑: symbol indicating summation from one period to another
ln: natural logarithm of the ratio between the highest and lowest prices during time period t
Ht: Highest stock price in year i
Lt: Lowest stock price in year i

Profitability

Profitability ratio or rentability ratio is used to measure the company's ability to generate business profits. The formula used to calculate Return On Assets (ROA) is:

Return On Assets = $= \frac{\text{Net Profit}}{\text{Total Aset}}$

Dividend Policy

Dividend policy is a decision on whether the company will distribute profits to investors or retain them for future investments. The formula to calculate the Dividend Payout Ratio (DPR) is:

Dividend Payout Ration= $= \frac{\text{Cash Dividend}}{\text{Net Profit}}$

Financial Leverage

Leverage is a ratio used to measure the proportion of the company's funds financed by debt. The formula to calculate leverage is:

Debt to Equity Ratio = $= \frac{\text{Total Debt}}{\text{Total Equity}}$

Data Analysis Techniques

Normality Test

According to [8] the normality test aims to examine whether the residuals in the regression model are normally distributed. One method to test residual normality is by using the Kolmogorov-Smirnov (K-S) non-parametric statistical test. The data is considered normally distributed if the significance value (sig) is greater than 0.05.

Multicollinearity Test

As per [8], the multicollinearity test aims to check for correlations between independent variables in the regression model. By examining the Variance Inflation Factor (VIF) and

Tolerance values, a model is considered free from multicollinearity if the VIF is less than 10 and Tolerance is greater than 0.1.

Heteroscedasticity Test

The heteroscedasticity test aims to check whether there is a variance inequality in residuals from one observation to another [8] The model is considered free from heteroscedasticity if the significance value (sig) is greater than 0.05.

Autocorrelation Test

The autocorrelation test is used to determine whether there is a correlation between residual errors in one period and the previous period in the linear regression model. The Durbin-Watson (D-W) test is used to detect autocorrelation in the regression model.

Multiple Linear Regression Test

According to [8], the multiple linear regression test is used to examine the relationship between more than one independent variable (X) and one dependent variable (Y). The formula used is:

$$\mathbf{Y = a + b1X1 + b2X2 + b3X3 + e}$$

Coefficient of Determination

As explained by [8], the coefficient of determination is used to understand the model's ability to explain the dependent variable. A higher R^2 value indicates a strong influence between the dependent variable and the independent variables. Conversely, a lower R^2 value suggests a weaker influence.

F-Test

According to [8], this test is used to determine whether each independent variable included in the model has a simultaneous influence on the dependent variable. The criteria for simultaneous hypothesis testing are:

a. If F statistic (p-value) > 0.05, the model is not statistically significant.
b. If F statistic (p-value) < 0.05, the model is statistically significant.

t-Test

This test is used to determine the influence of one independent variable on the dependent variable [8] The criteria for partial hypothesis testing are:

a. If the significance value (sig) > 0.05, the model is not statistically significant.
b. If the significance value (sig) < 0.05, the model is statistically significant.

4. Result and Discussion

Description of the Research Object

This study focuses on the LQ45 Index companies listed on the Indonesia Stock Exchange for the period 2019-2023. The aim is to measure the impact of financial performance on stock price volatility using ratios such as ROA, DPR, and DER. The sample was selected using purposive sampling, resulting in 17 companies meeting the criteria out of 28 companies. Data was obtained from www.idx.co.id. Some companies did not meet the sample criteria due to incomplete data or non-participation in the PROPER program during the research period.

Normality Test

Table 3. Normality Test Result

Sig Value K-S	Sig Value Threshold	Description
0,380	0.05	Normal Distribution

From the observations in Table 3, the Kolmogorov-Smirnov test result in asym. Sig. (2-tailed) is 0.380, which exceeds the 0.05 significance level. This indicates that the residual data has a normal distribution.

Multicollinearity Test

Table 4. Multicollinearity Test Results

Variable	Tolerance	VIF
Return On Asset (X1)	0,954	1,048
Dividend Payout Ratio (X2)	0,954	1,048
Debt to Equity Ratio (X3)	0,971	1,030

From the observations above, the tolerance values for each independent variable are greater than 0.10, and the variance inflation factor values for each independent variable are below 10. The conclusion is that there is no multicollinearity among the independent variables in the regression.

Heteroscedasticity Test

Table 5. Heteroscedasticity Test Results

Variable	Sig	Conclusion
Return On Asset (X1)	0,537	No Heteroscedasticity
Dividend Payout Ratio (X2)	0,135	No Heteroscedasticity

Variable	Sig	Conclusion
Debt to Equity Ratio (X3)	0,879	No Heteroscedasticity

From the table 5, the significance values for the four independent variables Return On Asset (ROA) (X1), Dividen Payout Ratio (DPR) (X2), Debt to Equity Ratio (DER) (X3) exceed the 0.05 significance level. This indicates that there is no heteroscedasticity in the data used in the study.

Autocorrelation Test

Table 6. Autocorrelation Test Results

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	0.522[a]	0.272	0.246	0.03832	1.901

In Table 6, the Durbin-Watson value is 1.901, with N = 85, and a 5% significance level, the du value is 1.7210. According to the autocorrelation formula, du < d < 4 - du = 1.7210 < 1.901 < 2.279, it is stated that there is no autocorrelation in this model.

Multiple Linear Regression Analysis Results

Table 7. Multiple Linear Regression Test Results

Model	Unstandardized Coefficients B	Sig
Constant	0,240	0,000
Return On Assets (X1)	0,029	0,261
Dividend Payout Ratio (X2)	0,046	0,015
Debt to Equity Ratio (X3)	-0,025	0,000

Based on Table 7, the first equation can be formulated by incorporating the standardized coefficients B into the multiple linear regression model as follows:

$$\mathbf{Y = \alpha + \beta 1X1 + \beta 2X2 + \beta 3X3 + e}$$

$$\mathbf{Y = 0.240 + 0.029X1 + 0.046X2 + (-0.025)X3 + e}$$

The regression equation above has the following meanings:

1. The constant (a) is 0.240, meaning that if the return on assets, dividend payout ratio, and debt to equity ratio are all zero, the stock price volatility would be 0.240. A positive constant indicates an increase in stock price volatility.
2. The coefficient β1 = 0.029 for X1 (return on assets) indicates a positive relationship between Return on Assets (X1) and stock price volatility (Y). As the return on assets increases, stock price volatility also increases.

3. The coefficient β2 = 0.046 for X2 (dividend payout ratio) indicates a positive relationship between the dividend payout ratio (X2) and stock price volatility (Y). As the dividend payout ratio increases, stock price volatility also increases.
4. The coefficient β3 = -0.025 for X3 (debt to equity ratio) indicates a negative relationship between the debt to equity ratio (X3) and stock price volatility (Y). As the debt to equity ratio increases, stock price volatility decreases.

Coefficient of Determination (R^2)

Table 8. Results of the Coefficient of Determination (R^2)

Model	R	R Square	Adjusted R Square
1	0,522[a]	0,272	0,246

Based on Table 8, the coefficient of determination test results show an Adjusted R Square value of 0.246. This indicates that the variation in the X variables explains 24.6% of the stock price volatility, while the remaining 75.4% is influenced by other variables not examined, such as the price-to-earnings ratio, price-to-book ratio, dividend yield, and others.

F Test

Table 9. Results of the Simultaneous Test (F Test)

	Model	Sum of Squares	Df	Mean Square	F	Sig.
1	*Regression*	0.045	3	0.015	10.112	0.000[a]
	Residual	0.119	81	0.001		
	Total	0.163	84			

From Table 9, the calculated F value is 10.112, which is greater than the F table value of 3.52, with a significance level of 0.00 < 0.05. Based on these results, it can be concluded that return on assets, dividend payout ratio, and debt to equity ratio together (simultaneously) have a significant effect on stock price volatility.

T- Test

Table 10. Results of the Partial Test (T Test)

Variabel	Sig t	Result
Return On Asset (X1)	0,261	Significant
Dividen Payout Ratio (X2)	0,015	Significant
Debt to Equity Ratio (X3)	0,000	Significant

Based on Table 10, the t test results for the independent variables show: return on assets is 0.261 > 0.05, dividend payout ratio is 0.015 > 0.05, and debt to equity ratio is 0.000 > 0.05. Thus, it is concluded that the dividend payout ratio and debt to equity ratio affect stock price volatility, while return on assets does not have a partial effect on stock price volatility.

Discussion

The Effect of Return On Assets (ROA) on Stock Price Volatility

This study examines the impact of return on assets (ROA) on the stock price volatility of LQ45 companies on the IDX for the period 2019-2023. The results show that ROA does not significantly affect stock price volatility, with a significance value of 0.261 (>0.05). This is consistent with [14] view, which suggests that other factors such as earnings stability and market perception have a greater influence on stock volatility. This study supports the findings of [15] and [16] , but differs from [19] who found a significant effect.

a. The Effect of Dividend Payout Ratio on Stock Price Volatility

The study shows that the dividend payout ratio (DPR) has a significant positive effect on stock price volatility for LQ45 index companies on the IDX for the period 2019-2023, with a significance value of 0.015 (<0.05). Higher DPR is associated with higher stock price volatility. This is in line with the theory of [17], which states that dividend policy can increase investor confidence, as well as [9]. However, [18] found that DPR does not affect stock price volatility.

b. The Effect of Debt To Equity Ratio on Stock Price Volatility

The study indicates that the debt to equity ratio (DER) has a significant negative effect on stock price volatility for LQ45 index companies on the IDX for the period 2019-2023, with a significance value of 0.00 (<0.05). Higher DER is associated with lower stock price volatility. This aligns with [10], who states that high debt reduces stock price volatility, despite financial risk. [11] support this finding, while [12] found that leverage has a significant positive effect on stock price volatility.

5. Conclusion

In a study conducted to analyze the influence of the variables Return On Assets (ROA), Dividend Payout Ratio (DPR), and Debt to Equity Ratio (DER) on stock price volatility, the following conclusions were obtained based on the results and discussions:

1. Return On Assets (ROA) does not have a significant effect on stock price volatility in LQ45 Index Sector companies listed on the Indonesia Stock Exchange (IDX) for the period 2019-2023.

2. Dividend Payout Ratio (DPR) has a significantly positive effect on stock price volatility in LQ45 Index Sector companies listed on the Indonesia Stock Exchange (IDX) for the period 2019-2023.
3. Debt to Equity Ratio (DER) has a significantly negative effect on stock price volatility in LQ45 Index Sector companies listed on the Indonesia Stock Exchange (IDX) for the period 2019-2023.
4. Simultaneously, the variables Return On Assets (ROA), Dividend Payout Ratio (DPR), and Debt to Equity Ratio (DER) have a significant effect on stock price volatility in LQ45 Index Sector companies listed on the Indonesia Stock Exchange (IDX) for the period 2019-2023.

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