

# ANALYZING FINANCIAL RATIOS' IMPACT ON STOCKS RETURNS: CASE STUDY OF LQ45 INDEX 2014-2023

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## Keywords

*Stock Return, Financial Ratio, Regression Analysis, Retail Investors*

## ABSTRACT

This study examines the correlation between fundamental financial metrics and stock returns of Indonesia's LQ45 Index over a 10-year period (2014-2023). The study aims to provide actionable insights for investors and companies by identifying the most critical financial metrics in predicting stock price movements. By analyzing data from 16 consistently listed Indonesian companies, the study focuses on stocks that have consistently maintained their position in the index over the past decade, a gap that has been underexplored in prior research. The study employs various statistical tests to validate the regression model, with hypothesis testing conducted through t-test and F-tests to determine the significance of financial ratios on stock returns. The analysis shows that Return on Equity, Price to Earnings Ratio (PER), Price to Book Value (PBV), Free Cash Flow per Share to Price (PFCF), and Dividend Payout Rate (DPR) have a significant positive effect on stock return. The research recommends that retail investors prioritize the PFCF ratio when evaluating potential stock investments. Transparency in financial reporting is essential, with companies encouraged to provide accurate and comprehensive financial statements, including clear reporting of key financial metrics, to build investor confidence.

## INTRODUCTION

Stocks are investment instruments known for their high returns and relatively high risk compared to bonds and commodities like gold (NYU Stern School, 2024). Despite the risks, they remain popular among investors from various backgrounds. Shares themselves are proof of ownership of a company, and holders of these shares will have rights as shareholders such as getting dividends and participating in deciding company policies with the amount of ownership they have, and these shares can also be traded in the capital market.

The origins of the stock market date back to 1602, with the opening of the Amsterdam stock market to offer shares of the Dutch East India Company (VOC), marking the first listed company in the world (Nguyen, 2024). The concept spread to England with the creation of the Bank of England and the London Stock Exchange (LSE) in 1773 (Young, 2023), followed by the New York Stock Exchange (NYSE) in 1792 (Strike Blogs, 2024). In Indonesia, the first stock exchange was established in 1912 in Batavia, though it faced multiple closures due to global conflicts and political changes (Indonesia Stock Exchange, 2024). Officially reopened in 1977 by President Soeharto, the market initially grew slowly, but government measures in the late 1980s spurred development. In recent years, especially during the COVID-19 pandemic, the number of retail investors surged dramatically, leading to a 92.99% increase in investors from 2020 to 2021 (Indonesia Stock Exchange, 2021). Despite this, foreign investors still control 40.15% of capital market assets, creating a dependency on global economic conditions. To reduce this reliance and ensure consistent growth, there is a need to increase the value of investments from individual local investors in Indonesia.

Unlike institutional investors, who are considered knowledgeable and capable of influencing the stock market, individual investors are often viewed as noise traders prone to psychological biases in their trading behavior (BLACK, 1986; Kyle, 1985). The tendency to perform psychological biases negatively impacts their personal investment performance due to a lack of calculated decision-making (Elhussein & Abdelgadir, 2020; Jain et al., 2022; Kartini & Nahda, 2021; Madaan & Singh, 2019; Zahera & Bansal, 2018). Poor investment performance will eventually have fatal consequences on the amount of investment they place in the stock exchange, the more they lose money in stock, the less they will be invested in it (Bhatti et al., 2021; Kovvali & Strine, 2022; Moradi et al., 2021).

Investors can use two main approaches to make buy and sell decisions in the stock market: technical analysis, which examines historical prices, and fundamental analysis, which assesses a company's financial health and intrinsic value (Edwards et al., 2018; Scott et al., 2016). The author prefers fundamental analysis for retail investors because it focuses on long-term growth rather than short-term price fluctuations. This method relies on thorough company valuation through financial statements and market prices, echoing Warren Buffett's belief that "Price is what you pay; value is what you get" (Buffett, 2008). While stock prices can be influenced by market perceptions, financial statements reflect a company's real-world operations, making it essential to select appropriate financial ratios to evaluate stocks effectively (Alamoudi & Bafail, 2022).

The LQ45 Index on the Indonesia Stock Exchange is known for its stability, high liquidity, and strong fundamentals, making it a key focus for identifying companies with long-term stability. This study examines stocks that have consistently met the LQ45 criteria over the past decade to provide insights into reliable investment opportunities for retail investors. By selecting companies that have maintained high market capitalization, strong transaction value, and solid financial conditions, the research offers a reliable basis for retail investment strategies. Despite the growth in retail investors in Indonesia's stock market, there is still a significant dependency on foreign investors, leading to high volatility and uncertainty in stock prices. Additionally, retail investors are often seen as noise traders prone to psychological biases, which can negatively impact their investment performance.

This study examines the correlation between fundamental financial metrics and annual stock price returns over a 10-year period (2014-2023). It aims to provide insights for retail investors, simplify decision-making for retail investors, and help prioritize metrics for companies to maximize and maintain value. The research focuses on 16 consistently listed companies in Indonesia's LQ45 Index from 2013-2023, a period chosen for its lower risk and strong fundamentals. The study extends existing literature by analyzing data beyond the five-year timeframe and focuses on stocks that have consistently maintained their position in the index over an extended ten-year period, a gap that has been underexplored in prior research.

## **METHODS**

This research combines descriptive analysis and verification methods to explore the relationships between financial ratios and stock returns, aiming to simplify investment decision-making for retail investors. By analyzing data from 16 companies consistently listed in Indonesia's LQ45 Index from 2014-2023, the study examines key financial ratios such as Return on Equity (ROE), Price to Earnings Ratio (PER), Price to Book Value (PBV), Price to Free Cash Flow (P/FCF), and Dividend Payout Ratio (DPR). The research covers a decade marked by various market phases, including bullish, bearish, and sideways trends, influenced by significant economic events like presidential elections, the global economic crisis, and the COVID-19 pandemic. The use of a 10-year sample period allows for a comprehensive assessment of how these financial ratios impact stock prices across different market conditions.

The study focuses on the LQ45 Index due to its high liquidity and strong fundamentals, making it ideal for retail investors by reducing liquidity risk and avoiding excessive fluctuations. Sixteen stocks that have consistently remained in the LQ45 Index over the past decade were selected using purposive sampling. Data collection involved sourcing financial reports from these companies, followed by financial ratio analysis and statistical techniques like multiple regression. The research employs various statistical tests, including normality, multicollinearity, heteroscedasticity, and autocorrelation, to validate the regression model, with hypothesis testing conducted through t-tests and F-tests to determine the significance of financial ratios on stock returns. The study aims to provide actionable insights for investors and companies by identifying the most critical financial metrics in predicting stock price movements.

## RESULTS

### **Movement of Return on Equity (ROE), Price to Earnings Ratio (PER), Price to Book Value (PBV), Price to Free Cash Flow (PFCF), and Dividend Payout Ratio (DPR)**

#### ***Movement of Return on Equity (ROE)***

Return on Equity (ROE) evaluates a company's capability to generate profits from its equity base. A higher ROE ratio indicates more efficient management of equity, which is advantageous for the company. The trends in ROE from December 2014 to December 2023 are detailed in Appendix B. This data reveals notable fluctuations in ROE values. The highest ROE observed was 145.09% for Unilever Indonesia Tbk in 2020, while the lowest was -11.86% for PT Perusahaan Gas Negara Tbk in the same year.

A negative ROE indicates that the company has experienced losses, as shown by negative earnings after tax (EAT) relative to its shareholders' equity during the specified period. In contrast, a positive ROE demonstrates that the company has been profitable, evidenced by a positive earnings after tax (EAT) compared to its shareholders' equity.

#### **Movement of Price to Earnings Ratio (PER)**

The Price to Earnings Ratio (PER) is a financial metric that compares a company's stock price to its net earnings. A higher PER signifies that the market places a greater value on the company's earnings. As shown in Appendix C, the lowest PER was recorded by PT Perusahaan Gas Negara Tbk in 2020, with a value of -10.9, while the highest PER was achieved by PT Unilever Indonesia Tbk in 2017, with a value of 60.89. A negative PER indicates that the company incurred losses during the period, yet the stock market still assigns value to its shares. Conversely, a positive PER signifies that the company is profitable. A higher positive PER suggests that the market values the company's earnings more highly, whereas a lower positive PER implies that the company might be undervalued, as it generates substantial earnings relative to its market price.

#### **Movement of Price to Book Value (PBV)**

The Price to Book Value (PBV) ratio is a financial metric that compares a company's market price per share to its book value per share. Typically, a lower PBV ratio is more appealing to investors, as it may indicate that the stock is undervalued. According to Appendix D, PT Unilever Indonesia Tbk had the highest PBV in 2017, with a value of 82.44, while PT Adaro Energy Indonesia Tbk recorded the lowest PBV in 2015, with a value of 0.42. A lower PBV ratio suggests that the market perceives the company's book value to be low, potentially indicating an undervalued stock. On the other hand, a higher PBV ratio implies that the market places a higher value on the company's book value, which may suggest that the stock is overvalued.

#### **Movement of Price to Free Cash Flow (PFCF)**

The Price to Free Cash Flow (PFCF) ratio is a financial measure that compares a company's market price per share to its free cash flow per share. A lower PFCF ratio indicates that the company may be undervalued, making it more attractive to investors. As shown in Appendix E, PT Bank Rakyat Indonesia (Persero) Tbk had the highest PFCF in 2014, with a value of 1.749, while PT Bank Mandiri (Persero) Tbk recorded the lowest PFCF in 2018, with a value of -0.182. A negative PFCF ratio indicates that the company generated negative free cash flow during the period, which may signal potential financial difficulties. Conversely, a lower positive PFCF ratio suggests that the company is relatively undervalued, as its market price is low compared to the free cash flow it generates.

#### **Movement of Dividend Payout Ratio (DPR)**

The Dividend Payout Ratio (DPR) is a financial indicator that measures the percentage of a company's earnings distributed to shareholders as dividends. A higher DPR suggests that a company is allocating a larger portion of its earnings to shareholders, which can be seen as a sign of financial health and stability. According to Appendix F, PT United Tractors Tbk had the highest DPR in 2023, with a value of 122%, while PT Perusahaan Gas Negara Tbk recorded the lowest DPR in 2021, with a value of 0%. A DPR of 0% indicates that the company did not distribute any earnings as dividends during that period. Conversely, a DPR exceeding 100% implies that the company is paying out more in dividends than it earns, potentially financing these dividends through debt or equity, which may not be sustainable in the long term.

Data Clean Up

Table 1. Deleted Data

	Ticker	Year	Variable	Value		Ticker	Year	Variable	Value		Ticker	Year	Variable	Value
1	ADRO	2022	ROE	0.4138	17	UNVR	2015	PER	48.2400	33	BBCA	2014	PFCF	0.6441
2	PGAS	2020	ROE	-0.1186	18	UNVR	2016	PER	46.3200	34	BBCA	2016	PFCF	0.6462
3	SMGR	2022	ROE	0.0553	19	UNVR	2017	PER	60.8900	35	BBNI	2017	PFCF	0.5436
4	UNVR	2014	ROE	1.2478	20	KLBF	2014	PBV	9.1400	36	BBNI	2020	PFCF	1.1141
5	UNVR	2015	ROE	1.2122	21	UNVR	2014	PBV	53.5900	37	BBNI	2021	PFCF	1.7237
6	UNVR	2016	ROE	1.3585	22	UNVR	2015	PBV	58.4800	38	BBRI	2014	PFCF	1.7490
7	UNVR	2017	ROE	1.3540	23	UNVR	2016	PBV	62.9300	39	BBRI	2015	PFCF	0.7318
8	UNVR	2018	ROE	1.2021	24	UNVR	2017	PBV	82.4400	40	BMRI	2016	PFCF	0.6992
9	UNVR	2019	ROE	1.3997	25	UNVR	2018	PBV	45.7100	41	BMRI	2020	PFCF	0.5783
10	UNVR	2020	ROE	1.4509	26	UNVR	2019	PBV	60.6700	42	BMRI	2021	PFCF	0.8806
11	UNVR	2021	ROE	1.3325	27	UNVR	2020	PBV	56.7900	43	BMRI	2022	PFCF	0.5322
12	UNVR	2022	ROE	1.3421	28	UNVR	2021	PBV	36.2800	44	PTBA	2016	PFCF	0.6956
13	UNVR	2023	ROE	1.4199	29	UNVR	2022	PBV	44.8600	45	BBRI	2023	DPR	1.1024
14	INTP	2018	PER	59.2700	30	UNVR	2023	PBV	39.8300	46	UNTR	2023	DPR	1.2228
15	PGAS	2019	PER	55.9900	31	ADRO	2021	PFCF	0.4750					
16	PGAS	2020	PER	-10.9000	32	ADRO	2022	PFCF	0.6885					

Statistic Test

One method of hypothesis testing in multiple regression analysis is the Normality Test. This test aims to determine whether the dependent variable, the independent variables, or the residuals in a regression model follow a normal distribution. A well-fitting regression model typically shows data that is normally distributed or approximates a normal distribution.

Normality Assumption Test

Residual distribution normality test is done by looking at the Kolmogorov-Smirnov result. Ho is accepted with criteria as mentioned below:

- 1) If  $\alpha \leq P\text{-value (Sig.)}$ ; then data is normally distributed
- 2) If The chart in the Histogram is bell-shaped
- 3) If data in the P-P Plot follow the NPP line and spread near it

Table 2. One-Sample Kolmogorov-Smirnov Test

Hypothesis Test Summary				
	Null Hypothesis	Test	Sig. <sup>a,b</sup>	Decision
1	The distribution of (FIX) ROE is normal with mean .1560 and standard deviation .0582986.	One-Sample Kolmogorov-Smirnov Test	.200 <sup>c</sup>	Retain the null hypothesis.
2	The distribution of (FIX) PER is normal with mean 4.08 and standard deviation 1.07614.	One-Sample Kolmogorov-Smirnov Test	.200 <sup>c</sup>	Retain the null hypothesis.
3	The distribution of (FIX) PBV is normal with mean .34 and standard deviation .24058.	One-Sample Kolmogorov-Smirnov Test	.200 <sup>c</sup>	Retain the null hypothesis.
4	The distribution of (FIX) PFCF is normal with mean -1.13 and standard deviation .38720.	One-Sample Kolmogorov-Smirnov Test	.200 <sup>c</sup>	Retain the null hypothesis.
5	The distribution of DPR - S is normal with mean .5119 and standard deviation .2340816.	One-Sample Kolmogorov-Smirnov Test	<.001	Reject the null hypothesis.
6	The distribution of SQDPR is normal with mean .69 and standard deviation .16173.	One-Sample Kolmogorov-Smirnov Test	<.001	Reject the null hypothesis.
7	The distribution of LGDPR is normal with mean -.32 and standard deviation .17091.	One-Sample Kolmogorov-Smirnov Test	.010	Reject the null hypothesis.
8	The distribution of INDPR is normal with mean 2.43 and standard deviation 1.36644.	One-Sample Kolmogorov-Smirnov Test	<.001	Reject the null hypothesis.
9	The distribution of NSQDPR is normal with mean .75 and standard deviation .18460.	One-Sample Kolmogorov-Smirnov Test	<.001	Reject the null hypothesis.

a. The significance level is .100.  
 b. Lilliefors Corrected. Asymptotic significance is displayed.  
 c. This is a lower bound of the true significance.

Table 2 above presents the probability (Sig.) for all variables, evaluated against a significance level of 0.1. Initially, after data cleaning using the Z value, several variables remained non-normal, necessitating data transformation. After successful data transformation, only the Dividend Payout Ratio variable remained non-normal.

The histogram chart in Appendix J visually demonstrates that all variables are normally distributed, except for the Dividend Payout Ratio. Similarly, the P-P Plot results in Appendix K indicate that all variables follow a normal distribution, except for the Dividend Payout Ratio. However, we assume that the Dividend Payout Ratio will not significantly impact the model's calculations if included. Therefore, for this assumption test, the null hypothesis ( $H_0$ ) is rejected, indicating that there is normality of residuals within the model.

### **Multicollinearity Assumption Test**

**Table 3. Multicollinearity Test**

		Coefficients <sup>a</sup>								
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	90,0% Confidence Interval for B		Collinearity Statistics	
		B	Std. Error	Beta			Lower Bound	Upper Bound	Tolerance	VIF
1	(Constant)	.336	.429		.784	.435	-.376	1.048		
	(FIX) ROE	-.533	1.183	-.108	-.451	.653	-2.497	1.430	.146	6.827
	(FIX) PER	-.019	.092	-.067	-.208	.835	-.172	.134	.081	12.347
	(FIX) PBV	.460	.378	.416	1.215	.227	-.168	1.087	.072	13.947
	(FIX) PFCF	.276	.083	.385	3.342	.001	.139	.414	.633	1.579
	LG DPR	-.023	.193	-.011	-.117	.907	-.343	.298	.923	1.084

a. Dependent Variable: Return Apr 2015-2024

According to Table 3, it is clear that out of the five independent variables, the Variance Inflation Factor (VIF) scores for Return on Equity (ROE), Price to Free Cash Flow (PFCF), and Dividend Payout Ratio (DPR) are below 10. However, the VIF scores for Price to Earnings Ratio (PER) and Price to Book Value (PBV) exceed 10, indicating significant multicollinearity issues.

**Table 4. Coefficient Correlations**

		Coefficient Correlations <sup>a</sup>					
Model		LG DPR	(FIX) PER	(FIX) ROE	(FIX) PFCF	(FIX) PBV	
1	Correlations						
		LG DPR	1.000	-.018	-.092	.220	.051
		(FIX) PER	-.018	1.000	.899	.153	-.933
		(FIX) ROE	-.092	.899	1.000	.043	-.912
		(FIX) PFCF	.220	.153	.043	1.000	.057
		(FIX) PBV	.051	-.933	-.912	.057	1.000

The Price to Earnings Ratio (PER) shows a positive correlation with Return on Equity (ROE) at 0.899, suggesting that companies with higher PER tend to have higher ROE. Conversely, Price to Book Value (PBV) has a negative correlation with Price to Earnings Ratio (PER) at -0.933, indicating that companies with higher PBV are likely to have lower PER.

### **Heteroscedasticity Assumption Test**

**Table 5. Heteroscedasticity Test**

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.336	.429		.784	.435
	(FIX) ROE	-.533	1.183	-.108	-.451	.653
	(FIX) PER	-.019	.092	-.067	-.208	.835
	(FIX) PBV	.460	.378	.416	1.215	.227
	(FIX) PFCF	.276	.083	.385	3.342	.001
	LG DPR	-.023	.193	-.011	-.117	.907

a. Dependent Variable: Return Apr 2015-2024

Based on the results of the heteroscedasticity test shown in Table 5, the probability (Sig.) values for each independent variable exceed 0.1, except PFCF with the value of 0.001. Therefore, it can be concluded that there is no heteroscedasticity among the independent variables (ROE, PER, PBV, and DPR), except PFCF.

For the dependent variable (Stock Return), Figure 4.1 illustrates that the histogram data does not display a systematic pattern, indicating the absence of heteroscedasticity in the dependent variable. Overall, the null hypothesis (Ho) is accepted, confirming that the model does not suffer from heteroscedasticity.

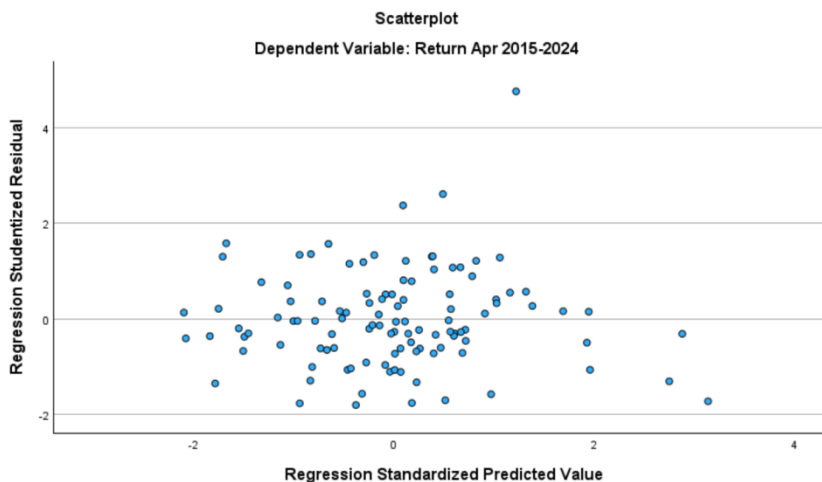


Figure 1. Scatterplot

**Autocorrelation Assumption Test**

**Table 6. Autocorrelation Test**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.343 <sup>a</sup>	.118	.076	.2745559	1.639

a. Predictors: (Constant), LGDPR, (FIX) PER, (FIX) ROE, (FIX) PFCF, (FIX) PBV

b. Dependent Variable: Return Apr 2015-2024

The next step in doing autocorrelation with Durbin-Watson test is using the criteria below:

- 1) Positive autocorrelation
  - a) If  $d > 1.956$  then  $H_0$  is accepted
  - b) If  $d < 1.519$  then  $H_0$  is rejected
  - c) If  $1.956 \leq d \leq 1.519$  then it cannot be concluded
- 2) Negative autocorrelation
  - a) If  $(4-d) > 1.956$  then  $H_0$  is accepted
  - b) If  $(4-d) < 1.519$  then  $H_0$  is rejected
  - c) If  $1.956 \leq (4-d) \leq 1.587$  then it cannot be concluded

Table 6 shows that the Durbin-Watson (d) value is 1.639 or 2.361 within the criteria  $1.956 \leq d \leq 1.519$  and  $(4-d) > 1.956$  which means that the model contain no negative autocorrelation but cannot be concluded for positive autocorrelation.

**Regression Coefficient Test Result**

After evaluating all the assumptions, the research variables will be analyzed using multiple linear regression analysis. This analysis employs the following regression model equation:

$$Y = b_0 + b_1 X_1 + b_2 X_2 + b_3 X_3 + b_4 X_4 + b_5 X_5$$

Using SPSS 14 for Windows, we can calculate the correlation coefficients for the independent variables—Return on Equity (ROE), Price to Earnings Ratio (PER), Price to Book Value (PBV), Price to Free Cash Flow (PFCF), and Dividend Payout Ratio (DPR)—denoted as X1, X2, X3, X4, and X5 respectively, with stock price as the dependent variable Y. The resulting regression model is represented by the following equation:

**Table 7.** Regression Coefficient Calculation

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.336	.429		.784	.435
	(FIX) ROE	-.533	1.183	-.108	-.451	.653
	(FIX) PER	-.019	.092	-.067	-.208	.835
	(FIX) PBV	.460	.378	.416	1.215	.227
	(FIX) PFCF	.276	.083	.385	3.342	.001
	LG DPR	-.023	.193	-.011	-.117	.907

a. Dependent Variable: Return Apr 2015-2024

From the Coefficients table, the regression model will be:

$$Y = 0.336 + (-0.533) X_1 + (-0.019) X_2 + 0.46 X_3 + 0.276 X_4 + (-0.023) X_5$$

Interpretation of Coefficients:

- 1) Return on Equity (X1): A 1-unit increase in X1 (Return on Equity) will result in a 0.533-unit decrease in Y (Stock Return), assuming all other variables are held constant.
- 2) Price to Earnings Ratio (X2): A 1-unit increase in X2 (Price to Earnings Ratio) will lead to a 0.019-unit decrease in Y (Stock Price).
- 3) Price to Book Value (X3): A 1-unit increase in X3 (Price to Book Value) will cause a 0.46-unit increase in Y (Stock Price).
- 4) Price to Free Cash Flow (X4): A 1-unit increase in X4 (Price to Free Cash Flow) will result in a 0.276-unit increase in Y (Stock Price).
- 5) Dividend Payout Ratio (X5): A 1-unit increase in X5 (Dividend Payout Ratio) will lead to a 0.023-unit decrease in Y (Stock Price).

### The Effect of Return on Equity (ROE), Price to Earnings Ratio (PER), Price to Book Value (PBV), Price to Free Cash Flow (PFCF), and Dividend Payout Ratio (DPR) to Stock Return

**Table 8.** R Square Result

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.343 <sup>a</sup>	.118	.076	.2745559	1.639

a. Predictors: (Constant), LG DPR, (FIX) PER, (FIX) ROE, (FIX) PFCF, (FIX) PBV

b. Dependent Variable: Return Apr 2015-2024

From Table 8, the multiple determination coefficient ( $R^2$ ) is 0.118. This means that 11.8% of the variation in stock price movements can be attributed to the changes in the independent variables. The remaining 88.2% of the variation is due to other factors not included in the model.

### Hypothesis Testing Result

#### Result of Partial Test (t-Test)

The t-Test (partial test) is used to evaluate the influence of each independent variable on the dependent variable. This test determines whether each independent variable has a significant partial effect on the dependent variable. The partial analysis results, as presented in Table 4.7, lead to the following conclusions for the five ratios examined: Return on Equity (ROE), Price to Earnings Ratio (PER), Price to Book Value (PBV), Price to Free Cash Flow (PFCF), and Dividend Payout Ratio (DPR).

- 1) Return on Equity (ROE): The Return on Equity (ROE) variable does not exhibit multicollinearity issues. As shown in Table 7, the significance value for ROE is 0.904, which exceeds the 0.1 significance level. The t-value for ROE is -0.451, which is less than the t-table of 1.9769. Therefore,  $H_0$  is accepted and it can be concluded that ROE does not significantly affect the stock price partially.
- 2) Price to Earnings Ratio (PER): The Price to Earnings Ratio (PER) variable is also free from multicollinearity problems. According to Table 7, the significance value for PER is 0.835, which is above the 0.1 significance level. The t-value for PER is -0.208, which is less than the t-table of 1.9761. Thus,  $H_0$  is accepted and it can be concluded that PER does not significantly impact the stock price partially.

- 3) Price to Book Value (PBV): The Price to Book Value (PBV) variable does not have multicollinearity issues. As indicated in Table 7, the significance value for PBV is 0.227, which is higher than the 0.1 significance level. The t-value for PBV is 1.215, which is less than the t-table of 1.9767. Therefore, it can be concluded that PBV does not significantly affects the stock price partially.
- 4) Price to Free Cash Flow (PFCF): The Price to Free Cash Flow (PFCF) variable is affected by multicollinearity issues. The significance value for PFCF, as shown in Table 4.7, is 0.001, which is below the 0.1 significance level. The t-value for PFCF is 3.342, which exceeds the critical value of 1.9771. Hence, it can be concluded that PFCF significantly impacts the stock price partially.
- 5) Dividend Payout Ratio (DPR): The Dividend Payout Ratio (DPR) variable does not exhibit multicollinearity issues. As presented in Table 7, the significance value for DPR is 0.907, which is above the 0.1 significance level. The t-value for DPR is -0.117, which is less than the critical value of 1.9768. Therefore, it can be concluded that DPR does not significantly affect the stock price partially.

**Result of Simultaneous Test (F-Test)**

The hypotheses are formulated as follows:

Ho: The independent variables collectively do not have a significant effect on the stock price

Ha: The independent variables collectively have a significant effect on the stock price

**Table 9.** F-Test (ANOVA) Result

ANOVA <sup>a</sup>						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1.056	5	.211	2.801	.020 <sup>b</sup>
	Residual	7.915	105	.075		
	Total	8.971	110			

a. Dependent Variable: Return Apr 2015-2024

b. Predictors: (Constant), LGDPR, (FIX) PER, (FIX) ROE, (FIX) PFCF, (FIX) PBV

Table 9 shows the F-Test result by using the analysis of variance (ANOVA) method. We can see that the Fvalue is 2.801. The Fvalue is valid and can be proven with the equation below:

$$F_{value} = \frac{\frac{0.118}{5}}{\frac{(1-0.118)}{(146-5-1)}}$$

$$2.801 = \frac{\frac{0.118}{5}}{\frac{0.882}{140}}$$

$$2.801 = \frac{0.0236}{0.0063}$$

$$2.801 = 3.746$$

The F-Test can be done by comparing the Fvalue with the Ftable and by comparing the probability (Sig.) and the degree of significance (α). Based on numerator df1 = k - 1 = 4 and denominator df2 = n - k = 141 at 5% degree of significance, the Ftable is 2.43. This means Fvalue is bigger than Ftable (2.801 > 2.43). The probability value acquired from table above is lower than the degree of significance (0.02 < 0.1). So from the F-test result, it can be concluded that Ho is rejected. This shows that there is significant effect between the independent variables simultaneously to the dependent variable.

After doing the regression assumption test and hypothesis testing about the relation between independent variable (X), which are Return on Equity (ROE), Price to Earnings Ratio (PER), Price to Book Value (PBV), Price to Free Cash Flow (PFCF), Dividend Payout Ratio (DPR), with the dependent variable (Y) which is the stock return, the result can be concluded in the table below:



**Table 10.** Test Results

	<b>Hypothesis</b>	<b>Criteria</b>	<b>Test Result</b>	<b>Conclusion</b>
Partial	H0 : There is no significant effect from ROE to Stock Return	If Sig $\leq$ $\alpha$ Then H0 is Accepted	Sig1 (0.904) > 0.1 and t1 (-0.451) < 1.9769 so H1 is rejected	ROE does not significantly affect the stock return
	H0 : There is no significant effect from PER to Stock Return	If Sig > $\alpha$ Then H0 is rejected	Sig2 (0.835) > 0.1 and t2 (-0.208) < 1.9761 so H1 is rejected	PER does not significantly affect the stock return
	H0 : There is no significant effect from PBV to Stock Return	Or	Sig3 (0.227) > 0.1 and t3 (1.215) < 1.9767 so H1 is rejected	PBV does not significantly affect the stock return
	H0 : There is no significant effect from PFCF to Stock Return	If t-value $\leq$ t-table Then H0 is accepted	Sig4 (0.001) < 0.1 and t4 (3.342) > 1.9771 so H1 is Accepted	PFCF significantly affect the stock return
	H0 : There is no significant effect from DPR to Stock Return	If t-value > t-table Then H0 is rejected	Sig5 (0.907) > 0.1 and t5 (-0.117) < 1.9768 so H1 is rejected	DPR does not significantly affect the stock return
Simultaneous	H0 : There is no significant effect to the stock return simultaneously	If Sig > $\alpha$ Then H0 is Accepted	Sig (0.02) < 0.1 and f-value (2.801) > f-table (2.43) then H0 is rejected	ROE, PER, PBV, PFCF, and DPR simultaneously affect the stock return
	Ha : There is significant effect to the stock return simultaneously	If Sig $\leq$ $\alpha$ Then H0 is rejected		
		Or	If f-value $\leq$ f-table Then H0 is accepted	
		If f-value > f-table Then H0 is rejected		

## Discussion

The research shows that the multiple determination coefficients (R. Square) are 11.8 percent. This means that Return on Equity (ROE), Price to Earnings Ratio (PER), Price to Book Value (PBV), Price to Free Cash Flow (PFCF), and Dividend Payout Ratio (DPR) can explain 11.8 percent of stock return. The rest which is 88.2 percent is explained by various variables that are not included in this research. Based on the hypothesis testing conclusion, we can conclude that partially, Price to Free Cash Flow (PFCF) have a significant effect on stock return. Simultaneously the variable of Return on Equity (ROE), Price to

Earnings Ratio (PER), Price to Book Value (PBV), Price to Free Cash Flow (PFCF) and Dividend Payout Ratio (DPR) have a significant effect to the stock return.

## **CONCLUSION**

The findings reveal that ROE, PER, and PBV do not significantly impact stock returns, differing from previous studies due to the focus on stock returns rather than stock prices. However, the PFCF ratio shows a significant positive effect on stock returns, aligning with value investing principles, while DPR does not significantly affect returns, likely due to varying dividend policies across sectors. The regression model explains only 11.8% of stock return variations, indicating that other factors like global economic conditions and news events play a significant role. The study suggests that retail investors prioritize the PFCF ratio when evaluating stocks but also consider other financial metrics and diversify investments to mitigate risks. Public companies should focus on improving free cash flow and transparency in financial reporting to attract investors and boost stock prices, while future research should explore additional financial ratios and the impact of market conditions on stock returns.

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