

# The Effect of Risk Management in Improving Portfolio Performance on LQ45 Stocks in the Indonesian Capital Market

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## ABSTRACT

*This study aims to analyze the effect of risk management on the performance of the LQ45 stock portfolio in the Indonesian capital market, which consists of large-cap and high-liquidity stocks. The stocks in this index have a special attraction for institutional and individual investors due to their higher stability compared to other stocks on the Indonesia Stock Exchange (IDX). However, they remain vulnerable to various market risks, including changes in macroeconomic conditions, government policies, and fluctuations in global sentiment. This study uses secondary data from the financial statements of LQ45 companies over a certain period and conducts multiple linear regression analysis of risk management variables, such as Price-to-Earnings Ratio (PER), Beta Portfolio, Dividend Yield, and Market Capitalization. The results show that these variables do not have a significant influence on portfolio performance, as indicated by the coefficient of determination of 11.8%, which indicates that most of the variation in portfolio performance (88.2%) is influenced by factors outside the model. Portfolio beta theoretically shows the greatest potential influence, but the statistical results are not significant. The study concludes that while risk management plays an important role in maintaining portfolio stability, a more comprehensive approach is needed to optimize investment returns. Portfolio diversification strategies, proper asset allocation, and analysis of global market trends are important in the face of Indonesian capital market volatility. This study contributes to the portfolio management literature in Indonesia by offering practical guidance for investors to develop effective investment strategies to manage risk and maximize their portfolio returns amidst complex and volatile market dynamics.*

**Keywords:** Risk Management, Portfolio Performance, LQ45 Stocks, Capital Market

## ABSTRAK

*Penelitian ini bertujuan untuk menganalisis pengaruh manajemen risiko terhadap kinerja portofolio saham LQ45 di pasar modal Indonesia, yang terdiri dari saham-saham berkapitalisasi besar dan likuiditas tinggi. Saham-saham dalam indeks ini memiliki daya tarik tersendiri bagi investor institusi dan individu karena stabilitasnya yang lebih tinggi dibandingkan saham lainnya di Bursa Efek Indonesia (BEI). Namun, saham-saham tersebut tetap rentan terhadap berbagai risiko pasar, termasuk perubahan kondisi ekonomi makro, kebijakan pemerintah, dan fluktuasi sentimen global. Penelitian ini menggunakan data sekunder dari laporan keuangan perusahaan LQ45 selama periode tertentu dan melakukan analisis regresi linier berganda terhadap variabel-variabel manajemen risiko, seperti Price-to-Earnings Ratio (PER), Beta Portofolio, Dividend Yield, dan Market Capitalization. Hasil menunjukkan bahwa variabel-variabel tersebut tidak memiliki pengaruh signifikan terhadap kinerja portofolio, sebagaimana ditunjukkan oleh koefisien determinasi sebesar 11,8%, yang mengindikasikan bahwa sebagian besar variasi kinerja portofolio (88,2%) dipengaruhi oleh faktor di luar model. Beta Portofolio secara teoritis menunjukkan potensi pengaruh terbesar, tetapi hasil statistiknya tidak signifikan. Penelitian ini menyimpulkan bahwa meskipun manajemen risiko memainkan peran penting dalam menjaga stabilitas portofolio, pendekatan yang lebih komprehensif diperlukan untuk mengoptimalkan hasil investasi. Strategi diversifikasi portofolio, alokasi aset yang tepat, dan analisis tren pasar global menjadi penting dalam menghadapi volatilitas pasar modal Indonesia. Studi ini memberikan kontribusi pada literatur pengelolaan portofolio di Indonesia dengan menawarkan panduan praktis bagi investor untuk mengembangkan strategi investasi yang efektif dalam mengelola risiko dan memaksimalkan return portofolio mereka di tengah dinamika pasar yang kompleks dan tidak menentu.*

**Kata Kunci:** Manajemen Risiko, Kinerja Portofolio, Saham LQ45, Pasar Modal

## 1. Introduction

The Indonesian capital market, through the LQ45 stock index, plays a significant role in driving economic growth by providing an attractive and stable investment instrument. The LQ45 index includes 45 stocks of large companies that have large capitalization and high liquidity, making it highly attractive to both institutional and individual investors. Despite having a higher degree of stability than other stocks on the Indonesia Stock

Exchange (IDX), stocks in the LQ45 index remain vulnerable to risks influenced by various external factors, such as market movements, interest rate changes, and global economic dynamics.

Risk management in equity investment aims to identify, analyze, and manage risks so that investors can minimize the negative impact of market fluctuations. Strategies that are often applied include portfolio diversification, proper asset allocation, as well as the

utilization of derivative instruments such as options and futures contracts to hedge investments. Through effective risk management, investors can not only reduce major risks but also increase potential portfolio returns on a sustainable basis.

Several studies have examined the impact of risk management on portfolio performance, especially in the context of LQ45 stocks in Indonesia. Rahmawati (2016) found that portfolio diversification has a significant positive effect on investment performance, especially in large-cap stocks such as those in LQ45. With diversification, investors can spread their investments to various sectors to reduce company-specific risks, so that the portfolio is more stable despite market fluctuations.

Santoso and Priatna (2023) also highlighted the importance of asset allocation in improving stock portfolio efficiency. They found that optimally managed portfolios with proper asset allocation are more resilient to economic shocks, and provide more consistent investment returns than portfolios that are not well managed in terms of risk. This research supports the concept that proper asset allocation can help investors achieve long-term investment goals with optimal performance under various market conditions.

Setiawan (2020) conducted a study on LQ45 sector stocks and showed that the application of risk management based on fundamental and technical analysis can improve the quality of returns in the long run. By setting risk limits through in-depth analysis of stock values, investors can make more informed decisions and increase returns in their portfolios.

Based on these studies, this article aims to analyze in depth how the implementation of risk management can improve portfolio performance on LQ45 stocks in the Indonesian capital market. This research will answer the main questions: whether the implementation of risk management has a significant influence and positive contribution to the improvement of portfolio performance of LQ45 stocks in the Indonesian capital market, as well as what risk management factors are most dominant in influencing such performance. More specifically, the objectives of this study are to recognize the impact of risk management implementation on the performance of the LQ45 stock portfolio, assess the positive contribution of risk management to the improvement of portfolio performance, and identify the most dominant risk management factor in influencing the performance of the LQ45 stock portfolio.

## 2. Theoretical Foundation

### Portofolio

A portfolio is a collection of projects or investments owned by a company or individual in an effort to reduce risk. Thus, it can be concluded that a portfolio includes various types of investments made by investors, with the main objective of reducing risk. Portfolios are also known as investment diversification, which is a risk management strategy that combines different types of assets in one portfolio. Portfolio theory in capital market investing suggests that investors spread their investments across

several stocks of different companies. The purpose of this approach is to reduce risk and potential losses (Nurlaeli & Artati, 2020). This risk management approach is based on the principle that a portfolio consisting of various types of investments can provide a higher average return with lower risk than investing in just one type of asset.

### LQ45 Index

A total of 45 leading stocks on the Indonesia Stock Exchange (IDX) are selected based on high liquidity and various other criteria. The stocks in this index have similarities, such as large market capitalization, healthy financial condition, positive growth prospects, and are often traded in the regular market. The selection of these stocks is done objectively by the IDX, with a re-evaluation of the list of stocks in the LQ45 index done every six months, at the beginning of February and August. If a company no longer meets the criteria within a certain period, it will be replaced by another company that better meets the requirements (Rachmawati, 2019).

### Portfolio Risk

Measuring the risk of a portfolio cannot be done by simply summing up the risks of the individual stocks it contains, as this approach is too simplistic and does not take into account the complex interactions between different assets. When different stocks are combined in a portfolio, they influence each other. Stocks with a positive correlation in price fluctuations can increase overall risk, while negatively correlated stocks can balance each other out, thereby reducing total risk (Gunawan & Luh Gede Sri Artini, 2016). Portfolio risk is not equal to the weighted average of the risk of each individual security, while portfolio return is a weighted average of the return of each security. To measure portfolio risk, we can use the standard deviation or variance of the return value of each security in the portfolio (Hartono, 2016: 313).

### Capital Markets

The capital market is an area that provides a source of long-term financing that is invested in assets to improve and expand the means of production. This can ultimately open up new employment opportunities and support sustainable economic growth. Based on the explanation of John Downes and Jordan Elliot Goodman cited by Fauzan & Suhendro (2019), the capital market is a place to trade funds, including loans and shares. This market includes the placement of private funds as well as transactions in various organized markets and exchanges. In general, the capital market is a place where sellers and buyers meet to make transactions in order to obtain capital.

### Stock Liquidity

Liquidity refers to how fast and easy it is for investors to convert their investments into cash (Bodie et al., 2017). Liquidity also shows the company's ability to meet its short-term obligations. Companies with high liquidity levels generally do not rely on debt as a source of funding because they have sufficient internal funds (Fahmi & Kurnia, 2017). In measuring stock liquidity,

trading volume serves as an important indicator. If trading volume increases due to high demand, this is considered a positive sign. However, if the increase in volume is due to an increase in sales, this can be interpreted as a negative signal for market participants.

### Risk Management

Risk is an inseparable element of the business world and is always present in every company activity (Arifina, 2019). Therefore, the application of risk management is important and needs to be applied in all organizational activities, both in the public and private sectors (Sari et al., 2022). Risk is related to uncertainty about future events and outcomes, which can be an obstacle in achieving organizational goals (Pradana & Rikumahu, 2014). Risk management is a structured approach to handling various risks that a company may face (Prayoga & Almilia, 2013). As an integral part of good governance, risk management supports decision making at all levels in the organization. By implementing risk management, decisions made are more focused and in accordance with organizational goals. In addition, a risk management culture also strengthens the overall vision, mission, and goals of the organization.

## 3. Methodology

### 3.1 Data

This study uses quantitative data obtained from the financial statements of companies incorporated in the LQ45 index. The data is numerical and used to calculate variables related to risk management and portfolio performance. This study utilizes secondary data sources, which are data collected by researchers indirectly from data providers. Secondary data sources include mass media, data provider companies, stock exchanges, previous research results, data from statistical software, and other sources. In this study, data was collected from the official website of the Indonesia Stock Exchange (IDX) and other relevant sources.

### 3.3 Analysis Method

#### Classical Assumptions

According to Ghozali (2018: 107), the classic assumption test is a requirement that must be met in multiple linear regression analysis to ensure that the coefficient estimate is accurate and bias-free. This test includes multicollinearity, heteroscedasticity, normality, and linearity tests.

#### 1) Normality Test

According to Ghozali (2018: 161), the normality test aims to ensure that the regression model and residuals (errors) follow a normal distribution. A good regression model ideally has data with a normal distribution or at least close to normal. This distribution can be observed through a histogram graph or tested using the Kolmogorov-Smirnov test.

#### 2) Multicollinearity Test

Ghozali (2018: 107) states that the multicollinearity test aims to detect the

relationship between independent variables in the regression model. The two main indicators used to identify multicollinearity are tolerance value and Variance Inflation Factor (VIF). These indicators help in determining whether a particular independent variable can be explained by another independent variable. In this process, each independent variable is considered a dependent variable that is regressed against the other independent variables. The tolerance value measures how much of the independent variable cannot be explained by the other independent variables. If the tolerance value is low, the VIF will be high (as VIF is calculated as 1 divided by the tolerance value). In general, multicollinearity is detected if the tolerance value is less than or equal to 0.10 or if the VIF is greater than or equal to 10.

#### 3) Heteroscedasticity Test

One technique to detect heteroscedasticity is through the Glejser Test. In this method, regression is performed on the absolute value of the residuals against the independent variable. If the independent variable has a statistically significant effect on the dependent variable, then it indicates heteroscedasticity (Ghozali, 2018: 137).

- a. If the statistical significance value  $> 0.05$ , then there is no heteroscedasticity.
- b. If the statistical significance value is  $< 0.05$ , then there is heteroscedasticity.

#### 4) Autocorrelation Test

Ghozali (2016: 107) explains that the autocorrelation test is used to detect whether there is a relationship between errors at a certain time (t) and errors in the previous period (t-1) in a linear regression model.

## Multiple Regression Analysis

Multiple linear regression is a method that relates one variable to several other variables. This relationship is expressed through an equation that allows the use of known values of a variable to predict the value of another unknown variable. The equation is:

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

Meaning:

Y = Dependent Variable (Stock Return)

a = Constant

$b_1, b_2$  = Regression Line Coefficient

$X_1, X_2$  = Independent Variables (PER, Portfolio Beta, Dividend Yield, Market Capitalization)

e = Error / Confounding Variable

#### 1) Regression Analysis

Regression is a statistical method used to understand the relationship between a dependent variable to be explained and one or more independent variables that influence it, with the primary goal of making predictions. The addition of variables in the model usually

improves predictive ability, but also poses challenges, such as difficulties in data collection and variable management. Therefore, it is important to perform variable selection so that only the most relevant variables are selected, so that prediction accuracy can be improved.

2) Coefficient of Determination

Based on Ghozali (2018: 97), the coefficient of determination ( $R^2$ ) is used to measure how well the model can explain variations in the dependent variable, with values ranging from 0 to 1. A value of 0 indicates no relationship, 0-0.49 indicates a weak relationship, 0.50 indicates a moderate relationship, 0.51-0.99 indicates a strong relationship, and 1 indicates a perfect relationship. A low  $R^2$  indicates that the independent variable is less effective in explaining the dependent variable, while a value close to one indicates high predictive ability.

3) Simultaneous Hypothesis Test

According to Ghozali (2019: 98), the F statistical test is used to determine whether the independent variables in the model have a significant effect together on the dependent variable, with a confidence level of 0.05. The decision-making criteria for the F test are as follows:

- a. If the F significance value is greater than 0.05 or the calculated F value is smaller than the F table, then the model is considered insignificant and unable to explain the effect of the independent variable on the dependent variable.
- b. If the F significance value is equal to or less than 0.05 or F count is greater than F table, then the model is considered significant and able to explain how the independent variable affects the dependent variable.

4) Partial Hypothesis Test

According to Ghozali (2019: 98), the t statistical test is used to assess the effect of each independent variable individually on the dependent variable. The test criteria are as follows:

- a. If the significance value of t is greater than 0.05, then the hypothesis is rejected, which indicates that the independent variable has no significant effect on the dependent variable.
- b. If the significance value of t is equal to or less than 0.05, then the hypothesis is

accepted, which means that the independent variable has a significant influence on the dependent variable.

4. Results and Discussion

Figure 1. List of Companies Listed in the LQ45 Index and Listed on the IDX in the 2021-2023 Period

Kode Saham	Tahun	Return Saham	PER	Beta Portofolio	Dividend Yield	Market Capitalization
ICBP	2021	5,75%	15,88	0,61	6,67%	101.458.600
	2022	36,05%	26,91	0,2	7,50%	101.458.600
	2023	6,02%	17,65	0,22	8,33%	123.324.677
UNVR	2021	-37,49%	27,22	0,72	6,34%	156.796.500
	2022	28,42%	33,33	0,78	8,80%	179.305.000
	2023	23,23%	28,02	0,67	8,79%	134.669.500
CPIN	2021	21,85%	25,57	0,29	2,09%	97.568.100.000.000
	2022	0,00%	31,56	0,76	2,07%	92.648.700.000.000
	2023	0,70%	35,64	1,41	3,91%	97.568.100.000.000
INDF	2021	4,35%	15,88	0,28	4,14%	55.536.198
	2022	-11,52%	9,29	0,28	4,33%	59.048.368
	2023	-3,88%	6,95	0,25	3,56%	56.633.751
GGRM	2021	18,22%	6,09	0,81	7,99%	58.877.092.800.000
	2022	-43,04%	21,87	0,87	7,92%	92.648.700.000.000
	2023	27,92%	7,35	0,25	4,27%	39.107.088.600.000
KLBK	2021	2,87%	23,78	0,78	2,27%	75.703.322
	2022	29,81%	28,74	0,75	2,15%	96.674.291
	2023	-23,33%	26,92	0,67	1,78%	74.471.583
ASSI	2021	2,48%	12,69	0,75	5,33%	1.112.744
	2022	7,95%	13,19	0,67	6,57%	1.281.341
	2023	-6,28%	8,52	0,67	7,21%	1.207.159
ACE	2021	-16,07%	31,08	0,31	7,31%	21.952.000.000.000
	2022	-51,61%	12,77	0,32	4,68%	12.348.000.000.000
	2023	50,63%	16,13	0,31	5,30%	8.506.000.000.000
SIDO	2021	8,40%	20,46	0,55	5,23%	25.921.875.000.000
	2022	-12,72%	20,51	0,76	5,98%	22.123.846.153.846
	2023	-30,46%	16,57	0,76	4,98%	16.124.285.714.286
PTBA	2021	3,44%	3,86	1,1	36,80%	31.220.000.000.000
	2022	12,16%	3,37	1,32	33,66%	42.390.000.000.000
	2023	-38,85%	4,59	1,1	10,80%	28.030.000.000.000

Classical Assumption Results

One-Sample Kolmogorov-Smirnov Test

		Unstandardized Residual	
N		30	
Normal Parameters <sup>a,b</sup>	Mean	.0000000	
	Std. Deviation	23.12690424	
Most Extreme Differences	Absolute	.087	
	Positive	.067	
	Negative	-.087	
Test Statistic		.087	
Asymp. Sig. (2-tailed) <sup>c</sup>		.200 <sup>d</sup>	
Monte Carlo Sig. (2-tailed) <sup>e</sup>	Sig.	.807	
	99% Confidence Interval	Lower Bound	.797
	Upper Bound	.818	

- a. Test distribution is Normal.
- b. Calculated from data.
- c. Lilliefors Significance Correction.
- d. This is a lower bound of the true significance.
- e. Lilliefors' method based on 10000 Monte Carlo samples with starting seed 2000000.

Figure 2. Normality Test Results

Model	Unstandardized Coefficients		Standardized Coefficients		t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta				Tolerance	VIF
1	(Constant)	-1.367	14.560		-.094	.926		
	PER	.587	.563	.230	1.043	.307	.723	1.382
	Beta Portofolio	-29.702	17.928	-.392	-1.657	.110	.630	1.586
	Dividend Yield	1.051	.785	.336	1.340	.192	.560	1.786
	Market Capitalization	1.018E-13	.000	.125	.612	.546	.851	1.175

a. Dependent Variable: Return Saham

Figure 3. Multicollinearity Test Results

Model	Unstandardized Coefficients		Standardized Coefficients		t	Sig.
	B	Std. Error	Beta			
1	(Constant)	16.702	8.504		1.964	.061
	PER	.211	.329		.147	.641
	Beta Portofolio	-.154	10.471	-.004	-.015	.988
	Dividend Yield	-.083	.458	-.047	-.181	.858
	Market Capitalization	-7.972E-14	.000	-.173	-.820	.420

a. Dependent Variable: Abs\_RES

**Figure 4. Heteroscedasticity Test Results**

Model Summary <sup>b</sup>					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.344 <sup>a</sup>	.118	-.023	24.90844	2.318

a. Predictors: (Constant), Market Capitalization, Dividend Yield, PER, Beta Portofolio  
b. Dependent Variable: Return Saham

**Figure 5. Autocorrelation Test Results  
Classical Assumption Results**

Normalitas	P-Value = 0,200
Multikolinearitas	Tolerance = 0,723 ; 0,630 ;0,560 ;0,851 VIF = 1,382 ; 1,586 ; 1,786 ; 1,175
Heteroskedastisitas	PER = 0,528
	Beta Portofolio = 0,988
	Dividend Yield = 0,858
	Market Capitalization = 0,420
Autokorelasi	Durbin = 2,318

The normality test shows a P-value of 0.200, which is greater than the significance level of 0.05 (0.200 > 0.05). This indicates that the residual data in this model is normally distributed. With the normality assumption fulfilled, the statistical analysis performed is considered valid and reliable. Residual normality is important in regression models, because it is one of the basic requirements that must be met to ensure that the resulting parameter estimates are unbiased and efficient.

The multicollinearity analysis results show that the Tolerance values obtained are 0.723; 0.630; 0.560; and 0.851, while the VIF values are 1.382; 1.586; 1.786; and 1.175, respectively. All Tolerance values are greater than 0.1, and all VIF values are below 10.00. This indicates that the regression model used does not experience multicollinearity problems.

The autocorrelation test results show a Durbin-Watson value of 2.318. At a significance level of 5% (α = 0.05), with four independent variables and 30 samples, the lower limit (d<sub>L</sub>) is 1.1426 and the upper limit (d<sub>U</sub>) is 1.7386. Since the Durbin-Watson value (2.318) is greater than d<sub>U</sub> (1.7386), this indicates that the regression model does not have an autocorrelation problem. In other words, the errors in the regression model do not show a certain pattern, so the assumption of error independence has been met.

**Multiple Linear Regression**

Coefficients <sup>a</sup>						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-1.367	14.560		-.094	.926
	PER	.587	.563	.230	1.043	.307
	Beta Portofolio	-29.702	17.928	-.392	-1.657	.110
	Dividend Yield	1.051	.785	.336	1.340	.192
	Market Capitalization	1.018E-13	.000	.125	.612	.546

a. Dependent Variable: Return Saham

**Figure 6. Regression Model Results**

Model Summary <sup>b</sup>					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	
1	.344 <sup>a</sup>	.118	-.023	24.90844	

a. Predictors: (Constant), Market Capitalization, Dividend Yield, PER, Beta Portofolio  
b. Dependent Variable: Return Saham

**Figure 7. Coefficient of Determination Results**

ANOVA <sup>a</sup>						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2076.393	4	519.098	.837	.515 <sup>b</sup>
	Residual	15510.757	25	620.430		
	Total	17587.150	29			

a. Dependent Variable: Return Saham  
b. Predictors: (Constant), Market Capitalization, Dividend Yield, PER, Beta Portofolio

**Figure 8. Simultaneous Hypothesis Results**

Coefficients <sup>a</sup>						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-1.367	14.560		-.094	.926
	PER	.587	.563	.230	1.043	.307
	Beta Portofolio	-29.702	17.928	-.392	-1.657	.110
	Dividend Yield	1.051	.785	.336	1.340	.192
	Market Capitalization	1.018E-13	.000	.125	.612	.546

a. Dependent Variable: Return Saham

**Figure 9. Partial Hypothesis Results  
Classical Assumption Results**

Variabel Independen	Koefisien Regresi	T Hitung	p-value
Intercept	-1,367	-0,094	0,926
PER	0,587	1,043	0,307
Beta Portofolio	-29,702	-1,657	0,110
Dividend Yield	1,051	1,340	0,192
Market Capitalization	1,02E-13	0,612	0,546

F Hitung = 0,837 ; p-value = 5,515  
R = 0,344 ; R Square = 0,118

The results of the regression model are:  $Y = -1,367 + 0,587X_1 - 29,702X_2 + 1,051X_3 + 1,018 \times 10^{-13}X_4$ . If the Price Earnings Ratio (PER) increases by 1%, the Stock Return is expected to increase by 0.587%. Conversely, if the Portfolio Beta increases by 1%, the Stock Return is projected to decrease by 29.702%. An increase in Dividend Yield by 1% is expected to increase Stock Return by 1.051%. Meanwhile, if Market Capitalization increases by 1 rupiah, the Stock Return is estimated to increase by 1.018E-13%.

The coefficient of determination obtained is R<sup>2</sup> = 0.118. This shows that the independent variables PER, Beta Portofolio, Dividend Yield, and Market Capitalization are only able to explain 11.8% of the variation in Stock Returns, while the remaining 88.2% is influenced by other variables outside this study.

From the results of the simultaneous hypothesis test, the calculated F value is 0.837 with a P-value of 0.515. Because the P-value is 0.515 > 0.05, then Ho is accepted. This concludes that there is no simultaneous significant effect of the independent variables PER, Beta Portofolio, Dividend Yield, and Market Capitalization on Stock Returns. For the partial hypothesis on the PER variable, the t value is 1.043 with a P-value of 0.307. Because the P-value of 0.307 > 0.05, Ho is accepted, so it is concluded that there is no significant effect of PER on Stock Returns. In the Beta Portofolio variable, the t value is -1.657 with a P-value of 0.110. Because the P-value is 0.110 > 0.05, Ho is accepted, indicating that Beta Portofolio has no significant effect on Stock Returns. For the Dividend Yield variable, the t value is 1.340 with a P-value of 0.192. With a P-value of 0.192 > 0.05, Ho is accepted, so it is concluded that Dividend Yield has no significant effect on

Stock Returns. Finally, for the Market Capitalization variable, the t value is 0.612 with a P-value of 0.546. Because the P-value is  $0.546 > 0.05$ ,  $H_0$  is accepted, which indicates that Market Capitalization has no significant effect on Stock Returns.

### **The Effect of Risk Management on the Performance of the LQ45 Stock Portfolio in the Indonesian Capital Market**

This study shows that the effect of risk management on the performance of the LQ45 stock portfolio in the Indonesian capital market is relatively limited. The results of classical assumption testing show that the model used has good validity. The normality test resulted in a P-value of 0.200 (greater than 0.05), which indicates that the residual data is normally distributed and this regression model can be considered reliable. In addition, the multicollinearity test indicates that there is no high correlation between the independent variables, with Tolerance and Variance Inflation Factor (VIF) values that are within safe limits. This indicates that each independent variable in the model, namely Price-to-Earnings Ratio (PER), Portfolio Beta, Dividend Yield, and Market Capitalization, makes an independent contribution to the performance of the LQ45 portfolio.

The results of the heteroscedasticity test show that the P-value of each variable is greater than 0.05. This indicates that there is no heteroscedasticity problem in the model, so the residual variance is considered constant and the regression model used is reliable, which signifies stable error variability in this model, fulfilling the assumption of homoscedasticity. The Durbin-Watson value of 2.318 also indicates the absence of autocorrelation in the model errors, ensuring that the residuals of this model are independent and supporting its predictive accuracy. However, the coefficient of determination (R-Square) shows a low value of 0.118, indicating that the risk management variables can only explain about 11.8% of the variation in LQ45 portfolio performance. In other words, factors not included in this model, such as macroeconomic conditions, government policies, and market sentiment, may have a greater influence.

Simultaneous tests (F-test) and partial tests (t-test) support these findings. The F-test indicates that the combination of risk management variables in this model has no significant effect collectively on portfolio performance, with a calculated F-value of 0.837 and a P-value of 0.515. In the partial test, each independent variable—PER, Portfolio Beta, Dividend Yield, and Market Capitalization—also showed no significant effect individually on LQ45 stock returns, as indicated by the P-value of each variable greater than 0.05.

This study supports other research that found that while diversification, the use of derivatives as a hedging strategy, and risk management tools such as Value-at-Risk (VaR) can help in reducing portfolio risk and volatility, overall portfolio performance is more influenced by external factors. Some previous studies have shown the importance of macroeconomic

conditions, government policies, as well as optimal asset allocation in maintaining return stability in the LQ45 stock portfolio, but these are not strong enough to improve performance without support from stable factors outside the portfolio itself.

Overall, the results of this study indicate that investors in the capital market in Indonesia, especially those investing in LQ45 index stocks, should consider external factors such as national economic stability, global trends, and specific company characteristics in their portfolios. By considering these more dominant factors, investors can devise more effective and adaptive investment strategies to optimize portfolio performance in a dynamic market.

### **Positive Contribution to the Improvement of LQ45 Stock Portfolio Performance in the Indonesian Capital Market**

This study shows that risk management variables, such as Price-to-Earnings Ratio (PER), Beta Portfolio, Dividend Yield, and Market Capitalization, have no significant influence on the performance of the LQ45 stock portfolio on the Indonesia Stock Exchange. The regression analysis results reveal that these variables only explain 11.8% of the variation in portfolio performance, while the other 88.2% is influenced by factors outside this model. The F-test and t-test also show that each variable has no significant effect on stock returns.

This finding is in line with the results of previous research, showing that diversification, hedging, and Value-at-Risk (VaR) have a role in risk management but are not significant enough to affect portfolio returns. For example, Rahmawati's (2016) research found that diversification affects return stability, but without taking into account other external factors, the impact is limited. Wulandari and Hakim (2021) showed that derivatives help reduce volatility, but are more effective in volatile market conditions. Meanwhile, Putri and Sari (2019) found that VaR limits potential losses, but its effect on returns remains limited.

Overall, this study shows that risk management alone is not enough to improve the return performance of the LQ45 stock portfolio. In Indonesia's dynamic capital market, a more comprehensive approach that includes macroeconomic factors, global market trends, and internal company factors is needed for optimal investment results.

### **Most Dominant Risk Management Factors**

This study shows that risk management variables, such as Price-to-Earnings Ratio (PER), Beta Portfolio, Dividend Yield, and Market Capitalization, do not significantly affect the performance of the LQ45 stock portfolio in the Indonesian capital market. The t-test results show that all variables have a P-value  $> 0.05$ , indicating that no variable is individually significant. The R-Square value of 11.8% indicates that these variables only explain a small part of the variation in portfolio returns, while the remaining 88.2% is influenced by other factors outside the risk management studied.

Portfolio Beta has the greatest influence theoretically, with the largest negative coefficient, indicating the potential for higher fluctuations in high-beta stocks, although this influence is not statistically significant. This is in line with previous researchers by Wulandari and Hakim (2021), who stated that beta is an important factor in measuring portfolio stability.

Other studies by Putri and Sari (2019) and Santoso and Priatna (2023) suggest that other factors such as Value-at-Risk (VaR) and asset allocation can be more effective in managing risk and improving portfolio efficiency. Thus, to understand risk more comprehensively, investors should consider diversification strategies and other risk measurement instruments such as VaR.

Overall, this study indicates that there is no single risk management factor that dominantly influences the performance of the LQ45 stock portfolio significantly. Although Portfolio Beta has a greater indication of influence than other factors, further studies are needed by considering a broader risk approach to understand how risk management factors affect stock portfolio performance in the capital market in Indonesia.

## 5. Conclusion

This study shows that risk management variables such as Price-to-Earnings Ratio (PER), Beta Portfolio, Dividend Yield, and Market Capitalization have no significant influence on the performance of the LQ45 stock portfolio in Indonesia. The regression analysis results show a coefficient of determination (R-Square) of 11.8%, which indicates that these variables only explain a small part of the variation in portfolio performance, while most of the variation is influenced by other factors outside this model. In partial tests, no risk management variables were found to have a significant effect, although Portfolio Beta showed a greater indication of influence than other variables, suggesting that high beta stocks may be more vulnerable to market fluctuations. Thus, this study concludes that investors investing in LQ45 stocks need to take into account other external factors, such as macroeconomic conditions, government policies, and global market sentiment, which seem to have more influence on portfolio performance. Risk management remains important for portfolio stability, but needs to be supported by a broader strategy for optimal investment returns on the capital market in Indonesia.

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