SAR (Soedirman Accounting Review): Journal of Accounting and Business

Journal Homepage:
http://jos.unsoed.ac.id/index.php/sar/

THE EFFECT OF SYSTEMATIC RISK AND UNSYSTEMATIC RISK ON EXPECTED RETURN OF OPTIMAL PORTFOLIO

Denisa Rizky Sukrianingrum[1], Gusganda Suria Manda[2]

[1,2] *Accounting, Faculty of economics, Universitas Singaperbangsa Karawang, Indonesia*
*Email corresponding author: denisa.rizkyy@gmail.com

Abstract

The purpose of this research is to search out empirical proof that the expected return of shares portfolio is influenced by the presence of systematic and unsystematic risk. The population in this study was a combination of shares portfolio of non-financial companies listed in the LQ45 stock index during the period 2015 - 2019. The technique for sampling in this research using the technique of purposive sampling with a sample of 7 companies combined into 120 samples. The results of the study were obtained from data that had been analyzed using a test of descriptive statistics, a test of classical assumption, determinant coefficients test, and analysis of multiple linear regression through the help of the SPSS application. The results of the research on the F-test showed that the simultaneous systematic risk (X_1) and unsystematic risk (X_2) have a significant and positive impact on the expected return of portfolio (Y). The results of the t-test showed that partially the systematic risk variable (X_1) has a negative and significant impact on the optimal portfolio expected return (Y), and partially the unsystematic risk variable (X_2) has a significant and positive impact on the expected return of optimal portfolio (Y). The variable probability of systematic and unsystematic risk has an impact of 53.5% on the expected return on the basis of the effects of the coefficient of determination in this analysis, while the remaining 46.5% is determined by other factors that are not tested.

Keywords: Expected Return of Optimal Portfolio, Unsystematic Risk, Systematic Risk.

INTRODUCTION

In general, investment is a commitment of a number of funds to obtain profits at a later date. Investors who invest their funds in company shares basically want profits in the form of capital gain or dividend. The more promising the world of capital markets can attract many people to invest in the world of capital markets. According to Al Qaisi et al. (2016), the stock market is the main place for institutions to spread shares and raise funds. If there are public institutions listed then they can spread their stocks to raise more funds to develop business. The stock market is filled with various sources of capital, reflecting the development status and prospects of various industries, regions, companies and even entire countries within one country (Liu and Huang, 2018).

The stock market has the ability to direct the financial instruments and funds of companies or individuals who have the opportunity to invest or even those who do not have investment opportunities (Rui et al., 2018). Conditions that occur in the capital market are monitored by an agency called BAPEPAM (Capital Market Planning and Supervisory Agency). BAPEPAM classifies 45 stocks that have trading liquidity levels above the average shares listed on

the Jakarta Stock Exchange. These stocks are called LQ45, namely 45 stocks selected through several criteria that refer to stock trading liquidity and market capitalization. The LQ45 is adjustedor selected every six months.

The LQ45 index is a collection of the 45 most liquid company stocks and has a large capitalization value. Shares that are included in LQ45 are large-cap stocks which account for 75% of the market capitalization. Shares that are listed in the LQ45 index will change each period depending on the high and low share trading levels of the issuer. Only stocks that are actively traded will be included in the LQ45 index. This means that the LQ45 index is a stock of issuers thatis in great demand by the investor. In other words, the LQ45 Stock Index can be a guide for investors who want to invest their funds and also serve as a measure of performance in choosinga stock portfolio.

Investment can be defined as a person's commitment to a number of funds that are carried out in order to get many benefits in the future. The increasing growth of investment every year shows the increasing public interest in investment instruments. Based on the report of the Investment Coordinating Board (BKPM), investment realization throughout 2019 reached Rp809.6 trillion. Exceeding the original government target of Rp792.0 trillion, it has reached 102.2%. In line with the increase in investors in 2019 in the Indonesian Capital Market as much as 2.48 million based on the number of Single Investor Identification (SID). This increased by 53.04percent compared to total SID in 2018 (BKPM, 2019).

Investment is one way for investors to invest their funds by buying securities or securities.With the expected investment, the invested capital is usually called the expected return. According to Misfiyati (2018), the expected return can be interpreted as a return that is expectedby investors to get within the future. The estimated level of expected return from each investment is seen from the risk and handling of the company. The technical period in the investment world is "high-risk high-return", which means that when an investor desires to receive a greater return, it will be exposed to greater risk as well (Koluku et al., 2015). Risk can be interpreted as the possibility of losing part or all of the original investment by considering the difference between expected returns and actual returns (Rui et al., 2018).

Based on Tandiontong and Rusdin (2015) stated that the basis of volatility in stock returns in the Indonesian capital market is influenced by two assumptions, namely the systematic risk and the un-systematic risk. The systematic risk or non-diversifiable risk is understood as a marketrisk because it relates to changes that occur in the market as a whole (Alena et al., 2017). Meanwhile, unsystematic risk refers to the risk that only impacts the related companies. Unsystematic risk is also known as diversifiable risk or specific risk (Fahmi, 2018).

In making investment decisions, investors are required to behave rationally. A rational investor is considered capable of optimizing his investment funds by using a variety of information available on the capital market (Pramuki et al., 2016). Investment decisions are management policies in using existing funds in an asset that are expected to provide future benefits (Novianggieand Asandimitra, 2019). Investors can diversify by investing their capital into several stocks that will form a portfolio. Although unsystematic risks can be eliminated by diversifying the formation of portfolios, investors should also consider them.

The optimal portfolio formation can use two stock analysis models, namely the Markowitz Model and the Single Index Model (Hartono, 2015). The Markowitz model was introduced in 1952 by Harry M. Markowitz, this model does not consider risk-free assets, but only considers the expected return and risk. Meanwhile, the Single Index Model is a development model from the previous model, which was developed in 1963 by William Sharpe. This model is a stock analysis model that deals with the calculation of the return of each asset on the market index return mathematically.

Based on the background of the issues discussed, the researchers have an interest in

researching and testing how risk, both systematic risk and un-systematic risk have an affects on the optimum portfolio expected return of stocks using a single index model. This study aims to search out empirical proof that the expected return of shares in the context of portfolio formation is influenced by the presence of investment risk, both systematic risk and unsystematic risk. From the results of this study, it is hoped that it will provide benefits in the form of information to investors or potential investors regarding stock portfolios associated with risk and return.

LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

The Optimal Portfolio

The Portfolio is a combination of various investment instruments either in the form of accidental or indeed decided through planning supported by calculations and rational considerations to maximize investment risk (Wahyuni and Darmayanti, 2019). According to (Samsul, 2015:13), a portfolio can be defined as an investment in several instruments of financial that can be traded on the stock exchange and also the capital market with the aim of spreading the sources of returns and attainable risks.

An optimal portfolio can be defined as a portfolio that provides information on the combination of the lowest risk with higher return (Giharta and Sedana, 2017). Investors will choose an investment portfolio based on the priority of the investor that is concerned to obtain returns and risks they will bear.

Investment

Investment is the delay of current consumption with the aim of obtaining a rate of return that will be received in the future. According to Paramitasari (2015) investment is the management of capital carried out on an asset that is expected to provide results in the future. With the investment, investors expect a return from the invested capital commonly called Expected return (Misfiyati, 2018)

The relationship between return and risk in stock investment is positive, meaning that the higher the return of a stock, the higher the risk (Mardhiyah, 2017). Risk can be defined as a form of uncertainty regarding circumstances that will occur in the future with decisions made based on various present considerations. Risks in investment activities are the main concern of investors in making investment decisions (Yuniarti, 2016). To reduce investment risk, investors must be familiar with the types of investment risk. Types of risk in the capital market are grouped into two major groups, namely systematic risk or non-diversifiable risk and unsystematic risk or diversifiable risk.

Systematic Risk

Systematic risk can be defined as a market risk because it relates to changes in the entire market (Alena et al., 2017). Systematic risk is a developmental fluctuation caused by macroeconomic factors that affect all risk assets in the form of corporate economic growth, deposit interest rates, inflation rates, foreign exchange rates, government policies in the economic sector and others (Evirrio et al., 2018). The systematic risk depends on the risk of macroeconomic events, which can be measured as the sensitivity of stock returns to fluctuations in market portfolio returns, this sensitivity is called stock beta. The high level of change in the country's economy and global markets is the cause of the risks that affect the uncertain investment results. The greater the systematic risk that indicates a change in the country's economy and global, the more it will affect the state of a company. When systematic risk increases, investors usually tend to avoid stocks from companies that have a tendency to be sensitive to economic changes because the risks reflect the relative risk of the company. Thus, the higher the systematic risk, the greater the result of uncertainty from the expected return.

Unsystematic Risk

Unsystematic risk (specific risk) can be interpreted as a risk that occurs from within the company itself, such as employee strikes, demands by other parties, unsuccessful products and so on (Darwanis and Andina, 2013). Although unsystematic risks can be eliminated by diversifying the formation of portfolios, investors should also consider them. Unsystematic risk measurement can be done using a variance. The variance shows the weight of the deviation with different probability levels (Evirrio et al., 2018).

Return

Return is the goal of investors in investing. According to Syahrin and Darmawan (2018), the return of shares is income on funds that have been invested in a company. Return is the income expressed in the percentage of the initial capital invested. The stock's investment revenue is the income obtained from the acquisition and sale of shares, where if the benefit is called capital gain and if the loss is called capital loss (Suriyani and Sudiartha, 2018). There are two types of returns, namely the actual return and the expected return.

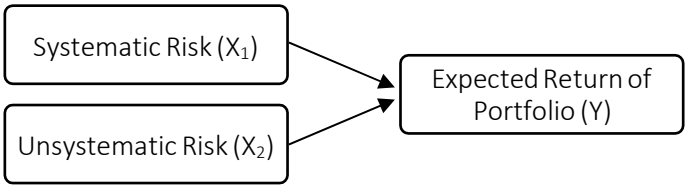
Return realization or actual return is a return that has occurred, while the expected return is the return used for making an investment decision (Alifiani, 2017). Return realization is historical and can be used as one of the company's performance gauges. The expected return is defined as the return used to make an investment decision. The expected return of portfolio is the weighted average of the expected returns of every single security in the portfolio (Ni Putu and Wirama, 2016). Investors usually look for ways with the stock portfolio to optimize the expected returns with a certain amount of risk. One way to reduce the risk of investing in equity in stocks is by diversifying share ownership by mixing various stocks in the investment or by building a portfolio. This means that the expected return of the stock portfolio is the average of the Expected Return of all the stocks that the portfolio has formed. This study uses the expected return of portfolio, so the way to analyze it is using the Single Index Model method.

Hypothesis Development

H_1: Systematic risk (X_1) has a significant and positive effect on the expected return of portfolio (Y).

H_2: Unsystematic risk (X_2) has a significant and positive effect on the expected return of portfolio (Y).

H3: Systematic risk (X_1) and unsystematic risk (X_2) have a simultaneous effect on the expected return of portfolio (y).



The type of this research is causality research. Causal design can be defined as useful for measuring research intervariable relationships or useful for analyzing how a variable affects other variables (Khairi Inayah S, 2020).

Population and sample

The population in this study was a combination of shares portfolio of non-financial companies listed in the LQ-45 stock index during the period 2015 - 2019, namely as many as 23 companies that were subsequently sought by companies that met the criteria (Purposive sampling) which eventually found 7 companies that met the criteria, then combined into 120 sample research variables.

Data collection method

The Data collection method is done by the documentation data collection method. In this analysis, secondary data is the type of data used in this research. The secondary data can be interpreted as data that already exists and does not need to be collected by researchers themselves. The secondary data used in this research were obtained from the Indonesia Stock Exchange's official website, namely www.idx.co.id to find out the stock data of companies shares listed in the LQ45 index, and www.bi.go.id to find out the risk-free interest rate.

$$\boldsymbol{E(R_p) = a_p - Q_p \,.\, E(R_m)}$$

Description:

α_p = Alpha Portfolio

β_p = Beta Portfolio

$E(R_m)$ = Expected Return Market

Independent Variable

Systematic Risk

Systematic risk is a risk caused by factors of macroeconomic changes. These risks can be measured by betas β. Portfolio systematic risk measurement is as follows (Hartono, 2015:336) :

$$\boldsymbol{Systematic\ Risk}$$

Description:

β_p^2 = Beta portfolio

σ_m^2 = Market return variants

Unsystematic Risk

Unsystematic risk is a risk caused by factors that occur within the company itself. This risk can be measured by the variant symbolized by σ_{ei}^2 . The portfolio's unsystematic risk measurement is as follows (Hartono, 2015:414):

$$\textbf{Unsystematic Risk}$$

Description:

W_i = Percentage allocation of funds for each share

σ_{ei} = Variance of stocks

Data analysis technique

In this research, the data analysis technique was carried out with descriptive statistics, classical assumption tests (test of normality, multicollinearity test, heteroscedasticity test, and test of autocorrelation), determination coefficient test (R square), and also analysis of multiple linear regression over the SPSS software with the formula:

$$= a + \mathrm{Q}_1\boldsymbol{X_1} + \mathrm{Q}_2\boldsymbol{X_2} + \boldsymbol{e}$$

Notes:
Y = Expected Return
α = Constant
X_1 = Systematic Risk
X_2 = Unsystematic Risk

RESULT AND DISCUSSION

Analysis of Descriptive Statistical

Descriptive statistical analysis is carried out to provide a summary or explanation or description of related data to find out the value of minimum, the value of maximum, the value of mean, and standard deviation. The variables described are expected return of portfolio Optimal as dependent variables, while systematic risk and unsystematic risk as independent variables. The results of the descriptive analysis in this study are shown in the following table:

Tabel 4.1 Result of Descriptive Statistics

Variable	N	Minimum	Maximum	Mean	Std. Deviation
ERP	120	.006586	.012345	.00989063	.001172552
Systematic Risk	120	.000329	.003241	.00124364	.000684455
Unsystematic Risk	120	.000004	.000289	.00002819	.000042541

Source: Secondary data processed (2020)

Based on table 4.1, it can be interpreted the variables in this research, the dependent variables (expected return of portfolio) from 120 sample combinations of the stock portfolio located between 0.006586 (minimum value) up to 0.012345 (maximum value), with a value of average (mean) is 0.00989063 and a standard deviation of 0.000042541. Then, Independent variables, namely systematic risk from 120 to a combination of stock portfolios located between 0.000329 (minimum value) to 0.003241 (maximum value), with an average (mean) of 0.00124364 and a standard deviation of 0.000684455. Meanwhile, the unsystematic risk from 120 to a combination of stock portfolios lies between 0.000004 (minimum value) to 0.000289 (maximum value), with a value of average (mean) of 0.00002819 and a standard deviation of 0.000042541.

Results of the Classical Assumption Test

The Classical Assumption Test is a prerequisite for the formation of both simple and multiple linear regression models. Linear regression model to test the research hypothesis. In this research, the classical assumption test was carried out on data that had been transformed so that

the number of samples in this research became 119. A series of classical assumption tests were as follows:

Normality Test

The aim of the normality test is to determine whether or not the distribution of data in a data group, disruptive variables, or residuals in the regression model is normally distributed. A model of regression with a normal distribution or near to a normal distribution is a good model of regression. To ensure whether or not the data is normally distributed, the following criteria are used, if the value of Asymp. Sig (2-tailed) .> α (0.05) then the research variable is declared normal (Ghozali, 2018:161). In this research, the Kolmogrov-Smirnov test was used for normality testing.

Table 4.2 Result of Normality Test

		Unstandardized Residual
N		119
Normal Parameters[a,b]	Mean	0E-7
	Std. Deviation	.00720345
Most Extreme Differences	Absolute	.103
	Positive	.103
	Negative	-.083
Kolmogorov-Smirnov Z		1.123
Asymp. Sig. (2-tailed)		.161

Source: Secondary data processed (2020)

Based on the table of the Kolmogrov-Smirnov test above, it is known that the Asymp. Sig (2-tailed) value is 0.161 where it is greater than the probability set at 0.05. Thus, it can be concluded that residual distribution is normal.

Multicollinearity Test

Multi-collinearity tests were performed to see whether in the model of regression there was a correlation between the independent variables (Nazariah & Mutia, 2020). To test multicollinearity can be proven from if the value of VIF does not exceed 10, then the model of regression is free from multicollinearity. And if the value of tolerance is greater than 0.10, then the model of regression is free from multicollinearity.

Table 4.3 Result of Multicolinierity Test

Variable	Collinearity Statistics	
	Tolerance	VIF

(Constant)		
Systematic Risk	.349	2.863
Unsystematic Risk	.349	2.863

Source: Secondary data processed (2020)

Based on the result of the multicollinearity test above can be interpreted that the tolerance value for both systematic risk variables and unsystematic risk is 0.349 > 0.10 and the VIF value for both independent variables is 2.863 < 10 which means independent variables in the regression model do not experience multicollinearity. Thus the regression model qualifies in multicollinearity tests.

Heteroscedasticity Test

The purpose of the heteroscedasticity test is to decide if there is variance inequality in the model of regression between residual observations (Chatarine et al., 2016). In this study, heteroscedasticity testing was conducted with The Park Test. The results of the Park Test are shown in table 4.4 below:

Table 4.4 Result of Heteroscedacity Test

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-12.199	.577		-21.142	.000
	Systematic Risk	53.062	44.778	.184	1.185	.238
	Unsystematic Risk	-42.148	142.017	-.046	-.297	.767

Source: Secondary data processed (2020)

Based on the Park Test results in the table above, it can be shown that the variable significance value (X_1) is 0.238 and the variable (X_2) is 0.767. This means that the model of regression does not have heteroscedasticity because the value of significant is greater than 0.05.

Autocorrelation Test

The autocorrelation test is used to assess whether or not there are the deviation from classical assumption of autocorrelation, i.e. correlation between the residuals in the observation and other observations on the regression model (Wijayani and Hermuningsih, 2020). To detect autocorrelation can use the Durbin Watson value.

Table 4.5 Result of Autocorrelation Test

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.737[a]	.543	.535	.007265279	1.782

Source: Secondary data processed (2020)

Based on the autocorrelation test result, it is shown that with a significance level of 0.05, the sample is 119 (n), the amount of independent variables is 2 (k = 2), and the degrees of freedom are 116 (nk-1), then dw is located between du and 4-du. The du table is 1.7323, so 4-du is 2.2677 and the result is 1.7323 <1.782 <2.2677. Thus, the regression model is good because the value of Durbin Watson is located between du and 4-du so that autocorrelation does not occur.

Analysis of Multiple Linear Regression

Table 4.6 Result of Multiple Linear Regression

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.042	.002		23.633	.000
	Systematic Risk	-1.283	.139	-.997	-9.210	.000
	Unsystematic Risk	1.384	.442	.333	3.132	.002

Source: Secondary data processed (2020)

Based on table 4.6, the factors that affect the expected return of the optimal portfolio can be formulated, namely:

$$\boldsymbol{Y = 0.042 - 1.283\, X_1 + 1.384\, X_2 + e}$$

The result of the analysis of multiple regression indicates that the constant (a) of 0.042 is positive, indicating that if it is assumed that the variable risk is systematic and unsystematic risk is zero or none, then the expected return will still exist. The coefficient on the systematic risk (X_1) variable is -1,283 indicating that if there is an increase in the systematic risk of one unit, it will decrease the expected return of shares by 1,283 units. The coefficient on Unsystematic Risk (X_2) is 1.384 indicating that if there is an increase in unsystematic risk by one unit, it will increase the expected return of shares by 1.384 units.

Determinant Coefficient Test

The following is a table of the determination coefficient from the results of data testing:

Table 4.7 Result of Determination Coefficient

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson

1	.737[a]	.543	.535	.007265279	1.782

Source: Secondary data processed (2020)

It can be shown from table 4.7 that the Adjusted R square value is 0.535. This implies that only 53.5% of the expected return can be affected by systematic risk and unsystematic risk. While the remaining 46.5% is affected by another factor that are not tested in the regression equation.
The Goodness of Fit Test

Table 4.8 Result of F Test

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.010	2	.004	68.845	.000[b]
	Residual	.006	116	.000		
	Total	.013	118			

Source: Secondary data processed (2020)

The results showed that simultaneously systematic risk and unsystematic risk have a significant impact on the dependent variable namely the expected return of portfolio. It can be proven in the table above the result ANOVA calculation at F count 68.845> F table 3.07 and the significance value of the F test of 0.000, which means that the significance value of the F test is below 0.05 (F test 0.000 <sig F 0.05). These results indicate that both the systematic risk and the unsystematic risk simultaneously affect the expected return of the portfolio. This means that the third hypothesis which states simultaneously systematic risk and unsystematic risk has an effect on the expected portfolio return is accepted.

Hypothesis Test (t-test)

The systematic risk variable has a significant 0.000 which is smaller than the probability value of 0.05. Thus systematic risk has a negative impact on expected return. This can be seen in the table that Systematic risk has a t value of -9.210.

The unsystematic risk variable has a significant 0.002 which is smaller than the probability value of 0.05 and has a t-count value of 3.132, this means that Unsystematic risk has a significant positive relationship to the expected return.

DISCUSSION

The Effect of Systematic Risk on Portfolio Expected Return of Portfolio

The results of this research show that systematic risk has a negative impact on the optimal portfolio expected return. This is based on the calculation of the t-test and the coefficient value, the test states that the systematic significance value of risk is 0.000 which is smaller than the value of probability (0.05) with a value of t count (-) 9.210 > t table 1.98063. Based on this analysis, the first hypothesis which states that partially systematic risk has a significant and positive impact on the expected return of portfolio is rejected. Systematic risk in this study has a significant negative effect. It can be interpreted that the lower the level of expected return, the

higher systematic risk. Based on the results of this research, it provides a meaningful view for investors in investing, where the systematic risk of portfolio stocks can be used as a guide for analysts in analyzing stocks.

The results of this research are different from the research carried out by Lestari & Sagoro (2016), Effendi (2018), and Evirrio et al. (2018) which stated that the risk systematic positively affects the expected return of portfolio. However, this study is in accordance with the research conducted by Fajri and Wahyu (2014) which states that systematic risk has a negative effect on the company's stock expected return.

The Effect of Unsystematic Risk on Expected Return of Portfolio

The results showed that unsystematic risk has a positive and significant impact on the expected return of the portfolio, it can be proven from the t count value of 3.132> t table 1.98063 with a t-test significance value of 0.000 which is smaller than the probability value of 0.05. Unsystematic risk in this study is positive, which means that there is a positive impact between unsystematic risk and expected portfolio return, meaning that the greater the unsystematic risk, the greater the expected portfolio return. Unsystematic risk can be eliminated by forming a stock portfolio. This is evidenced by the variance value as an unsystematic measure of risk for each stock before the formation of a portfolio is greater than after the formation of a portfolio.

Based on this analysis, it can be concluded that the second hypothesis which states that there is a significant influence between unsystematic risk on expected portfolio return is accepted. These results support the research conducted by Paramitasari (2014), Fajri and Wahyu (2014), and Effendi et al. (2017) which states that unsystematic risk has a significant positive effect on stock returns.

The Simultaneous Effect of Systematic Risk and Unsystematic Risk on Expected Return of Portfolio

The results showed that systematic risk and unsystematic risk influence the expected return on the portfolio simultaneously. It can be seen in the table, the F count is 67,866> F table is 3.97 and the value of significance in the F test is 0.000. These results indicate that the systematic risk and the unsystematic risk simultaneously have an impact on the expected portfolio return. From the results of this study, it can be concluded that the third hypothesis is accepted.

The results of this research support the result of research conducted by Evirrio et al. (2018), Misfiyati (2018), Fajri & Wahyu (2014), dan Effendi et al. (2017) which states that systematic risk and unsystematic risk simultaneously have a significant impact on stock expected returns.

CONCLUSION AND IMPLICATION

Conclusion

This research was conducted to see whether the systematic risk and the unsystematic risk can affect the expected return of the optimal portfolio in companies listed in the LQ45 index for the 2015-2019 period. From the test results discussed in the previous part, it can be concluded as follows: (1) The systematic risk has a significant and negative effect on the portfolio's expected return of the company listed in the LQ45 index in the period 2015-2019. (2) The unsystematic risk has a significant and positive effect on the portfolio's expected return of the company listed in the LQ45 index in the period 2015-2019.(3) The systematic and unsystematic risk simultaneously has a significant and positive effect on the portfolio's expected return of the company listed in the LQ45 index in the period 2015-2019.

Implication

The results of this research imply that the movement of expected returns is affected by systematic and unsystematic risk. For investors, in this research show that the systematic risk and the non-systematic risk have an R square of 53.5%, which means that these variables have an influence that determines the size of the expected return on company shares and can be used as consideration for investors in their investment activities to go according to plan. Because of the systematic risks and the unsystematic risks of the shares of companies incorporated in LQ 45 in an estimated period can be estimated, then the expectation of future returns can also be estimated, making it easier for analysts to choose the stocks to be bought. In investing prospective the investors need to conduct an in-depth analysis of what may occur, namely systematic risks and un systematic risks. Systematic risks need to be considered by taking into account beta stocks, while the unsystematic risk is carried out by taking into account the residual variants of the shares concerned.

Research Limitation

This research has several limitations including the following: (1) This research only used samples from non-financial companies listed in the LQ45 stock index for the 2015-2019 period. Therefore, differences in sectors and research periods will result in differences in the results of calculating returns and risks for both individual and portfolio stocks (2) This research only examines systematic and unsystematic risk factors so that other factors that affect the optimal portfolio expected return are not examined. (3) The method of sample selection used in this research was purposive sampling. The advantage of this method is that researchers can select the right sample, so that the researcher will obtain data that meets the criteria to be tested. But it is necessary to realize that this purposive sampling method results in a lack of generalization ability from the results of this research.

Suggestion

From the conclusions that have been obtained from the results of this research, several suggestions can be given as follows: (1) For investors who will determine the investment in the form of shares should consider risk factors both from outside and from the company because the risk affects the return to be received. (2) For investors who will determine the investment should choose a portfolio because it will maximize the return to be received while minimizing the risk of the portfolio. (3) For further research, with this research it is hoped that further researchers can conduct further research related to company stock returns. By increasing the research period, changing the object of research to a certain sector or index, changing the proxies used. In addition, further researchers should be able to add research variables that expand the observation so that the research results have a broader generalization.

REFERENCES

Al Qaisi, D. F., Tahtamouni, D. A., & Al-qudah, D. M. (2016). Factors Affecting the Market Stock Price - The Case of the Insurance Companies Listed in Amman Stock Exchange. *International Journal of Business and Social Science*, *7*(10), 81–90.

Alena, E., Achsani, N. A., & Andati, T. (2017). Dampak Guncangan Variabel Makroekonomi terhadap Beta Indeks Sektoral di BEI. *Jurnal Aplikasi Bisnis Dan Manajemen (JABM)*, *3*(3), 384–397.

Alifiani, M. A. (2017). Analisis Return dan Risk atas Investasi Saham pada Perusahaan Otomotif dan Komponen Go Publik di Bursa Efek Indonesia Periode 2014-2016. *Jurnal Studi Manajemen Bisnis*, *1*(1).

Badan Koordinasi Penanaman Modal (BKPM). (2019). *SIARAN PERS: Lampaui Target, Realisasi Investasi Tahun 2019 Tembus 800 Triliun*. https://www.bkpm.go.id/

Bank Indonesia. (2015-2019). *Suku Bunga*. Retrieved November 7, 2020, from https://www.bi.go.id/

Bursa Efek Indonesia. (2015-2019). *Perusahaan Tercatat*. Indonesian Stock Exchange. Retrieved November 7, 2020, from https://www.idx.co.id/perusahaan-tercatat/laporan-keuangan-dan-tahunan/

Chatarine, A., Wiagustini, L. P., & Artini, L. G. S. (2016). Pengaruh Risiko Kredit Dan Risiko Nilai Tukar Terhadap Profitabilitas Dan Return Saham Perbankan Di Bei Alvita. *E-Jurnal Ekonomi Dan Bisnis Universitas Udayana 5.11 (2016): 3683-3712 PENGARUH*, *5*(11), 3683–3712.

Darwanis, D. S., & Andina, A. (2013). Pengaruh Risiko Sistematis Terhadap Pengungkapan Corporate Social Responsibility Serta Dampaknya Terhadap Pertumbuhan Laba Dan Koefisien Respon Laba (Studi Pada Perusahaan Manufaktur Yang Terdaftar Di Bursa Efek Indonesia). *Jurnal Telaah Dan Riset Akuntansi*, *6*(1), 64–92.

Effendi, M., Hidayat, & Muninghar. (2017). Analisis Risiko Sistematis Dan Risiko Tidak Sistematis Terhadap Expected Return Daham Dalam Pembentukan Portofolio Optimal Indeks Saham LQ45. *Jurnal Manajerial Bisnis*, *1*(2), 178–193.

Evirrio, S., Azizah, D. F., & Nurlaily, F. (2018). Pengaruh Risiko Sistematis Dan Risiko Tidak Sistematis Terhadap Expected Return Portofolio Optimal (Studi Pada Perusahaan Yang Terdaftar Di Jakarta Islamic Index Tahun 2013-2017). *Jurnal Administrasi Bisnis (JAB)*, *61*(4), 210–216.

Fahmi, I. (2018). *Manajemen Risiko - Teori, Kasus, dan Solusi* (7th Edition).

Fajri, A., & Wahyu, N. C. (2014). Pengaruh Risiko Sistematis dan Resiko Tidak Sistematis Terhadap Expected Return Saham Perusahaan Manufaktur di BEI Jakarta dengan Pendekatan Koreksi

Beta. *Prosiding Seminar Nasional UMP.*, 263–268.

Ghozali, I. (2018). *Aplikasi Analisis Multivariative dengan IBM SPSS 25*. Universitas Diponegoro.

Giharta, A. S., & Sedana, B. I. P. (2017). Pembentukan Portofolio Optimal Pada Saham-Saham Perusahaan Sub-Sektor Konstruksi Bangunan Di Bursa Efek Indonesia (Pendekatan Markowitz). *E-Jurnal Manajemen Unud*, *6*(9), 4716–4743.

Hartono, J. (2015). *Teori Portofolio dan Analisis Investasi* (Edisi Sepu). BPFE.

Khairi Inayah S, A. (2020). Pengaruh Inflasi , Suku Bunga dan Nilai Tukar Rupiah terhadap Neraca Pembayaran (Studi Kasus : Negara-negara Tetangga di ASEAN). *PROSEDING SEMINAR NASIONAL AKUNTANSI*, *3*(1), 78–94.

Koluku, R. F., Pangemanan, S., & Tuumewu, F. (2015). Analysis of Market Risk, Financial Leverage, and Firm Size Toward Stock Return on Non-Banking Companies Listed in Lq45 Index of Idx. *Jurnal Riset Ekonomi, Manajemen, Bisnis Dan Akuntansi (EMBA)*, *3*(2), 528–536.

Lestari, F. T., & Sagoro, E. M. (2016). Pengaruh risiko sistematis dan risiko tidak sistematis terhadap expected return portofolio optimal. *Jurnal Profita: Kajian Ilmu Akuntansi*, *4*(2).

Liu, T., & Huang, X. (2018). Research on Stock Market Volatility. *International Journal of Business and Social Science*, *9*(6), 133–139. https://doi.org/10.30845/ijbss.v9n6a16

Mardhiyah, A. (2017). Peranan Analisis Return Dan Risiko Dalam Investasi. *Jurnal Ekonomi Dan Bisnis Islam*, *2*(1), 1–17. https://doi.org/10.32505/jebis.v2i1.120

Misfiyati, A. L. (2018). Pengaruh Risiko Sistematis Dan Risiko Tidak Sistematis Terhadap Expected Return Portofolio Optimal (Pada Perusahaan yang Terdaftar Di Jakarta Islamic Index Periode 2014-2018). *Prosiding 2nd Business and Economics Conference In Utilizing of Modern Techonolgy ISSN 2662-9404*, 15–30.

Nazariah, & Mutia, I. (2020). Pengaruh Risiko Investasi Terhadap Returnsaham Pada Perusahaan Manufaktur Sektor Aneka Industri Tekstil Dan Garmen Yang Tercatat Di Bursaefek Indonesia Tahun 2013-2017. *Jurnal Real Riset*, *2*(1), 44–52.

Ni Putu, N. H., & Wirama, D. G. (2016). Analisis Perbedaan Return Portofolio Berdasarkan Model Indeks Tunggal Dan Portofolio Random. *E-Jurnal Ekonomi Dan Bisnis Universitas Udayana*, *5*.

Novianggie, V., & Asandimitra, N. (2019). The Influence of Behavioral Bias, Cognitive Bias, and Emotional Bias on Investment Decision for College Students with Financial Literacy as the Moderating Variable. *International Journal of Academic Research in Accounting, Finance and Management Sciences*, *9*(2), 92–107. https://doi.org/10.6007/IJARAFMS/v9-i2/6044

Paramitasari, R. (2014). Expected Return Saham Dalam Rangka Pembentukan Portofolio Saham Lq-45 Yang Terdaftar Di Bursa Efek Indonesia dengan Single Index Model Periode Tahun 2009. *Jurnal Organisasi dan Manajemen*, *10*(1), 78–83.

Paramitasari, R. (2015). Analisis Portofolio Untuk Menentukan Expected Return Optimal dan Risiko Minimal pada Saham Perusahaan Telekomunikasi yang Terdaftar di Bursa Efek Indonesia. *Jurnal Manajemen dan Organisasi*, *VI*(1), 19–33.

Pramuki, N. M. W. A., Subroto, B., & Subekti, I. (2016). Do investors become risk takers after receiving MLA and accounting information? *Journal of Economics, Business & Accountancy Ventura*, *19*(2), 283–292. https://doi.org/10.14414/jebav.v19i2.464

Rui, K. X., Rasiah, D., Yen, Y. Y., Ramasamy, S., & Pillay, S. D. (2018). An Analysis of the Relationship between Risk and Expected Return in Malaysia Stock Market: Test of the CAPM. *International Journal of Scientific and Technology Research*, *9*(3), 6850–6859.

Samsul, M. (2015). *Pasar Modal dan Manajemen Portofolio*. Erlangga.

Suriyani, N. K., & Sudiartha, G. M. (2018). Pengaruh Tingkat Suku Bunga, Inflasi Dan Nilai Tukar

Terhadap Return Saham Di Bursa Efek Indonesia. *E-Jurnal Manajemen Universitas Udayana*, *7*(6), 3172. https://doi.org/10.24843/EJMUNUD.2018.v07.i06.p12

Syahrin, R. A., & Darmawan, A. (2018). Pengaruh Risiko Inflasi, Risiko Suku Bunga, Risiko Valuta Asing, Risiko Pasar Terhadap Return Saham. *Jurnal Administrasi Bisnis (JAB)*, *61*(1), 10–19.

Tandiontong, M., & Rusdin. (2015). Komparasi Capital Asset Pricing Model Versus Arbitrage Pricing Theory Model atas Volatilitas Return Saham. *Jurnal Keuangan Dan Perbankan*.

Wahyuni, N. C. T., & Darmayanti, N. P. A. (2019). Pembentukan Portofolio Optimal Berdasarkan Model Indeks Tunggal Pada Saham Indeks IDX30 di BEI. *E-Jurnal Manajemen Universitas Udayana*, *8*(6), 3814.

Wijayani, H., & Hermuningsih, S. (2020). Pengaruh Risiko Investasi Terhadap Return Saham Dengan Ukuran Bank Sebagai Variabel Moderating (Studi Pada Bank Yang Terdaftar Di Bursa Efek Indonesia Tahun 2013 – 2017). *SEGMEN Jurnal Manajemen Dan Bisnis*, *16*(1), 23–34.

Yuniarti. (2016). The Urgency for Regional Integration in Accordance To Investment Risk Management. *Indonesian Journal of International Law*, *14*(1), 45–59. https://doi.org/10.17304/ijil.vol14.1.676