

The Effect of Systematic Risk, Return on Equity, and Market Sentiment on Stock Return in Banking Companies Listed on the Indonesian Stock Exchange in 2019-2021

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ABSTRACT

This study aims to determine the effect of systematic risk, return on equity, and market sentiment on stock returns in banking companies listed on the IDX in 2019-2021. The population in this study were 45 companies or all companies listed during 2019-2021, while the sample was 11 companies with a sampling method using purposive sampling. Data collection techniques using documentation study techniques by collecting financial data from financial reports on the official website of the Indonesia Stock Exchange, namely www.idx.co.id while data analysis tools use multiple linear regression with SPSS tools. It is known that the variables of systematic risk, ROE, and market sentiment have a positive and significant effect on stock returns.

Keywords: *Systematic risk, Return on Equity, Sentiment Market, Stock Return.*

1. INTRODUCTION

The capital market is one of the economic instruments that plays an important role in the development of the financial sector in Indonesia. One of the instruments that are in great demand by investors in the capital market is shares. Shares are proof of ownership of a company that gives rights to a share of the company's profits to shareholders. Therefore, stock returns are one of the main focuses in assessing stock performance by investors. Banking companies listed on the Indonesia Stock Exchange (IDX) are one of the sectors that are quite attractive to investors because they are vital in the economy and have relatively stable volatility.

The banking sector, as one of the fundamental pillars of the global financial system, has faced unique challenges in this dynamic economic landscape. Global banking institutions are experiencing pressure on net interest margins due to the persistent low-interest rate environment, while also having to adapt to the post-2008 financial crisis regulatory evolution (Brei et al., 2020). The digitization of financial services and proliferation of financial technology have catalyzed the transformation of traditional banks' business models, consequently affecting financial performance and investor perceptions. The volatility of banking stock returns reflects not only the fundamental performance of companies, but also fluctuations in market sentiment and investor expectations of the sector.

In ideal conditions, the stock returns of banking companies are expected to be able to provide attractive returns for investors. The return should be influenced by various factors, both internal and external. Some internal factors that are often studied include Return on Equity (ROE) and systematic risk. Systematic risk is a fundamental factor that affects stock returns, as explained in the Capital Asset Pricing Model (CAPM). This theory states that the expected return of an asset is directly proportional to its systematic risk or market beta (Sharpe, 1964). In the context of this research, systematic risk is proxied by stock beta, which measures the sensitivity of stock returns to overall market movements (Bali et al., 2022). A higher beta indicates greater systematic risk, which theoretically should be compensated by higher returns (Zaremba et al., 2020). This concept is based on the premise that rational investors will demand higher compensation for bearing greater risk, especially risk that cannot be eliminated through diversification (Asness et al., 2020).

On the other hand, Return on Equity (ROE) is a financial ratio that shows how efficient the company is in generating profits from each unit of equity invested by shareholders. The higher the ROE, the better the company's performance and the stronger the company's position. If ROE

increases, it means that the company is able to generate high profits and grow the company by using money from shareholders efficiently. Obtaining high profits can increase the company's share price so that it can increase the stock return received by shareholders (Brigham & Houston, 2014).

In addition to internal company factors, the market is also influenced by external factors such as market sentiment. Market sentiment reflects investors' perceptions and expectations of overall capital market conditions. Positive sentiment can encourage an increase in stock prices and stock returns, while negative sentiment can trigger a decrease in stock prices. Research from Baker and Wurgler (2006) shows that market sentiment has a significant influence on various aspects of the capital market, including stock returns.

In reality, these ideal conditions often do not match the facts on the ground. In Indonesia, although the banking sector has performed well, uncertainties in macroeconomic conditions, regulatory changes, and fluctuations in global financial markets can affect the volatility of banking stock returns.

Related to this, research on the influence of systematic risk, ROE, and market sentiment on stock returns in banking companies listed on the IDX is very relevant and important. Thus, systematic risk, ROE and market sentiment are important components that financial backers need to consider in determining the most extreme stock returns and consequently, the relationship between appropriate systematic risk and stock returns should be perceived. In terms of the greater the gamble borne, the greater the return that must be compensated. Previous research conducted by (Nofitasari and Adi 2021) stated that systematic risk, ROE and Market System affect stock returns. This study uses the latest proxies from Baker and Wurgler (2006) which consist of closed-end fund discount, IPO number, IPO first-day return, equity issues and dividend premium along with the consumer confidence index to analyze the correlation between the above variables as investor sentiment towards stock returns using company characteristics in the form of firm size, book to market ratio, leverage, ROE and ROA as control variables (Anusakumar et al., 2017; Husna & Satria, 2019).

2. LITERATURE REVIEW

2.1 Stock Return

Stock Return according to (Jogiyanto, 2015), Return is the result obtained from investment. Returns can be in the form of realized returns that have occurred or expected returns that have not occurred but which are expected to occur in the future. Realized return is a return that has occurred. Realized return is calculated using historical data. This important realized return or historical return is also useful as a basis for determining the expected return and future risk. Expected return is the return that investors expect to get in the future.

In this study, return is used as the dependent variable and the return taken into account is that derived from capital gains without taking into account the dividend yield. Because basically the dividends distributed are smaller in value than capital gains so that they are not too influential if they are not taken into account, investors prefer capital gains (Susilowati et al., 2018). Mathematically and according to the book written by Brigham & Houston (2011), the calculation of stock returns can be formulated as follows:

$$\text{Stock Return} = \frac{P_t - P_{(t-1)}}{P_{(t-1)}}$$

2.2 Systematic Risk

Systematic risk is a risk that cannot be eliminated by diversification, because fluctuations in this risk are influenced by macro factors that can affect the market as a whole. This risk is caused by factors that simultaneously affect stock prices in the capital market, such as changes in economic conditions, political climate, tax regulations, government policies. Examples of systematic risks are sharp increases in inflation, rising interest rates, and economic cycles. Systematic risk is risk that is directly related to movements in the market or economy as a whole (Jones, 2014). According to (Jones, 2014) no matter how well investors diversify risk, systematic risk is still inevitable. Systematic risk is also called market risk, where this risk occurs due to external factors such as interest rates, recession, inflation, and several other factors. Although systematic risk cannot be avoided, it can be assessed and estimated. Stock beta can be measured by:

$$\beta_i = \frac{\text{Covarian}(R_i, R_m)}{\text{Varian}(R_m)}$$

2.3 Return on Equity

Return On Equity (ROE) is the ratio between net profit after tax and total equity. Return On Equity is a measurement of the income available to the owners of the company (both common shareholders and preferred shareholders) on the capital they invest in the company (Harahap, 2009). Return On Equity is a ratio used to measure the ability of own capital to generate profits for all shareholders, both common and preferred shares (Wijaya & Suarjaya, 2017).

Return on equity (ROE) ROE is a ratio that explains the company is able to earn profits with the capital obtained from investors who invest in the company. ROE can be calculated with the following formula:

$$ROE = \frac{\text{net profit after interest and tax} \times 100\%}{\text{Total Equity}}$$

2.4 Market Sentiment

Market sentiment is defined as the collective perceptions and expectations of market participants towards economic conditions, industry sectors, or the performance of certain companies, which then influence their investment decisions (Goldstein & Yang, 2020). In the context of the stock market, market sentiment is an important indicator that can affect stock prices and trading volumes and describe the movement of stock returns. Miller (1977) states that market sentiment not only reflects available information, but also the psychology of market participants triggered by economic news or political events. Therefore, understanding market sentiment is essential for investors to make the right investment decisions.

Market sentiment has a key function in helping to predict stock price movements. This function is related to the ability of market sentiment to reflect the collective view of market participants towards an asset or the market as a whole. Brown and Cliff (2005) suggest that positive market sentiment tends to be followed by an increase in stock prices and stock returns, while negative sentiment can lead to a decrease in stock prices. Therefore, market sentiment analysis can provide useful signals for investors in planning their investment strategies. In addition, sentiment analysis in the stock market can also help portfolio managers better manage investment risk. Market sentiment is calculated by:

$$TVA = \frac{\text{Number of shares } i \text{ traded at time } t}{\text{Number of shares } i \text{ outstanding at time } t}$$

3. METHODS

This research was conducted on banking companies listed on the Indonesia Stock Exchange which have published annual financial reports by accessing the official website of the Indonesia Stock Exchange www.idx.co.id. Data collection in this study was carried out using documentation study techniques, this study as a whole uses secondary data obtained from financial report documents and summaries of listed companies that have been publicly published on the official website of the Indonesia Stock Exchange, namely www.idx.co.id and processed into systematic risk, ROE, market sentiment, and stock returns. The population in this study are all banking companies listed on the Indonesia Stock Exchange for the 2019-2021 period, totaling 45 companies.

The sampling method used in this study is purposive sampling method, namely sample selection based on certain criteria. The criteria that the authors consider in this study include: (1) Companies listed in banking companies consistently during and listed on the Indonesia Stock Exchange during the 2019-2021 period. (2) Banking companies that publish financial reports in Rupiah during the 2019-2021 period. Based on these criteria, 11 companies were obtained, which were used as research samples, which were financial statement data from these 11 role companies that met the criteria and could be used as samples in research during the 2019-2021 period.

3.1 Data Analysis Techniques

The data analysis methods used in this study include the classic assumption test which consists of normality test, multicollinearity test, heteroscedasticity test and autocorrelation test. The regression equation in this study is:

$$Y = a + b_1 x_1 + b_2 x_2 + b_3 x_3 + e$$

Research hypothesis testing is carried out by analyzing the coefficient of determination and statistical t-test to determine whether each independent variable affects the dependent variable.

4. RESULTS AND DISCUSSION

4.1 Normality Test

Figure 1 shows the normality test results that the lines spread out in the direction of the diagonal line. So, this normality test is worth using.

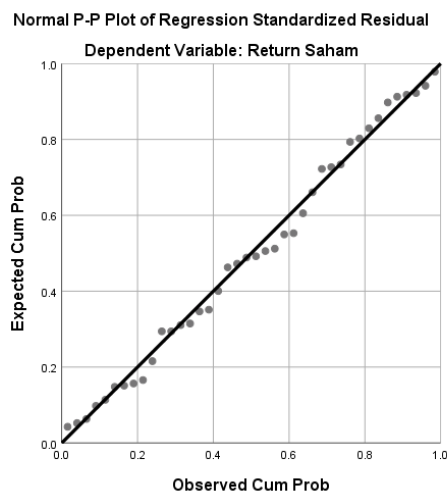


Figure 1. P-Plot Normality Testing
Source: Data processed (2024)

Based on figure 1, it can be seen that the results of the P-Plot Normality Test imply that the regression model meets the assumption of normality.

4.2 Multicollinearity Test

Table 1. Multicollinearity Test Results

Coefficients ^a			
Type		Collinearity Statistics	
		Tolerance	VIF
1	(Constant)		
	Systematic Risk	.929	1.076
	ROE	.929	1.076
	Market Sentiment	.989	1.011

a. Dependent Variable: Stock Return

Source: Data processed (2024)

Based on Table 1, it shows that the tolerance value of the Systematic Risk variable is 0.929, the ROE variable is 0.929 and the Market Sentiment is 0.989. For the VIF value of the Systematic Risk variable worth 1.076, ROE worth 1.076 and Market Sentiment worth 1.011. This shows that all independent variables have a tolerance value greater than 0.10 and a VIF value less than 10.00, so there are no symptoms of multicollinearity.

4.3 Heteroskedasticity Test

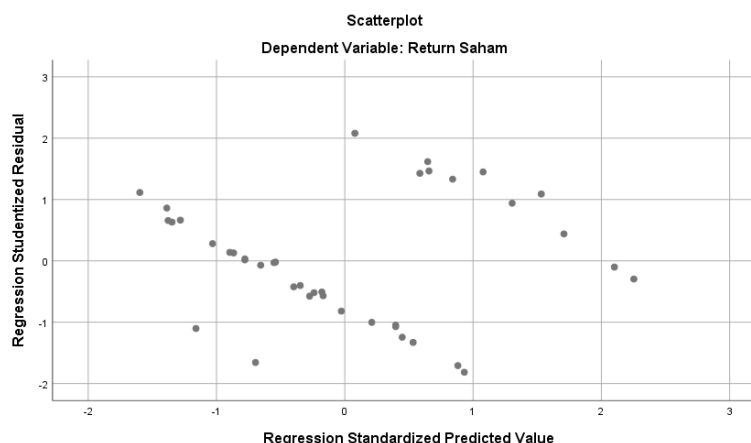


Figure 2. Scatterpot Chart
Source: Processed Data, 2024

Figure 2, shows that the points on the graph spread above zero and below zero on the Y axis. It can be concluded that there is no heteroscedasticity in the regression model.

4.4 Multiple Linear Regression Analysis

Tabel 2. Coefficient

Coefficientsa						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Mr.
		B	Std. Error	Beta		
1	(Constant)	4.301	.566		.589	.560
	Systematic Risk	4.172	.167	.364	3.116	.004
	ROE	9.554	.332	.403	3.451	.001
	Market Sentiment	3.361	.655	.571	5.041	.000

a. Dependent Variable: Stock Return

Source: Data Processed, 2024

$$Y = 4.301 + 4.172 X_1 + 9.554 X_2 + 3.361 X_3 + e$$

From the multiple linear regression equation above, it can be interpreted as follows:

1. The regression coefficient for a constant value of 4,301 which means that if the effect of Systematic Risk, ROE and Market Sentiment is equal to 0, the Stock Return will be 4,301.
2. The regression coefficient for the Systematic Risk level variable is 4.172, which means that if the Systematic Risk value increases by 1 with a record of other variables remaining constant, the Stock Return will decrease by 4.172. The positive value here means that Systematic Risk has a positive relationship and the significance value of Systematic Risk of 0.004 is greater than the Alpha value (0.05). Thus, it can be concluded that the Systematic Risk variable has a positive relationship and has a significant effect on Stock Returns.
3. Regression coefficient for ROE variable is 9.554, it means that if the value of Capital Structure increases by 1 with a record of other variables fixed, the value of ROE will decrease by 9.554. The positive value here means that ROE has a positive relationship and the significance value of Stock Return is 0.001 greater than the Alpha value (0.05). Thus, it can be concluded that the ROE variable has a positive relationship and has a significant effect on Stock Returns.
4. The Regression Coefficient for the Market Sentiment variable is 3.361, which means that if the Stock Return increases by 1 with a record of other variables remaining constant, the Stock Return

will decrease by 3.361. The positive value here means that Stock Returns have a positive relationship and the significance value of Stock Returns of 0.000 is smaller than the Alpha value (0.05). Thus, it can be concluded that the Stock Return variable has a positive relationship and has a significant effect on Stock Returns.

4.5 Hypothesis Esting

4.5.1 Simultaneous Test (f test)

Table 3. Anonymous

ANOVA						
Model		Sum of Squares	df	Mean Square	F	Mr.
1	Regression	6.570	3	.523	14.248	.000b
	Residual	4.400	36	.067		
	Total	.970	39			
a. Dependent Variable: Stock Return						
b. Predictors: (Constant), Market Sentiment, ROE, Systematic Risk						

Source: Processed Data (2024)

To test the effect of independent variables on the dependent variable together or simultaneously, it is done with the F test. The table above shows that the f-count value is 14.248 with an f-table of 0.00 with a significance level ($0.000 < 0.05$), it can be concluded that Market Sentiment, ROE, Systematic Risk together have an effect on Stock Returns.

4.5.2 Partial Test (t)

Table 4. Partial Test Result (t)

Coefficientsa					
Model		Unstandardized Coefficients		Standardized Coefficients	t
		B	Std. Error	Beta	
1	(Constant)	4.301	.566		.589
	Systematic Risk	4.172	.167	.364	3.116
	ROE	9.554	.332	.403	3.451
	Market Sentiment	3.361	.655	.571	5.041
a. Dependent Variable: Return Saham					

Source: Processed Data (2024)

1. The t-count value for the Systematic Risk variable obtained a t-count of $3.116 > t\text{-table } 1.683$ and a significant level greater than 0.05, namely 0.004 so it can be concluded that H1 is accepted, meaning that Systematic Risk has a positive and significant effect on Stock Returns. This proves that the high or low stock return is influenced by the company's systematic risk value. the higher the beta value of a security, the more sensitive the security is to market changes, so that stock returns will also fluctuate following market returns because beta functions as a measure of fluctuations in stock returns against market returns.
2. The t-count value for the ROE variable obtained a t-count of $3.451 > t\text{-table } 1.683$ with a significant level greater than 0.05, namely 0.001 so it can be concluded that H2 is accepted, meaning that ROE has a positive and significant effect on Stock Returns. The results of this study are supported by research conducted by Alviara (2021), Devi & Artini (2019) and Almira & Wiagustini (2020) which show the results that ROE has a positive and significant effect on stock returns. The higher the ROE value, the higher the profit level, so the higher the stock price which has an impact on stock returns. This is due to the nature and pattern of investment made by the company so that all assets can be used efficiently so that the profit earned is maximized.
3. The t-count value for the Market Sentiment variable obtained a t-count of 5.041 with a significant level smaller than 0.05, which is 0.000 so it can be concluded that H3 is accepted, meaning that market sentiment has a significant effect on stock returns. The results of his research show that investor sentiment at that time has a significant influence on the company's stock returns,

regardless of the level of competition. From the results and discussion, it is known that in some sectors, investor sentiment has a positive or unidirectional and significant effect on stock returns. These results are also in accordance with the results of previous research related to the effect of investor sentiment on stock returns conducted by Yang, Ryu (2017).

4.5.3 Multiple Correlation Coefficient (R) and Determination Coefficient (R²)

Table 5. Multiple Correlation Coefficient (R) and Determination Coefficient (R²)

Model Summary ^b					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.737 ^a	.543	.505	729204.00490	.967
a. Predictors: (Constant), Market Sentiment, ROE, Systematic Risk					
b. Dependent Variable: Stock Return					

Source: Processed Data (2024)

Based on Table 5, the result of the coefficient of determination test, the Udjested R2 value is 0.543 or equal to 54.3%. This means that the Systematic Risk, ROE, Market Sentiment variables affect Stock Returns by 54.3%. The Adjusted R2 value is 0.543. And the remaining 45.7% can be explained by other variables.

5. CONCLUSION

Based on the results of data analysis and discussion described in the previous chapter to determine the effect of Systematic Risk, ROE and Market Sentiment on stock returns in banking companies listed on the Indonesia Stock Exchange for the 2019-2021 period, the following conclusions can be drawn.

1. Systematic Risk has a positive and significant effect on stock returns in banking companies listed on the Indonesia Stock Exchange for the 2019-2021 period. This means that the more Systematic Risk increases, the more Stock Returns will increase.
2. ROE has a positive and significant effect on stock returns in banking companies listed on the Indonesia Stock Exchange for the 2019-2021 period. This means that the more ROE increases, the stock return will increase. This happens because companies that have a high ROE already have a high share value or price so that the increase in stock returns is not so great because investors consider the share price to be too high.
3. Sentiment has a positive effect on stock returns in banking companies listed on the Indonesia Stock Exchange for the 2019-2021 period. This can be interpreted that the more market sentiment increases, the stock return will increase.

REFERENCES

- Alviara, T. (2021). *Analysis of the Effect of Return on Asset, Return on Equity, and Net Profit Margin on Stock Return in Manufacturing Companies Listed on the IDX*. The Influence of Price, Product Quality and Promotion on Purchase Decisions at PT Sirkah Purbantara Utama, 10, 1–18.
- Anusakumar, S. V., Ali, R., & Wooi, H. C. (2017). THE EFFECT OF INVESTOR SENTIMENT ON STOCK RETURNS: INSIGHT FROM EMERGING ASIAN MARKETS. *Asian Academy of Management Journal of Accounting & Finance*, 13(1).
- Bali, T. G., Brown, S. J., & Tang, Y. (2020). Is economic uncertainty priced in the cross-section of stock returns? *Journal of Financial Economics*, 136(1), 56-75.
- Baker, M., & Wurgler, J. (2004). A catering theory of dividends. *The Journal of finance*, 59(3), 1125-1165.
- Barberis, N., Shleifer, A., & Vishny, R. (1998). A model of investor sentiment. *Journal of financial economics*, 49(3), 307-343.
- Brigham, E. F., & Houston, J. F. (2014). *Fundamentals of Financial Management*. Volume 1. Jakarta: Selemba four.
- Charles P. Jones. 2014. *Investment Principles and Concepts*. Twelfth Edition. Singapura: John Wiley and Sons Singapore Pte. Ltd
- Chen, L., Novy-Marx, R. and Zhang, L. (2011), *AniAlternative Three-Factor Model*, Working Paper, Washington University in St. Louis, Washington.

- Devi, N. N. S. J. P., & Artini, L. G. S. (2019). The Effect of ROE, DER, PER, and Exchange Rate on Stock Returns. *E-Journal of Management of Udayana University*, 8(7), 4183.
- Dowling, M., & Lucey, B. M. (2005). Weather, biorhythms, beliefs and stock returns—some preliminary Irish evidence. *International Review of Financial Analysis*, 14(3), 337-355.
- Fahmi, Irham. 2013. Introduction to Capital Market. Bandung: Alfabeta.
- Harahap, Sofyan Syafri. 2009. Critical Analysis of Financial Statements. Jakarta. King Grafindo Persada.
- Hartono, J. (2011). Portfolio Theory and Investment Analysis. Yogyakarta: BPFE
- Husna, A., & Satria, I. (2019). Effects of return on asset, debt to asset ratio, current ratio, firm size, and dividend payout ratio on firm value. *International Journal of Economics and Financial Issues*, 9(5), 50-54.
- Jogiyanto, H.M.2015. Portfolio theory and investment analysis. Yogyakarta: BPFE.
- Nofitasari, F. K., & Adi, S. W. (2021, December). The effect of systematic risk, leverage, company size, profitability and liquidity on stock returns. In *Proceedings of the National Seminar & Call for Paper STIE AAS* (Vol. 4, No. 1, pp. 369-379).
- Sharpe, W. F. (1964). Capital asset prices: A theory of market equilibrium under conditions of risk. *The Journal of Finance*, 19(3), 425-442.
- Sudana, I. M., (2015), *Corporate Financial Management*, Jakarta: Erlangga
- Wehantouw, J. D., Tommy, P., & Tampenawas, J. L. (2017). The Effect of Capital Structure, Company Size, and Profitability on Stock Prices in Food and Beverage Sector Industrial Companies Listed on the Indonesia Stock Exchange for the 2012-2015 Period. *EMBA Journal: Journal of Research in Economics, Management, Business and Accounting*, 5(3).
- Wijaya, I. G. O., & Suarjaya, A. A. G. (2017). *The Influence of EVA, ROE and DPR on the Stock Price of Manufacturing Companies on the IDX* (Doctoral dissertation, Udayana University).
- Yang, H., Ryu, D., & Ryu, D. (2017). Investor sentiment, asset returns and firm characteristics: Evidence from the Korean stock market. *Investment Analysts Journal*, 46(2), 132–147.
- Zaremba, A., Kizys, R., & Raza, M. W. (2020). The long-run performance of initial public offerings (IPOs): The case of Poland. *Economic Research-Ekonomska Istraživanja*, 33(1), 1108-1129.