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The Effect of Macroeconomic Variables on Stock Returns of The Jakarta Islamic Index: A Panel Vector Error Correction Model Approach

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Abstract

Introduction: This study was conducted because there were differences in stock return trends in JII during 2016-2018, where stock return movements simultaneously decreased, but different conditions occurred in 2019-2022, where trend returns experienced different conditions between companies. This was caused by the domino effect of the Covid-19 Pandemic, which resulted in changes in Indonesia's BI Rate and Inflation. Thus, this study aims to analyze the long and short-term effects of BI Rate and Inflation on changes in the return of company shares in JII. **Research Methods:** This study uses the Panel Vector Error Correction Model (VECM) method, secondary data in the form of a Panel of Stock Return of 4 companies, BI Rate and Inflation during 2016-2022. **Results:** The long and short-term results in the previous two and three-quarters of the BI Rate were significantly positive for stock returns. While in the long and short term, inflation was significantly negative for stock returns. **Conclusion:** The research found that the BI Rate does not always negatively affect return. When the BI Rate increases, it gives investors confidence that the value of their investment is protected from depreciation. This can create a positive environment for the stock market so that it has an impact on rising stock prices.

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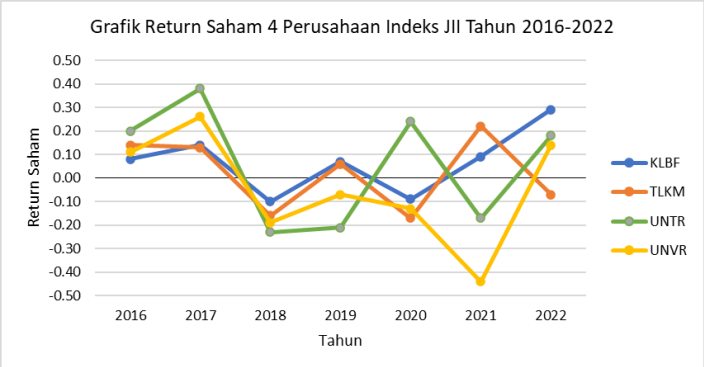
INTRODUCTION

The capital market is an indicator of the progress of a country's economy which is currently growing very rapidly. Nowadays, the development of the capital market in Indonesia has developed by issuing an Islamic stock index (Ariyanto & Pramono, 2022). The Jakarta Islamic Index (JII) was launched on July 3, 2000 in the capital market and became the first sharia-based stock index (Sutowo, Soemitra, & Daulay, 2022).

The constituents of the Jakarta Islamic Index consist of only 30 of the most liquid Islamic stock issuers listed on the Indonesia Stock Exchange (IDX). This was followed by the DSN-MUI fatwa in 2003 at number 40 which explains the capital market and general guidelines for the application of sharia principles in the capital market. In 2015 through the Financial Services Authority (OJK) regulation No. 15/POJK.04/2015 regarding the application of sharia principles in the capital market, in this case the OJK converted sharia principles to the capital market in Indonesia, so that it became more binding and had legal certainty (Exchange, 2019).

Investors, of course, in making investments have several goals, one of which is to get a return on the type of shares invested. Return is the return / result that will be obtained by investment activities, which itself is divided into two types, namely in the form of dividends and capital gains (Septiana & Wahyuati, 2016). Investors who want long-term benefits will certainly choose dividends, so they are not too concerned about fluctuations in the shares used as investments. However, on the other hand, investors who want to get profits in the short term, of course, capital gains will be chosen by these investors, namely by looking at the difference between the selling price and the purchase price of shares by always seeing and following the fluctuation movements that occur in the capital market (Septiana & Wahyuati, 2016). This research will focus on the level of development of stock returns based on the value of capital gains received by an investor.

Figure 1. 4 Company Stock Return Chart of JII Index 2016-2022



Source: https://idxislamic.idx.co.id (data processed)

Based on Figure 1, it can be seen that the 4 most consistent companies listed in the JII over the past 10 years show that the level of stock returns since 2016 continues to experience quite fluctuating movements until 2022. In 2018 the four companies experienced a decrease in the level of stock returns. This happened along with the decline in the company's share

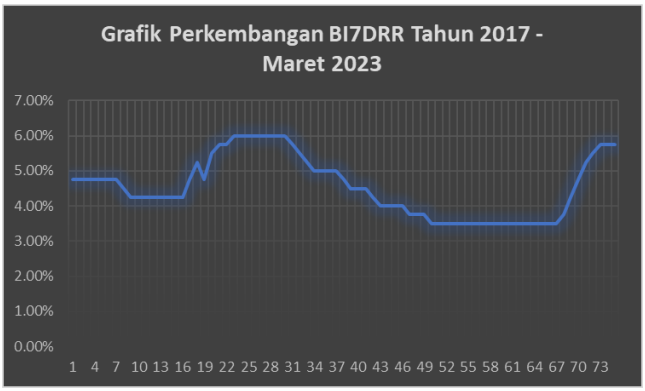
price because in 2018 there was a decline in the JCI of 2.54% because the Indonesian stock market was galvanized by trade issues between China and America. However, these conditions in 2019 continued to grow.

In 2020, the Covid-19 pandemic had a domino effect on the performance of companies in Indonesia. It can be seen in the graph that the return level has decreased, but the opposite condition occurred in the engineering and manufacturing industry sector company, namely United Tractor Tbk. where its stock return has increased significantly. The domino effect condition continues to be responded to by the four companies where in 2021-2022 the return condition of the pharmaceutical company, namely Kalbe Farma Tbk. continues to increase. Meanwhile, in 2021 the company United Tractor Tbk. and the primary consumer goods sector, namely Unilever Indonesia Tbk. experienced a decline due to people's purchasing power which experienced a significant decline, but again experienced an increase in 2022 along with the increase in people's purchasing power.

Based on this graph, it indicates that many factors affect the movement of a company's stock return. The increase and/or decrease in stock returns is caused by various influencing factors, one of which is the macroeconomic conditions of a country. Macroeconomics is a science which studies thoroughly the behavior of the economy. In macroeconomic conditions, it emphasizes behavior and policies that can affect conditions such as consumption and investment behavior (Suryantini & Wahyuni, 2018). The scope of the macroeconomics used in this study is the BI Rate (interest rate) and the Inflation rate.

BI Rate is a benchmark interest rate policy issued by Bank Indonesia which is used to maintain harmony between the volatility of operational interest rates and the achievement of inflation targets (Tumundo & Dkk, 2020). For an investor in choosing the type of investment, interest rates are also one of the things that influence. Where the movement of the benchmark interest rate can affect deposit and credit interest rates in the community. If the deposit interest rate is high, then investors will tend to invest their capital in the form of deposits, this is felt by investors because it produces a large return.

Figure 2. BI Rate Development Chart January 2017-March 2023



Source: https://www.bi.go.id/ (data processed)

Based on Figure 2, it can be seen that the level of the BI Rate from November 2018 to June 2019 was at its highest position during the last six years. This happened along with the global economic conditions that grew sluggish and unbalanced, and accompanied by the uncertainty of global financial markets that remained high. Then the conditions continued to decline and were quite stable until July 2022, and again experienced a significant increase until March 2023. Of course, these conditions have an impact on economic development in Indonesia.

Research conducted by Ayman al-Shebab in Oman, states that interest rates have a positive influence on MSX30 stock returns (Al-Shehab, 2023). Similarly, Peter's research says that interest rates (BI Rate) have a significant positive effect on stock returns (Silalahi, 2022). So, when there is an increase in BI7DRR, it will be followed by an increase in stock returns on companies in Indonesia. However, different conditions exist in the results of research conducted by Suliyani and Benarda, resulting in interest rates (BI Rate) having no significant effect on stock returns (Suliyani & Benarda, 2023).

The macroeconomic factor that also influences the development of stock returns is the inflation rate of a country. A high inflation rate together with a comprehensive decline in the value of the currency causes various industries to experience shocks, a decreased level of productivity which is caused by an increase in prices which makes a decrease in the level of profit earned (Candy & Winardy, 2019). The decrease in profit will have an impact on the company's share price, because the value of dividends that will be received by investors will also decrease.

Figure 3. Indonesia Inflation Rate Chart 2013-2022

Source: https://www.bi.go.id/ (data processed)

Based on Figure 3, it is known that the inflation rate in Indonesia (yoy) has decreased significantly from 2014 to 2020. Then in 2021 to 2022, it began to increase again. This certainly has an effect on the sustainability of the economy of both the country and the company. Abdul Jabar in his research said that the inflation rate has a negative and significant effect on stock returns (Jabar, 2020). This condition indicates that when there is an increase in inflation, it will reduce the level of stock returns obtained by investors, due to a decrease in stock prices. However, different conditions are shown by Saputri and Wijaya in their research which says that inflation has no significant effect on stocks (Saputri & Wijaya, 2018).

In the conditions of an uncertain economy and always running dynamically, often changes among economic variables influence each other. As according to Anari in a study conducted by Yeni et al. who said that there is a dynamic relationship between interest rates (BI Rate) and Inflation. Through the Fisher effect explains that there is a relationship between inflation and BI Rate where causality runs from inflation to BI Rate. While the effect of Wicksell is a negative relationship between BI Rate and Inflation where causality runs from BI Rate to Inflation (Yeni, Amar, & Satrianto, 2018). Furthermore, research conducted by Hazem states that there is a short-term relationship between Inflation and interest rates (Marashdeh, Ashraf, & Muhammad, 2020). Sulistiana and Hidayati's research also explains that the inflation variable has a causal relationship with interest rates (Sulistiana, Hidayati, & Sumar, 2017).

Based on the results of the review of previous research, it shows that there are still mixed results based on the research conducted. The various variables used include BI Rate, Inflation and Stock returns still allow new evidence if carried out in different conditions and company sectors. This study uses the Vector Error Correction Model (VECM) method which is expected to provide clarity on both long-term and short-term relationships between the variables studied using panel data.

RESEARCH METHOD

This study uses quantitative research methods which are research methods used to examine populations and samples (Sugiyono, 2018). The population in this study consisted of companies listed on the Jakarta Islamic Index (JII) during the 2016-2022 period totaling 52 companies. The sample determination was carried out using purposive sampling technique, which is a technique used to determine the number of samples through certain considerations (Sugiyono, 2018). Where it is determined by the criteria of companies that survive (listing) in the JII during 2016 to 2022 and companies that publish financial reports on their official website. The sample in this study was found to be 4 companies, which are Kalbe Farma Tbk.; Telekomunikasi Indonesia (Persero) Tbk.; United Tractors Tbk.; and Unilever Indonesia Tbk.

The data source in this study uses secondary data where company data is obtained from the OJK (www.ojk.go.id/id/) and IDX (www.idx.co.id/id/), BI Rate and Inflation Rate are obtained from the Bank Indonesia website (www.bi.go.id/id/), and stock return data is obtained from the closing price of each company on Yahoo Finance (www.finance.yahoo.com/). This study uses a type of panel data which is a combination of cross section and time series data. Cross section data in the form of four companies sampled, while the time series is in the form of the time frame studied, which is 7 years from 2016 to 2022.

The collected panel data is processed using the Vector Autoreggresion (VAR) approach where if there is cointegration, it is continued using the Vector Error Correction Model (VECM)

with the help of Eviews 9 software. With this approach, the results of the analysis of the long and short-term relationships of the variables used in the study can be known.

The general model that can be formed from the VECM estimation in this study is as follows:

$$X_{i,t} = \beta o_{i,t} + \sum_{i=1}^{p} a_1(i) BI\ Rate_{i,t-1} + \sum_{i=1}^{p} a_2(i) Inflasi_{i,t-1} + \sum_{i=1}^{p} a_5(i) Return_{i,t-1} + EC_{i,t-1} + \varepsilon_{,i,t}$$

X : Variables used in the study; $EC_{i,t-1}$: *Error Correction Term* (lag value of residuals obtained from cointegration regression of BI Rate, Inflation and Return variables); $\varepsilon_{,i,t}$: *Residuals*

RESULT AND DISCUSSION

Stationarity Test

The panel data, which consists of time series and cross section data, usually has a trend that makes the data nonstationary. When the data is left non-stationary, a spurious regression will occur which will mislead the estimation results. To overcome these results, the data to be used in research must first be stationary, so that it will provide a good estimate (Syamputri, Khairunnisa, & Nurfajariyati, 2021). The stationarity test is conducted using the Augmented Dickey-Fuller (ADF) procedure as illustrated in Table 1 as follows.

Table 1. Stationarity Test Results

Variable	*Probability ADF-Fisher Chi-square*	
	Level Difference	*First Difference*
Stock Return	0.0000	0.0000
BI Rate	0.6937	0.0017
Inflation	0.3011	0.0000

Source: data processed Eviews 9 (2024)

Based on Table 1 using a significance level of 5%, if the probability value is smaller than (0,05), it indicates that the variable is stationary. The results show that at the level difference the BI Rate and Inflation variables are more significant than (0,05), so they do not meet stationarity. To find out whether the three variables are stationary, further stationarity test is needed at the first difference level. It is known that the results at the first difference level show that the three variables have been stationary where they have a probability value of less than (0,05).

Optimum Lag Test

This test is needed to ensure that the estimated model is able to interpret the research model dynamically, efficiently and comprehensively. the use of a lag that is too long can make the model inefficient in its measurement. Vice versa, if the lag determination is too short, it can make the model unable to explain dynamically in its measurement (Faizin, 2021). The optimum lag test in this study was carried out by taking the lag level that had the smallest LR, FPE, AIC, SC and HQ values. The results of the optimum lag test are as follows.

Table 2. Optimum Lag Test Results

Lag	LogL	LR	FPE	AIC	SC	HQ
0	751.0249	NA	3.42e-11	-15.58385	-15.50372	-15.55146
1	789.0976	72.97266	1.87e-11	-16.18953	-15.86899	-16.05997
2	810.1769	39.08445	1.45e-11	-16.44119	**-15.88023***	**-16.21444***
3	821.0474	**19.47633***	**1.40e-11***	**-16.48015***	-15.67880	-16.15623

Source: data processed Eviews 9 (2024)

Based on Table 2, it shows that the lag that has the smallest value or marked with (*) is mostly found on lag (3), which is LR, FPE and AIC values. So it shows that there will be an optimal trade-off between one variable and another within a period of three periods. Later lag (3) can be used in the granger process to estimate the VECM Panel parameters.

Model Stability Test

The model stability test uses the Root of Characteristic Polynominal to determine whether the VAR / VECM estimation model developed is stable or not. If the modulus value of each root is less than one (1), then the model tested using a predetermined lag is considered stable (Pririzki, Sulitiana, & Adriyansyah, 2023). The results of model stability testing are obtained as follows.

Table 3. Model Stability Test Results

Root	Modulus
-0.205941 - 0.657468i	0.688967
-0.205941 + 0.657468i	0.688967
0.605080 - 0.329227i	0.688848
0.605080 + 0.329227i	0.688848
-0.583760 - 0.160506i	0.605424
-0.583760 + 0.160506i	0.605424
0.535506	0.535506
-0.025825 - 0.508206i	0.508862
-0.025825 + 0.508206i	0.508862

Source: data processed Eviews 9 (2024)

Based on Table 3, it is found that all modulus values are less than (1), so it can be said that the model used has been stable because it is in an ideal position.

Cointegration Test

The cointegration test helps identify long-term parameters or equilibrium for two or more variables. The purpose of this cointegration test is to determine whether the variables used in the study have a long-term equilibrium relationship between variables. The cointegration test used is the Johansen Cointegration Test where by looking at the probability value on the Rank Test Trace and Maximum Eigevalue. If the probability value of both is less

than 5%, then there is cointegration and further testing is required to use the VECM test. The results of the Johansen cointegration test are as follows.

Table 4. Johansen Cointegration Test Results

Hypothesized No. of CE(s)	*Trace Statistic*		*Maximum Eigenvalue Statistic*	
	0.05 Critical Value	*Prob.***	*0.05 Critical Value*	*Prob.***
None *	29.79707	0.0000	21.13162	0.0000
At most 1 *	15.49471	0.0000	14.26460	0.0000
At most 2 *	3.841466	0.0833	3.841466	0.0833

Source: data processed Eviews 9 (2024)

Based on Table 4, it is known that the probability Trace and Maximum Eigenvalue Statistic is less than 5%, so that the model has cointegration or long-term relationship between stock return, BI Rate and Inflation variables. These results indicate that further data processing is carried out using the Vector Error Corection Model (VECM) estimation.

Panel *Vector Error Correction Model* (VECM) Estimation

Based on the cointegration test, the three variables have cointegration, so they continue to use VECM estimation. In this study using panel data, the Panel Vector Error Correction Model is the VECM model used. Panel VECM estimation is a development of Vector Autoregressive (VAR) estimation, where VAR is a method developed by Sims in 1980. The use of Panel VECM estimation has advantages over individual VECM, which can analyze the effect of time and individuals and can model the relationship between individuals because the panel approach uses heterogeneity between individuals (Ekananda, 2015). The Panel VECM estimation results are presented as follows.

1) Long-Term Estimation

By using lag (3), the estimation results of the long-term relationship are as follows.

Table 5. Long-Term Estimation Results of Stock Return

Variables	Coefficient	S.D.	T-value
BI Rate	15.41526	(3.68023)	[4.18867]
Inflation	-28.35042	(3.23722)	[-8.75764]
C	0.033951		

Source: data processed Eviews 9 (2024)

Table 6. Results of Long-Term Estimation of Stock Returns of Each Company

Company	Variables	Coefficient	S.D.	T-value
KLBF	BI Rate	11.57618	(6.33644)	[1.82692]
	Inflation	-27.42931	(5.82884)	[-4.70579]
	C	0.027937		

TLKM	BI Rate	-4.828653	(2.09253)	[-2.30757]
	Inflation	11.22615	(2.03401)	[5.51923]
	C	-0.023681		
UNTR	BI Rate	19.21745	(9.92696)	[1.93589]
	Inflation	-30.96204	(9.12035)	[-3.39483]
	C	0.045568		
UNVR	BI Rate	4.740418	(1.97246)	[2.40330]
	Inflation	-15.09641	(1.73040)	[-8.72425]
	C	0.014101		

Source: data processed Eviews 9 (2024)

Based on Table 5 of the long-term VECM estimation results, variables can be said to have a significant long-term relationship or Ha is rejected if the t-value > t-table of 1,982. In the BI Rate variable with the coefficient (15,41526), the t-value (4,189) > t-table (1,982) is obtained so that Ha is rejected. In other words, when there is an increase in the BI Rate during the previous period, it significantly impacts the increase in stock returns by 15,42%. This can be seen in Table 6 where when there is an increase in the BI Rate, it will significantly increase the amount of stock returns of the Unilever Indonesia Tbk company (t-value> t-table of 2,052). The same thing is also seen in the companies Kalbe Farma Tbk. and United Tractor Tbk. although it does not significantly affect.

Meanwhile, in Table 5, the Inflation variable with a coefficient value (-28.35042) obtained a t-value (8,758) > t-table (1,982) so that Ha is rejected. In other words, when there is an increase in inflation during the previous period, it significantly affects the decline in stock returns by 28,35%. This can be seen in Table 6 where when there is an increase in inflation, it will significantly reduce the stock returns of the companies Kalbe Farma Tbk.; United Tractor Tbk.; and Unilever Indonesia Tbk.

2) Short-Term Estimation

By using lag (3), the estimation results of the short-term relationship are as follows.

Table 7. Short-Term Estimation Results of Stock Return

Variables	Coefficient	S.D.	T-value
BI Rate (-1)	-0.550769	(5.62732)	[-0.09787]
BI Rate (-2)	22.85016	(6.15698)	[3.71126]
BI Rate (-3)	17.55729	(5.60136)	[3.13447]
Inflation (-1)	-15.37878	(6.05731)	[-2.53888]
Inflation (-2)	-17.68888	(5.37979)	[-3.28802]
Inflation (-3)	-9.648523	(3.94115)	[-2.44815]
C	0.014305	(0.02070)	[0.69116]

Source: data processed Eviews 9 (2024)

Table 8. Results of Short-Term Estimation of Stock Returns of Each Company

Company	Variables	Coefficient	S.D.	T-value
KLBF	BI Rate (-1)	10.61873	(10.2612)	[1.03484]
	BI Rate (-2)	29.16241	(10.7696)	[2.70785]
	BI Rate (-3)	11.08029	(13.0059)	[0.85195]
	Inflation (-1)	-7.589618	(11.7643)	[-0.64514]
	Inflation (-2)	-13.79446	(9.80731)	[-1.40655]
	Inflation (-3)	-3.878916	(7.90515)	[-0.49068]
	C	0.009221	(0.03439)	[0.26817]
TLKM	BI Rate (-1)	-22.77831	(9.83785)	[-2.31537]
	BI Rate (-2)	0.210104	(10.8151)	[0.01943]
	BI Rate (-3)	-8.020871	(8.86187)	[-0.90510]
	Inflation (-1)	38.68883	(10.7342)	[3.60427]
	Inflation (-2)	24.30313	(10.6102)	[2.29054]
	Inflation (-3)	15.66980	(7.12365)	[2.19969]
	C	-0.083417	(0.03608)	[-2.31180]
UNTR	BI Rate (-1)	-3.288433	(16.0407)	[-0.20501]
	BI Rate (-2)	7.332525	(17.6725)	[0.41491]
	BI Rate (-3)	17.01903	(15.0831)	[1.12835]
	Inflation (-1)	-31.77951	(16.5934)	[-1.91519]
	Inflation (-2)	-17.74220	(16.5961)	[-1.06906]
	Inflation (-3)	-21.76670	(11.9338)	[-1.82395]
	C	0.025008	(0.05777)	[0.43288]
UNVR	BI Rate (-1)	6.559876	(12.2112)	[0.53720]
	BI Rate (-2)	14.33336	(11.5445)	[1.24157]
	BI Rate (-3)	15.39787	(10.8947)	[1.41333]
	Inflation (-1)	-24.11889	(12.7376)	[-1.89352]
	Inflation (-2)	-23.09713	(10.1759)	[-2.26978]
	Inflation (-3)	-13.25857	(7.51111)	[-1.76520]
	C	0.016828	(0.03942)	[0.42693]

Source: data processed Eviews 9 (2024)

Based on Table 7 short-term VECM estimation results, variables can be said to have a significant long-term relationship or H_0 is rejected if the t-value> t-table of 1,982. In the BI Rate (-1) variable, the t-value (0,098) < t-table (1,982) is obtained so that Ha is accepted. This means that when there is an increase in BI Rate one quarter earlier, it is not able to significantly affect changes in current stock returns. Meanwhile, the BI Rate (-2) and BI Rate (-3) variables each have a t-value of (3,711) and (3,134) > t-table (1,982) so that H_0 is rejected. Put another way, when there is an increase in the BI Rate two and three quarters earlier it is able to significantly affect the change in stock returns at this time. In Table 8, it can be seen that when there is an increase in the BI Rate in the previous

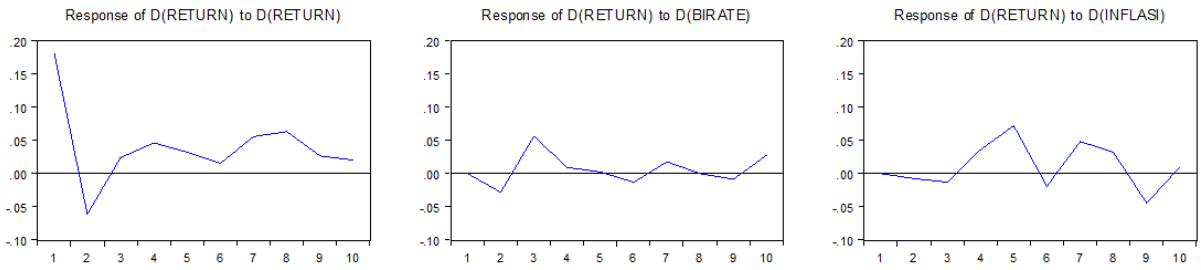
two and three quarters, stock returns on Kalbe Farma Tbk.; United Tractor Tbk.; and Unilever Indonesia Tbk. will increase even though not significantly.

Meanwhile, the t-value on the Inflation (-1) variable is (2,539), Inflation (-2) is (3,289) and Inflation (-3) is (2,448) > t-table (1,982) so that H_0 is rejected. Put another way, when there is an increase in inflation in the previous one to three quarters, it is able to significantly affect the current stock return. It can be seen in Table 8 that when inflation increases, in the short term it will affect the decline in stock returns of Kalbe Farma Tbk.; United Tractor Tbk.; and Unilever Indonesia Tbk. although not significantly. However, different conditions are seen in the company Telekomunikasi Indonesia Tbk. where significantly in the short-term Inflation has a positive effect on the company's stock return.

Impulse Response Functions (IRF)

Impulse Response Function (IRF) is a method used to see how long the shock from a variable in the study on other variables in one study. In this IRF analysis, we will know the positive response or negative response of a variable to other variables. If the impulse response moves closer to the equilibrium point (horizontal line) or returns to the previous equilibrium, it means that the response of a variable from other variable shocks will increasingly disappear so that the shock does not leave a permanent influence on the affected variable (Basuki, 2017). The Impulse Response Fuction (IRF) test results for ten periods are as follows.

Figure 4. IRF Chart of Stock Return Response



Source: data processed Eviews 9 (2024)

Based on Figure 4, it is known that the response of the Return variable to the stock return shock itself. The shocks are responded fluctuatively during the study period. In the first period, the return shock responded positively by 18%. However, in the second period, the shock responded negatively by 6,1%, and then in the third period it responded positively again until the tenth period. Meanwhile, the response of the Return variable to BI Rate shocks also responded slightly fluctuating. In the first period, the BI Rate shock has not been responded by the return, and it only began to respond negatively in the second period by 2,4%. Then in the third period the shock was responded positively by 5,6% by the return. During the study period, the response to BI Rate shocks appeared to be close to the equilibrium line. This means that the shock is not responded permanently or towards a stable condition.

In Figure 4, it can also be seen that the return response to inflation shocks is also slightly fluctuating. In the first period, the inflation shock has not been responded by the return, it just started to respond negatively in the second period by 0,7%. The negative response continued to be responded until the third period, and began to respond positively in the fourth period by 3,6%. Then experienced a negative response again in the sixth period of 1,9%. Until the tenth period, the return response to inflation shocks is still not seen in a stable condition.

Variance Decomposition

Variance Decomposition (VD) is a method used to understand how much each variable contributes to other variables. VD analysis is also used to analyze how much variable variance can be explained by the variable itself in addition to variations or changes in other variables (Lutkepohl, 2005). The results of the Variance Decomposition (VD) test for ten periods are as follows.

Table 9. Variance Decomposition of Stock Return

Period	S.E.	D(RETURN)	D(BIRATE)	D(INFLASI)
1	0.180636	100.0000	0.000000	0.000000
2	0.192999	97.71867	2.128725	0.152609
3	0.202792	89.89900	9.551458	0.549539
4	0.211197	87.65197	8.985309	3.362717
5	0.225425	78.96023	7.896339	13.14343
6	0.227169	78.19747	8.126097	13.67643
7	0.239475	75.78140	7.844942	16.37365
8	0.249702	76.10457	7.215473	16.67996
9	0.255220	73.94100	7.025940	19.03306
10	0.257669	73.14969	8.032733	18.81758

Source: data processed Eviews 9 (2024)

Based on the results of the Variance Decomposition in Table 9, it can be seen the contribution of each variable to the variance of the Stock Return variable. In the first period, the formation of Return is influenced by itself by 100%. In the second and third periods (short-term) the influence began to decrease to 97,7% and 89,9%. In the tenth period, the formation of the return is only influenced by itself by 73,1%. This indicates that in the long-term the effect of stock returns continues to decline.

The results in Table 9 also show the contribution of other variables to stock returns. In the second period (short-term) BI Rate and Inflation explain 2,13% and 0,15% of the formation of stock returns. This indicates that the BI Rate effect is more significant on the formation of returns. However, in the fifth period, Inflation began to have a higher effect than the BI Rate, which amounted to 13.14%. In the tenth period, BI Rate and Inflation explained the formation of returns by 8.03% and 18.82%. This indicates that in the long-term conditions the inflation variable is more significant in influencing the formation of stock returns.

The Effect of BI Rate on Stock Return

Based on the findings, in the long-term the BI Rate is positively and significantly able to affect the company's Stock Return in the Jakarta Islamic Index (JII) as evidenced by the t-value (4,189) greater than the t-table. The coefficient value in the long term is obtained at 15,415, so that when there is a 1% increase in the BI Rate, the stock return will increase significantly by 15,415%. The increase in the BI Rate in the primary consumer goods sector company, Unilever Indonesia Tbk. significantly increased the amount of its stock return. The same condition was also felt by the companies United Tractor Tbk. and Kalbe Farma Tbk. however, it did not significantly affect.

Meanwhile, in the short-term, the increase in BI Rate in the previous quarter, was able to reduce stock returns although not significantly. This condition supports the Keynesian theory that the demand for money is a rational action. Increased demand for money will raise interest rates. Investment in securities (bonds) when interest rates rise will result in capital gain losses, and will also have an impact on decreasing the company's stock return because the company's cost of capital will increase (Hidayat, Setyadi, & Azis, 2017).

However, the increase in BI Rate in the previous two and three quarters significantly increased stock returns. Thus, when there is an increase in the BI Rate, it will be followed by an increase in stock returns. This is illustrated in the company Kalbe Farma Tbk.; United Tractor Tbk.; and Unilever Indonesia Tbk. which when experiencing an increase, affects the amount of the company's stock return even though it is not significant. This finding is in line with research conducted by Petrus Pirhot which examines the effect of BI Rate on stock returns in LQ45 Index companies on the Indonesia Stock Exchange in 2017-2021 which shows that the development of BI Rate has a significant positive effect on stock returns in LQ45 index companies (Silalahi, 2022).

In general, an increase in the BI Rate will reduce the amount of stock return on a company, but there are several situations where an increase in the BI Rate can cause an increase in a company's stock return. This happens when the BI Rate increase is carried out by Bank Indonesia to control high inflation, so as to provide confidence to investors that the value of their investment will be protected from value depreciation. Of course, these results can create a positive environment for the stock market which has an impact on rising stock prices.

The Effect of Inflation on Stock Return

Based on the findings, in the long-term Inflation is negatively and significantly able to affect Stock Returns as evidenced by the t-value (8,758) > t-table. The coefficient value in the long term is obtained at (-28,35), so that when there is a 1% increase in inflation, it will decrease by 28,35% in the long-term stock returns in the Jakarta Islamic Index (JII) companies. Therefore, if the inflation rate increases, the company's share price in the Jakarta Islamic Index will decrease, this will certainly be followed by a decrease in the level of stock returns (Geriadi & Wiksuana, 2017). These conditions are illustrated in the company Kalbe Farma

TBk.; United Tractor Tbk.; and Unilever Indonesia Tbk. where in the long-term Inflation negatively significantly affects the amount of its stock return.

Meanwhile, in the short term, it is known that inflation significantly negatively affects the stock returns of companies in the Jakarta Islamic Index (JII). When there is an increase in inflation in the previous one to three quarters, it can reduce the amount of stock returns on companies in the JII. This condition is illustrated in the company Kalbe Farma TBk.; United Tractor Tbk.; and Unilever Indonesia Tbk. where the increase in inflation is able to reduce the amount of stock returns insignificantly in the short term.

The findings support research conducted by (Suliyani & Benarda, 2023); (Silalahi, 2022); (Jabar, 2020); and (Adnan & Iradianty, 2018) which show that the development of inflation variables is able to significantly and negatively affect the level of stock returns in a company. In the long-term, the inflation rate of a country also has a significant negative effect on the amount of stock returns of a company. When there is an increase in inflation, it can result in purchasing power where inflation reduces the purchasing power of money in buying goods and services. This can certainly reduce the real income earned from stock investment. In another case, high inflation can create economic and stock market uncertainty. High market volatility causes investors to be anxious and reduces overall stock prices.

CONCLUSION

Based on the findings, in the long term, BI Rate positively and significantly affects the amount of stock returns of JII companies. While in the short term, the BI Rate in the previous one quarter is negative and does not significantly affect stock returns. However, the previous two and three quarters are positively significant in affecting stock returns. Meanwhile, in the long term, Inflation is negatively and significantly able to affect stock returns. While in the short term, in the previous one to three quarters Inflation also negatively significantly affects the stock returns of companies in the Jakarta Islamic Index (JII).

Based on these findings, investor who invest both in the long and short term should be aware of the fluctuations in BI Rate and Inflation that greatly affect the development of stock returns in the long term. Investors should diversify their investments by dividing their funds into various investment instruments, such as stocks, bonds and other assets. With such diversification, the influence of BI Rate and Inflation can be offset by the potential growth of other investments. In another case, the government, in this case Bank Indonesia, needs to be able to maintain the stability of BI Rate and Inflation through targeted monetary and fiscal policies. With stable BI Rate and Inflation levels, it will provide certainty to investors and encourage long-term economic growth.

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