

THE EFFECT OF INTEREST RATES AND INFLATION ON STOCK PRICES IN BANKING COMPANY KBMI 4 LISTED ON THE INDONESIA STOCK EXCHANGE

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Abstract:

This research was conducted based on the inconsistency of previous research results regarding the phenomenon of stock price fluctuations due to changes in interest rates and inflation. This study aims to analyze and obtain empirical evidence related to the effect of interest rates and inflation on stock prices in the KBMI 4 category banking sub-sector companies listed on the Indonesia Stock Exchange (IDX) for the period 2019-2023. The study uses secondary time series data taken from the official websites of Bank Indonesia and the Indonesia Stock Exchange. The sampling technique used is saturation sampling or total sampling. The research sample is all banking companies included in the KBMI 4 category that are listed on the Indonesia Stock Exchange for the 2019-2023 period, with a total of 4 issuers. The data analysis technique used is multiple linear regression analysis, and the data is processed with the SPSS 25 data processing application. The test results show that simultaneously, there is a positive and significant influence of interest rates and inflation on stock prices. Partial testing found that interest rates have an insignificant effect on stock prices, while inflation has a positive and significant effect on stock prices.

Keywords: Interest Rate, Inflation and Stock Prices

INTRODUCTION

The capital market plays an essential role as one of the driving forces of a country's economy. Many developed nations place a high emphasis on the sustainability of the capital market due to its strategic role in strengthening and resilient economies. Of the many known investment instruments, stocks are arguably one of the most dominantly traded. Shares of companies officially listed on the stock exchange are classified into 12 industrial sectors. Of these 12 sectors, shares in the banking sub-sector are the most sought after by investors. Book 2 of the Financial Literacy Series for the Financial Services Authority (OJK) at the Higher Education Level (2016:26) explains that banks are financial institutions with a crucial role in driving economic activity in a country. To date, the banking industry in Indonesia remains the most influential in supporting financial system stability. The significant role of banks and their vast market share are the reasons why investors, both local and foreign, highly seek this sector.

Four banks in Indonesia are among the highest tier of banking companies listed on the Indonesia Stock Exchange (IDX). These banks fall into the KBMI 4 category and are the banks with the largest asset control, accounting for 49.94% of the total assets of the Indonesian banking industry, totaling Rp 5,742.33 trillion. These KBMI 4 banks represent a group of banks with sound fundamentals and are known as the banks with the largest market capitalization on the IDX. The banks included in this category are companies with the stock codes BBKA, BBNI, BBRI, and BMRI. Their large market capitalization and core capital make the stock price movements of these banks potentially act as either a driving force or a drag on the JCI's performance. The stock price movements of these KBMI 4 banking issuers follow each other closely.



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A company's stock price is closely linked to investors' perceptions of its ability to generate future profits (Murphy, 2022). Stock price fluctuations result from the bid and offer process conducted by investors and traders. Investors' buying and selling decisions, which shape trading activity on the stock exchange, are influenced by various indicators, the most well-known being fundamental and technical indicators. However, other factors can also influence a company's stock price, namely macroeconomic factors. According to Kewal (2012), macroeconomic factors can influence a company's performance. Positive macroeconomic growth will attract investors to invest and encourage companies to expand, and vice versa.

Interest rates and inflation are two of the many macroeconomic variables most frequently associated with capital markets and stock price fluctuations, particularly in the banking sector. According to Boediono (2014:76), interest rates are defined as the value of the utilization of investment funds (loanable funds), which is one of the factors determining whether an individual will invest or save their funds. The fluctuations in BI's benchmark interest rate serve as the basis for fluctuations in interest rates on banking products such as savings, loans, and time deposits. In 2019, interest rates tended to stagnate and remained unchanged. From January to June, the BI rate was 6.00%. In 2021-2022, BI gradually lowered the interest rate, from 5.00% in January 2020 to 3.50% in February 2021. Only from August to December 2022 did BI decide to gradually raise the interest rate, starting from 3.75% in August, 4.25%, and then to 5.75% in January 2023.

The RDG's decision to change interest rates is usually made to mitigate the potential impact of inflation. Inflation that is too high or too low indicates an unstable economy. Stock prices are often associated with the influence of inflation, which is one of the most significant macroeconomic factors (Gupta and Inglesi-Lotz in Antonakakis et al. 2017). The relationship between inflation and stock prices can be positive or negative, depending on the level of inflation itself (Samsul, 2006:201). From 2019 until the beginning of the first semester of 2022, inflation remained within the established target range of $3\pm 1\%$. Inflation began to rise significantly in July to 4.94%, a 2.76 percentage point increase compared to January's 2.18%. Inflation peaked at 5.95% in September, the highest inflation rate in September 2022 since October 2015, or the highest in the past eight years. Banking operations, as a pillar of the Indonesian financial industry and economy, make it a sector vulnerable to the risks of changes in interest rates and inflation.

Based on the phenomena described above and considering the inconsistencies in theories identified by previous researchers, the following research questions are formulated:

1. Do interest rates and inflation simultaneously affect the stock prices of KBMI 4 banking issuers listed on the Indonesia Stock Exchange (IDX)?
2. Do interest rates partially affect the stock prices of KBMI 4 banking issuers listed on the IDX?
3. Does inflation partially affect the stock prices of KBMI's 4 banking issuers listed on the IDX?

Signaling Theory. Spence (in Nursanita 2019:157) briefly states that information disclosure can provide a signal, indicating that the data owner (information) is attempting to transmit a piece of important information that will be processed by the data signal collector and utilized according to the recipient's understanding. Signaling theory has since developed and is often used to explain fluctuations in stock prices due to information disclosure between the information owner (company) and the recipient (investor) in the capital market, leading to changes in investment decisions.

Interest Rate. According to Kashmir in Harsono (2018:32), the interest rate refers to the amount of compensation or price offered to bank service users (those with deposits) and the price or value that service users (those with debts) must pay to the bank. As is appropriate, when a company sells a product, it must first determine the price of that product. Similarly, in the banking business, for

banks, the interest rate can be considered the selling price offered to customers for banking products, whether in the form of deposits or loans (Safii and Martono, 2022:213).

Inflation. Inflation, as defined by Suseno and Astiyah (2009:2), is defined as "a general and persistent tendency for prices of goods and services to rise." Furthermore, Mankiw (2009:80) defines inflation simply as an increase in average prices, where price refers to the amount of money that can be exchanged for goods and services (Heykal et al., 2024). Inflation can be problematic for the economy when its rate is uncontrolled and persists over a prolonged period, while the incomes of most people stagnate. The inflation rate is generally expressed as a percentage (%).

Stock Price. According to Ayu and Handoyo (2009:28), the price of a stock is the price listed on the physical form of the stock itself, which is the result of the supply and demand process carried out by both traders and investors on the stock exchange. The price agreed upon by the buyer and seller ultimately becomes the share price. Because stock trading transactions are conducted freely on the stock exchange, the price will fluctuate (Wijaya, 2021:5). In essence, stock prices are volatile; a company's share price can change every hour, minute, and even second.

The Effect of Interest Rates and Inflation on Stock Prices. According to research conducted by Buniarto (2019), the combined effect of interest rates, represented by the BI Rate, and inflation on stock prices is positive and significant. Hadistia and Nurlinda (2021) also found findings consistent with Buniarto's. H1: Interest rates and inflation simultaneously have a positive and significant effect on the stock price of the four KBMI 4 banking companies listed on the IDX.

The Effect of Interest Rates on Stock Prices. Research by Buniarto (2019) shows that the independent variable, the BI Rate, has a negative and significant correlation with stock prices. Consistent with these findings, research by Aristiya et al. (2022) also states the same thing. H2: Interest rates have a significant partial effect on the stock prices of the four KBMI 4 banking companies listed on the IDX.

The Effect of Inflation on Stock Prices. Research by Hadistia and Nurlinda (2021) found that inflation has a negative and significant correlation with stock prices, while research by Larasati (2021) found that inflation has a positive and significant effect on stock prices. H3: Inflation has a significant partial effect on the stock price of the four KBMI 4 banking companies listed on the IDX.

METHODS

The research was conducted scientifically by utilizing monthly data from related issuers through the Indonesia Stock Exchange (IDX) website and from the official Bank Indonesia (BI) website to obtain information on interest rates and inflation. This study took banking companies included in the Group of Banks with Core Capital (KBMI) 4 listed on the IDX from 2019 to 2023 as the population, with a total population of 4 companies. The sample was determined using a total sampling or census technique. The data sample amounted to 60 samples, which consisted of stock price data, the BI Rate, and monthly inflation. This study utilized both quantitative and qualitative data. Data sourced from the results of publications from other parties, which are secondary data. Data collection for the study was carried out using a literature study method, namely by reviewing and analyzing information related to the phenomenon to be solved. Multiple linear regression analysis, simultaneous and partial hypothesis testing are the testing instruments that will be used. The data processing process was carried out using SPSS 25.

RESULTS AND DISCUSSION

Table 1. Multiple Linear Regression Analysis



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Model	Coefficients ^a				
	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(constant)	8.115	.150		53.978	.000
1 LNX1	.173	.113	.180	1.527	.132
LNX2	.258	.056	.544	4.602	.000

a. Dependent Variable: LNY

Based on the test results presented in Table 1, the following regression model equation is formulated:

$$\text{LnY} = 8.115 + 0.173 X1 + 0.258 X2 + e$$

The use of natural logarithms aims to reduce excessive data fluctuations. The results of this formulated equation imply the direction and magnitude of the influence of the independent variables being tested on the dependent variable. Several pieces of information were obtained from the regression analysis above, including:

1. The constant value of 8.115 indicates that if the contribution of interest rates and inflation were assumed to be zero or constant, the stock price would be Rp 8,115.
2. The interest rate regression coefficient was found to be 0.173, indicating a unidirectional effect on stock prices. It means that a 1 percentage point increase in interest rates will increase the stock price by Rp 0.173, provided the other variables remain constant.
3. Inflation was found to have a regression coefficient of 0.258, indicating a unidirectional (positive) effect between inflation and stock prices. It means that stock prices will increase by Rp. 0.258 when inflation increases by 1 percentage point, provided the other variables remain constant.

Table 2. Simultaneous Test (F-Test)

		ANOVA ^a				
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1.131	2	.565	21.783	.000 ^b
	Residual	1.480	57	.026		
	Total	2.611	59			

a. Dependent Variable: LNY

b. Predictors: (Constant), LNX2, LNX1

Source: SPSS 25 Output (2024)

Table 2 displays the results of the simultaneous test, indicating that the F-table value is 3.159. Conversely, the calculated F-value is 21.783 with a significance level of 0.000. The calculated F-value falls within the rejection range for H0. Referring to the decision-making criteria, the calculated F-value is greater than the F-table value, and the significance level of 0.000 is less than 0.05. These results indicate the rejection of H0 and the acceptance of H1, indicating a positive and significant effect between interest rates and inflation on stock prices.

Partial Test (t-Test).

Table 3. Partial Test (t-Test)

		Coefficients ^a				
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Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(constant)	8.115	.150		53.978	.000
1 LNX1	.173	.113	.180	1.527	.132
LNX2	.258	.056	.544	4.602	.000

a. Dependent Variable: LNY

Source: SPSS 25 Output (2024)

Based on the results of the t-test for the independent variables presented in the table above, the following conclusions were made:

1. The calculated t-value for the interest rate is 1.527 with a significance level of 0.132. The t-value for the table is 2.002. This value falls within the acceptance range for H0. Based on the established criteria, the calculated t-value is <t-value, and the significance level is 0.132 > α 5%. This finding indicates that the interest rate has a partial insignificant effect on stock prices. H0 is accepted, and H2 is rejected.
2. The inflation variable has a calculated t-value of 4.602 with a significance level of 0.000. Conversely, the t-value for the table is 2.002. This value falls within the rejection range for H0. Referring to the applicable decision-making criteria, the calculated t value > t table and the significance level of 0.000 < α 5% explain that inflation has a positive and significant effect on stock prices. In conclusion, H0 is rejected, and H3 is accepted.

The Effect of Interest Rates and Inflation on Stock Prices. The findings obtained through the F-test indicate that interest rates, or the BI Rate, and inflation simultaneously have a positive and significant effect on stock prices in KBMI 4 banking companies during the 2019-2023 observation period. The reference used is the F-table, which is smaller than the calculated F-value, namely 21.783 > 3.159, with a significance level of 0.000 < α 5%. It indicates that when interest rates increase, as Bank Indonesia's response to address rising inflation, investors view this decision as a positive stimulus or catalyst that will increase stock prices.

The Effect of Interest Rates on Stock Prices. Referring to the t-test results, it was found that the interest rate variable, represented by the BI Rate, had a partial insignificant effect on the stock prices of banking companies in the KBMI 4 category for the 2019-2023 observation period. This conclusion is evident from the smaller calculated t-value compared to the t-table, with 1.527 < 2.002 and 0.132 > α at the 5% significance level. These results indicate that even if the BI Rate is announced to increase or decrease, stock prices do not experience significant changes due to the BI Rate movement.

The Effect of Inflation on Stock Prices. Referring to the partial t-test results, it was found that there is a positive and significant effect between inflation and stock prices of banking companies in KBMI category 4 for the observation period 2019-2023. This is evident from the calculated t-value of 4.602 > t-table of 2.002, and 0.000 < α at the 5% significance level. It aligns with Ellen May's (2015) opinion, which states that any slight increase in inflation will result in higher stock prices. Mild inflation is a positive sentiment for the economy. Mild and stable inflation tends to be a positive stimulus because it can drive economic activity in a positive direction by increasing public interest in spending and investor interest in investing.

CONCLUSION

Based on the findings obtained from the testing, the following conclusions can be drawn:



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1. Interest rates and inflation simultaneously have a positive and significant effect on stock prices in KBMI 4 banking companies listed on the Indonesia Stock Exchange (IDX) for the 2019-2023 observation period.
2. Interest rates have an insignificant effect on stock prices in the KBMI 4 banking companies listed on the IDX for the 2019-2023 observation period.
3. Inflation partially has a positive and significant effect on stock prices in the KBMI 4 banking sub-sector companies listed on the IDX for the 2019-2023 period.

Recommendations. Based on the data analysis and conclusions obtained, the researcher has several potentially useful suggestions, including:

1. For companies, one simulation that can be conducted to face the challenges of fluctuating interest rates and inflation is to create a matrix of Indonesia's economic growth in the next quarter and potential risks. It will allow companies to make the most appropriate decisions and mitigate risks.
2. For novice investors, if they wish to invest their capital in high-risk instruments such as stocks, they should pay attention to macroeconomic variables that can clearly influence stock prices, including the BI Rate and inflation.
3. For further development, it is recommended to include other economic factors that have the potential to influence stock prices, such as ROA, ROE, net foreign flow, NPL ratio or loan-to-deposit ratio (specifically for banking companies), dividend yield, and so on.

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