



## THE EFFECT OF INFLATION, INTEREST RATES AND EXCHANGE VALUE ON STOCK PRICES OF BANKING SECTOR COMPANIES ON THE INDONESIAN STOCK EXCHANGE

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### Abstract

The research aims to determine: (1) The effect of inflation on share prices in banking sector companies listed on the Indonesian Stock Exchange in 2020-2022. (2) The effect of interest rates on share prices in banking sector companies listed on the Indonesian Stock Exchange in 2020-2022. (3) The influence of the exchange rate on share prices of banking sector companies listed on the Indonesian Stock Exchange in 2020-2022. (4) The influence of inflation, interest rates and exchange rates on banking sector companies listed on the Indonesian Stock Exchange in 2020-2022. Descriptive quantitative type, the sample for this research is banking sector companies listed on the Indonesian Stock Exchange in 2020-2022. The sample selection used a purposive sampling method, totaling 45 companies. The data analysis technique uses multiple regression analysis. The results of the analysis can be concluded that (1) Inflation has no significant effect on the share prices of banking sector companies listed on the Indonesian Stock Exchange in 2020-2022. (2) Interest rates have a significant influence on banking sector companies listed on the Indonesian Stock Exchange in 2020-2022. (3) The exchange rate does not have a significant effect on the share prices of banking sector companies listed on the Indonesian Stock Exchange in 2020-2022. (4) Inflation, interest rates and exchange rates do not have a significant effect on share prices in banking sector companies listed on the Indonesian Stock Exchange in 2020-2022.

**Keywords:** *Inflation, Interest Rates, Exchange Rates, Stock Prices*

### 1. INTRODUCTION

The majority of Asia-Pacific exchanges performed less than encouraging throughout 2022, due to global conditions that were beyond market expectations and a lot of turmoil in 2022. Many countries experienced energy and food crises, inflation soared, the Fed tightened interest rates, and several countries even declared went bankrupt, affecting global economic conditions and several parts of the world are still grappling with the economic crisis due to the Covid-19 pandemic (Chandra, 2022). Only a few exchanges managed to record quite good performance in 2022, although not as good as in 2021.

Shares are proof of a person's participation in ownership of a company (Hidayat, 2019). Companies use shares as a source of capital to run their operations. Share prices in the capital market reflect investors' assessments of the company's future prospects and the quality of the issuer's management. The development of share prices in the capital market is an important indication in studying market behavior, namely investors (Murni, 2017). Share prices continue to change daily, monthly and annually, depending on existing supply and demand. The share price of a company is caused by several components such as microeconomic and macroeconomic components. Inflation, interest rates and exchange rates are macroeconomic factors that have the potential to influence the share price of a company (Hartono, 2017). Economic conditions and

financial markets have a relatively large influence on stock prices in the long term compared to other factors(Prastuti & Setianingrum, 2018).

According to Bank Indonesia, inflation is a general and continuous increase in the prices of goods and services over a certain period of time. High inflation conditions will increase the costs borne by the company. If the increase in costs is higher than the increase in the selling price set by the company, the company's profitability will decrease. Investors will be reluctant to invest their funds in the company so that share prices will decline and vice versa(Kurniawan & Yuniati, 2019).

The interest rate is the percentage of income received by the creditor from the debtor during a certain time interval(Mayasari, 2019). BIRate is an interest rate policy in Indonesia. High interest rates will encourage investors to place their capital in banks because of the hope of greater profits. If deposit interest rates continue to increase, there is a tendency for investors to move their funds to deposits rather than investing their capital in the capital market because of the lower risk factor and greater profits. This has a negative impact on share prices in the capital market because share prices will fall significantly(Vikaliana, 2017).

The currency exchange rate or what is often called the exchange rate is the price of domestic currency against foreign currency. When the rupiah exchange rate weakens, this shows that the foreign currency is strengthening. This indicates that economic conditions are not good, so investors are not interested in investing in shares because the profits they get will decrease. A decrease in demand for shares will reduce share prices and vice versa(Dwijayanti, 2021).

## 2. IMPLEMENTATION METHOD

This research was conducted on banking sector companies listed on the Indonesia Stock Exchange during the period 2020 to 2022.This type of research is quantitative descriptive and the data source in this research is taken from secondary data sources. The data sources in this research were taken through official websites such as Bank Indonesia (bi.go.id) and the Indonesian Stock Exchange (idx.co.id).

The sampling method in this research used purposive sampling, namely a technique for determining samples with certain considerations and criteria (Sugiyono, 2016). The sample in this study must meet the following criteria: (1) is a banking sector company listed on the Indonesia Stock Exchange throughout the 2020-2022 period. (2) Publish annual financial reports throughout the 2020-2022 period.

**Table 1**Research Sample Criteria

No	Information	Number of Samples
1	Banking sector companies listed on the IDX for the 2020-2022 period	45
2	Companies that do not publish annual financial reports for the 2020-2022 period	0
<b>Number of Research Samples</b>		<b>45</b>

This research uses an analytical model with multiple linear regression analysis. Multiple linear regression is based on the functional or causal relationship of more than one independent variable with one dependent variable (Sugiyono, 2016). As for the conditions that must be met to



carry out a multiple linear regression research model, the classical assumption test must be carried out and then a multiple linear regression test must be carried out, with hypothesis testing, namely simultaneous testing and partial testing.

### 3. RESULTS AND DISCUSSION

#### 3.1 Results

##### 3.1.1 Descriptive Statistics

**Table 2 Descriptive Statistics**

	N	Minimum	Maximum	Mean	Std. Deviation
Inflation	135	1.68	5.51	3.0200	1.76897
Interest rate	135	3.50	5.50	4,2500	.89307
Exchange rate	135	14105.00	15731.00	14701.6667	733.64374
Stock price	135	50.00	16000.00	1770.1852	2344.84049
Valid N (listwise)	135				

Based on table 2, the results of descriptive statistical tests can be seen in the inflation variable (X1) for the 2020-2022 period known for three years with valid N or processed data of 135. Mean inflation in the 2020-2022 period is 3.0200. The minimum value in the 2020-2022 period is 1.68, the maximum value is 5.51. The Standard Deviation value is 1.0230. Interest rate variable (X2) with valid N135. Mean of 4.2500. The minimum value is 3.50 while the maximum value is 5.50. The Standard Deviation value is 0.8930. Exchange rate variable (X3) with valid N135. The mean exchange rate is 14701.6667. The minimum value is 14105 while the maximum value is 15731. The Standard Deviation value is 733.64374. Share price variable (Y) with valid N 135. Mean share price is 1770.1852. The minimum value is 50 while the maximum value is 16000. The Standard Deviation value is 2344.84049.

##### 2.1.2 Classic Assumption Test

###### 1. Normality test

**Table 3 Normality Test Results  
One-Sample Kolmogorov-Smirnov Test**

		Unstandardized Residuals
N		135
Normal Parameters, b	Mean	.0000000
	Std. Deviation	.97546261
Most Extreme Differences	Absolute	,039
	Positive	,039
	Negative	-.028
Kolmogorov-Smirnov Z		,454
Asymp. Sig. (2-tailed)		,986

- a. Test distribution is Normal.
- b. Calculated from data.

Based on the results of the normality test with the Kolmogorov-Smirnov Test in table 3, the Asymp value is known. Sig. (2-tailed) is 0.986, meaning it is greater than 0.05, which means the research data has a normal distribution.

2. TestMulticollinearity

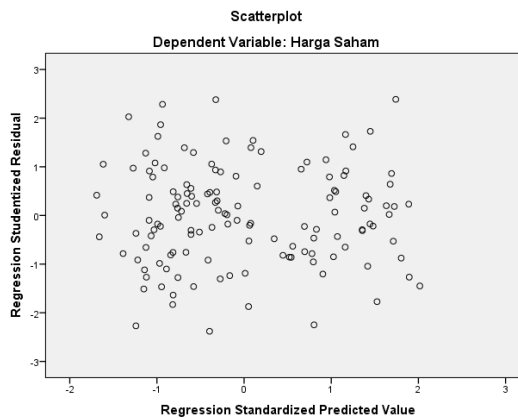
**Table 3**Multicollinearity Test Results  
Coefficientsa

Model	Collinearity Statistics	
	Tolerance	VIF
(Constant)		
Inflation	,373	2,684
Interest rate	,663	1,508
Exchange rate	,440	2,270

a. Dependent Variable: Stock Price

Based on Table 3, the VIF value for the inflation variable (X1) is 2.684 and the tolerance value is 0.373. The interest rate variable (X2) has a VIF value of 1.508 and a tolerance value of 0.663. And the exchange rate variable (X3) has a VIF value of 2,270 and a tolerance value of 0.440. Based on decision making, that is, if the VIF value is < 10 and the tolerance value is > 0.10, then this means that the independent variable does not have a multicollinearity problem.

3. Heteroscedasticity Test



**Figure 1**Heteroscedasticity test results

Based on Figure 1, it can be seen that the dots are spread randomly and evenly distributed both on the X axis and the Y axis, and the dots gather in one place and do not form a particular pattern. then it can be interpreted that heteroscedasticity does not occur in the regression model.

4. Autocorrelation Test

**Table 4**Autocorrelation Test Results  
Model Summary b

Model	R	R Square	AdjustedR Square	Std. Error of the Estimate	Durbin-Watson
1	.171a	.029	.007	.9865688	1,981

a. Predictors: (Constant), Exchange Rates, Interest Rates, Inflation

b. Dependent Variable: Stock Price

Based on Table 4, it can be seen that the Durbin Watson (d) value is 1.981 which will be compared with the value in the Durbin-Watson table at a significance of 0.05 with a sample size (n) of 135 and the number of independent variables (k) = 3. So the value of  $d_u = 1$  is obtained. .7645



and less than  $(4-dU) = 4 - 1.7645 = 2.2355$ . Based on decision making in the autocorrelation test, that is, if  $dU < d < (4-dU)$  ( $1.7645 < 1.981 < 2.2355$ ), it means that there is no autocorrelation.

### 3.1.3 Hypothesis Testing

#### 1. Coefficient of Determination Test

**Table 5** Coefficient of Determination Test Results

Model Summary b				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.171a	.029	.007	.9865688

a. Predictors: (Constant), Exchange Rates, Interest Rates, Inflation  
b. Dependent Variable: Stock Price

Based on Table 5, the adjusted Determination Coefficient value for R Square is 0.029. It can be concluded that the variation of all the independent variables inflation (X1), interest rate variable (X2) and variable (X3), can only explain the dependent variable Y (share price) by 0.029 or 2.9% while the remainder is 97.1 % explained by other variables not proposed in this study.

#### 2. F Test (Simultaneous)

**Table 6** Simultaneous Test Results

ANOVAa					
Model	Sum of Squares	Df	Mean Square	F	Sig.
1 Regression	3,826	3	1,275	1,310	.274b
Residual	127,505	131	,973		
Total	131,330	134			

a. Dependent Variable: Stock Price  
b. Predictors: (Constant), Exchange Rates, Interest Rates, Inflation

Based on table 6, the results of the ANOVA test or F test obtained an F value of 1.310 with a significance value of 0.274. Because the significance value of 0.274 is greater than 0.05 ( $F_{sig} > 0.05$ ), inflation, interest rates and exchange rates simultaneously do not have a significant effect on the share prices of banking sector companies listed on the Indonesian Stock Exchange.

#### 3. t Test (Partial)

**Table 7** Partial Test Results

Coefficientsa					
Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	.345	.293		1,180	.240
Inflation	.101	.142	.100	.710	.479
Interest rate	-.005	.003	-.209	-1,975	.050
Exchange rate	.029	.443	.008	.065	.948

a. Dependent Variable: Stock Price

The regression equation formed in this regression test is:

$$Y = 0.345 + 0.101 X_1 - 0.005 X_2 + 0.029 X_3 + e$$

The value of the constant (a) in the regression equation model is 0.345. The constant value can be interpreted as meaning that, if inflation, interest rates and exchange rates remain constant or equal to zero, then the share price will be 0.345.

The value of the inflation regression coefficient (b1) in the regression equation model is 0.101. This means that there is a positive or unidirectional influence between inflation and stock prices. If inflation rises and other variables remain constant, then share prices will increase by 0.101. The partial test results for the inflation variable (X1) have a significance value of  $0.479 > \alpha$  (0.05), so inflation has no significant effect on the share prices of banking sector companies listed on the Indonesian Stock Exchange.

The value of the interest rate regression coefficient (b2) in the regression equation model is -0.005. This means that there is a negative or opposite influence between interest rates and stock prices. If interest rates rise and other variables remain constant, then share prices will decrease by -0.005. The partial test results for the interest rate variable (X2) have a significance value of  $0.05 \leq \alpha$  (0.05), so interest rates have a significant effect on the share prices of banking sector companies listed on the Indonesia Stock Exchange.

The value of the exchange rate regression coefficient (b3) in the regression equation model is 0.029. This means that there is a positive or unidirectional influence between inflation and stock prices. If inflation rises and other variables remain constant, then share prices will increase by 0.101. The partial test results of the exchange rate variable (X3) have a significance value of  $0.948 > \alpha$  (0.05), so interest rates do not have a significant effect on the share prices of banking sector companies listed on the Indonesia Stock Exchange.

## **3.2 Discussion**

### **3.2.1 The Effect of Inflation on Stock Prices**

The significance level of inflation is  $0.479 > \alpha$  (0.05), meaning that inflation does not have a significant influence on stock prices. The results of this research are in line with what was carried out Afianty et al. (2021), Adikerta & Abundanti (2020), And Maronrong & Nugrhoho (2017) which states that inflation has no effect on stock prices.

According to Iradilah & Tanjung (2022), Inflation that has no effect indicates that the inflation rate that occurs is always below 10% and this condition is still acceptable to the market so that it does not affect stock prices. If inflation exceeds 10%, the capital market will be disrupted (Kewal, 2012). In this research, the highest inflation will be in 2022, namely 5.51%, so it will not yet have an influence on stock prices.

### **3.2.2 Effect of Interest Rates on Stock Prices**

The interest rate significance level is  $0.05 \leq \alpha$  (0.05), meaning that interest rates have a significant influence in a negative direction on stock prices. The results of this research are in line with what was carried out Iradilah & Tanjung (2022), Kurniawan & Yuniati (2019), And Rachmawati (2018) who stated in the results of his research that interest rates had a negative and significant effect on stock prices.

Rising interest rates can trigger investors to withdraw investments from shares and switch to savings or deposits, causing share prices to decline (Tandelilin, 2017). Because the expected profit from shares is smaller than the profit from interest rates.

### **3.2.3 Effect of Exchange Rates on Share Prices**

The significance level of the exchange rate is  $0.948 > \alpha$  (0.05), which means that the exchange rate does not have a significant influence on stock prices. The results of this research are



in line with what was carried out Rossy (2018), Princess (2015) which states that the exchange rate has no effect on share prices.

According to Maryanne (2009), the banking sector uses the rupiah currency to conduct transactions with its customers. So this is said to be normal and has no impact on banking companies. In contrast to export and import sector companies, when there are fluctuations in exchange rates, it can affect share prices because when there is a weakening of the exchange rate against the dollar, it can affect the company's profitability and can affect the rise and fall of share prices. In general, investors will think that as the company's profitability increases, share prices will tend to rise and vice versa.

### 3.2.4 Effect of Inflation, Interest Rates and Exchange Rates on Stock Prices

The significance level based on the F test of 0.274 is stated to be greater than the alpha significance value of 0.05, which means that inflation, interest rates and exchange rates simultaneously do not have a significant influence on stock prices.

## 4. CONCLUSION

In the F test (simultaneous), the research results showed that inflation, interest rates and exchange rates did not have a significant effect on the share prices of banking sector companies listed on the Indonesian Stock Exchange.

The results of the t test (partial) research show that interest rates have a significant effect on the share prices of banking sector companies, while inflation and exchange rates do not have a significant effect on the share prices of the banking sector listed on the Indonesia Stock Exchange.

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*Deri Zulfitriah, Iqlima Azhar, Mayang Murni*

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