RESEARCH ARTICLE

The Effect Of Interest Rates And Exchange Rates On Stock Prices In Cigarette Manufacturing Companies Listed On The IDX

Mursidah Abu[1*)], Bustam[2], Patta Rapanna[3]

Abstract

The capital market is a means for investors to bring together sellers and buyers of funds to invest in stocks. The official institution that handles the sale and purchase of shares is the Indonesia Stock Exchange (IDX). One of the companies that are attractive to investors is manufacturing companies because manufacturing companies are an industry that dominates companies listed on the Indonesia Stock Exchange (IDX). This study uses a quantitative approach while based on the level of explanatory, this research is classified as associative research. Associative research is research that aims to determine the influence or causal relationship, namely the independent variable (X) to the bound or dependent variable (Y). This research was conducted on cigarette sub-sector manufacturing companies listed on the Indonesia Stock Exchange (IDX). From the results of testing and analyzing the effect of interest rates on stock prices in cigarette manufacturing companies sub-sector is not very significant to companies listed on the IDX and from the results of testing and analyzing exchange rates on stock prices in manufacturing companies in the cigarette sub-sector has a significant influence on companies listed on the IDX.

Keywords: Manufacturing, Indonesia Stock Exchange, Interest Rate, Exchange Rate, Stock Price

Introduction

In this era of globalization, many countries, including Indonesia, pay close attention to the capital market because the capital market is one of the factors that has a major impact on the country's economy. According to (Widjaja et al., 2020), whether a country's economy is running well or not can be seen from the level of savings and investment. The capital market is a means for investors to bring together sellers and buyers of funds to invest in stocks. The official institution that handles the sale and purchase of shares is the Indonesia Stock Exchange (IDX).

The capital market has an important role in the country's economy because the capital market has a function as a means to fund or develop businesses, as well as a means for people to invest in the financial sector such as stocks, bonds, mutual funds, and others. With this function, the public can place their funds in accordance with the risks and benefits that exist in each financial sector (Frida Purwaningtyas, Pane, Dewi Nurmasari, Miftah ELFikri, 2018). In its activities, companies cannot be separated from their interactions with the community as a chain of economic behavior (such as distributors, shareholders, producers, competitors, consumers and investors), as well as government regulations and policies play a role in controlling economic growth. Thus, the dynamics of the stock market are inseparable from economic activities outside the capital market itself.

Before investors make an investment, they usually consider what factors can affect the stock price. The stock price is the value of a company's shares that is formed due to the demand and supply for the shares and the price is determined at the closing price. The price of a stock is greatly influenced by the law of supply and demand, the price of a stock will tend to rise if a stock is over-demanded and tends to fall if there is an oversupply (Wira, 2020).

The increase in stock prices is also influenced by the earnings per share or dividends distributed by the company to investors. In other words, the higher the value of the company's shares or dividends, the higher the share price. If the stock price increases, investors can judge that the company's performance is successful, and vice versa. In addition to making profits from investing, an investor must be aware that they also have the possibility of incurring losses (Widiastuti & Jayanti, 2022).

One of the companies that are attractive to investors is manufacturing companies because manufacturing companies are an industry that dominates companies listed on the Indonesia Stock Exchange (IDX). The number of companies in the industry, as well as the current economic conditions have created a fierce competition between manufacturing companies. Competition in the manufacturing industry makes every company improve its performance so that its goals can still be achieved. However, it requires funds to carry out its operational activities that have been planned, both short-term and long-term. One of the ways is to attract investors to invest in the company they own, investment is investment in a company in the hope of getting profits in the future. The object of research in this study is Cigarette Sub-Sector Companies listed on the Indonesia Stock Exchange. Currently, the cigarette industry is one of the industries that plays an important role in the Indonesian economy.

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Table 1. Stock price of manufacturing companies in the cigarette sub-sector

No	Company Name	Stock Price			Information
		2020	2021	2022	
1	PT GUDANG GARAM Tbk	Rp 41,000	Rp 30,600	Rp 18,000	Decreased
2	PT H.M. SAMPOERNA Tbk	Rp 1.505	Rp 965	Rp 840	Decreased
3	PT INDONESIAN TOBACCO Tbk	Rp 650	Rp 274	Rp 262	Decreased
4	PT WISMILAK INTI MAKMUR Tbk	Rp 540	Rp 428	Rp 630	Fluctuation
5	PT BENTOEL INTERNASIONAL INVESTAMA TBK	Rp 340			Voluntary delisting

Based on the table above, the stock prices of cigarette manufacturing companies listed on the Indonesia Stock Exchange from 2020 to 2022 show different changes every year. In salt warehouse companies, shampoo, and Indonesian tobacco, during the period from 2020 to 2022 there was a significant decrease. And in the Wismilak Inti Makmur Company experienced fluctuations where in 2020 it was at a price of Rp.540, then in 2021 it decreased at a price of Rp.428, then in 2022 it again increased at a price of Rp.630. and the Bentoel international investama company experienced the delisting of shares on the Indonesia Stock Exchange (IDX) at the company's request (Voluntary delisting). So, it can be concluded based on the explanation above that the cigarette sub-sector is decreasing every year. This is strongly suspected because the level of public awareness of a healthy lifestyle is increasing and has an impact on the stock price of cigarette sub-factor manufacturing companies.

Cigarette Sub-Sector Companies are companies engaged in the manufacture of tobacco products and then sold to obtain large profits. To achieve this goal, management with a high level of effectiveness is needed. As one of the promising sub-sectors, it will certainly be one of the attractions for investors to invest. However, before investing, investors will of course first analyze the company's interest rates and exchange rates which reflect the company's share price. Companies with high interest rates can affect the company's stock price and the influence of exchange rates also has an impact on stock prices so that it is one of the things that investors must pay attention to to invest their capital in a company.

Interest rates are one of the macroeconomic factors that can affect stock prices. However, the effect of interest rates on stock prices usually tends to be negative. When interest rates increase, stock prices will decrease, and vice versa, when interest rates decrease, stock prices will increase. Because with high interest rates, investors will turn to savings or deposits which results in less demand for stocks so that stocks will decrease. (Luthfiana, 2018). In relation to these variables, previously many researchers also researched. However, it was found that there were differences in research results such as SBI having a significant positive influence on stock price movements (Wira, 2020), while the benchmark interest rate had a significant effect on stock prices with a negative correlation direction (Widiastuti & Jayanti, 2022).

The rupiah exchange rate is the exchange of currency value in the form of other national currencies. There is also foreign exchange as a place where currencies are traded. The rupiah exchange rate affects stock prices and influences investors to invest in the capital market. There was a depreciation of the rupiah exchange rate against the dollar, resulting in an increase in the price of imported goods. This will certainly increase the costs that will be incurred by companies that use imported raw materials in their production process, so that the company's profits will decrease due to the increase in imported raw materials. The decline in corporate profits affects investors' interest in investing capital in the company. (Anggriana & Paramita, 2020). In relation to these variables, many researchers have also previously researched. However, it was found that there were differences in the results of the study, such as the exchange rate having a significant positive influence on stock prices (Wira, 2020), while the Rupiah exchange rate had a significant effect on stock prices with a negative direction of correlation (Widiastuti & Jayanti, 2022).

Method

This study uses a quantitative approach, namely using a deductive way of thinking which shows that the thinking in this study is based on a general or universal pattern, then leads to a narrower or universal pattern, then leads to a narrower or specific pattern. Meanwhile, based on the level of explanatory, this study is classified as associative research. Associative research is research that aims to determine the influence or causal relationship, namely the independent variable (X) to the bound or dependent variable (Y). This research was conducted on cigarette sub-sector manufacturing companies listed on the Indonesia Stock Exchange (IDX).

Results and Discussion

Description of Research Variable Data

This study uses data on the financial statements of sub-cigarette manufacturing companies listed on the Indonesia Stock Exchange. Where there are 5 companies during the 2020-2022 period, but in determining the sample using the Purposive Sampling technique, namely sampling using certain criteria, there are 5 companies that meet the criteria, so there are 5 companies obtained as samples. The research sample data period was carried out for three (3) years, namely 2020 - 2022, so in this study there were 5 units of sample data, which were obtained from 5 companies x 3 years = 15 data.

In the regression modeling specification of this study, there are variables of Interest Rate, Exchange Rate and Stock Price. The company data based on the variables in this study are as follows

1) Interest Rate (X1)

Interest rates are a measure of the return that investors can expect, as well as the amount of capital a business must spend to leverage investor funds. Interest rates show how high and low a company is in managing costs and how the company seeks to optimize profits in each company's revenue.

2) Exchange Rate (X2)

The manufacturing of the cigarette industry sector shows that the company's total assets have increased for 3 years From 2020-2022 the exchange rate shows an increase in the average value. The high or low total assets of a company indicate the size of the company, and affect the assessment of investors in making an investment decision.

3) Stock Price

The manufacturing of the cigarette industry sector shows that the company's total assets have increased for 3 years From 2020-2022 the exchange rate shows an increase in the average value. The high or low total assets of a company indicate the size of the company, and affect the assessment of investors in making an investment decision.

Results of the Classic Assumption Test

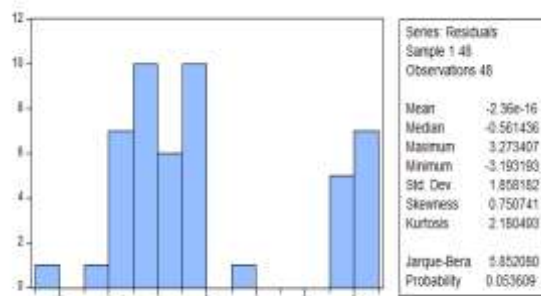### 1) Results of the Normality Test

Fig 1.   Normality test results

Based on the results of the normality test in the figure above, it is known that the probability is more than the level of significance that has been set or 0.053609 > 0.05, then it can be concluded that the data is normally distributed.

2) Autocorrelation Test Results

Table 2.   Autocorrelation test results

RESULT	VALUE
dU	1.6231
dL	1.4500
DW	0,0802
4-dU	2.3769
4-dL	2.5500

Based on the table above, the value of Watson's durbin statistics is 0.0802, then the upper durbin value is 1.6231 and the 4-DU value is 2.3769, in other words there is a positive autocorrelation.

3) Multicollinearity

Variance Inflation Factors
Date: 03/29/24 Time: 13:15
Sample: 1 48
Included observations: 48

Variable	Coefficient Variance	Uncentered VIF	Centered VIF
C	2.91E+09	569.8275	NA
SUKU_BUNGA	7053749.	26.00958	1.092115
NILAI_TUKAR	14392616	616.9562	1.092115

Based on the table above, it can be concluded that there are no symptoms of multicoloniality between independent variables. This is because the correlation value between

independent variables does not exceed 0.90. namely 1.092115 < 0.90.

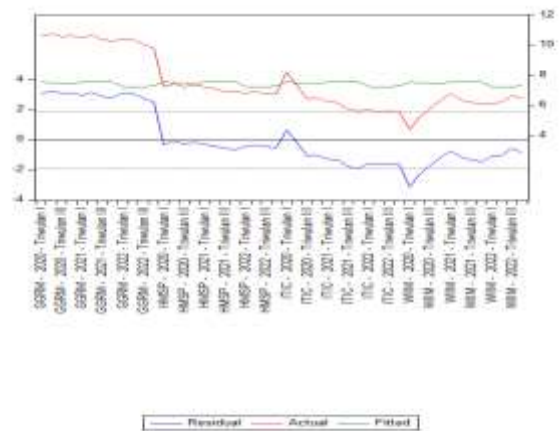### 4) Heteroscedasticity

Fig 2.   Heteroscedasticity test results

From the graph image above, it can be observed that the residual value of each variable does not occur heterogeneously because the graph does not make a certain pattern

Disscussion

Research Data Analysis

1) Descriptive Statistical Analysis

Date: 03/29/24 Time: 13:12
Sample: 1 48

	HARGA_SAH	SUKU_BUNGA	NILAI_TUKAR
Mean	9278.146	4.250000	14.79175
Median	917.5000	3.750000	14.55700
Maximum	47175.00	5.500000	16.33600
Minimum	79.00000	3.500000	14.16900
Std. Dev.	15410.29	0.899172	0.629482
Skewness	1.375478	0.665469	1.233013
Kurtosis	3.159481	1.500000	3.600142
Jarque-Bera	15.18638	8.042790	12.88291
Probability	0.000504	0.017928	0.001594
Sum	445351.0	204.0000	710.0040
Sum Sq. Dev.	1.12E+10	38.00000	18.62361
Observations	48	48	48

Fig 3.   Results of descriptive statistical analysis

For the stock price variable, it has a mean value of 9278,146 which is greater than the standard deviation of 15410.29, which means that the research variable data is good. then the Interest Rate variable has a mean value of 4.250000 which is greater than the standard deviation of 0.899172, which means that the research variable data is good. while the Exchange Rate variable has a mean value of 14.79175 which is greater than the standard deviation of 0.629482, which means that the research variable data is good.

Dependent Variable: HARGA_SAHAM
Method: Least Squares
Date: 03/29/24   Time: 13:17
Sample: 1 48
Included observations: 48

Variable	Coefficient	Std. Error	t-Statistic	Prob
C	15982.00	53978.24	0.296082	0.768
SUKU_BUNGA	-1764.336	2655.889	-0.664311	0.509
NILAI_TUKAR	53.71771	3793.760	0.014159	0.988

R-squared	0.010472	Mean dependent var	9278.14
Adjusted R-squared	-0.033507	S.D. dependent var	15410.2
S.E. of regression	15666.34	Akaike info criterion	22.2168
Sum squared resid	1.10E+10	Schwarz criterion	22.3338
Log likelihood	-530.2051	Hannan-Quinn criter.	22.2610
F-statistic	0.238106	Durbin-Watson stat	0.08020
Prob(F-statistic)	0.789106		

Fig 4.   Panel data regression test results

Based on the above, it can be known that the linear regression equation is:

$$y= 15982 - 1764.336 – 53.71771$$

from the equation can be explained as follows:

1) The constant of 15982 indicates a constant value, where if the value of all independent variables is equal to 0, then the value of the stock price (y) is equal to 15982.
2) Interest Rate Coefficient (X1) = -1764.336 means that based on other research variables, the value is fixed and the Interest Rate increases by 1%, then the stock price will increase by 1764.336 (17.64%)
3) Exchange Rate Coefficient (X2) = 53.71771 means that based on other research variables, the value is fixed and the Exchange Rate decreases by 1%, then the stock price will increase by 53.71771.

4) *Coefficient of Determination (R2)*

R-squared	0.010472	Mean dependent var	9278.146
Adjusted R-squared	-0.033507	S.D. dependent var	15410.29
S.E. of regression	15666.34	Akaike info criterion	22.21688
Sum squared resid	1.10E+10	Schwarz criterion	22.33383
Log likelihood	-530.2051	Hannan-Quinn criter.	22.26107
F-statistic	0.238106	Durbin-Watson stat	0.080200
Prob(F-statistic)	0.789106		

Fig 5.   Determination coefficient test results

Based on the results of the r^2 test above, it is known that the value of the determination coefficient is 0.010472 or 1.0472% which means that it shows the influence between independent variables, namely Interest Rate and Exchange Rate on the dependent variable, namely the stock price, this means that the value of the company can be influenced by 1.0472% while the remaining 98.9528% is influenced by other factors that are not explained in this study.

Results of Hypothesis Testing

1) *Model Feasibility Test (Fisher Test)*

R-squared	0.010472	Mean dependent var	9278.146
Adjusted R-squared	-0.033507	S.D. dependent var	15410.29
S.E. of regression	15666.34	Akaike info criterion	22.21688
Sum squared resid	1.10E+10	Schwarz criterion	22.33383
Log likelihood	-530.2051	Hannan-Quinn criter.	22.26107
F-statistic	0.238106	Durbin-Watson stat	0.080200
Prob(F-statistic)	0.789106		

Based on the results of the above model test, an F-count value of 0.238106 was obtained with a degree of error of 5% (α = 0.05) and a degree of freedom (2:78) so that an F-table value of 3.2 was obtained. Therefore, based on the results obtained using the F-INV formulation, it was concluded that the F-calculated value > F-table (0.238106 < 3.2) and the p-value of 0.789106 > 0.05 which showed that the tested model met the model eligibility criteria.

2) *Student Test*

Dependent Variable: HARGA_SAHAM
Method: Least Squares
Date: 03/29/24   Time: 13:17
Sample: 1 48
Included observations: 48

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	15982.00	53978.24	0.296082	0.7685
SUKU_BUNGA	-1764.336	2655.889	-0.664311	0.5099
NILAI_TUKAR	53.71771	3793.760	0.014159	0.9888

R-squared	0.010472	Mean dependent var	9278.146
Adjusted R-squared	-0.033507	S.D. dependent var	15410.29
S.E. of regression	15666.34	Akaike info criterion	22.21688
Sum squared resid	1.10E+10	Schwarz criterion	22.33383
Log likelihood	-530.2051	Hannan-Quinn criter.	22.26107
F-statistic	0.238106	Durbin-Watson stat	0.080200
Prob(F-statistic)	0.789106		

Fig 6.   Student test results

Based on the table above, the following results were obtained:

The Effect of Interest Rates on Stock Prices

In the table above, it is found that the calculated t value is 0.296082 with a probability value of 0.5099 greater than 0.05. Therefore, it can be concluded that the Interest Rate has no effect on the stock price of manufacturing companies in the cigarette industry sector listed on the Indonesia Stock Exchange. so it can be said that Ho was accepted and h1 was rejected. Meanwhile, the value of the regression coefficient of the interest rate is negative, which is -1764.336, meaning that if the interest rate experiences a 1% increase, the stock price will rise.

The Company's Exchange Rate to the Stock Price

In the table above, it is found that the calculated t value is 0.014159 with a probability value of 0.9888 is less than 0.05. Therefore, it can be concluded that the exchange rate affects the price of manufacturing companies in the cigarette sector listed on the Indonesia Stock Exchange. So it can be said that h2 is accepted and h0 is rejected. Meanwhile, the regression coefficient value of the exchange rate is positive, which is 53.71771, meaning that if the exchange rate increases by 1%, the value of the company will decrease.

Interpretation of Research Results

1) *The Effect of Interest Rates on Stock Prices*

The results of the study show that interest rates have a non-significant effect on stock prices. This is evidenced by a calculated t-value of 0.296082 with a probability value of 0.8321 greater than 0.05. Meanwhile, the value of the regression coefficient of interest rates is negative, which is -1764.336, meaning that if the interest rate decreases by 1%, the stock price will rise.

This is due to interest rates that do not represent all components of the company in achieving profits but only from their sales. In addition, the company's increased costs will cause the sales results received to be disproportionate to the company's costs, which can result in debt to the company. Investors also do not consider the amount of interest rates to predict stock prices. Interest rates are the basis for forecasting the company's performance in the

future so that investors are interested in making stock transactions with the company so that they can increase the stock price.

2) Effect of Exchange Rate on Stock Price

The results of the study show that the exchange rate has a significant effect on stock prices. This is evidenced by a calculated t-value of 0.014159 with a probability value of 0.9888 greater than 0.05. Meanwhile, the regression coefficient value of the exchange rate is positive, which is 53.71771, meaning that if the exchange rate increases by 1%, the value of the company will decrease. This happens because when the exchange rate experiences growth that tends to be unstable or then decreases, it will make investors consider it more before investing.

Conclusions and Recommendations

Based on the results of data analysis and discussion that have been described in the previous chapters, the following conclusions can be drawn:

1) From the results of testing and analysis, the effect of interest rates on stock prices in manufacturing companies in the cigarette sub-sector is not too significant for companies listed on the IDX.
2) From the results of testing and analyzing the exchange rate on stock prices in manufacturing companies in the cigarette sub-sector has a significant influence on companies listed on the IDX.

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