Changes in Inflation and Exchange Rates on Investment Decisions in Sectoral Shares on the Indonesia Stock Exchange

Aldhi Herlando[1], Sishadiyati[2]*

[1,2] University of Pembangunan Nasional "Veteran" East Java

A B S T R A C T

This research was conducted on the basis of different perceptions regarding the influence of domestic macroeconomics on stock prices. The independent variables used in this study are inflation and exchange rates, while the dependent variable used is the share price of the Indonesia Stock Exchange's Sectoral Index. This study uses monthly data from January 2018 to December 2020. The analysis technique used is multiple regression analysis. There are three findings in this research. First, inflation has a partial effect on most of the sectoral indices except for the Basic Industry Sector Index, the Financial Sector Index and the Trade Sector Index. Second, the Exchange Rate has a partial effect on most of the Sectoral Indices except for the Mining Sector Index and the Trade Sector Index. Third, inflation is the most dominant variable affecting the eight sectoral indices, while the rest is dominated by exchange rates.

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Author correspondence:
E-mail: sishadiyati.ep@upnjatim.ac.id

INTRODUCTION

The main factor that causes changes in stock prices is the difference in perceptions or views regarding the information held by investors. The macroeconomic fundamentals have become something that investors must pay attention to because the changes that occur in the macroeconomy are very uncertain and cannot be controlled so that when there is a change in the macroeconomy, it will indirectly have an impact on the capital market. Uncertain conditions also occurred during the economic crisis during the Covid-19 pandemic which had an impact on economic growth in Indonesia. Indonesia's economic growth tends to decline during the pandemic. During the pandemic, many companies experienced a decline in their performance and finances. These conditions will affect investors to invest in the capital market, especially stocks and will certainly affect the stock price of the company. In addition, the economic crisis also affected other macroeconomics such as interest rates, inflation and exchange rates which also experienced a decline. This makes many companies try to obtain additional funds or capital through the capital market.

External factors, namely macroeconomics, are able to influence stock prices in the capital market. The macroeconomic conditions must also be a concern for investors because this factor is a factor that affects the performance and finances of the company. According to Tandelilin (2017) fluctuations that occur in the capital market are related to changes that occur with various macroeconomic factors. This study aims to determine the effect of inflation and exchange rates on sectoral stock prices on the Indonesia Stock Exchange and which variable is the most dominant variable influencing sectoral stock prices on the Indonesia Stock Exchange.

Inflation according to Lintang (2019) is a prolonged process of increasing prices and several factors affect market processes, namely the uneven distribution of goods, increased public consumption, and the emergence of speculation which causes liquidity in the market which triggers consumption. High and unstable inflation will have an impact on the social and economic conditions of society. According to Lintang (2019) the exchange rate is the price of a country's currency that can be measured by the price of another country's currency, where the exchange rate can affect the economy and business activities directly or indirectly. Share price is the value or price issued by investors, either selling or buying, to acquire a company's shares. According to Hanafiah (2015) states that stock prices are important information that contains performance and financial condition which is used as a measuring tool for investors to invest in order to obtain profits in the future.

Inflation that has increased indicates a relatively high risk in investment activities because it will reduce the rate of return (rate of return) from investors. When the inflation rate is high, it will make the price of raw materials rise due to high demand so that there will be price changes. Rising raw material prices will also increase the company's spending level, so that it will reduce the company's financial performance and have an impact on stock prices. Stable fluctuations in the value of the rupiah against foreign currencies will affect the investment climate in the country, especially the capital market. High and low exchange rates will have an impact on the value and activities of the capital market. This will make investors take risk considerations in investing and capital owners will be inclined to release stock prices until economic conditions improve. Stock prices in the capital market will fall so that it will make stock returns low.

The findings from previous research can provide broad insights and knowledge

regarding the variables associated with inflation and also the exchange rate of Sectoral Shares. The results of previous research are research conducted by Dino Yeri Yanto (2021) with the title Effects of Inflation and Exchange Rates on Stock Prices in Miscellaneous Industries on the Indonesia Stock Exchange. The results of this study indicate that inflation has a significant and significant effect on the share prices of the miscellaneous industry sector and the exchange rate has a significant and significant effect on the share prices of the miscellaneous industry sector. Research conducted by Dian Efriyenty (2020) entitled Effects of Inflation and Exchange Rates on Stock Prices in Basic and Chemical Industries also shows that inflation has a positive and insignificant effect on stock prices in Basic and Chemical Industries and exchange rates have a positive and insignificant effect on stock prices in Basic Industry and Chemicals. In a study conducted by Linzzy Pratami Putri with the title Effects of Inflation and the Rupiah Exchange Rate over the US Dollar on the Performance of Shares of Property and Real Estate Companies in Indonesia, it shows that partially Inflation and Exchange Rates have no effect and are not significant on Stock Prices in Property and Real Companies Estate listed on the Indonesia Stock Exchange.

This research was conducted using a quantitative approach method. This study uses 10 Sectoral Indices on the Indonesia Stock Exchange as the dependent variable (Y), namely AGRI Sector Index (Y1), MINING Sector Index (Y2), BASIC-IND Sector Index (Y3), MISC-IND Sector Index (Y4), CONSUMER Sector Index (Y5), PROPERTY Sector Index (Y6), INFRASTRUC Sector Index (Y7), FINANCE Sector Index (Y8), TRADE Sector Index (Y9) and MANUFACTUR Index (Y10). While the independent variables in this study are inflation (X1) and exchange rates (X2). All data used is secondary and obtained from various sources. Inflation and the rupiah exchange rate against the US dollar were obtained from the Bank Indonesia (BI) website, while Sectoral Index Share Prices were from the official website of the Indonesia Stock Exchange (IDX). The sampling technique is done by saturated or census sampling, which means that the research sample is the same as the population.

The data analysis technique used is the classical assumption test which consists of four types of tests, namely the normality test, multicollinearity test, heteroscedasticity test and autocorrelation test, then there is the f test and the coefficient of determination, then proceed with multiple linear regression analysis and hypothesis testing with the t test.

METHODOLOGY

Table 1.
Regression Equation

No	Sectoral	Regression Equation
1	AGRI	$Y1 = \beta 0 + \beta 1.X1 + \beta 1.X2 + e$
2	MINING	$Y2 = \beta 0 + \beta 1.X1 + \beta 1.X2 + e$
3	BASIC-IND	$Y3 = \beta 0 + \beta 1.X1 + \beta 1.X2 + e$
4	MISC-IND	$Y4 = \beta 0 + \beta 1.X1 + \beta 1.X2 + e$
5	CONSUMER	$Y5 = \beta 0 + \beta 1.X1 + \beta 1.X2 + e$
6	PROPERTI	$Y6 = \beta 0 + \beta 1.X1 + \beta 1.X2 + e$
7	INFRASTRUC	$Y7 = \beta 0 + \beta 1.X1 + \beta 1.X2 + e$
8	FINANCE	$Y8 = \beta 0 + \beta 1.X1 + \beta 1.X2 + e$
9	TRADE	$Y9 = \beta 0 + \beta 1.X1 + \beta 1.X2 + e$
10	MANUFACTUR	$Y10 = \beta 0 + \beta 1.X1 + \beta 1.X2 + e$

RESULT AND DISCUSSION
Classic Assumption Test

In the Kolmogorov-Smirnov test, a significance greater than 0.05 was obtained for all variables. This means that the distribution of the data used is normal. Based on the basis of decision making, it can be concluded that all data in the study have met the assumption of normality.

In the multicollinearity test, the inflation tolerance value is 0.965 and the exchange rate tolerance value is 0.965. Meanwhile, the VIF inflation rate is 1.036 and the exchange rate is 1.036. This means that there is no similarity of variance from the residuals of one observation to another observation. Based on the basis of decision making, it can be concluded that there is no multicollinearity problem in all independent variables of the study.

In the heteroscedasticity test with the glesjer test, a significance value greater than 0.05 was obtained for all variables. This means that there is no correlation between the independent variables and the residuals. Based on the basis of decision making, it can be concluded that there is no heteroscedasticity problem in all research data.

In the Run test, obtained a significance of less than 0.05 for all research variables. This means that there is a correlation between the residuals of period one and the previous period. Based on the basis of decision making, it can be concluded that there is an autocorrelation problem between residual values. Because there is an autocorrelation problem, the researchers overcome this problem with the Cochcrane Orcutt test where the Durbin-Watson value is obtained which is between dU and 4 - dU so that the autocorrelation problem in this study can be resolved.

F test and Coefficient of Determination

Table 2.
F test and Coefficient of Determination

No	Sectoral	F	Sig.	R-Square
1	AGRI	13,506	0,000	0,459
2	MINING	6,278	0,005	0,276
3	BASIC-IND	8,705	0,001	0,345
4	MISC-IND	21,329	0,000	0,564
5	CONSUMER	16,325	0,000	0,489
6	PROPERTI	67,351	0,000	0,803
7	INFRASTRUC	30,541	0,000	0,649
8	FINANCE	7,268	0,002	0,306
9	TRADE	9,136	0,005	0,362
10	MANUFACTUR	21,780	0,000	0,569

Based on the table above, it is known that the significance value of each sector is < 0.05 and the value of F count > F table 3.28, so that based on the basis of decision making, Inflation and Exchange Rates simultaneously affect the Stock Price of the Sectoral Stock Index.

t test

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Table 3.
t test

No	Sectoral	Variable	t	Sig.	Description
1	AGRI	X1	3,240	0,003	Take Effect
		X2	-3,388	0,002	Take Effect
2	MINING	X1	2,500	0,018	Take Effect
		X2	-2,001	0,054	Take Effect
3	BASIC-IND	X1	-0,008	0,993	No Effect
		X2	-4,101	0,000	Take Effect
4	MISC-IND	X1	4,779	0,000	Take Effect
		X2	-3,482	0,001	Take Effect
5	CONSUMER	X1	4,533	0,000	Take Effect
		X2	-2,573	0,015	Take Effect
6	PROPERTY	X1	8,437	0,000	Take Effect
		X2	-6,258	0,000	Take Effect
7	INFRASTRUC	X1	5,617	0,000	Take Effect
		X2	-4,292	0,000	Take Effect
8	FINANCE	X1	-0,241	0,811	No Effect
		X2	-3,783	0,001	Take Effect
9	TRADE	X1	-0,257	0,797	No Effect
		X2	0,126	0,980	No Effect
10	MANUFACTUR	X1	4,538	0,000	Take Effect
		X2	-3,863	0,000	Take Effect

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Based on the table above, it can be seen that inflation has a positive and significant effect on most of the sectoral index stock prices. Meanwhile, the BASIC-IND, FINANCE and TRADE sectoral indices are not affected by inflation. While the Exchange Rate has a negative and significant effect on most of the sectoral index stock prices. Meanwhile, the sectoral indices that are not affected by the exchange rate are the MINING and TRADE sectoral indices.

Dominant Test

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Table 4.
Dominant Test

No	Sectoral	Variable	Standardized Beta	Description
1	AGRI	X1	0,426	-
		X2	-0,445	Dominant
2	MINING	X1	0,377	Dominant
		X2	-0,302	-
3	BASIC-IND	X1	-0,001	-
		X2	-0,588	Dominant
4	MISC-IND	X1	0,599	Dominant
		X2	-0,408	-
5	CONSUMER	X1	0,568	Dominant
		X2	-0,323	-
6	PROPERTY	X1	0,663	Dominant
		X2	-0,492	-
7	INFRASTRUC	X1	0,589	Dominant
		X2	-0,450	-
8	FINANCE	X1	-0,036	-
		X2	-0,558	Dominant
9	TRADE	X1	-0,046	Dominant
		X2	-0,005	-
10	MANUFACTUR	X1	0,528	Dominant
		X2	-0,449	-

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Based on the table above, it can be seen that the Inflation variable has a dominant influence on the MINING Sectoral Index, MISC-IND Sectoral Index, CONSUMER Sectoral Index, PROPERTY Sectoral Index, INFRASTRUC Sectoral Index, RADE Sectoral Index and MANUFACTUR Sectoral Index.

Meanwhile, the Exchange Rate has a dominant influence on the AGRI Sectoral Index, the BASIC-IND Sectoral

stability to the country's currency so that its Index and the FINANCE Sectoral Index.

Multiple Linear Regression Analysis

Table 5.
Regression Equation

No	Sektoral	Regression Equation
1	AGRI	Y = 3694,146 +138,601X1 - 0,188X2 + e
2	MINING	Y = 3490,511+151,796X1 - 0,157X2 + e
3	BASIC-IND	Y = 2077,740 - 0,138X1 - 0,089X2 + e
4	MISC-IND	Y = 3694,164 + 138,601X1 - 0,188X2 + e
5	CONSUMER	Y = 4552,272 + 297,437X1 - 0,219X2 + e
6	PROPERTI	Y = 1232,203 + 72,742X1 - 0,070X2 +e
7	INFRASTRUC	Y = 2374,020 + 116,408X1 - 0,115X2 + e
8	FINANCE	Y = 2989,435 - 6,190X1 - 0,126X2 + e
9	TRADE	Y = 779,111 - 7,149X1 + 0,129X2 + e
10	MANUFACTUR	Y = 3243,056 + 139,058X1- 0,153X2 + e

Discussion

Based on the results of the F test, inflation and exchange rates simultaneously affect stock prices in each sectoral index on the Indonesia Stock Exchange. This can be interpreted that changes in inflation and exchange rates together are one of the determining factors that can explain changes in stock prices in sectoral indices.

Based on the results of the t test, inflation affects most stock prices in each Sectoral Index on the Indonesia Stock Exchange. Inflation has a positive value which can be interpreted as inflation having a positive impact in the form of increasing people's purchasing power so that the profitability of the company will also increase. The results of this study support Yanto's research (2021) which states that inflation has a positive and significant effect on share prices in the miscellaneous industry sector. Meanwhile, the sectors that are not affected by inflation are the BASIC-IND Sectoral Index, the FINANCE Sectoral Index and the TRADE Sectoral Index. The BASIC-IND Sectoral Index and Trade Sectoral Index are not affected by inflation because low inflation can provide TRADE Sectoral Index and MANUFACTUR Sectoral Index. Meanwhile, the Exchange

economic activity is not affected by changes in inflation. Meanwhile, the financial sector is also not affected by inflation because inflation is an increase in the price of goods that is influenced by people's purchasing power which will increase profits for companies that produce products in the form of finished or processed goods. This is taken into consideration by investors to invest in other sectors that can generate greater profits compared to the financial sector whose performance tends to be stable and not affected by inflation. The results of this study are supported by research conducted by Efriyenty (2020) which says that inflation has no significant effect on sector stock prices in the Basic Industry and Chemical sectors. Based on the explanation above, changes that occur in inflation are one of the factors that affect stock prices. The relatively low inflation rate still has an impact on the stock prices of each Sectoral Index. This study found that the inflation relationship that influences the Sectoral Index stock prices is positive.

Exchange Rate Variables affect most of the stock prices in each Sectoral Index on the Indonesia Stock Exchange. The exchange rate has a negative effect, which means that when the value of the

US Dollar strengthens or the Rupiah depreciates, it will result in a decrease in stock prices per sector. When the rupiah depreciated, there was a shift in investment flows by investors from the stock market to investing in the money market. The results of this study are supported by Yanto (2021) which states that exchange rates have a negative and significant effect on share prices in the Miscellaneous Industry sector. Sectors that are not affected by the Exchange Rate are the MINING Sectoral Index and the TRADE Sectoral Index. These sectors are not affected by the exchange rate because the economic activities of the two sectors are mostly related to export-import activities so that a stable moving exchange rate does not affect these two sectors. This is supported by research conducted by Putri (2017) which states that exchange rates do not affect stock prices on the Indonesia Stock Exchange. Based on the explanation above, it can be concluded that changes in the rupiah exchange rate are also a determining factor that can explain changes in stock prices in each Sectoral Index on the Indonesia Stock Exchange. This study found that the exchange rate relationship that influences the Sectoral Index stock price is negative.

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