

# Effect Of Macroeconomic Factors (Exchange, Inflation, Sbi Interest Rate, World Oil Price) On Stock Returns With Profitability As Intervening Variables In Mining Sector Companies In The Indonesia Stock Exchange 2015-2019

Elsa Dutiva Br. Ginting<sup>1\*</sup>, Sofiyan Matondang<sup>2</sup>

<sup>1,2</sup> Department of Economics, Universitas Prima Indonesia, Medan, Indonesia

\*Corresponding Author:

Email: elsaginting91@gmail.com

## Abstract.

The purpose of this study was to determine and analyze the effect of macroeconomic factors (exchange rate, inflation, interest rates for Bank Indonesia Certificates, world oil prices) on stock returns with profitability (return on assets) as an intervening variable in mining sector companies on the Indonesia Stock Exchange in 2015 -2019. The data used in this study is secondary data obtained from monthly and annual data published by Bank Indonesia, the Indonesia Stock Exchange, and the Energy Information Administration (EIA) and processed using Path Analysis with SmartPLS 3.0. The results showed that macroeconomics (exchange rate of Rp/US\$, inflation, SBI interest rates, world oil prices) and ROA had a direct significant effect on stock returns in the mining sector on the Indonesia Stock Exchange (IDX). Macroeconomics (Rp/US\$ exchange rate, inflation and world oil prices) have an indirect and significant indirect effect on Stock Return of the mining sector on the IDX, while the SBI interest rate has a significant indirect effect on Stock Return of the mining sector on the IDX.

**Keywords:** Stock Return, Return on Assets, Exchange Rate, Inflation, SBI Interest Rate, World Oil Price.

## I. INTRODUCTION

The process of seeking profit by investing is something that requires in-depth analysis and calculation without compromising the prudential principle [1]. Therefore, investors must pay attention to stock price movements and the factors that influence them. Given the fluctuating movement of stock prices, in investing in stocks, investors should conduct technical and fundamental analysis to predict future stock prices, the level of profit received, and minimize risk (losses). Technical and fundamental analysis can be used to assist investors in seeing the trend of stock price movements. Fundamental analysis focuses on the company's performance from the internal environment and the external environment focuses on economic conditions [2]. Technical analysis is a method of evaluating stocks or securities, by statistically analyzing the data obtained from market analysis in the past with the aim of predicting stock prices in the future [3]. The increase and decrease in stock prices reflects how much return will be received by investors.

The following is data on the Rupiah/US\$ exchange rate, inflation, SBI interest rates, world oil prices, mining sector stock returns, and profitability (Return on Assets) for 2015-2019.

**Table 1.1.**Data on Exchange Rates, Inflation, SBI Interest Rates, World Oil Prices, Return on Assets and Mining Sector Stock Returns for 2015-2019

Annual	DESCRIPTION					
	Exchange Rate (Rp)	Inflation (%)	BI Rate (%)	World Oil Prices (US\$/barrel)	Return on Asset (%)	Mining Sector Annual Stock Return (%)
2015	13.795	6.38%	7.52%	48.79	-2,23%	-29,30%
2016	13.436	3.53%	6.0%	43.40	0,77%	101,02%
2017	13.548	3.81%	4.56%	50.80	6,95%	20,76%
2018	14.481	3.19%	5.10%	64.81	6,68%	24,56%
2019	13.901	3.03%	5.62%	57.07	0,73%	-21,07%

Sources: www.bi.go.id, www.eia.gov, www.idx.co.id, and the websites of each company, processed in 2022.

Table 1.1 shows the decline and increase, exchange rates, inflation, SBI interest rates, world oil prices, return on assets, and annual stock returns in the mining sector during 2015-2019. In 2015 and 2016 there was a decline in the exchange rate from Rp. 13,795 to Rp. 13,436. The decline in the exchange rate during that period was followed by an increase in return on assets (ROA) from -2.23% to 0.77%. In 2016 and 2017 there was an increase in the exchange rate from Rp. 13,436 to Rp. 13,548. The increase in the exchange rate during that period was followed by an increase in return on assets (ROA) from 0.77% to 6.95%. In 2017 and 2018 there was an increase in the exchange rate from Rp. 13,548 to Rp. 14,481. The increase in the exchange rate during that period was followed by a decrease in return on assets (ROA) from 6.95% to 6.68%. In 2018 and 2019 there was a decline in the exchange rate from Rp. 14,481 to Rp. 13,901. The decline in the exchange rate during that period was followed by a decrease in return on assets (ROA) from 6.68% to 0.73%. This phenomenon states a negative relationship between the exchange rate and return on assets (ROA) in the period 2015 to 2016 and 2017 to 2018. The phenomenon in observations from 2016 to 2017, 2018 to 2019 states that there is a positive relationship between the exchange rate and return on assets (ROA).

In 2015 and 2016 there was a decrease in inflation from 6.38% to 3.53%. The decline in inflation during this period was followed by an increase in return on assets (ROA) from -2.23% to 0.77%. In 2016 and 2017 there was an increase in inflation from 3.53% to 3.81%. The increase in inflation during that period was followed by an increase in return on assets (ROA) from 0.77% to 6.95%. In 2017 and 2018 there was a decrease in inflation from 3.81% to 3.19%. The decline in inflation during this period was followed by a decrease in return on assets (ROA) from 6.95% to 6.68%. In 2018 and 2019 there was a decrease in inflation from 3.19% to 3.03%. The decline in inflation during this period was followed by a decrease in return on assets (ROA) from 6.68% to 0.73%. This phenomenon states that there is a negative relationship between inflation and return on assets (ROA) in the period 2015 to 2016. The phenomenon observed from 2016 to 2019 states that there is a positive relationship between inflation and return on assets (ROA).

In 2015 and 2016 there was a decrease in the SBI interest rate from 7.52% to 6.00%. The decline in SBI interest rates during this period was followed by an increase in return on assets (ROA) from -2.23% to 0.77%. In 2016 and 2017 there was a decrease in the SBI interest rate from 6.00% to 4.56%. The decline in the SBI interest rate during this period was followed by an increase in return on assets (ROA) from 0.77% to 6.95%. In 2017 and 2018 there was an increase in the SBI interest rate from 4.56% to 5.10%. The increase in SBI interest rates during this period was followed by a decrease in return on assets (ROA) from 6.95% to 6.68%. In 2018 and 2019 there was an increase in the SBI interest rate from 5.10% to 5.62%. The increase in SBI interest rates during this period was followed by a decrease in return on assets (ROA) from 6.68% to 0.73%. The phenomenon in observations from 2015 to 2019 stated that there was a negative relationship between SBI interest rates and return on assets (ROA). In 2015 and 2016 world oil prices decreased from US\$ 48.79 to US\$ 43.40. The decline in world oil prices during this period was followed by an increase in return on assets (ROA) from -2.23% to 0.77%. In 2016 and 2017, world oil prices increased from US\$ 43.40 to US\$ 50.80. The increase in world oil prices during this period was followed by an increase in return on assets (ROA) from 0.77% to 6.95%. In 2017 and 2018 world oil prices increased from US\$ 50.80 to US\$ 64.81. The increase in world oil prices during this period was followed by a decrease in return on assets (ROA) from 6.95% to 6.68%. In 2018 and 2019 world oil prices decreased from US\$ 64.81 to US\$ 57.07. The decline in world oil prices during this period was followed by a decrease in return on assets (ROA) from 6.68% to 0.73%. The phenomenon in observations from 2015 to 2016, 2017 to 2018 states that there is a negative relationship between world oil prices and return on assets (ROA). The phenomenon in observations from 2016 to 2017, 2018 to 2019 states that there is a positive relationship between world oil prices and return on assets (ROA).

In 2015 and 2016 there was a decline in the exchange rate from Rp. 13,795 to Rp. 13,436. The decline in the exchange rate during that period was followed by an increase in the mining sector's annual stock return from -29.30% to 101.02%. In 2016 and 2017 there was an increase in the exchange rate from Rp. 13,436 to Rp. 13,548. The increase in the exchange rate during that period was followed by a decrease in the mining sector's annual stock return from 101.02% to 20.76%. In 2017 and 2018 there was an increase in

the exchange rate from Rp. 13,548 to Rp. 14,481. The increase in the exchange rate during that period was followed by an increase in the mining sector's annual stock return from 20.76% to 24.56%. In 2018 and 2019 there was a decline in the exchange rate from Rp. 14,481 to Rp. 13,901. The decline in the exchange rate during that period was followed by a decline in the mining sector's annual stock return from 24.56% to -21.07%. This phenomenon states a negative relationship between the exchange rate and the mining sector's annual stock return in the period 2015 to 2017 and a positive relationship between the exchange rate and the mining sector's annual stock return in the period 2017 to 2019.

In 2015 and 2016 there was a decrease in inflation from 6.38% to 3.53%. The decline in inflation during that period was followed by an increase in the mining sector's annual stock return from -29.30% to 101.02%. In 2016 and 2017 there was an increase in inflation from 3.53% to 3.81%. The increase in inflation during this period was followed by a decrease in the mining sector's annual stock return from 101.02% to 20.76%. In 2017 and 2018 there was a decrease in inflation from 3.81% to 3.19%. The decline in inflation during this period was followed by an increase in the mining sector's annual stock return from 20.76% to 24.56%. In 2018 and 2019 there was a decrease in inflation from 3.19% to 3.03%. The decline in inflation during this period was followed by a decline in the mining sector's annual stock return from 24.56% to -21.07%. This phenomenon states a negative relationship between inflation and the mining sector's annual stock return in the period 2015 to 2018 and a positive relationship between inflation and the mining sector's annual stock return in the period 2018 to 2019. In 2015 and 2016 there was a decrease in the SBI interest rate from 7.52% to 6.00%. The decline in the SBI interest rate during this period was followed by an increase in the mining sector's annual stock return from -29.30% to 101.02%. In 2016 and 2017 there was a decrease in the SBI interest rate from 6.00% to 4.56%. The decline in the SBI interest rate during this period was followed by a decrease in the mining sector's annual stock return from 101.02% to 20.76%. In 2017 and 2018 there was an increase in the SBI interest rate from 4.56% to 5.10%. The increase in the SBI interest rate during this period was followed by an increase in the mining sector's annual stock return from 20.76% to 24.56%. In 2018 and 2019 there was an increase in the SBI interest rate from 5.10% to 5.62%. The increase in the SBI interest rate during this period was followed by a decrease in the mining sector's annual stock return from 24.56% to -21.07%. The phenomenon in observations from 2015 to 2016, 2018 to 2019 states that there is a negative relationship between SBI interest rates and the mining sector's annual stock returns. The phenomenon in observations from 2016 to 2017, 2017 to 2018 states that there is a positive relationship between SBI interest rates and the mining sector's annual stock returns.

In 2015 and 2016 world oil prices decreased from US\$ 48.79 to US\$ 43.40. The decline in world oil prices during this period was followed by an increase in the mining sector's annual stock return from -29.30% to 101.02%. In 2016 and 2017, world oil prices increased from US\$ 43.40 to US\$ 50.80. The increase in world oil prices during this period was followed by a decrease in the mining sector's annual stock return from 101.02% to 20.76%. In 2017 and 2018 world oil prices increased from US\$ 50.80 to US\$ 64.81. The increase in world oil prices during that period was followed by an increase in the annual stock return of the mining sector from 20.76% to 24.56%. In 2018 and 2019 world oil prices decreased from US\$ 64.81 to US\$ 57.07. The decline in world oil prices during this period was followed by a decline in the mining sector's annual stock return from 24.56% to -21.07%. The phenomenon observed from 2015 to 2017 states that there is a negative relationship between world oil prices and the mining sector's annual stock returns. The phenomenon in observations from 2017 to 2019 states that there is a positive relationship between world oil prices and the mining sector's annual stock returns. In 2015 and 2016 there was an increase in Return on Assets (ROA) from -2.23% to 0.77%. The increase in Return on Assets (ROA) during that period was followed by an increase in the mining sector's annual stock return from -29.30% to 101.02%. In 2016 and 2017 there was an increase in Return on Assets (ROA) from 0.77% to 6.95%. The increase in Return on Assets (ROA) during that period was followed by a decrease in the mining sector's annual stock return from 101.02% to 20.76%. In 2017 and 2018 there was a decrease in Return on Assets (ROA) from 6.95% to 6.68%. The decline in Return on Assets (ROA) during that period was followed by an increase in the mining sector's annual stock return from 20.76% to 24.56%. In 2018 and 2019 there was a decrease in Return on Assets (ROA) from 6.68% to 0.73%. The decline in Return on Assets (ROA) during that period was

followed by a decline in the mining sector's annual stock return from 24.56% to -21.07%. The phenomenon in observations from 2016 to 2018 states that there is a negative relationship between Return on Assets (ROA) and the mining sector's annual stock returns. The phenomenon in observations from 2015 to 2016, 2018 to 2019 states that there is a positive relationship between Return on Assets (ROA) and the mining sector's annual stock returns.

The exchange rate (exchange rate), inflation, SBI interest rates, world oil prices, and Return on Assets (ROA) can be concluded to have a role in influencing stock return fluctuations. The movement of stock returns that tend to follow the movement of the Rupiah exchange rate against the US\$, inflation, SBI interest rates, world oil prices, and Return on Assets (ROA) are of interest for researchers to examine whether there is a relationship between stock returns and these variables. There is a research gap between this study and previous research, namely differences in research variables. (Abdallah, 2018 "The Influence of the Rupiah Exchange Rate on Stock Returns with Return on Assets as an Intervening Variable in Cigarette Companies", shows the independent variable (macroeconomics) used is the rupiah exchange rate [4]. (Aminullah et al., 2018) " The Effect of Macro Economic Variables on Stock Return of Companies That Listed in Stock Exchange: Empirical Evidence from Indonesia", shows that the independent variables used are inflation rates, interest rates, money supply, and foreign exchange rates and do not use intervening variables entitled "The Effect of Inflation Levels and Oil Prices on Stock Return Food and Beverage", shows that the independent variables (macroeconomics) used are inflation levels and oil prices and do not use intervening variables [5]. Interest Rate on Stock Return with Profitability as an Intervening Variable in Banks Registered with B Indonesia Stock Exchange 2013-2015", shows the independent variables (macroeconomics) used are inflation and interest rates [6].

Based on these phenomena and research gaps, the researchers are interested in conducting research with the title "The Effect of Macroeconomic Factors (Exchange Rates, Inflation, SBI Interest Rates, World Oil Prices) on Stock Returns with Profitability as Intervening Variables in Mining Sector Companies on the Stock Exchange Indonesia in 2015-2019".

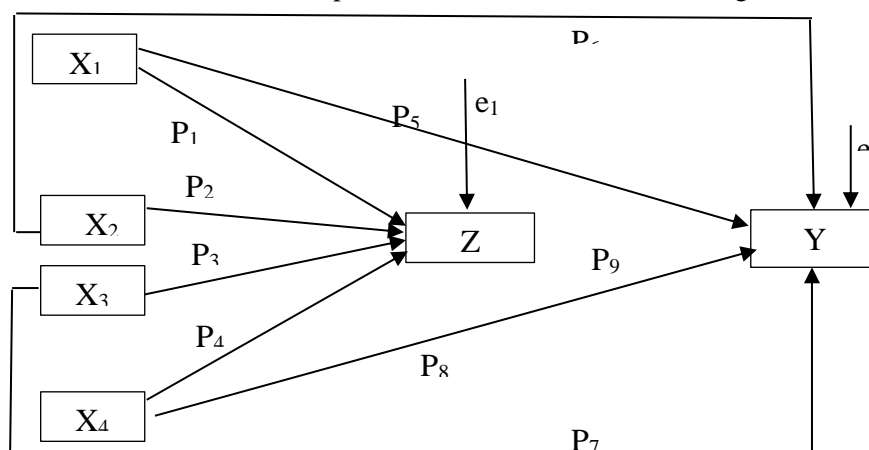
**II. MATERIALS AND METHODS**

**Path Analysis using SmartPLS**

Path analysis studies whether the relationship that occurs is caused by a direct and indirect relationship from the independent variable (exogenous) to the dependent variable (endogenous), analyzes the relationship between variables from the causal model that has been formulated by the researcher on the basis of theoretical considerations. Theoretically it can be concluded, among others:

- a. Exchange Rate, Inflation, SBI Interest Rate, World Oil Price affect Profitability (ROA).
- b. Exchange Rate, Inflation, SBI Interest Rate, World Oil Price, Profitability (ROA) affect Stock Return.

Based on the theoretical relationships between variables, the following model can be made:



**Fig 1.1.** Path Analysis

## Information:

X1	: Exchange Rate (Rupiah/US\$)
X2	: Inflation
X3	: SBI Interest Rate
X4	: World Oil Prices
Z	: Return on Assets (ROA)
Y	: Stock Return
P1	: Coefficient of Exchange Rate Effect on ROA
P2	: Inflation effect coefficient on ROA
P3	: Coefficient of influence of SBI Interest Rate on ROA
P4	: Coefficient of influence of World Oil Prices on ROA
P5	: Coefficient of Exchange Rate Effect on Stock Return
P6	: Coefficient of Inflation Effect on Stock Return
P7	: Coefficient of Effect of SBI Interest Rate on Stock Return
P8	: Coefficient of Effect of World Oil Prices on Stock Returns
P9	: Coefficient of Effect of ROA on Stock Return
e	: Standard Error, namely:

$$e_1 = \sqrt{1 - R_1^2} ; e_2 = \sqrt{1 - R_2^2}$$

The structure of the variable relationship can be expressed in the path equation, as follows:

$$\begin{aligned} \text{Sub-Struktural I} & : Z = P_1X_1 + P_2X_2 + P_3X_3 + P_4X_4 + e_1 \\ \text{Sub-Struktural II} & : Y = P_5X_1 + P_6X_2 + P_7X_3 + P_8X_4 + P_9Z + e_2 \end{aligned}$$

### III. RESULT AND DISCUSSION

#### Results of Sub-Structural Analysis I

The equation that can be formed is as follows:

$$Z = -0.018X_1 + 0.218X_2 - 0.377X_3 + 0.118X_4 + 0.963$$

$$\begin{aligned} \text{Information : } e_1 &= \sqrt{1 - R_1^2} = \sqrt{1 - 0.072} \\ &= \sqrt{0.928} = 0.963 \end{aligned}$$

It means :

1. The path coefficient for Exchange Rate (X1) is -0.018. This means that if the X1 variable decreases by 1%, it will increase the stock return by -0.018, assuming the other independent variables remain (X2, X3 and X4 = 0).
2. The path coefficient for Inflation (X2) is 0.218. This means that if the X2 variable has increased by 1%, it will increase the stock return by 0.218, assuming the other independent variables remain (X1, X3 and X4 = 0).
3. The path coefficient for the SBI Interest Rate (X3) is -0.377. This means that if the X3 variable decreases by 1%, it will increase the stock return by -0.377, assuming the other independent variables remain (X1, X2 and X4 = 0).
4. The path coefficient for World Oil Prices (X4) is 0.118. This means that if the X4 variable increases by 1%, it will increase the stock return by 0.118, assuming the other independent variables remain (X1, X2 and X3 = 0).

#### Results of Sub-Structural Analysis II

The equation that can be formed is as follows:

$$Y = -0.002X_1 + 0.021X_2 - 0.036X_3 + 0.011X_4 + 0.094Z + 0.907$$

$$\text{Information : } e_2 = \sqrt{1 - R_2^2} = \sqrt{1 - 0.177}$$



$$= \sqrt{0.823} = 0.907$$

It means :

1. The path coefficient for Exchange Rate (X1) is -0.002. This means that if the X1 variable decreases by 1%, it will increase the stock return by -0.002, assuming the other independent variables remain (X2, X3, X4, and Z = 0).
2. The path coefficient for Inflation (X2) is 0.021. This means that if the X2 variable increases by 1%, it will increase the stock return by 0.021, assuming the other independent variables remain (X1, X3, X4, and Z = 0).
3. The path coefficient for the SBI Interest Rate (X3) is -0.036. This means that if the X3 variable decreases by 1%, it will increase the stock return by -0.036, assuming the other independent variables remain (X1, X2, X4, and Z = 0).
4. The path coefficient for World Oil Price (X4) is 0.011. This means that if the X4 variable has increased by 1%, it will increase the stock return by 0.011, assuming the other independent variables remain (X1, X2, X3 and Z = 0).
5. The path coefficient for Profitability/ROA (Z) is 0.094. This means that if the Z variable increases by 1%, it will increase the stock return by 0.094, assuming the other independent variables remain (X1, X2, X3, and X4 = 0).

Structural Model Test Results (Inner Model)

**Table 1.2.**Result for R-Square

	<b>R Square</b>	<b>R Square Adjusted</b>
<b>STOCK RETURN</b>	0.177	0.154
<b>ROA</b>	0.072	0.051

Source: SmartPLS 3.0 Output output

From the table above the R-Square value shows the results of 0.177 and 0.072 which can be interpreted that the stock return variable is explained by the exchange rate, inflation, SBI interest rate, world oil prices, profitability (ROA) of 17.7% (the remaining 82.3% is explained by the variable). (other than those studied in this study) and the profitability construct variable (ROA) is explained by the exchange rate, inflation, SBI interest rates, world oil prices of 7.2% (the remaining 92.8% is explained by other variables outside those studied in this study).

### **Discussion**

#### **The Effect of the IDR/US\$ Exchange Rate on Mining Sector Stock Returns on the Indonesia Stock Exchange in 2015-2019**

The results showed that the exchange rate had a direct positive and significant effect on stock returns in the mining sector on the Indonesia Stock Exchange in 2015-2019 of 0.920. A positive relationship means that the exchange rate has a direct relationship with stock returns. If the rupiah exchange rate appreciates, it will increase stock returns because it indicates that the country's economic condition is stable/good, which is indicated by the company's ability to increase company profits. If the company's profit increases it will give a positive signal for investors who can increase the company's stock price. With the strengthening of the company's stock price, the company's stock returns will increase. In this case, if the exchange rate has increased/appreciated, the stock return will also increase, on the contrary, if the exchange rate has decreased/depreciated, the stock return will also experience a decrease. The Rp/US\$ exchange rate has a significant effect on stock returns because the strong or weak Rp/US\$ exchange rate is often the cause of stock prices fluctuating on the stock exchange. The increase in the IDR/US\$ exchange rate will also increase economic growth through international trade which is marked by public welfare. Increased economic growth will encourage an increase in demand or the purchasing power of the people which will directly affect investment in the capital market. With the increasing investment in the capital market, the stock price will increase and result in an increase in stock returns. The results of this study are in line with "The Influence of the Rupiah Exchange Rate on Stock Return of Indofarma, Tbk Companies for the 2014-2018 period", which proves that the exchange rate has a positive and significant effect on stock returns [7].

### **The Effect of Inflation on Mining Sector Stock Returns on the Indonesia Stock Exchange in 2015-2019**

Inflation has a direct and significant negative effect on stock returns in the mining sector on the Indonesia Stock Exchange in 2015-2019 of -0.247. The negative effect of inflation on stock returns can be caused by a decrease in the purchasing power of individuals/companies due to an increase in the price of goods which has an impact on an increase in production costs. The increase in inflation causes a decrease in company profits which has an impact on the decline in company stock returns. This is a bad signal for investors. Investors usually tend to release stocks when the inflation rate increases. This means that if inflation increases, the company's stock returns will decrease. These results are in line with "The Effect of Inflation on Stock Returns in Property and Real Estate Companies Listed on the Indonesia Stock Exchange (Systematic Risk and Profitability as Mediation Variables)", which proves that inflation has a negative and significant effect on stock returns [8].

### **The Influence of SBI Interest Rates on Mining Sector Stock Returns on the Indonesia Stock Exchange in 2015-2019**

The SBI interest rate has a direct and significant negative effect on the mining sector stock return on the Indonesia Stock Exchange in 2015-2019 of -0.335. The negative effect of the SBI interest rate on stock returns means that if the SBI interest rate increases, the stock return will decrease, on the contrary if the SBI interest rate decreases, the stock return will increase. The increase in the SBI interest rate will encourage investors to invest their funds in the banking sector (money market) because it provides a higher return on investment, thereby reducing the level of stock sales which causes the company's profits to also decrease so that stock returns also decline. These results are in line with "Analysis of the Effect of Variants and Interest Rates on Stock Returns in the Study on IDX30 Companies", which proves that SBI interest rates have a negative and significant effect on stock returns [9].

### **The Effect of World Oil Prices on Mining Sector Stock Returns on the Indonesia Stock Exchange in 2015-2019**

World oil prices have a direct and significant negative effect on stock returns in the mining sector on the Indonesia Stock Exchange in 2015-2019 of -1,336. The negative effect of world oil prices on stock returns means that if world oil prices increase, stock returns will decrease, otherwise if world oil prices decline, stock returns will increase. The significant effect of world oil prices on stock returns means that the increase or decrease in world oil prices is a factor that affects conditions in the mining sector, especially the oil and gas sector. The increase in world oil prices also triggers inflation which can lead to negative investor sentiment. The increase in world oil prices will result in an increase in the price of goods needed for production, which will increase the production cost (cost) and reduce the company's profit. This has an impact on the decline in the company's stock return. The decline in world oil demand due to unstable economic growth will also have an impact on company profits, followed by a decrease in company stock returns. The results of this study are in line with "The Effect of Macroeconomic Variables, Gold Prices and World Oil Prices on the Composite Stock Price Index on the IDX for the 2009-2013 Period", which proves that world oil prices have a negative and significant effect on the JCI [10].

### **The Effect of the IDR/US\$ Exchange Rate on Mining Sector Stock Returns on the Indonesia Stock Exchange 2015-2019 with Profitability (ROA) as the Intervening Variable**

The exchange rate has a negative and indirect effect on mining sector stock returns on the Indonesia Stock Exchange in 2015-2019 with profitability (ROA) as the intervening variable of -0.002. This means that the depreciation of the IDR/US\$ exchange rate can increase stock returns, and increase company profits because the foreign exchange difference received due to exports can increase company profits. The results of this study are in line with the results of research conducted by (Lestari & Suaryana, 2020) with the title "The Effect of Exchange Rates on Stock Returns with Profitability as an Intervening Variable", which proves that the exchange rate has a negative effect on stock returns. Meanwhile, the insignificant effect of the exchange rate on stock returns can be caused by differences in the targets of each company, some relying on imports and others relying on exports. In addition, it can also be caused because long-term investors generally think that the impact of fluctuations in the rupiah exchange rate against the US Dollar is only temporary so that it

does not have a significant effect on stock returns. The results of this study are in line with "The Effect of Exchange Rates on Stock Prices After Initial Public Offering (IPO)", which proves that the exchange rate has no significant effect on stock returns [11].

#### **The Effect of Inflation on Mining Sector Stock Returns on the Indonesia Stock Exchange in 2015-2019 with Profitability (ROA) as an Intervening Variable**

Inflation has a positive and indirect effect on mining sector stock returns on the Indonesia Stock Exchange in 2015-2019 with profitability (ROA) as the intervening variable of 0.021. This is because in this research period the inflation rate is relatively low (lower-inflation) or creeping inflation, which is characterized by a low inflation rate, namely the price increase runs slowly with a relatively small percentage and over a long period of time so that it has no effect. significant or not so felt/influenced on the movement of shares and does not interfere with economic sustainability. In this case, it means that inflation has a positive impact which then causes the prices of mining goods to tend to rise so that the profits of mining sector companies also increase and investors get higher stock returns. In addition, these results indicate that inflation causes investors not to want to speculate or tend to wait for more stable inflation conditions, so that the risk of loss experienced by investors is not large.

This shows that currently many investors and traders are very enthusiastic about investing their funds in stocks and before inflation data is announced, market participants are usually able to predict it (analyze) so that once the data is announced, the effect will not be felt. The results of this study are in line with research conducted by (Akbar, 2020) with the title "The Effect of Inflation, Exchange Rates, and Economic Growth on Stock Returns in Mining Sector Companies Listed on the Indonesia Stock Exchange", which proves that inflation has a positive effect on stock returns in the sector. mines listed on the IDX. In addition, the results of this study are also in line with "The Influence of Interest Rates, Inflation, Exchange Rates, Earning Per Share, and Price Earning Ratios on Stock Returns (Case Study on Mining Companies listed on the Indonesia Stock Exchange for the period 2011-2015)", which proves that inflation has no significant effect on stock returns [12].

#### **The Effect of SBI Interest Rates on Mining Sector Stock Returns on the Indonesia Stock Exchange in 2015-2019 with Profitability (ROA) as Intervening Variable**

The SBI interest rate has a negative and significant indirect effect on stock returns in the mining sector on the Indonesia Stock Exchange in 2015-2019 with profitability (ROA) as the intervening variable of -0.036. An increase in the SBI interest rate will encourage investors to invest their funds or deposit them in a bank rather than investing in stocks because it provides a higher investment return. This resulted in a decrease in the sale of shares which caused the company's profit to decrease so that the stock return also decreased. In this case, the significant effect indicates that profitability (ROA) can be an intervening variable between SBI interest rates and stock returns. This result is in line with "Company Performance and BI Rate on Stock Return of State-Owned Banks", which proves that the SBI interest rate has a negative and significant effect on stock returns [13].

#### **The Effect of World Oil Prices on Mining Sector Stock Returns on the Indonesia Stock Exchange in 2015-2019 with Profitability (ROA) as Intervening Variable**

World oil prices have a positive and indirect effect on mining sector stock returns on the Indonesia Stock Exchange in 2015-2019 with profitability (ROA) as an intervening variable of 0.011. This is because the increase in world oil prices causes an increase in the price of mining products. The increase in the price of mining products can increase the company's profit. The increased profitability of the company causes the company's stock return to also increase. The results of this study are in line with "Oil Price and Stock Return: Evidence of Mining Companies in Indonesia", which proves that world oil prices have a positive effect on stock returns. World oil prices have no significant effect on stock returns, meaning that the increase or decrease in world oil prices is considered not to have much impact on stock returns [14].

This is because Indonesia is an oil-producing country and carries out exploration activities but Indonesia continues to import crude oil (crude) to support domestic energy needs (domestic demand). So that the increase in world oil prices does not have much positive effect on the Indonesian economy. The results of this study are in line with "Analysis of the Effect of World Oil Prices, Rupiah Exchange Rate, Inflation, and



SBI Interest Rates on the Composite Stock Price Index (JCI)", which proves that world oil prices have no significant effect on the JCI [15].

#### **The Effect of Profitability (ROA) on Mining Sector Stock Returns on the Indonesia Stock Exchange in 2015-2019**

Profitability (ROA) has a direct positive and significant effect on the mining sector stock return on the Indonesia Stock Exchange in 2015-2019 of 0.094. The positive effect of profitability (ROA) on stock returns means that if profitability (ROA) increases then stock returns will also increase, on the contrary if profitability (ROA) decreases, stock returns will decrease. High profitability (ROA) indicates that the company's performance is good or shows the higher the company's ability to generate profits (profit). High profitability (ROA) indicates that a company is efficient and optimal in utilizing its assets.

The significant effect of profitability (ROA) on stock returns means that the fluctuations in profitability (ROA) greatly affect stock returns. Profitability (ROA) becomes an attraction and greatly influences investor decisions in investing which can trigger an increase in stock prices and be followed by an increase in stock returns. The results of this study are in line with "Return on Assets, Return on Equity, and Earnings per Share Influence on Stock Returns", which proves that ROA has a positive and significant effect on Stock Return [16].

#### **IV. CONCLUSION**

Based on the results of research and data analysis on the Effect of Macroeconomic Factors (Exchange Rates, Inflation, SBI Interest Rates, World Oil Prices) on Stock Returns with Profitability as an Intervening Variable in Mining Sector Companies on the Indonesia Stock Exchange in 2015-2019, it can be concluded that: Results The research shows that the exchange rate has a direct positive and significant effect on stock returns in the mining sector on the Indonesia Stock Exchange in 2015-2019. The results of the study indicate that inflation has a direct and significant negative effect on stock returns in the mining sector on the Indonesia Stock Exchange in 2015-2019. The results showed that the SBI interest rate had a direct and significant negative effect on stock returns in the mining sector on the Indonesia Stock Exchange in 2015-2019. The results show that world oil prices have a direct and significant negative effect on stock returns in the mining sector on the Indonesia Stock Exchange in 2015-2019.

The results showed that the exchange rate had a negative and indirect effect on mining sector stock returns on the Indonesia Stock Exchange in 2015-2019 with profitability (ROA) as the intervening variable. The results show that inflation has a positive and indirect effect on mining sector stock returns on the Indonesia Stock Exchange in 2015-2019 with profitability (ROA) as the intervening variable. The results showed that the SBI interest rate had a negative and significant indirect effect on stock returns in the mining sector on the Indonesia Stock Exchange in 2015-2019 with profitability (ROA) as the intervening variable. The results show that world oil prices have a positive and indirect effect on mining sector stock returns on the Indonesia Stock Exchange in 2015-2019 with profitability (ROA) as the intervening variable. The results showed that profitability (ROA) had a direct positive and significant effect on stock returns in the mining sector on the Indonesia Stock Exchange in 2015-2019.

#### **REFERENCES**

- [1] Irham. (2012). *Manajemen Investasi*. Salemba Empat.
- [2] Putri, A. P., & Mesrawati. (2017). Pengaruh Analisis Teknikal terhadap Trend Pergerakan Harga Saham Perusahaan Subsektor Hotel dan Restoran. *Jurnal Ekonomi Dan Keuangan*, 3. <https://doi.org/10.24034/j25485024.y2019.v3.i3.4161>
- [3] Ong, E. (2016). *Technical Analysis for Mega Profit (Kedelapan)*. Gramedia Pustaka Utama.
- [4] Aminullah, Murwaningsari, E., Gunawan, J., & Mayangsari, S. (2018). The Effect of Macro Economic Variables on Stock Return of Companies That Listed in Stock Exchange: Empirical Evidence from Indonesia. *International Journal of Business and Management*, 14. <https://doi.org/10.5539/ijbm.v14n8p108>
- [5] Chandra, K. (2017). The Effect of Inflation Levels and Oil Prices on Stock Return Food and Beverage. *Business and Entrepreneurial Review*, 17.
- [6] Kurniasari, W., Wiratno, A., & Yusuf, M. (2018). Pengaruh Inflasi dan Suku Bunga terhadap Return Saham

- dengan Profitabilitas sebagai Variabel Intervening di Perbankan Yang Terdaftar di Bursa Efek Indonesia tahun 2013-2015. *Journal of Accounting Science*, 2, 67-90. <https://doi.org/10.21070/jas.v2i1.1216>
- [7] Septariani, D. (2020). Pengaruh Nilai Tukar Rupiah terhadap Return Saham Perusahaan Indofarma Tbk Periode 2014-2018. *Jurnal Sosio E-Kons*, 12, 221–229. <https://doi.org/10.30998/sosioekons.v12i3.7548>
- [8] Geriadi, M. A. D., & Wiksuana, I. G. B. (2017). Pengaruh Inflasi Terhadap Return Saham pada Perusahaan Properti dan Real Estate yang Terdaftar di Bursa Efek Indonesia (Risiko Sistematis dan Profitabilitas sebagai Variabel Mediasi). *E-Jurnal Ekonomi Dan Bisnis Universitas Udayana*, 3435–3462.
- [9] Wulandari, T. (2021). Analisis Pengaruh Varian dan Tingkat Suku Bunga Terhadap Return Saham Studi pada perusahaan IDX30 BEI. *Journal Management, Business, and Accounting*, 20, 235–247.
- [10] Gumilang, R. C., Hidayat, R. R., & NP, M. G. W. E. (2014). Pengaruh Variabel Makro Ekonomi, Harga Emas dan Harga Minyak Dunia terhadap Indeks Harga Saham Gabungan pada BEI Periode 2009-2013. *Jurnal Administrasi Bisnis (JAB)*, 14, 1–9.
- [11] Andriana, D. (2015). Pengaruh Nilai Tukar terhadap Harga Saham Setelah Initial Public Offering (IPO). *Jurnal Riset Akuntansi Dan Keuangan*, 3 (3), 761–767.
- [12] Solihatun. (2017). Pengaruh Suku Bunga, Inflasi, Nilai Tukar, Earning Per Share, dan Price Earning Ratio terhadap Return Saham (Studi Kasus pada Perusahaan Pertambangan yang terdaftar di Bursa Efek Indonesia periode 2011-2015). Universitas Negeri Semarang.
- [13] Sari, L., Mary, H., Elfiswandi, Zefriyenni, & Lusiana. (2021). Kinerja Perusahaan dan BI Rate terhadap Return Saham Bank BUMN. *Jurnal Ekonomi Manajemen Sistem Informasi*, 2, 544-555. <https://doi.org/10.31933/jemsi.v2i4>
- [14] Endri, Rinaldi, M., Arifian, D., Saing, B., & Aminudin. (2021). Oil Price and Stock Return: Evidence of Mining Companies in Indonesia. *International Journal of Energy Economics and Policy*, 11. <https://doi.org/10.32479/ijeep.10608>
- [15] Hanoeboen, B. R. (2017). Analisis Pengaruh Harga Minyak Dunia, Nilai Tukar Rupiah, Inflasi, dan Suku Bunga SBI terhadap Indeks Harga Saham Gabungan (IHSG). *Cita Ekonomika, Jurnal Ekonomi*, 11, 35–40.
- [16] Almira, N. P. A. K., & Wiagustini, N. L. P. (2020). Return on Asset, Return on Equity, and Earning per Share Berpengaruh terhadap Return Saham. *E-Jurnal Manajemen*, 9.