

DOI: <https://doi.org/10.31933/dijemss.v2i5>Received: 15<sup>th</sup> May 2021, Revised: 25<sup>th</sup> May 2021, Publish: 30<sup>th</sup> June 2021

## ANALYSIS RELATES TO THE IMPACT FROM MACROECONOMIC FACTORS TO BANKING STOCK RETURNS WHICH MEDIATED BY PROFITABILITY

Hedwigis Esti Riwayat<sup>1</sup>, Muhammad Affid Diena<sup>2</sup>

<sup>1</sup>) Perbanas Institute, Jakarta, Indonesia, [hedwigis.esti@perbanas.id](mailto:hedwigis.esti@perbanas.id)

<sup>2</sup>) Bank Mandiri, Jakarta, Indonesia, [aviddien@gmail.com](mailto:aviddien@gmail.com)

**Corresponding Author: Second Author**

**Abstract:** This research aims to analyze the impact which caused by macroeconomic factors to stock returns which mediated by profitability. This research used purposive sampling method with BUKU IV Banks who Listed on the Indonesia Stock Exchange as sample in this research period. The data was taken from the quarterly financial reports of the sample banks and Bank Indonesia. The analysis technique that used in this research are panel data regression and used path analysis to reveal the impact which caused by intervening variable. The results found that interest rates had no significant impact towards stock returns, while the inflation rate and the rupiah exchange rate had a direct significant impact on stock returns. Path analysis found that interest rates, inflation rates and Rupiah exchange rate had no significant affect on stock returns which indirectly mediated by profitability. This research results are very useful as an information for investors and stakeholders to determine good investment decisions in the banking sector.

**Keywords:** Interest Rate, Inflation Rate, Exchange Rate, Return on Assets, Profitability, Stock Return.

### INTRODUCTION

Investment is an funds for one or more assets owned and usually for a long period of time in the hope to earn profits in the future (Bitar, 2019). Entering the era of the industrial revolution 4.0, the investment is one of the important things in increasing the economic growth. The government always strives to create a conducive investment climate.

Taswan & Soliha in (Bitar, 2019) defines that investments could be made by individuals or business entities (including banking institutions) which have an excess funds. Investments could be made either in the money market or in the capital market or placed as credit to people in need. The capital market is a market for various long-term financial instruments that could be traded, both debt securities (bonds), equities (stocks), mutual funds, derivative instruments and other instruments. The capital market by means of funding for companies and other institutions (eg the government) and as a place for investing activities. Thus, the capital market are supporting those various facilities and infrastructure for buying and

selling activities and other related on it (PT Indonesia Stock Exchange, 2019). The capital market in Indonesia is organized by the Indonesia Stock Exchange (IDX).

Investors definitely expecting the profit (Return) from the investment made. There are two components of return from investment in the capital market, namely the profit from the gap between the purchase price and the selling price (capital gain) and the profit from the distribution of dividends. Stock returns mostly influenced by various factors, both internal and external on the company. Internal factors are factors which come from within the company, for example financial ratios, profitability ratios and the company's health level. External factors are those factors which come from the outside of the company, for example macroeconomic conditions and government policies. Analysis of these factors is necessary so the investors will gain the maximum return.

Almost all of the banks listed on the IDX are commercial banks. Commercial banks are The banks who operate their business as collectors of funds in the form of deposits, both demand deposits and time deposits and in the business of distributing funds they play as an distributors of short-term loans. Commercial banks could be said as an extension from the central bank, namely Bank Indonesia in implementing the monetary policy instruments such as interest rates to keeping and maintain the stability of the rupiah value, which is reflected in a low and stable inflation rate (Bank Indonesia, 2019).

Interest rates, inflation rates and the rupiah exchange rate are closely related to the function of banks and should affect to stock returns in the banking sector. Several research had been conducted to reveal the impact of interest rates, rupiah exchange rates and inflation rates to the various of stock sectors that listed on the IDX, either directly or indirectly. According to Kohar et al. (2018), interest rate sensitivity had a negative and significant affect on stock price volatility. This in line with the research from Kurniasari et al. (2018) which analyzes that interest rates had a negative affect either directly or indirectly through Return on Assets (ROA) on stock returns, as well as in the research from Halima et al. (2019) which stated if the interest rates had a negative and significant affect on abnormal stock returns. This is opposites to the research results from Saputra et al. (2018) which defined that interest rates had no affect on stock prices. The results from Maharditya et al. (2018); Yunita et al. (2018); Agustina & Budiono (2018); and Suriyani & Sudiarta (2018) described that interest rates had no affect on stock returns. While the research from Afifah et al. (2019) found that interest rates had no significant affect on stock returns either directly or indirectly through Return on Equity (ROE).

According to Kohar et al. (2018), inflation sensitivity has a negative and significant affect on stock price volatility. Kurniasari et al. (2018) stated that inflation has a direct or indirect negative affect on stock returns through ROA. Research Halima et al. (2019); and Hidayat et al. (2019) found that the inflation rate has a negative and significant affect on stock returns. The research from Maharditya et al. (2018); Agustina & Budiono (2018); and Suriyani & Sudiarta (2018) gave the different results, namely the inflation rate has no significant affect on stock returns. Afifah et al. (2019) described that the inflation rate had no significant affect on stock returns both directly and indirectly through ROE.

The results from Maharditya et al. (2018); Agustina & Budiono (2018); Suriyani & Sudiarta (2018) described that the rupiah exchange rate had a negative and significant affect on stock returns. In opposites to the results from Kohar et al. (2018) which defined that the sensitivity of the rupiah exchange rate has no significant affect on stock price volatility. Different results were also found by Saputra et al. (2018) and Afifah et al. (2019) which defined that the rupiah exchange rate has no affect on stock returns.

## LITERATURE REVIEW

Investment is an activity which carried out by investors to earn profits in the future. Tandelilin (2017) were conveyed that investment is a commitment to a number of funds or other resources which are carried out by this time, with the aim of obtaining a lots of benefits in the future. While Smart et al. (2017) described that investment as an asset in which a number of funds are placed with expect that it will provide positive income and/or increase its value. This profit, income, increase in value from an investment is so called Return.

Investors can choose various types of investments to get the expected return according to what its expected, The level of risk, liquidity and other criteria. Investment in the real sector, for example, through purchasing the land, property, shop houses, or commodities. Investments can also be made in the form of financial assets, such as deposits, stocks, bonds, mutual funds and other financial products. Each investment has different characteristics and criteria. Investments in the property sector are generally less liquid than investments in financial assets such as deposits and mutual funds. Financial assets are often chosen by investors because of their liquidity and ease of transactions and transfers, they can even be transacted in real time via computer or smartphone. In addition, some of financial assets can provide a greater return than investment in the property sector so the financial assets become one of the more desirable choices.

Investors definitely want to invest in financial assets which can provide large and stable returns. However, there will always be a trade off between the return and the risk of an investment. The greater the return expected by investors, the greater the risk of loss that need to be borne by investors.

Stock is one type of financial asset investment which are known by Indonesia people as it could provide a high return. Shares consist of common stock and preferred stock. The difference is the preferred stock has the right to distribute dividends on permanent basis and has precedence over common stock when the company is liquidated. However, the preferred stock is more difficult to trade and has the limited number in a company. Therefore, the common stock is better known by the publics. The term of stock in this research are refers to the notion of common stock.

Tandelilin (2017) described that common stock as a certificate which shows proof of an ownership of a company. As owners, the common shareholders of a company have proportional voting rights in various important company decisions, including approval of decisions at the General Meeting of Shareholders (GMS). Common stock is very attractive to investors because it promises high returns, especially in the long term compared to other financial assets such as bonds and government securities. Common stock are also protects investors' funds from inflation because over time their returns can exceed the inflation rate. In addition, common stock is also easy to trade with low transaction costs. Information about the price of common stock could be easily obtained from the news and mass media. Another advantage of common stock is the minimum price per unit is generally quite low. Unlike bonds which require a minimum of one million rupiah for each unit, common stock could be obtained at a price of fifty rupiah per share and each investor is free to buy how many shares he wants (Smart et al., 2017).

Various analyzes have been carried out by investors to maximize the stock returns and minimize risks, including technical analysis and fundamental analysis. Technical analysis is a research of market action, especially in terms of using charts to predict the future prices (Murphy, 1999). Fundamental analysis are examine all the relevant factors in influencing the prices to obtain their intrinsic value, including industry analysis, economic analysis and internal company analysis.

Economic analysis is one of the analyzes which investors need to do in their investment decisions. According to Tandelilin (2017) an economic analysis needs to be done because of the tendency of strong

relationship between what is happening in the macroeconomic environment and the performance of capital market. The capital market reflects to what happens in the macro economy because the value of an investment is determined by the expected cash flow and required rate of return on the investment, both factors are strongly influenced by the changes in macroeconomic environment. Thus, to estimate the cash flow, interest, or risk premium of a security, an economic analysis need to be done.

According to BI (2019), the interest rate is a fee which stated in a certain percentage in order to lends money for certain period of time and as an expenses of bank credit to customers (interest rate). The investment made depends on the interest rate to measure the cost of capital (cost of funds) of the investment. Investment could be said to be profitable if the return exceeds the cost of acquisition. If the interest rates increases, there will be fewer investments with returns that will exceed interest rates, that will reduce the amount or demand for investment (Mankiw, 2016).

Tandelilin (2017) were explained that the interest rate which is too high will affect the present value of the company's cash flows so the existing investment opportunities will no longer be attractive. High interest rates will also increase the cost of capital borne by the company. In addition, the high interest rates will also cause the return required by investors from an investment to increase. Thus, the higher the interest rate, the lower the level of demand for investment, including the investment in stocks. So when the demand for stocks decreases, the stock price will fall and resulting in a lower return.

Interest rates can be divided into nominal interest rates and real interest rates. Mankiw (2016) were explains that the nominal interest rate is the interest rate that need to be paid by investors to get money, while the real interest rate is the nominal interest rate that count the inflation rate. For example, if the nominal interest rate is 10 percent and the inflation rate is 3 percent, then the real interest rate is 7 percent.

According to BI (2019), the inflation is an economic condition which marked by a rapid increase in prices, resulting in a decrease in purchasing power. It is often followed by a decrease in the level of savings and/or investment due to increased public consumption and little for long-term savings. Inflation is related to the amount of money circulating in society. When the money supply in the community increases without being accompanied by an increase in the number of transactions (output or people's income), prices will rise so the purchasing power of money weakens. Thus, inflation is also related to interest rates. According to Mankiw (2016) based on quantity theory, an increase in the money supply by 1 (one) percent will increase the inflation by 1 (one) percent and according to the Fisher's equation an increase in inflation by 1 percent will increase nominal interest rates by 1 percent. This is called the Fisher Effect.

According to BI (2019), the exchange rate is the of one country's currency unit against another. The exchange rate is influenced by several factors, such as domestic interest rates, inflation rates and central bank intervention on the money market if needed so they are constantly changing.

Exchange rates can be divided into nominal exchange rates and real exchange rates (Mankiw, 2016). The nominal exchange rate is the relative price of currency between two countries. If the exchange rate between US dollars and rupiah is IDR 14,500 rupiah per dollar, meaning spending IDR 14,500 to get 1 US dollar. Tandelilin (2017) described that the strengthening of the rupiah exchange rate against foreign currencies will reduce the cost of importing raw materials for production and will reduce the prevailing interest rate thereby increasing investment. Conversely, when the rupiah exchange rate weakens, investors (especially foreign investors) will tend to invest in other countries or invest in stronger currencies due to the weak of purchasing power towards the rupiah in the international market.

There are many ways to measure the profitability of a company. This measurement allows the analyst to evaluate the company's profits in comparison to the level of sales, asset level or investment level of the owner. Brigham & Ehrhardt (2014) described that profitability is the end result of various company policies and decisions. Profitability ratios were explained that the combined effects of a company's liquidity, asset management and debt on its profits. According to Brigham and Ehrhardt, several types of ratios include Net Profit Margin, Basic Earning Power (BEP), Return on Total Assets, and Return on Common Equity. According to Riyadi (2006) the profitability ratio is a comparison of profit (after tax) with capital (core capital) or profit (before tax) with total assets owned by the bank with certain period. Measurement of profitability ratios which carried out by Riyadi using ROE and ROA.

Return on stock investment generally has two components, namely the return received when you have an investment (yield). For stocks, this return is in the form of dividends distributed by the company to shareholders. Another component is the change in the value of investments purchased by investors. For stocks, this return is in the form of capital gains (if the stock value has increased) or capital loss (if the stock value has decreased). Thus, the total return from the stock investment made is the sum of the yield (return from dividends) and capital gain/capital loss.

In addition to estimation returns, investors need to consider the level of risk in investing in stocks. Risk is the possible difference between the actual return received and the expected return. The greater the difference, the greater the risk of investing in a stock. According to Tandelilin (2017) several sources of risk include: 1) interest rate risk; 2) inflation rate risk; and 3) exchange rate risk.

Interest rates are closely related to the profitability of a company as an element of the cost of capital (Mankiw, 2016). An increase in interest rates means an increase in the cost of capital which will reduce the profitability of a company and conversely. Banking companies earned profits in the form of interest so the banks should get bigger profits when interest rates increase, especially banks with large core capital. However, an increase in interest rates will also cause people to reduce consumption and investors to reduce their investment, thereby reducing credit will ultimately reducing the bank profitability. Research conducted by Kurniasari et al. (2019) shows that the interest rates have an influence on stock returns with profitability as an intervening variable. Likewise, research by Zaman & Musdholifah (2018); Nidya & Mawardi (2018) which explained that interest rates have a negative affect on company profitability.

The inflation rate is related to the company's profitability. The increase in the inflation rate will make the price of raw materials rise so it will reduce the company profits (Tandelilin, 2017). An increase in the inflation rate means an increase in nominal interest rates and ultimately causes a decrease in the profitability of the company. Conversely, a decrease in the inflation rate means a decrease in nominal interest rates and will ultimately increase the company's profitability. According to Kurniasari et al. (2019), inflation affects the stock returns through profitability as an intervening variable. Zaman & Musdholifah (2018); Ali et al. (2018) found that inflation has an affect on company profitability. Tandelilin (2017) were explained that the strengthening of the rupiah exchange rate will reduce the prevailing interest rate. Research conducted by Nidya & Mawardi (2018); Ali et al. (2018); Setyaningsih et al. (2018) shows that the exchange rate has a significant affect on company profitability.

Changes in interest rates can affect the amount of the risk of an investment. Changes in interest rates will affect the stock prices in reverse, *ceteris paribus* (Tandelilin, 2017). This shows that interest rates should have a negative affect on stock returns meaning that if the interest rates increase, stock returns will decrease. Research results Kurniasari et al. (2019); Yunita et al. (2018); Halima et al. (2018);

Afifah et al. (2019); and Agustina & Budiono (2018) explained that interest rates have a negative and significant affect on prices or stock returns. Rising inflation will reduce the purchasing power of the invested rupiah. If the inflation increases, the investors usually demand an additional inflation premium to compensate for the decrease in purchasing power they experienced (Tandelilin, 2017). When the inflation is overvalued, there is a tendency for investors to look for investments with lower risk and higher returns than stocks. The decline in investor interest will make stock prices in the secondary market weaken due to loss of liquidity. Thus, the higher the inflation rate, the lower the stock return, which means that the inflation rate has a negative affect towards stock returns. Research results from Hidayat et al. (2019); Kohar et al. (2018); Kurniasari et al. (2018); Yunita et al. (2018); Halima et al. (2018) examined the inflation rate has a significant negative affect on stock prices or returns.

The Rupiah Exchange Rate is one of the variables that need to be considered because it can be another investment option for investors. When the rupiah exchange rate weakens, investors (especially foreign investors) will tend to invest in other countries or invest in instruments denominated in a stronger currency due to the weak purchasing power of the rupiah in the international market. Conversely, when the rupiah exchange rate strengthens, it will increase investment so that the company's stock return will tend to increase. The results of research conducted by Maharditya et al. (2018); Yunita et al. (2018); Agustina & Budiono (2018); Halima et al. (2018); Suriyani & Sudiartha (2018) also show that the exchange rate has a significant negative effect on prices or stock returns

Profitability is one of the assessment that used by investors to perform the fundamental analysis and maximize the return towards the investment made. According to Tandelilin (2017), profitability is one of the important indicators to assess the company's prospects in the future. The higher the profitability of the company, the stock return of the company would be increase. Halima et al. (2019) on her research shows that profitability with ROE variable has a positive and significant affect on stock prices. This in line by the research of Haryani & Priantinah (2018) which stated that ROA has a positive and significant affect on stock returns. Research Kurniasari et al. (2019) shows that interest rates affect the stock returns indirectly through company profitability as measured by ROA. Inflation rate affects the stock returns indirectly through company profitability as measured by ROA (Kurniasari et al., 2019). An increase in the inflation rate will make the price of raw materials rise so it will reduce the company profits. The increase or decrease in profitability will affect investors' decisions in making investments which will ultimately affect the company's stock return.

According to the theory and those previous research, the hypothesis that could be conveyed to answer the formulation of the problem in this research as follows:

- H<sub>1</sub>: Interest rates has a negative and significant affect on profitability.
- H<sub>2</sub>: The inflation rate has a negative and significant affect on profitability.
- H<sub>3</sub>: The rupiah exchange rate has a negative and significant affect on profitability.
- H<sub>4</sub>: Interest rates has a negative and significant affect on stock returns.
- H<sub>5</sub>: The inflation rate has a negative and significant affect on stock returns.
- H<sub>6</sub>: The rupiah exchange rate has a negative and significant affect on stock returns.
- H<sub>7</sub>: The company's profitability has a positive and significant affect on stock returns.
- H<sub>8</sub>: Interest rates has a negative and significant affect on stock returns which mediated by profitability.
- H<sub>9</sub>: Inflation rate has a negative and significant affect on stock returns which mediated by profitability.
- H<sub>10</sub>: The rupiah exchange rate has a negative and significant affect on stock returns which mediated by profitability.

## RESEARCH METHODS

This research type based on its purpose and were included in the type of hypothesis test which is this research aimed on examine those certain hypothesis to described the relations(correlation) between two or more variables or differences (comparison) of several sample groups. The research population are the stocks from the Book IV Bank category that listed on the IDX. The sampling technique used was purposive sampling method, which is taking samples on a consideration in order to obtain samples that according to predetermined criteria. The criteria of this research sample are Business Group Commercial Banks (BUKU 4) or banks that during the research period: 1) had a core capital of more than IDR 30 trillion; 2) had issued quarterly financial reports; 3) not delisting. And according to these criteria, the sample companies of this research are 7 (seven) banking companies, namely BCA Bank, Mandiri Bank, BRI Bank, BNI Bank, CIMB Niaga, Panin Bank and Danamon Bank.

The data used in this research was secondary data with quantitative method. Macroeconomic data was obtained from Bank Indonesia. ROA and Stock Return data are taken from banks. The data analysis technique for panel data types used a descriptive statistical analysis framework, determines the appropriate panel data estimation method then performs a classical assumption test. The panel data regression equation was carried out to prove the results and determine the affect of the independent variables on the dependent variable through the substructure equation 1 and substructure equation 2. This equation will be used to see how much change in the direct influence towards the independent variable will affect the dependent variable. The equation is formulated as follows:

$$\text{Substructure Equation 1: } Y_{1it} = \beta_{1.1}X_{1it} + \beta_{1.2}X_{2it} + \beta_{1.3}X_{3it} + \varepsilon_{1it}$$

$$\text{Substructure Equation 2: } Y_{2it} = \beta_{2.1}X_{1it} + \beta_{2.2}X_{2it} + \beta_{2.3}X_{3it} + \beta_{2.4}Y_{1it} + \varepsilon_{2it}$$

Information:

$Y_{1it}$  = ROA

$Y_{2it}$  = Stock Return

$X_{1it}$ ,  $X_{2it}$  and  $X_{3it}$  = Interest Rate, Inflation Rate and Rupiah Exchange Rate

$\beta_{1.1}$ ;  $\beta_{2.1}$  = Interest Rate Coefficient

$\beta_{1.2}$ ;  $\beta_{2.2}$  = Coefficient of Inflation Rate

$\beta_{1.3}$ ;  $\beta_{2.3}$  = Coefficient of Rupiah Exchange Rate

$\beta_{2.4}$  = ROA coefficient

$\varepsilon_{1it}$  &  $\varepsilon_{2it}$  = The impact from other factors outside the model

$i$  = Bank

$t$  = Year

## FINDINGS AND DISCUSSION

The data used in this research is panel data from 7 cross section units (banks) and 20 time series units (quarterly for 5 years). In the panel of data regression process, it is necessary to find out the right estimation model before interpreting the results of data analysis. Determination of this model is done by performing the Chow Test, Hausman Test and Lagrange Multiplier Test on Substructure Equation 1 and Substructure Equation 2.

According to the fixed effect estimation method, the test results was obtained the panel data regression in substructure equation 1 as follows:

**Table 1. The Regression Output Substructure Equation 1 through Fixed Effect**

Variable	Coefficient	Std. Error	t-Statistic	Prob.
SBI	0.006017	0.058000	0.103741	0.9175
INF	-0.022890	0.054939	-0.416641	0.6776
NTR	-0.000123	0.000101	-2.309057	0.0288

---

C      1.513123      1.417953      1.067118      0.2879

---

**Source: Data of Research**

The coefficient of determination is a coefficient that could find out how much the ability of all independent variables could explain the variance of the dependent variable. The value of Adjusted R Square from substructure equation 1 was 0.9230, which means that this research model has a contribution of 92.30 percent, while 7.70 percent was influenced by other variables. The impact from the independent variable on the dependent variable could be done by performing the F-Statistics test. The value of F-statistics was 2.673462 with Prob. (F-statistics) of 0.007012 < 0.05, which indicates that the substructure model 1 was feasible to explained that Return on Assets. The substructure equation 1 can be shaped as follows:

$$ROA = 0,006017SBI - 0,022890INF + 0,000123NTR + 0,9230$$

The hypothesis results from the analyzing of the influence of each independent variable towards its dependent variable of substructure equation 1 could be conveyed as follows:

The significance value from the impact of interest rates on ROA was 0.9175 > 0.05, then H<sub>1</sub> was rejected, which means that interest rates had no affect towards ROA. The impact of interest rates on ROA was 0.006017 or 0.6 percent with a positive direction. The impact of the Inflation Rate on Return on Assets with a significance value of 0.6776 > 0.05, then H<sub>2</sub> was rejected, meaning that the inflation rate has no affect on ROA. The amount of influence from the inflation rate on ROA was -0.022890 or 2.2 percent with a negative influence direction. The significance value from the affect of the rupiah exchange rate on Return on Assets was 0.0288 < 0.05, then H<sub>3</sub> was accepted, meaning that the rupiah exchange rate has a negative and significant affect on ROA. The amount from the affect of the rupiah exchange rate on ROA was -0.000123 or 0.01 percent with a negative influence direction.

### The Result of Substructure Equation 2

According to the common effect estimation method, the results of panel data regression test on substructure equation 2 could be conveyed as follows:

**Table 2. The regression Output of Substructure Equation 2 with Common Effect**

Variable	Coefficient	Std. Error	t-Statistic	Prob.
SBI	0.012343	0.011991	1.029337	0.3052
INF	0.049449	0.011364	-4.351209	0.0000
NTR	0.000104	2.11E-05	-4.937928	0.0000
ROA	0.011604	0.016824	0.689699	0.4916
C	1.581281	0.294246	5.374005	0.0000

**Source: Data of Research**

The value of Adjusted R Square from substructure equation 2 is 0.8007, which means that this research model has a contribution of 80.07 percent while 19.30 percent was influenced by other variables. The impact of the independent variable on the dependent variable could be seen from the F-statistics value of 9.312353 with Prob. (F-statistics) 0.000001 < 0.05. This shows that the substructure model 2 was feasible to explained the Stock Return.

The substructure equation 2 can be formed as follows:

$$RS = 0.012343SB - 0.049449INF - 0.000104NTR + 0.011604ROA + 0.8007$$

The hypothesis test results from the effect of each independent variable towards its dependent variable from substructure equation 2 are as follows:

The significance value from the effect of interest rates on RS was  $0.3052 > 0.05$ , then  $H_4$  was rejected, which means that interest rates have no impact on Stock Return. The amount of the impact from interest rates on stock returns is 0.012343 or 1.2 percent with a positive influence. The impact of the inflation rate on stock returns, the significance value is  $0.0000 < 0.05$ , then  $H_5$  which means that the inflation rate has a negative significant affect on stock returns. The significance value of the exchange rate on stock returns was  $0.0000 < 0.05$ , then  $H_6$  was accepted, meaning that the rupiah exchange rate affects stock returns. The amount of the influence from the rupiah exchange rate on stock returns was -0.0000104 or 0.01 percent with a negative influence direction. The significance value from the effect of ROA on stock returns was  $0.4916 > 0.05$ , then  $H_7$  is rejected, which means that the ROA has no affect towards stock returns.

### Path Analysis Results

According to the regression test result with path analysis, it could be explained that interest rates directly have an affect towards stock returns of -0.012343. Indirectly, the interest rates have an impact on Stock Return through ROA of 0.00006982, the total effect was 0.01241282. These results was indicated that the direct effect from interest rates on Stock Return was greater than the indirect effect so the ROA-mediated interest rate did not have a significant impact towards Stock Return, so  $H_8$  was rejected.

**Table 3 Recapitulation from the Regression Test Results**

Model	Path Coefficient (Beta)	Variable Significance Test (t-statistic)	Sig.	Adjusted R <sup>2</sup>	Model Test (F-statistic)
Substructure Equation 1: $Y_{1it} = \beta_{1.1}X_{1it} + \beta_{1.2}X_{2it} + \beta_{1.3}X_{3it} + \epsilon_{1it}$					
$\beta_{1.1}$	0,006017	0,103741	0,9175	0,097761	2,673462
$\beta_{1.2}$	-0,022890	-0,416641	0,6776		
$\beta_{1.3}$	0,000123	1,209057	0,2288		
Substructure Equation 2: $Y_{2it} = \beta_{2.1}X_{1it} + \beta_{2.2}X_{2it} + \beta_{2.3}X_{3it} + \beta_{2.4}Y_{1it} + \epsilon_{2it}$					
$\beta_{2.1}$	0,012343	1,029337	0,3052	0,193031	0,000001
$\beta_{2.2}$	-0,049449	-4,351209	0,0000		
$\beta_{2.3}$	-0,000104	-4,937928	0,0000		
$\beta_{2.4}$	0,011604	0,689699	0,4916		

**Source: Data of Research**

The inflation rate directly has an impact on Stock Return of -0.049449. Indirectly, the inflation rate has an impact on stock returns through ROA of -0.0002656, so the total impact was -0.0497146. These results was indicate that the direct effect from the inflation rate on stock returns was greater than the indirect one so the ROA-mediated inflation rate did not have a significant impact on stock returns, so  $H_9$  was rejected.

The rupiah exchange rate directly has an impact on stock returns with -0.000104. While indirectly the exchange rate has an impact on Stock Return through ROA of -0.000001427. Thus the total impact was -0.000102573. It shows that the direct effect of the exchange rate on stock returns was greater than the indirect one so the rupiah exchange rate which have been mediated by ROA did not have a significant impact on stock returns, so  $H_{10}$  was rejected.

### Discussion of Research Results

At the Commercial Bank Business Group (BUKU IV), the interest rate fluctuations could not affect the company's profitability. Meaning that the increase or decrease in the BI Rate does not affect the increase or decrease in bank income and profits. This happens because in BUKU IV Banks, the increase in the BI Rate does not cause the public to automatically reduce their credit to banks, especially if economic growth is quite significant and people's purchase power is high, so the bank income and profits are not affected by the increase or decrease in the BI Rate. Interest rates are only one of the external factors that affect its profitability. In a bank with a large of capital, there probably have many other factors which has further affect to its profitability, such as company performance, financial ratios and the level of public trust. These results were in line with the results from Putrama's research (2017); Ali et al. (2018); and Setyaningsih (2018). In contrast to the research by Zaman & Musdholifah (2018) stated that high interest rates will cause the negative impact on profitability. The increase or decrease in the inflation rate does not affect the bank's income and profit. This happens because the inflation rate is only one of the external factors that affect its profitability. In a bank with a large capital, there could be many other factors that further affect its profitability, such as company performance, financial ratios, and the level of public trust. In addition, a high inflation rate if balanced with good economic growth and high purchasing power of the people will not affect the investment decision of the public to save their funds in the Bank so that the income and profitability of the bank is not affected. The results of this research are in line with the results from Nidya & Mawardi (2018), which stated that inflation has an negative and insignificant affect on ROA. Fluctuations in the Rupiah Exchange Rate affect the increase or decrease in bank income and profits. This could happen because foreign exchange is part of the main income of BUKU IV banks so the strengthening or weakening of the rupiah against the dollar has a significant impact towards thei profitability. This is in line with the research from Nidya & Mawardi (2018) which defined that the profits of banks who does the business activities in foreign currencies will be determined by the rupiah exchange rate.

BI Rate fluctuations have no impact on the increase or decrease in Banking Stock Returns. This caused by the differences of investors' behavior, such as there are investors who avoid risk and some who accept risk. For risk-averse investors, an increase in interest rates means moving their investment to other safer investments, such as government bonds or time deposits, so the stock prices tend to decline. By seeing from this research, the investors tend to accept the risk that's why the increase or decrease in interest rates does not affect the stock returns. Beside that, it might be caused this research used a sample of banking companies. An increase in interest rates will cause investors who tend to accept risk to look for stocks with a minimum rate of return, such as stocks in banks, especially those with large capital so the bank stock returns are not affected. On the other hand, a decrease in interest rates does not automatically make investors move to other investments or stock sectors. These results are in accordance with the research from Saputra et al. (2018); Maharditya et al. (2018); Agustina & Budiono (2018); and Suriyani & Sudiarta (2018) who stated that there is no correlation between interest rates to stock returns.

The results showed that an increase in inflation rate causes a decrease in stock returns and conversely. An increase in inflation will reduce the capital gains which causes reduced profits for investors. When inflation is overvalued, there is a tendency for investors to seek investments with lower risk and higher returns. This probably why the inflation rate in this research period was overestimated by investors. This research are supported by the research results by Kohar et al. (2018); Kurniasari et al. (2018); Halima et al. (2019); and Hidayat et al (2019) who declared that the inflation has a negative affect on stock returns volatility

The strengthening of the Rupiah exchange rate will lead to a decrease in stock returns so it does conversely by the weakening of the rupiah exchange rate will cause an increase in stock returns. This is because investors tend to choose to save their money in dollars compared to investing their money in the stock market when the rupiah weakens against the dollar. These results are supported by the research from Maharditya et al. (2018) which explained that the rupiah exchange rate has a negative and significant effect on stock returns. This also in line with the research from Kurniasari et al. (2018); Agustina & Budiono (2018); and Sudiarta & Suriyani (2018).

The increase or decrease in ROA of banking companies does not affect the increase or decrease on its stock returns. Saputra et al (2018) stated that ROA has no affect towards stock prices. Its happen because ROA is the only one of the internal factors which could affecting the bank's stock returns. Investors may consider other financial ratios, particularly in banking companies, such as liquidity ratios and Non Performing Loan (NPL) ratios. Beside, although ROA could explain the company's current performance, but it could not fully explain the company's performance in the future so the changes in ROA won't significantly affect the stock returns. These results were support by the research from Kohar et al. (2018); Kurniasari et al. (2018); and Nidya & Mawardi (2018).

The test results show that interest rates have no negative and significant affect on stock returns through profitability. This explains by the increase or decrease in interest rates which is not affect the increase or decrease in the company's profitability which appear that there has no affect on the increase or decrease in the company's stock returns. Fluctuations in the inflation rate do not affect the increase or decrease in the company's profitability so then with the increase or decrease in the company's stock return. Fluctuations in the rupiah exchange rate will affect the increase or decrease in the company's profitability but then will not affect the increase or decrease in the company's stock return. This research results are in line with the research results of Afifah et al(2019) and Nidya & Mawardi (2018).

## CONCLUSION AND RECOMMENDATION

The increase or decrease in Interest Rates does not affect the increase or decrease in the profitability of banking companies. Customers do not necessarily reduce or increase their credit when interest rates rise or fall so that the profitability of banking companies is not affected. The increase or decrease in the Inflation Rate does not affect the increase or decrease in the company's profitability. If high inflation is balanced with good economic growth and high purchasing power of the people, it will not affect people's investment decisions to save their funds in the Bank so that the income and profitability of the bank is not affected. The strengthening or weakening of the rupiah exchange rate does not affect the increase or decrease in the company's profitability. This can happen because foreign exchange is not the main income of BUKU IV Banks so that the strengthening or weakening of the rupiah against the dollar has no significant effect on bank profitability. An increase or decrease in interest rates does not affect the increase or decrease in the company's stock return. An increase in interest rates will cause investors who tend to accept risk to look for stocks with minimal risk of return, such as stocks in banks, especially with large capital so that the return of banking shares is not affected. On the other hand, a decrease in interest rates does not automatically make investors move to other investments or stock sectors.

An increase in the inflation rate will cause a decrease in stock returns and conversely. The decrease in the inflation rate will cause an increase in stock returns. When inflation is overvalued, there is a tendency for investors to look for investments with lower risk and higher returns than stocks. This could

mean that the inflation rate in the study period was overvalued by investors. The strengthening of the rupiah exchange rate will cause a decrease in stock returns and conversely the weakening of the rupiah exchange rate will cause an increase in stock returns. Investors tend to choose to save their money in dollars compared to investing their money in the stock market when the rupiah weakens against the dollar. The increase or decrease in the company's profitability does not affect the increase or decrease in Stock Return. Profitability which represented by ROA variable did not fully describe the company's performance in the future so that changes in ROA do not significantly affect stock returns.

Fluctuations in interest rates did not affect the increase or decrease in the company's profitability which has no impact on the increase or decrease in the company's stock return. The up and down of the inflation rate does not affect the increase or decrease in the company's profitability which then had not affect in the increasing or decreasing of the company's stock return. Profitability is unable to mediate the impact from fluctuations in the rupiah exchange rate which did not affect to the increase or decrease in the company's profitability which then has no effect on the increase or decrease in the company's stock returns.

Banking companies, especially BUKU IV Banks need to be more attentive towards its internal factors and other external factors outside the interest rates, inflation rates and the rupiah exchange rate which have an impact towards their profitability. Stock market investors who are interested in financial and banking sectors, especially those who will invest in BUKU IV Bank's stocks could be more attentive towards inflation rate and the rupiah exchange rate which had directly impact towards the company's stock returns without having attention towards the company's profitability.

## BIBLIOGRAPHY

- Afifah, N., Fathoni, A., & Amboningtyas, D. 2018. *"The Influence of Internal and Macro-Economic Factors on the Stocks Return with Stock Beta as the Intervening Variable (Case Study on Property, Real Estate, and Building Construction Companies Listed on Indonesia Stock Exchange for the Period of 2012-2016)"*. Bilancia: Jurnal Ilmiah Akuntansi. Vol. 2 (1).
- Agustina, L. D., & Budiono. 2018. *"Pengaruh Indikator Makro Ekonomi terhadap Return Indeks Saham Sektor Keuangan di Bursa Efek Indonesia periode 2011-2015"*. Media Mahardhika. Vol. 16 (2), pp: 158-173.
- Ali, Q., Maamor, S., Yaacob, H., & Gill, M. U. T. 2018. *"Impact of Macroeconomic Variables on Islamic Banks Profitability"*. Journal of Accounting and Applied Business Research. Vol. 1 (2), pp: 1-16.
- Bank Indonesia. 2019. *Transmisi Kebijakan Moneter*. <https://www.bi.go.id/id/fungsi-utama/moneter/default.aspx>.
- Bitar. 2019. *Investasi Adalah - Pengertian, Fungsi, Tujuan, Jenis, Manfaat, Faktor, Bentuk, Resiko, Para Ahli*. Gurupendidikan.com. <https://www.gurupendidikan.co.id/investasi-adalah/>.
- Brigham, E. F., & Ehrhardt, M. C. 2014. *Financial Management: Theory and Practice* (14th ed.). Mason: South-Western Cengage Learning.
- Bursa Efek Indonesia. 2019. *Pengantar Pasar Modal*. <https://idx.co.id/investor/belajar-pasar-modal/>.
- Ferdinand, A. 2014. *Metode Penelitian Manajemen: Pedoman Penelitian untuk Penulisan Skripsi, Tesis, dan Disertasi Ilmu Manajemen*. Semarang: Badan Penerbit Universitas Diponegoro.
- Halima, J., Amin, M., & Mawardi, M. C. 2019. *"Analisis Pengaruh Faktor Fundamental Perusahaan dan Kondisi Makro Ekonomi terhadap Abnormal Return Perusahaan Industri Pertambangan di BEI (Bursa Efek Indonesia)"*. Jurnal Ilmiah Riset Akuntansi Fakultas Ekonomi dan Bisnis Universtias Islam Malang. Vol. 8 (10), pp: 68-81.

- Haryani, S., & Priantinah, D. 2018. "Pengaruh Inflasi, Nilai Tukar Rupiah/Dolar AS, Tingkat Suku Bunga BI, DER, ROA, CR dan NPM terhadap Return Saham". *Jurnal Nominal*. Vol. 7 (2), pp: 106-124.
- Hidayat, A. K., Firdaus, M., & Sanim, B. 2019. "Pengaruh Kapitalisasi Pasar Saham dan Variabel Makroekonomi terhadap Indeks Harga Saham Gabungan di Bursa Efek Indonesia". *Jurnal Aplikasi Manajemen dan Bisnis*. Vol. 5 (2), pp: 332-345.
- Kohar, A., Ahmar, N., & Suratno. 2018. "Sensitivitas Faktor Ekonomi Makro dan Mikro dalam Memprediksi Volatilitas Harga Saham Perusahaan Sektor Industri Food & Beverages". *Jurnal Ilmiah Akuntansi Fakultas Ekonomi Universitas Pakuan*. Vpl. 4 (1), pp: 85-100. <https://doi.org/10.34204/jiafe.v4i1.1080>
- 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". *Jurnal of Accounting Science Universitas Muhammadiyah Sidoarjo*. Vol. 2 (1), pp: 67-90.
- Maharditya, M. A., Layyinaturobaniyah, & Anwar, M. 2018. "Implication of Macroeconomic Factors to Stock Returns of Indonesian Property and Real Estate Companies". *Jurnal Dinamika Manajemen*. Vol. 9 (1), pp: 100-113.
- Mankiw, N. G. 2016. *Macroeconomics* (9th ed.). New York, NY: Worth Publishers.
- Murphy, J. J. 1999. *Technical Analysis of the Financial Markets*. New York: New York Institute of Finance.
- News from Bisnis.com. 2019, 6<sup>th</sup> May. *Saham Emiten Perbankan Raup Nilai Perdagangan Terbesar, 29 April-3 Mei*. Bisnis.com. <https://market.bisnis.com/read/20190506/7/918887/saham-emiten-perbankan-raup-nilai-perdagangan-terbesar-29-april-3-mei>.
- News from Kemenperin.go.id. 2019. *Pemerintah Siapkan Berbagai Kebijakan Tarik Investasi Manufaktur*. Kementerian Perindustrian Republik Indonesia. [kemenperin.go.id. https://kemenperin.go.id/artikel/20275/Pemerintah-Siapkan-Berbagai-Kebijakan-Tarik-Investasi-Manufaktur](https://kemenperin.go.id/artikel/20275/Pemerintah-Siapkan-Berbagai-Kebijakan-Tarik-Investasi-Manufaktur).
- Nidya, A. T., & Mawardi, I. 2018. "Analisis Jalur Faktor Makroekonomi terhadap Return Saham Syariah". *Jurnal Ekonomi Syariah Teori dan Terapan*. Vol. 5 (10), pp: 877-891.
- Putrama, A. 2017. "Pengaruh Variabel Makroekonomi terhadap Profitabilitas Bank Non Devisa di Indonesia Periode 2012-2016". *Jurnal Ilmu Manajemen*. Vol. 5 (2), pp: 1-8.
- Riyadi, S. 2006. *Banking Assets and Liability Management*. Jakarta: Lembaga Penerbit Fakultas Ekonomi Universitas Indonesia.
- Saputra, I., Veny, & Mayangsari, S. 2018. "Pengaruh Rasio Keuangan, Aksi Korporasi dan Faktor Fundamental Ekonomi Makro terhadap Harga Saham". *Jurnal Magister Akuntansi Trisakti*. Vol. 5 (1), pp: 89-114.
- Setyaningsih, C. A., Sriwidodo, U., & Utami, S.S. 2018. "Analisis Pengaruh Suku Bunga, Inflasi, dan Nilai Tukar Rupiah terhadap Profitabilitas Bank Umum Swasta Nasional di Bursa Efek Indonesia". *Jurnal Ekonomi dan Kewirausahaan*. Vol. 18 (2), pp: 323-331.
- Smart, S. B., Gitman, L. J., & Joehnk, M., D. 2017. *Fundamentals of Investing* (13th ed.). Harlow: Pearson Education Limited.
- Suriyani, N. K., & Sudiarta, G., M. 2018. "Pengaruh Tingkat Suku Bunga, Inflasi dan Nilai Tukar terhadap Return Saham di Bursa Efek Indonesia". *E-Jurnal Manajemen Unud*. Vol. 7 (6), pp: 3172-3200.
- Tandelilin, E. 2017. *Pasar Modal Manajemen Portofolio dan Investasi*, G. Sudibyo (Ed.). Yogyakarta: PT Kanisius. Diperoleh dari aplikasi iPusnas.
- Yunita, R., Efni, Y., & Kamallah. 2018. "The Influence of Internal and Macro-Economic Factors on the Stocks Return with Stock Beta as the Intervening Variable (Case Study on Property, Real Estate, and Building Construction Companies Listed on Indonesia Stock Exchange for the Period of 2012-2016)". *Bilancia: Jurnal Ilmiah Akuntansi*. Vol. 2 (1), pp: 44-58.

Zaman, C. O., & Musdholifah. 2018. "*Pengaruh Faktor Internal, Makroekonomi, dan Konsentrasi Pangsa Pasar terhadap Profitabilitas Bank Umum Konvensional di Indonesia Periode 2012-2016*". Jurnal Ilmu Manajemen. Vol. 6 (3), pp: 213-226.