

Inflation, Rupiah Exchange Rates, And Interest Rates On The Financial Performance Of State-Owned Banks For 2013-2022 Period

Nur Iqbal Justiro¹, Zulfa Irawati²

Faculty of Economics and Business, Muhammadiyah University of Surakarta^{1,2}

Corresponding Author: Nur Iqbal Justiro (B100200107@student.ums.ac.id)

ARTICLE INFO

Date of entry:
7 November 2023
Revision Date:
20 December 2023
Date Received:
28 December 2023

ABSTRACT

This study's overarching goal is to examine the impact of interest rates, inflation, and the value of the rupiah on the bottom line of state-owned banks from 2013 to 2022. One or more types of banking services are currently required by almost every sector in Indonesia that engages with monetary transactions. The macroeconomic circumstances have an effect on the rules that govern Bank Indonesia, and these regulations are applicable to all banks in Indonesia, which means that they have an effect on the processes that banks use to conduct their business. This research makes use of a quantitative technique, and it does so by collecting secondary data from Indonesian banks that are controlled by the state. In order to conduct the analysis of the data for this research, the approach of multiple linear regression was used. On the basis of the conclusions of this research, it seems that the ROA indicator is mostly unaffected by factors like as interest rates, inflation, and the currency rate of the Rupiah. When it comes to the calculation of the LDR indicator, the rates of inflation and interest, as well as the exchange rate of the Rupiah, all play a part. There exists a relationship between the CAR indicator and the rate at which the Rupiah is being exchanged. The CAR indicator, on the other hand, is not impacted by inflation in any way. At the same time, inflation, the rate of the Rupiah currency, and interest rates all have an impact on the functioning of the financial system. ROA, LDR, and CAR are the metrics that are used to quantify these characteristics. These metrics stand for capital adequacy, liquidity, and profitability in regard to one another.

Keywords: Financial Performance, Inflation, Interest Rate, Rupiah Exchange Rate, State-Owned Bank.



Cite this as: Justiro, N. I., & Irawati, Z. (2023). Inflation, Rupiah Exchange Rates, And Interest Rates On The Financial Performance Of State-Owned Banks For 2013-2022 Period. *Jurnal Ilmu Manajemen Advantage*, 7(2), 223-237. <https://doi.org/10.30741/adv.v7i2.1181>

INTRODUCTION

Nowadays, banking plays an important role in the economy in Indonesia. Almost all sectors operating in Indonesia Services provided by banks are essential for dealing with concerns connected to money. As a consequence of this, we will continue to be dependent on the banking system in all of our monetary transactions, whether we are individuals or enterprises. According to Kasmir

(2002), there are many who believe that banks represent the "soul" of an economy since they are responsible for things like creating and spending money in order to improve the quality of life for everyone. In order for the financial system of any nation to operate properly, their labour is absolutely necessary. The macroeconomic circumstances in Indonesia have an effect on the operations of banks in the country, which in turn have an effect on the regulations that are published by Indonesian banks. These regulations, in turn, are applicable throughout the whole country of Indonesia to all banks.

The Indonesian BUMN Bank is a significant role in the economy of the nation, and it is one of the state-owned banks in Indonesia. There are a number of Indonesian financial organisations that have been granted the status of State-Owned Enterprise (BUMN), including Mandiri Bank, BRI Bank Rakyat Indonesia, BNI Bank Negara Indonesia, and BTN Bank. The criteria that determine a bank's financial success are the same for this state-owned bank as they are for any other bank. Existing variables include things like capital structure, business size, total asset turnover, and economic events like the COVID-19 pandemic. All of these things are possible factors. Additionally, the value of the Rupiah in comparison to other currencies, interest rates, and inflation, which is defined as "a general trend of rising prices over a specified time period," are all factors that have the potential to influence the outcomes of financial transactions.

Financial performance is an analysis carried out to see the extent to which the company has implemented financial implementation rules properly and correctly (Irham, 2014). Performance can be interpreted as the ability of a person or group to achieve predetermined goals, and can be measured through various indicators such as productivity, efficiency, effectiveness and quality (Sunyoto, 2021). Finance is a very important aspect in company life which is related to the management of company funds and assets, as well as financial planning and decision making (Suwarno, 2021). Financial performance can provide an overview of a company's financial position over a certain period of time, in this case, raising or distributing capital, and can often be measured by metrics such as liquidity, profitability, and capital (A. D. Cahya et al., 2021). Financial performance objectives include being able to see the level of success in a company's financial management, especially in liquid situations, and the level of capital adequacy and company profitability that can be achieved in the current and previous quarters (Azhar Cholil, 2021). Financial performance is an important factor and must be considered because financial performance is used as an indicator for investor decision making. This financial performance is measured by Profitability (ROA), Liquidity (LDR), and Capital Adequacy (CAR).

The profitability ratio is a metric that may be used to evaluate the possibility for a company to generate a profit. Through the use of this ratio, one can also evaluate the effectiveness of the leadership of an organisation. It is shown by the money that is flowing in from sales and investments. It is possible to illustrate the effectiveness of the company by using this ratio (Kasmir, 2019). According to Samsul (2015), a higher Return on Assets (ROA) shows that a firm is performing well financially and is able to create net profits from its assets. This is the case when the amount of ROA is higher. A Calculation of ROA (Kasmir, 2019)

$$\text{Return on Asset} = (\text{Net Income} : \text{Total Assets}) \times 100\%$$

It is possible to determine whether or not a corporation is able to meet its immediate financial obligations by calculating the liquidity ratio. The liquidity ratio also serves to indicate how well a company is able to pay its bills when they are due, regardless of whether those bills are owed to third parties (business entity liquidity) or to workers (company liquidity) (Kasmir, 2019). That is another thing that the liquidity ratio accomplishes. Eleven hundred percent is the maximum loan-to-deposit ratio that the government will permit. A higher Loan to Deposit Ratio (LDR) shows that a bigger proportion of the business's capital is being invested into credit. This, in turn, suggests that interest income is rising, which, in turn, indicates that the company is doing better financially (Citra

Dewi et al., 2015). Taking into consideration the information provided in Bank Indonesia Circular Letter No. 6/23/DPNP 2004, the following is the computation for the Load to Deposit Ratio (LDR):

$$\text{LDR} = \text{Amount of Credit Provided} / \text{Third party funds} \times 100\%$$

According to Kasmir (2016), the capital adequacy of a corporation may be defined as the ratio of its capital to its assets, with this ratio being adjusted for risk and in accordance with regulatory requirements. According to Dedawijaya (2009), the Capital Adequacy Ratio (CAR) is a ratio that illustrates the total quantity of assets that are owned by a financial institution. Taking into consideration the potential for the bank to incur losses is the objective of this CAR ratio, which was developed for that reason. According to Suratminingsih et al. (2022), financial institutions such as banks that have higher Capital Adequacy Ratios (CARs) are better equipped to utilize their own capital to absorb the risks that are connected with their productive assets. Formula for the CAR formula (Kasmir, 2019) is

$$\text{CAR} = \text{Capital} / \text{RWA (Risk Weighted Assets)} \times 100\%$$

As stated by Bank Indonesia (2023), inflation takes place when there is a broad and constant increase in prices. The most frequent causes of inflation include an increase in the Consumer Price Index (CPI), higher costs for vital items, increased demand, and inadequate production and distribution of commodities. Inflation may be ascribed to a variety of different occurrences, the most prevalent of which are the ones mentioned. As a result of the 2019 COVID-19 epidemic, inflation in Indonesia rose to unprecedented levels. Each and every nation was impacted by the epidemic. Bank Indonesia was forced to increase interest rates as a matter of monetary policy in order to accomplish the goal of reducing the rate of inflation. This was done since the implications of this inflation on the banking sector were significant. Inflation, which is defined as a consistent and prolonged increase in prices that eats away at the purchasing power of particular currencies, causes a reduction in the purchasing power of the general people. Inflation is a consequence of inflation. Inflation is a condition in which the macroeconomic prospects of a nation are uncertain owing to a broad and sustained increase in the price of goods and services (Anwar, 2018). The name "inflation" refers to this situation. It is possible that people's purchasing power will decrease as a result of rising prices brought on by inflation (Perdana et al., 2020). The phenomenon known as inflation is described by Wiriani and Mukarramah (2020) as the tendency of prices of goods and services to increase in a consistent manner over a certain period of time. According to Murti and Syahria (2022), a loss in purchasing power experienced as a result of inflation has a domino impact on profitability and, therefore, on the quality of profits. As inflation increases, the purchasing power of a nation's currency decreases. This is due to the fact that citizens are more prone to save their money in expectation of rising costs. As a consequence of this, the value of the currency decreases in contrast to the worth of other currencies. Using the consumer price index as a measurement of inflation is a common practice.

The following is the formula for calculating average annual inflation (Putong, 2013):

$$\text{Inf} = (\text{IHK}_n - \text{IHK}_0) / \text{IHK}_0 \times 100\%$$

The value of one rupiah in respect to other currencies is referred to as the Rupiah Exchange Rate. This rate is established by the Central Bank of Indonesia. Nominal and real currency exchange rates are the two categories that make up currency exchange rates. There are two different kinds of exchange rates: the nominal rate, which indicates the value of one currency in comparison to another, and the real rate, which indicates the value of the goods and services produced in one nation in comparison to those produced in another nations. If the rupiah maintains its strength, this means that it is doing well in the money market. As a result of rising inflation, the value of the rupiah decreases in comparison to other currencies, which in turn has an effect on the rates at which currencies are exchanged. The rate at which one currency is valued in reference to another currency is referred to as the exchange rate. There are two primary categories that exchange rates fall into, and those are

nominal exchange rates and real exchange rates. A nominal exchange rate is one method that may be used to evaluate the worth of one currency in relation to another. The actual exchange rate, on the other hand, is the differential in purchasing power that exists between two countries while they are trading goods (Larasati & Amri, 2017). The exchange rate is the value that occurs in the foreign exchange market as a consequence of the equilibrium between the supply and demand of foreign currency, measured or calculated against the currency of that nation (Effendie, 2017). This value is referred to as the exchange rate. A rise in the value of the rupiah in comparison to other currencies is the consequence of an increase in the exchange rate of the rupiah. This has occurred for a number of reasons, including a decrease in inflation, an increase in demand for the rupiah, an increase in the number of investors, and an increase in the value of exports. Through the application of the formula to the data that is provided, the intermediate exchange rate may be calculated. (Ekananda, 2014):

$$\text{Middle Rate} = (K_b + K_j) / 2$$

It is often understood that interest rates represent "the cost of borrowing money" for investments. It has been shown that the interest rate has an effect on an individual's likelihood of saving money or investing it (Boediono, 2014). The reference interest rate must be declared by other financial institutions, and they must adhere to it. By using this monetary technique, it is possible to exercise control over the money supply, which in turn allows for a reduction in inflation. There is a need for a change in the manner in which the Bank of Indonesia (BI) rate policy is implemented in order to address the present inflation environment in Indonesia. Following the implementation of increased interest rates by the Bank of Indonesia in reaction to the growing inflation rate, there will be a reduction in the amount of money that is in circulation. In the event that the Indonesian economy experiences a decline, the Bank of Indonesia will also reduce the interest rates that are now in place. The Bank of Indonesia is responsible for announcing and determining interest rates as part of its monetary policy. At their monthly meeting, the board of governors will make the announcement on the interest rate. The actions that banks engage in on the money market will make use of this rate. According to Husnan (2015), one of the ways in which the government conducts monetary policy is via the SBI interest rate, which it establishes in order to manage the amount of money in circulation. According to Siamat (2014), the interest rates are a reflection of the viewpoint that Bank Indonesia has publicly declared about monetary policy policies. When it comes to investments, the expense is the interest rate. The interest rate is one of the factors that might impact a person's choice on whether or not to save money or invest (Boediono, 2014). When interest rates rise, investors are encouraged to invest their money and exchange it for the currency of the nation. This results in an increase in the demand for the currency of the country. The consequence of this is that the exchange rate would go up. Based on the findings of Utami and Rahayu (2003), it is possible to calculate an annual percentage rate by averaging the interest rates that are paid each month. The following is a list of the possible measuring indicators that may be developed in order to get the interest rate:

$$\bar{X}_i = \frac{i_1 + i_2 + i_3 + \dots + i_{12}}{12} \times 100\%$$

From the explanation above, it is found the influence of inflation, the rupiah exchange rate, and interest rates on financial performance. The following is a table of profitability (ROA), liquidity (LDR) and capital adequacy (CAR) data from the financial reports of state-owned banks in Indonesia for 2013-2022.

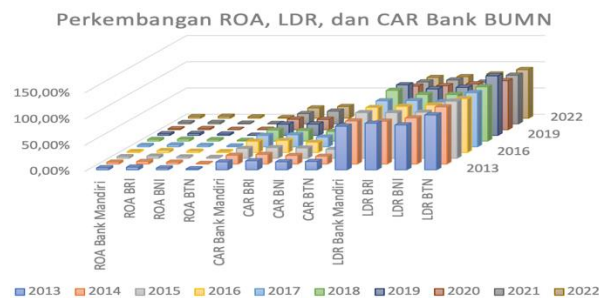


Figure 1. Profitability, liquidity and capital adequacy of BUMN Banks 2013-2022

Source: secondary data is processed

The fact that the return on assets (ROA) for the years 2013–2022 is positive makes it abundantly evident that BUMN Banks have a really high value. The LDR Ratio of BUMN Banks went through a period of fluctuation between the years 2013 and 2022, with Bank Tabungan Negara Tbk holding the highest current level. During the period of 2013–2022, the CAR Ratio of BUMN Banks was more than the minimum requirement of 4% that was mandated by Bank Indonesia. BUMN Banks are deemed to be in good health and with sufficient bank guarantees to meet the risks that are associated with their activity. In spite of the fact that they have solid financial ratios, state-owned banks had a decline from 2019 to 2021, followed by an increase in 2022. The pandemic caused by the COVID-19 virus was the single most significant event that occurred in 2019 and had a detrimental effect on the economy.

The research conducted by B. S. Cahya in 2015 discovered that the rate of return on assets (ROA) is considerably and favorably influenced by inflation, interest rates, and currency rates. An investigation that was carried out in 2017 by Mufidhoh and colleagues discovered that ROA was unaffected by factors such as inflation, interest rates, or currency exchange rates. A study conducted by Cinyawardani in 2016 discovered that the rates of interest, inflation, and currency all had a substantial and favorable impact on money supply. During the same time period, Winarsih (2015) said that the interest rate and the currency rate had a negative and considerable impact on the LDR. According to the findings of the research that Oktoviana and Mulawarman conducted in 2021, macroeconomic factors do not have a substantial influence on CAR. At the same time, the research conducted by Sorongan in 2020 discovered that inflation had a major influence on CAR.

Based on this background, the author is interested in conducting research with the title "The Effect of Inflation, Rupiah Exchange Rates, and Interest Rates on Financial Performance (Study of State-Owned Banks for the 2013-2022 Period)"

METHODS

There is a quantitative method that is used in this research. It is secondary data that serves as the foundation for this investigation. This research will gather information from January 2021 through December 2022 utilizing data obtained from the websites of the following Indonesian financial institutions: Bank Mandiri, Bank Negara Indonesia, Bank Rakyat Indonesia, Bank Indonesia, and Bank Tabungan Negara. The information will be collected from Indonesian financial institutions. This research involves the use of time series data as well as financial reports from banks that are under the authority of the state. The financial performance of state-owned banks was analyzed using multiple linear regression beginning in 2013 and continuing through 2022. The purpose of this research was to determine whether or not inflation, the Rupiah exchange rate, and interest rates had any influence at all. In the context of multiple linear regression analysis, it is considered ideal to meet the BLUE (Best Linear Unbiased Estimator) criteria, which include the Normality Test, the Autocorrelation Test, the Multicollinearity Test, and the Heteroscedasticity Test. When doing a hypothesis test, the t test was used to assess the partial impact, and the F test was utilized to determine

the simultaneous effect. Both of these tests were utilized. Last but not least, the R2 test is used to evaluate how well the model accounts for the observed variation in the variable that is being determined. According to Sugiyono (2018), the term "population" refers to a wide category that encompasses all of the components or individuals that researchers have chosen to investigate due to the presence of similar characteristics. Between the years 2013 and 2022, the population of this research is comprised of BUMN Banks. This research made use of a data set that was compiled from the financial reports of five major Indonesian banks: Bank Mandiri, Bank Negara Indonesia, Bank Rakyat Indonesia, Bank Indonesia, and Bank Tabungan Negara. The data set covered a period of 10 years, from 2013 to 2022. In terms of both size and composition, the sample is said to be typical of the population, as stated by Sugiyono (2018). For the purpose of this research, samples were collected via the use of saturated sampling, which is a method in which the whole population is utilized as a sample due to the tiny population in order to reduce the possibility of making errors. One of the factors that are being studied is the dependent variable, which in this instance is the financial performance. In order to evaluate the level of financial success achieved, this research makes use of annual report measures such as ROA, LDR, and CAR. Three factors that are considered independent are the interest rate, the exchange rate for the rupiah, and the inflation rate. In the course of this investigation, the average annual inflation rate is given as a percentage measure. According to the average annual rate of exchange, the value of one rupiah in relation to one dollar in the United States is decided annually. For the purpose of this study, the annual interest rate is used as the interest rate. The technique of data collecting for this study is based on the research equipment found in libraries. The foundation of library research is comprised of several theories that may be found in a wide range of literature that are related to research objectives. In the format of financial reports, the data that was obtained is presented. The official website of the PT is used in order to carry out the function of data collecting for the documentation method. PT. Bank Mandiri Tbk., PT. Bank Rakyat Indonesia (Persero) Tbk., PT. Bank Negara Indonesia (Persero) Tbk., PT. Bank Tabungan Negara (Persero) Tbk., and Bank Indonesia are some examples of publications, along with academic works.

RESULTS AND DISCUSSION

The purpose of this research was to conduct an instrument test that is a typical assumption test in order to get analytical results that could be used as a reference for obtaining data for further analysis. The degree to which an organization's profitability, liquidity, and capital adequacy are satisfied is the dependent variable in this research. Financial performance is determined as the degree to which an organization is able to be profitable. For the purpose of this research, financial performance measures have been extracted from the annual reports of state-owned banks. Inflation, interest rates, and the exchange rate of the rupiah are the variables that represent the independent variables. In the course of this investigation, the average annual inflation rate is given as a percentage measure. The Rupiah exchange rate that was selected is the rate that corresponds to the middle of the current year's Rupiah/USD exchange rate. On the basis of the usual annual BI rate, the interest rates in this research have been calculated.

In SPSS version 23, the results of the classical assumption test are calculated by assessing the normality test to determine whether or not the data follows a normal distribution. This non-parametric test, known as the K-S test, was used in order to carry out this test. This test is carried out by analyzing the significant values that have been extracted from the data. The presence of a sig (2-tailed) value that is larger than 0.05 indicates that the data follows a normal distribution.

Table 1. Normality Test

Indicator	P-value	Asymp. Sig. (2-tailed)	Information
Normality Test on ROA	P > 0,05	0,200	Normal
Normality Test on LDR	P > 0,05	0,122	Normal

Normality Test on CAR P > 0,05 0,074 Normal

Source: secondary data is processed

According to Table 1, all of the data from the normality test for ROA, LDR, and CAR have a p-value that is more than $\alpha=5\%$ ($p>0.05$), which indicates that the data follows a normal distribution. This is the case for all of the statistics. Whether or not the variables are completely connected to one another is the question that the multicollinearity test seeks to answer. In the event that there are signs of multicollinearity, the multicollinearity test is carried out using the following criteria: the tolerance value must be less than 0.10, or the VIF must be more than 10. Therefore, in the absence of multicollinearity, either the tolerance value is greater than 0.10 or the variance inflation factor (VIF) is lower than 10. A presentation of the results of the multicollinearity test can be seen in Table 2.

Table 2. Multicollinearity Test

	Variable	Tolerance	VIF	Information
ROA	Inflation	0,204	4,894	Multicollinearity Free
	Rupiah Exchange Rates	0,379	2,637	Multicollinearity Free
	Interest Rates	0,347	2,885	Multicollinearity Free
LDR	Inflation	0,855	1,170	Multicollinearity Free
	Rupiah Exchange Rates	0,632	1,582	Multicollinearity Free
	Interest Rates	0,628	1,593	Multicollinearity Free
CAR	Inflation	0,204	4,894	Multicollinearity Free
	Rupiah Exchange Rates	0,379	2,637	Multicollinearity Free
	Interest Rates	0,347	2,885	Multicollinearity Free

Source: secondary data is processed

The results of the tests show that the VIF value is less than 10, and the tolerance value is more than 0.1. This leads one to the conclusion that all of the data do not exhibit multicollinearity. This conclusion can be reached since Table 2 presents the findings of the tests. The Glejser test was then used to determine whether or not heteroscedasticity was present. Given that one of the criteria used to establish the presence of heteroscedasticity is a probability value that is more than 0.05, it may be concluded that heteroscedasticity does not exist. When the probability value is less than 0.05, heteroscedasticity is present in the experiment. The results of the test for heteroscedasticity are shown in Table 3, which can be found here.

Table 3. Heteroscedasticity Test

Dependent Variable	Independent Variable	Sig.	Information
ROA	Inflation	0,716	Heteroscedasticity Does Not Occur
	Rupiah Exchange Rates	0,980	Heteroscedasticity Does Not Occur
	Interest Rates	0,380	Heteroscedasticity Does Not Occur
LDR	Inflation	0,897	Heteroscedasticity Does Not Occur
	Rupiah Exchange Rates	0,534	Heteroscedasticity Does Not Occur

	Interest Rates	0,564	Heteroscedasticity Does Not Occur
	Inflation	0,699	Heteroscedasticity Does Not Occur
CAR	Rupiah Exchange Rates	0,988	Heteroscedasticity Does Not Occur
	Interest Rates	0,698	Heteroscedasticity Does Not Occur

Source: secondary data is processed

The results of the heteroscedasticity test are shown in Table 3, which reveals that every single one of the data has a probability value that is higher than 0.05 on the scale. Based on the findings, it can be concluded that the data do not exhibit any heteroscedasticity. The subsequent stage is to carry out an autocorrelation test in accordance with the relevant requirements, which are explained in the following manner: When the value of the DW falls between the range of -2 to +2 or -2 to +2, there is no occurrence of autocorrelation. Table 4 contains the results of the autocorrelation test that was performed..

Table 4. Autocorrelation Test

Variable	Durbin Watson	Information
ROA	0,488	No Autocorrelation Occurs
LDR	1,643	No Autocorrelation Occurs
CAR	1,184	No Autocorrelation Occurs

Source: secondary data is processed

According to the outcomes of the autocorrelation test, which are shown in Table 4, it can be seen that every single DW value data falls within the range of -2 to +2, such that -2 is less than or equal to +2. After that, we carried out a multiple linear regression analysis to determine the influence that X1, X2, and X3—the Rupiah exchange rate, interest rates, and inflation—had on ROA (Y1), LDR (Y2), and CAR (Y3)—the measures that measure financial success. The link that exists between the independent factors and the dependent variables is shown in Table 5.

Table 5. Multiple Linear Regression Results

Dependent Variable	Independent Variable	Coefficient
ROA	Coefficient	2,325
	Inflation	0,321
	Rupiah Exchange Rates	-0,000051
	Interest Rates	-0,075
LDR	Coefficient	4,566
	Inflation	-0,023
	Rupiah Exchange Rates	-0,000010
	Interest Rates	0,032
CAR	Coefficient	9,894
	Inflation	0,138
	Rupiah Exchange Rates	0,001
	Interest Rates	-0,539

Source: secondary data is processed

Based on Table 5, the results of the multiple linear regression equation are as follows:

$$\text{ROA } Y_1 = 2.325 + 0.321X_1 - 0.000051X_2 - 0.75X_3 + e. \text{ LDR } Y_2 = 4.566 - 0.023X_1 - 0.000010X_2 - 0.032X_3 + e. \text{ CAR } Y_3 = 9.894 + 0.138X_2 + 0.001X_2 - 0.539X_3 + e.$$

Next, a t test was carried out to see the significance of the influence of the independent variable on the dependent variable in partial terms. The influence of the independent variable on the dependent variable is presented in table 6.

Table 6. T Test Results

Dependent Variable	Model	T _{Count}	Sig
ROA	(Constant)	0,628	0,500
	Inflation	1,514	0,139
	Rupiah Exchange Rates	-0,238	0,813
	Interest Rates	-0,376	0,709
LDR	(Constant)	269,338	0,000
	Inflation	-86,684	0,000
	Rupiah Exchange Rates	-10,109	0,000
	Interest Rates	34,898	0,000
CAR	(Constant)	1,762	0,087
	Inflation	0,396	0,695
	Rupiah Exchange Rates	2,416	0,021
	Interest Rates	-1,639	0,110

Source: secondary data is processed

Next, an F test is carried out to test the influence of the independent variables together (simultaneously) on the dependent variable. The results of the F test analysis are presented in table 7.

Table 7. F Test Results

Variable	F _{Count}	F _{Table}	Sig	Information
ROA Inflation, Rupiah Exchange Rates, Interest Rates	3,358	3,25	0,029	Ho Rejected
LDR Inflation, Rupiah Exchange Rates, Interest Rates	2637,804	3,25	0,000	Ho Rejected
CAR Inflation, Rupiah Exchange Rates, Interest Rates	9,164	3,25	0,000	Ho Rejected

Source: secondary data is processed

Taking a look at the coefficient of determination (R²) of an independent variable is one method that may be used to understand the extent to which it can explain a dependent variable. The R² value is believed to be getting closer to 1 when the model is deemed to be improving. Table 8 presents the coefficient of determination (R²) that was determined based on the results of the test study.

Table 8. Coefficient of Determination Test Results

Dependent Variable	R	R Square	Adjusted R Square	Std. Error of the Estimate
ROA	0,468	0,219	0,154	1,08083

LDR	0,998	0,995	0,995	0,00661
CAR	0,658	0,433	0,386	1,78066

Source: secondary data is processed

The Partial Influence of Inflation, Rupiah Exchange Rate and Interest Rates on Financial Performance is Measured by The ROA Indicator

The comparison results in a tcount of 1.514 and a ttable of 2.026, both of which are predicated on the notion that ROI is affected by inflation in a way that is both slightly positive and somewhat modest. On the basis of these facts, it is obvious that the value of tcount is less than the value of ttable, namely 1.514 is less than 2.026. As a result, we may acknowledge Ho while dismissing Ha. Therefore, it can be deduced that the variable of inflation has a positive and insignificant impact on ROA to a certain extent. Because banks are able to charge customers higher interest rates on loans rather than deposits, which results in an increase in interest income, banks profit from inflation in terms of interest margins. This is because, as inflation increases, banks are able to charge customers higher interest rates on loans. In spite of this, the regulations imposed by the government have an effect on banks as well, particularly with regard to the management of inflation via the restriction of interest rate increases. This suggests that inflation has little to no impact on interest rates throughout this time period.

According to the hypothesis that the Rupiah Exchange Rate has a slightly negative and modest impact on ROA, the tcount value is 0.238, and the ttable value is 2.026. Both of these values are statistically significant. Based on this data, we may draw the conclusion that Ho is accepted and Ha is rejected. This is because the Rupiah Exchange Rate variable influences ROA in a way that is somewhat negative and small. This is shown by the fact that tcount is less than ttable, particularly -0.238 is less than 2.026. Financial institutions have the ability to influence foreign currencies as a result of their investment portfolios and loans to other countries. At the same time as the value of the rupiah increases or decreases, the amount of money that banks owe in other currencies also increases or decreases. As a result, ROA is reduced, and interest costs expressed in rupiah are increased. In spite of this, there are circumstances in which changes in the value of the rupiah against other currencies do not instantly impact ROA. This is because the exchange rate only reflects changes in financial accounts, and not the actual operations of the organisation. This is the reason why this is the case.

On the basis of the assumption that interest rates have a somewhat negative and insignificant impact on ROA, the comparative result of tcount is 0.376, while the result of ttable is 2.026. These data make it clear that the value of tcount is less than the value of ttable, precisely -0.376 is less than 2.026. As a result, we may acknowledge Ho while dismissing Ha. The conclusion that can be drawn from this is that the variable of interest rate has a somewhat negative impact on ROA. Whenever there is an increase in the BI interest rate, all market interest rates also increase. If the interest rate that the bank offers does not keep up with the speed of growing interest rates, the bank's margin will decrease, and the return on assets would be significantly impacted. Banks that are controlled by the state, on the other hand, are less susceptible to fluctuations in interest rates since they have a strong portfolio and a monetary policy that is consistent. The findings of this research are in agreement with those of Mufidhoh et al. (2017), who discovered that there is no statistically significant association between ROA and inflation, interest rates, or currency trade rates.

The Partial Influence of Inflation, Rupiah Exchange Rate and Interest Rates on Financial Performance is Measured by The LDR Indicator

The result of tcount is 86.685, while the value of ttab is 2.026. This indicates that the null hypothesis, which states that inflation has a statistically significant and relatively negative influence on LDR, is correct. Due to the fact that these data demonstrate that tcount is more than ttable, namely -86.685 is greater than 2.026, we are able to reject Ho and accept Ha. This indicates that inflation has a significant negative affect on LDR, although a partial one for the time being. The capacity of banks

to lend money and the level of long-term debt (LDR) are both affected by high inflation, which elevates credit risk since there is a probability that the value of the payback may be lower than expected. In addition, when inflation is high, real interest rates are low. This discourages people from saving money and establishing deposits, which in turn makes it more difficult for banks to lend money.

The null hypothesis states that the Rupiah Exchange Rate has a considerable and partial impact on LDR. The calculated values for t_{count} and t_{table} are 10.109 and 2.026, respectively. It is apparent that t_{count} is more than t_{table} , notably because -10.109 is less than 2.026, as a result of these facts. As a result, we may decide to reject H_0 and accept H_a , which would imply that the Rupiah Exchange Rate variable has a significant and negative effect on LDR to some extent. As a result of the rupiah's recent decline in comparison to other currencies, financial institutions are now required to pay higher interest rates on loans that are denominated in other currencies. It's possible that this will damage LDR by making the sources of finance more costly. In addition, if the value of the rupiah decreases, it may be difficult for debtors to fulfil their commitments that are denominated in other currencies. There is a possibility that the credit performance of banks may be affected, and as a consequence, the risk of default may increase.

The outcomes of the comparison show that the t_{count} is 34.898 and the t_{table} is 2.026, which lends credence to the idea that interest rates have a large impact on LDR that is partially positive. On the basis of these data, which demonstrate that t_{count} is more than t_{table} , particularly 34.898 is less than 2.026, we may draw the conclusion that H_0 is rejected and H_a is authorised. It may be deduced from this that the variable of Interest Rate has a positive and significant impact on LDR due to its partiality. When interest rates are raised, customers are encouraged to acquire a higher rate of return on their investments. This leads to an increase in the amount of money that can be lent out, which in turn leads to an increase in the amount of money that is deposited and saved in banks. The findings of this research are consistent with those of Winarsih's study from 2015, which discovered that interest rates and currency exchange rates had a substantial and detrimental impact on loans for development (LDR)..

The Partial Influence of Inflation, Rupiah Exchange Rate and Interest Rates on Financial Performance is Measured by The CAR Indicator

Through the use of the null hypothesis, which states that inflation has no effect whatsoever on CAR, we find that t_{count} equals 0.396 and t_{table} equals 2.026. On the basis of these facts, which demonstrate that t_{count} is less than t_{table} , precisely 0.396 is less than 2.026, we may draw the conclusion that H_0 is accepted and H_a is rejected. It may be deduced from this that the inflation variable has a positive and insignificant impact on CAR to a certain extent. In the event that inflation results in higher interest rates, which in turn raises the bank's interest margin and interest income, the capital of a bank may be strengthened. However, in the majority of instances, the impact that inflation has on vehicles is also indirectly influenced by other factors.

According to the hypothesis that the Rupiah Exchange Rate has a semi-positive and considerable impact on CAR, the t_{count} value is 2.416, and the t_{table} value is 2.026. Both of these values are based on the hypothesis. 2.416 is more than 2.026, which indicates that t_{count} is greater than t_{table} . As a result, we can choose to ignore H_0 and go with H_a . The conclusion that can be drawn from this is that the Rupiah Exchange Rate variable has a somewhat favorable and significant impact on CAR. The value of the assets held by banks is denominated in other currencies increases as the rupiah depreciates in comparison to other currencies, which in turn increases the capital of the banks. There is a possibility that CAR will be positively impacted by internal factors such as income, expenditure, and capital policy. These variables often have an influence on CAR.

The value of the t_{table} is 2.026, while the value of the t_{count} is 1.639. This suggests that the null hypothesis, which states that interest rates do not substantially impact CAR, is correct. On the basis of these facts, which demonstrate that t_{count} is less than t_{table} , precisely 1.639 is less than 2.026,

we may draw the conclusion that H_0 is accepted and H_a is rejected. The conclusion that can be drawn from this is that the variable of Interest Rate has a negative and very minimal impact on CAR. State-owned banks have the capacity to make use of two different types of financing: grants and bonds from the government. For this reason, BI interest rates have the potential to have a major impact on banks that are dependent on other sources of financing. In contrast to the findings of Oktoviana and Mulawarman's research from 2021, which found that macroeconomic issues did not have a significant impact on CAR, this study contradicts their findings. The fact that this is the case lends credence to the null hypothesis that the rupiah exchange rate has no impact on CAR.

The Simultaneous Influence of Inflation, Rupiah Exchange Rate and Interest Rates on Financial Performance is Measured by ROA, LDR, and CAR Indicator

From the hypothesis that Inflation, the Rupiah Exchange Rate and Interest Rates simultaneously have a significant influence on the effectiveness of the financial performance as determined by the ROA, LDR, and CAR markers. Given that the results of the SPSS calculation indicate a significant value or probability of less than 0.05 and that F_{count} is greater than F_{table} 3.25, it may be concluded that the null hypothesis (H_0) is rejected and the alternative hypothesis (H_a) is adopted. It can be deduced from this that the factors that are considered independent in the research are interest rates, inflation, and the exchange rate of the Rupiah. These three variables, whether they are considered together or individually, have a substantial influence on Financial Performance, which is evaluated using the ROA, LDR, and CAR indicators alike.

The results of this research are consistent with the findings of Mufidhoh et al. (2017), who discovered that the return on assets (ROA) was considerably increased when interest rates, inflation, and currency rates were all taken into consideration at the same time respectively. According to Winarsih (2015), who discovered that LDR was greatly impacted by changes in interest rates, currency rates, and inflation all at the same time, the conclusions of this study are consistent with those other researchers' findings. In contrast to the conclusions of Oktoviana and Mulawarman (2021), who discovered that there was no statistically significant association between CAR and contemporaneous macroeconomic indicators, the findings of this research contradict those findings.

CONCLUSION

It is not possible for inflation, the exchange rate of the Rupiah, or interest rates to have an impact on the financial performance that is assessed by ROA. Even yet, the rate of return on assets is favorably impacted by inflation. At the same time, the rate of interest and the exchange rate of the Rupiah both have a negative impact on total return on assets. Several factors, such as inflation, the exchange rate of the Rupiah, and interest rates, have a significant impact on the financial performance that is evaluated by LDR. Interest rates, on the other hand, have a positive impact on LDR. There is a negative impact on LDR from both the Rupiah currency rate and inflation. Statistically speaking, there is a correlation that is both positive and statistically significant between the CAR, which is a measure of financial success, and the Rupiah exchange rate. The effect of inflation on CAR, despite its very minor nature, is beneficial. Interest rates, on the other hand, have a tiny yet negative impact on CAR.

The F test demonstrates that interest rates, inflation, and the Rupiah exchange rate all have a major influence on financial performance. The metrics that are used in the F test include ROA, LDR, and CAR. With an adjusted R^2 of 0.154 for ROA, we can see that other variables have an influence on inflation, the Rupiah currency rate, and interest rates, which in turn affect ROA by 15.4% and 84.6%, respectively. Therefore, we can conclude that ROA is affected by these factors. With an adjusted R^2 value of 0.995 for the LDR variable, we are able to determine that the independent variable in our model accounts for 99.5% of the variance in LDR across inflation, the Rupiah exchange rate, and interest rates. Conversely, other variables contribute to the remaining 0.50% of the variation in LDR. It can be deduced from the fact that the updated R^2 value for the CAR variable is 0.386 that other

factors have an influence on the CAR by 61.4% and that the independent variable in the model explains the variables Inflation, Rupiah Exchange Rate, and Interest Rates by 38.6%.

It is recommended that the author do more study in order to investigate the influence of financial performance, specifically on ROA and CAR ratios, in conjunction with other significant factors. In addition, the research should make use of a larger sample size, research objects from diverse businesses or banks that are not affiliated with BUMN, and a longer time frame for analysis. This is because the present study only used four organizations over a period of 10 years.

REFERENCES

- Ana Zahrotun Nihayah, M. (2019). *Pengolahan Data Penelitian Menggunakan Software SPSS 23.0*. Semarang.
- Anjani, E. N. (2022). Pengaruh tingkat inflasi dan probabilitas terhadap kualitas laba pada perusahaan. *Fair Value: Jurnal Ilmiah Akuntansi dan Keuangan*, 4, 5179-5192. DOI: <https://doi.org/10.32670/fairvalue.v4i11.1842>
- Anwar, M. K. (2018). Pengaruh tingkat suku bunga, Inflasi, dan nilai kurs terhadap simpanan Deposito Murabahah (Studi pada Bank Syariah Mandiri periode 2010- 2015). *Jurnal Ilmiah Ekonomi Bisnis*.
- Azhar Cholil, A. (2021). Analisis Rasio Likuiditas Dan Profitabilitas Untuk Menilai Kinerja Keuangan Perusahaan Pt Berlina Tbk Tahun 2014-2019. *Jurnal Ekonomi Manajemen Sistem Informasi*, 2(3), 401–413. <https://doi.org/10.31933/jemsi.v2i3.420>
- Azizah, L. (2020). Pengaruh Nilai Tukar Rupiah dan Jumlah Uang Beredar Luas Terhadap Inflasi di Indonesia Periode 2010 - 2019. *Ecodunamika*, 3(2). Retrieved from <https://ejournal.uksw.edu/ecodunamika/article/view/4046>
- Bank Indonesia, 2023. Data BI Rate. 2018 s.d 2022. <http://www.bi.go.id>
- Bank Indonesia. (2023). *Data Inflasi. 2018 s.d 2022*. <http://www.bi.go.id>
- Bank Indonesia, 2023. Data Indeks Harga Konsumen. 2018 s.d 2022. <http://www.bi.go.id>
- Boediono. (2014). *Seri Sinopsis Pengantar Ilmu-No.5 Ekonomi Makro*. BPFE.
- Cahya, A. D., Rachmawati., H., & Putri, R. R. (2021). Analisis Kesehatan Keuangan Perusahaan di Masa Pandemi Covid 19 Menggunakan Rasio Likuiditas, Profitabilitas Dan Solvabilitas (Studi Kasus Umkm Ameera Hijab). *Equilibrium: Jurnal Ilmiah Ekonomi, Manajemen Dan Akuntansi*, 10(2), 131–136. <https://doi.org/10.35906/je001.v10i2.788>
- Cahya, B. S. (2015). Pengaruh Tingkat Inflasi, Suku Bunga Dan Nilai Tukar Terhadap Kinerja Keuangan Perusahaan Perbankan Yang Listing di Bursa Efek Indonesia Periode Tahun 2008 - 2012. *Jurnal Measurement*, 9, 28–38. <https://doi.org/10.33373/mja.v9i2.1018>
- Cintyawardani, C. I. (2016). Analisis Stabilitas Pengaruh SBI, Inflasi, dan Kurs Terhadap Intermediasi Bank Umum di Indonesia Pasca Kenaikan Harga BBM 2010. *Jurnal Ilmiah Mahasiswa FEB*, 4(2).
- Damayanti, S. d. (2016). *Makro Ekonomi Pengantar untuk Manajemen*. Jakarta: Salemba Empat
- Dendawijaya, L. (2009). *Manajemen Perbankan*. Ghalia Indonesia.
- Dr. I Wayan Widana, S. M., & Muliani, P. L. (2020). Uji Persyaratan Analisis. Lumajang: KLIK MEDIA
- Edukasi, P. (2017, 07 11). Inflasi dan Indeks Harga Konsumen. pp. <https://macroeconomicdashboard.feb.ugm.ac.id/inflasi-dan-indeks-harga-konsumen/>
- Effendie. (2017). *Keuangan Negara Suatu Tinjauan Komprehensif dan Terpadu*. Airlangga University Press.
- Ekananda, M. (2014). *Ekonomi Internasional*. Erlangga.
- Erawati, D., Shenurti, E., & Nur Kholifah, S. (2022, April). Analisis Return on Asset (ROA) , Return on Equity (ROE) dan Corporate Social Responsibility (CSR) yang mempengaruhi Nilai Perusahaan pada Perusahaan Manufaktur. *Jurnal Akuntansi dan Manajemen (JAM)*, 19, 1-10 DOI: <https://doi.org/10.36406/jam.v19i01.539>

- Hasyim, A. Ibrahim. (2016). *Ekonomi Makro*. Jakarta: Prenadamedia Group.
- Hidayati, A. N. (2014). Pengaruh Inflasi, BI Rate Dan Kurs Terhadap Profitabilitas Bank Syariah Di Indonesia. *AN-NISBAH*, 1, 72-97.
- Husnan, S. (2015). *Dasar-Dasar Teori Portofolio dan Analisis Sekuritas* (5 ed.). UPPN STIM YKPN.
- Imron, I. (2019). Analisa Pengaruh Kualitas Produk Terhadap Kepuasan Konsumen Menggunakan Metode Kuantitatif Pada CV. Meubele Berkah Tangerang. *Indonesian Journal on Software Engineering*, 5.
- Irham, F. (2014). *Analisis kinerja keuangan panduan bagi akademisi, manajer dan investor untuk menilai dan masyarakat bisnis dari aspek keuangan*. Alfabeta.
- Junaidi. (2010). Download Tabel t untuk d.f = 1-200. Diakses pada 11 Oktober 2023, dari <https://junaidichaniago.wordpress.com/2010/04/21/download-tabel-t-untuk-d-f-1-200/>
- Junaidi. (2010). Download Tabel F Lengkap. Diakses pada 11 Oktober 2023, dari <https://junaidichaniago.wordpress.com/2010/04/22/download-tabel-f-lengkap/>
- Karhab, R. S., Utami, E., & Sartika, D. (2022). Analisa rasio laporan keuangan guna menilai kinerja manajemen pada UMKM. *KINERJA: Jurnal Ekonomi dan Manajemen*, 19, 506-520. DOI: <https://doi.org/10.30872/jkin.v19i3.11695>
- Kasmir. (2002). *Dasar-dasar perbankan*. PT Raja Grafindo Persada.
- Kasmir. (2016). *Analisis Laporan Keuangan*. PT Raja Grafindo Persada.
- Kasmir. (2019). *Analisis Laporan Keuangan* (12 ed.). PT Raja Grafindo Persada.
- Larasati, D. M., & Amri. (2017). Pengaruh Tingkat Suku Bunga Sertifikat Bank Indonesia Dan Nilai Tukar Terhadap Inflasi Di Indonesia. *Jurnal Ilmiah Mahasiswa*.
- Mamduh M. Hanafi. (2003). *Analisis Laporan Keuangan*, YKPN, Yogyakarta
- Mufidhoh, U., Andriyanto, I., & Haerudin. (2017). Analisis Pengaruh Inflasi, Suku Bunga, Dan Nilai Tukar Terhadap Kinerja Bank Syariah BUMN (Periode 2014-2017). *MALIA*, 1, 71-90. <https://doi.org/10.21043/malia.v1i1.4017>
- N. K. V. M. D., D. W. C., & D. I. K. K. (2015). Pengaruh LDR, LAR, DER dan CR Terhadap ROA. *Jurnal Manajemen Indonesia*, 3(1). Retrieved from <https://ejournal.undiksha.ac.id/index.php/JMI/article/view/4655>
- Nur Rosi Awaliatun Nikma, M. S. (2022). Pengaruh Suku Bunga, Inflasi, Nilai Tukar Rupiah, Dan BOPO Terhadap Kinerja Perbankan Syariah di Bank BRI Syariah Periode 2015-2020. *Jurnal Rekognisi Ekonomi Islam*, 1, 1-10 DOI: <https://doi.org/10.34001/jrei.v1i1.82>
- Oktoviana, B. S., & Mulawarman, H. (2021). Pengaruh Indikator Makroekonomi Terhadap Kinerja Keuangan Bank Umum Syariah Pada Masa Pandemi COVID-19. *Jurnal Tabarru': Islamic Banking and Finance*, 4(1), 139-151. [https://doi.org/10.25299/jtb.2021.vol4\(1\).6590](https://doi.org/10.25299/jtb.2021.vol4(1).6590)
- Perdana, K., Hamzah, E., & Lubis, P. (2020). Pengaruh tingkat inflasi, suku bunga BI, dan pertumbuhan ekonomi terhadap pembiayaan murabahah pada bank syariah di Indonesia (Periode Januari 2013 – Desember 2017). *Journal Najaha Iqtishod*, 1(21), 1-9. <https://doi.org/10.22437/jief.v1i1.11511>
- Prof. Dr. Ir. Agus Djoko Santosa, & MS Dr. Dwi Sihono Raharjo, S. M. (2022). *Aplikasi JASP Dan SPSS Dalam Penelitian Kuantitatif*. Yogyakarta: Penerbit Kepel Press
- PT Bank Mandiri, Tbk. (2023). *Laporan Keuangan. 2018 s.d 2022*. www.bankmandiri.co.id
- PT Bank Negara Indonesia, Tbk. (2023). *Laporan Keuangan. 2018 s.d 2022*. www.bni.co.id
- PT Bank Rakyat Indonesia, Tbk. (2023). *Laporan keuangan. 2018 s.d. 2022*. www.bri.co.id
- PT Bank Tabungan Negara, Tbk. (2023). *Laporan Keuangan. 2018 s.d 2022*. www.btn.co.id
- Putong, I. (2013). *Economics Pengantar Mikro dan Makro*. Mitra Wacana Media.
- Rochmat Aldy Purnomo, S. M. (2016). *Analisis Statistik Ekonomi dan Bisnis Dengan SPSS*. Ponorogo: CV. WADE GROUP.
- Sasmita, D., Andriani, S., & Hadi Ilman, A. (2019). Analisis Pengaruh Inflasi, Suku Bunga BI, Nilai Tukar Rupiah Terhadap Profitabilitas (Studi Kasus Pada Bank Yang Terdaftar Di BEI

- Periode 2011-2015). *Jurnal Ekonomi dan Bisnis Indonesia*, 3, 1-7. DOI: <https://doi.org/10.37673/jebi.v3i1.379>
- Sastroasmoro, S., & Ismael, S. (2016). *Dasar-dasar metodologi penelitian klinis*. Jakarta: Sagung Seto.
- Samsul, M. (2015). *Pasar Modal dan Manajemen Portofolio*. Erlangga.
- Setiyono, J. (2021). Pengaruh Kepemilikan Manajerial, Kepemilikan Institusional, dan Karakteristik Perusahaan terhadap Kinerja Keuangan Perusahaan Manufaktur yang Terdaftar di BEI. *Jurnal Manajemen dan Akuntansi*, 2, 1-14.
- Siamat, D. (2014). *Manajemen Lembaga Keuangan*. Lembaga Penerbit Fakultas Ekonomi Universitas Indonesia.
- Sorongon, F. A. (2020). Pengaruh Rentabilitas, Non Performing Loan(NPL), Likuiditas dan Inflasi terhadap Rasio Kecukupan Modal (CAR) (Pada Bank Pembangunan Daerah Periode 2016-2019). *Jurnal Riset Manajemen Sains Indonesia (JRMSI)*, 11(2). <https://doi.org/10.21009/JRMSI>
- Sugihyanto, T. (2021). Pengaruh Inflasi, Suku Bunga, Roa Dan Market Share Terhadap Profitabilitas Pada Bank Umum Syariah (Studi Kasus pada Bank Umum Syariah yang terdaftar di Bursa Efek Indonesia). *Sustainability Accounting & Finance Journal*, 12-17. DOI: 10.52496/SAFJ-v1.i1.pp12-17
- Sugiyono. (2018). *Metode Penelitian Kuantitatif*. Alfabeta.
- Sugiyono, P. D. (2019). *Metode Penelitian Kuantitatif, Kualitatif, dan R&D*. (M. Dr. Ir. Sutopo. S.Pd, Ed.) Bandung: Alfabeta.
- Sunyoto, D. & B. (2021). Pengaruh Kepemimpinan Transformasional dan Motivasi Terhadap Kinerja Karyawan dengan Mediasi Komitmen Organisasional. *Jurnal Aplikasi Manajemen*, 19. <https://doi.org/10.21776/ub.jam.2021.019.01.01>.
- Surat Edaran Bank Indonesia No.6/23/DPNP (2004).
- Taufiqur Rahman, M., B Setiadi, P., & Rahayu, S. (2022, Juni). Analisis Rasio CAR, NPL, DAN LDR Terhadap ROA (Studi Pada Bank Umum Go Public Tahun 2018 – 2020). *Jurnal Ekonomika* 45, 9, DOI: <https://doi.org/10.30640/ekonomika45.v9i2.228>
- Suratminingsih, S., Patriandari, P., Mujiani, S., & Rizkiyana, N. (2022). Faktor-faktor yang mempengaruhi kinerja keuangan pada bank umum syariah di Indonesia. *Owner*, 6(1), 802–812. <https://doi.org/10.33395/owner.v6i1.670>
- Utami, M., & Rahayu, M. (2003). Peranan Profitabilitas, Suku Bunga, Inflasi & Nilai Tukar Dalam Mempengaruhi Pasar Modal Indonesia Selama Krisis Ekonomi. *Jurusan Ekonomi Manajemen, Fakultas Ekonomi – Universitas Kristen Petra*. <https://doi.org/10.9744/jmk.5.2.pp.%20123-131>
- Winarsih, E. (2015). Pengaruh Pertumbuhan Ekonomi, Tingkat Bunga, dan Inflasi Terhadap Permintaan Kredit di Indonesia (Studi Kasus Bank Umum Periode 2008Q1-2015Q4). *Artikel Ilmiah Mahasiswa*. <http://repository.unej.ac.id/handle/123456789/76705>
- Winarsih, E. (2023). Loan To Deposit Ratio (LDR): Rumus,Definisi,Analisis, Interpretasi. Diakses pada 13 Juni 2023, dari <https://www.invesnesia.com/loan-to-deposit-ratio-ldr>.
- Winarsih, E. (2023). On Assets (ROA): Rumus, Analisa dan Interpretasi. Diakses pada 13 Juni 2023, dari https://www.invesnesia.com/return-on-assets-roa#Cara_Interpretasi_Return_on_Asset_ROA.
- Wiriani., E., & Mukarramah. (2020). Pengaruh Inflasi dan Kurs terhadap Pertumbuhan Ekonomi Indonesia. *Jurnal Samudra Ekonomika*, 4(1), 41–50. <https://doi.org/10.0123/jse.v4i1.2222>