



The Influence of Macroeconomic Variables on Net Asset Value Growth Islamic Mutual Funds In Indonesia During The Covid-19 Pandemic

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ABSTRACT :

This study was conducted in response to the economic turmoil that hit Indonesia during the Covid-19 pandemic. During the period from March 2020 to December 2022, the Islamic capital market in Indonesia showed an impressive increase in performance, despite the overall macroeconomic conditions being disrupted by the economic crisis. This prompted research to investigate the relationship between macroeconomic variables and the performance of Islamic mutual funds during the pandemic. This study aims to analyze the relationship between the Net Asset Value (NAV) of Islamic Mutual Funds in Indonesia and macroeconomic variables, including inflation, money supply, rupiah exchange rate, central bank interest rate, and Islamic stock index during the Covid-19 pandemic. The method used is a quantitative approach with multiple linear regression models. This type of research is associative research, and the sample was selected using saturated sampling technique. The data used is secondary data collected through online observation. The results showed that simultaneously, inflation, money supply, rupiah exchange rate, central bank interest rate, and Islamic stock index significantly affect the NAV of Islamic Mutual Funds. However, partially, inflation, exchange rate, central bank interest rate, and Islamic stock index have no significant influence on the NAV of Islamic Mutual Funds, while the money supply has a negative influence on the NAV of Islamic Mutual Funds. This study provides valuable insights into how macroeconomic factors contribute to investment performance in Islamic mutual funds during times of economic crisis caused by the Covid-19 pandemic.

Key words: *inflation, money supply, exchange rates.*

INTRODUCTION

The years 2020-2022 are the toughest years in Indonesia's economy. Since the Covid-19 pandemic began to be detected. Covid-19 was declared a global pandemic by the World Health Organization (WHO) since March 11, 2020. The pandemic status was taken because Covid-19 spread rapidly and covered a large area. As of June 2022, Covid-19 has spread to more than 200 countries¹. The SARS-CoV-2 virus that causes Covid-19 originated in China and spread massively to a number of countries around the world. After WHO set a pandemic status, the Indonesian government took steps by declaring Covid-19 as a public health emergency and a non-natural national disaster. Covid-19 is a disease that is easily transmitted through direct contact with sufferers so that crowds or crowds that involve physical interaction must be avoided because they

¹ lity In Indonesia (A Case Study Of Pt. Bank Muamalat): English," *Tamansiswa ...*, 2022, <https://jurnal.stiekn.ac.id/index.php/tmj/article/view/190>.F Qureshi et al., "Dynamics of mutual funds and stock markets i

trigger transmission². Moreover, Indonesia is the fourth most populous country in the world after China, India, and the United States.

The results of the 2020 Population Census show that Indonesia's population reached 270.2 million people with an annual population growth rate (2010-2020) of 1.25 percent. This growth rate is lower when compared to the 2000-2010 period of the 2010 Population Census results of 1.49 percent. During a pandemic like this, a large population with high population density and mobility, especially Java Island, has the potential to become a red zone for the spread of Covid-19. This is related to the ability to provide infrastructure and health budgets that must be prepared by the government to handle and anticipate a surge in cases given the high risk of morbidity and mortality³. Based on data from covid19.go.id accessed on October 12, 2022, as many as 6,448,220 people were confirmed positive for covid-19 out of 71,076,578 people examined, a total of 158,235 people died from covid-19 infection and 6,273,593 people recovered.

Various Government policies are carried out to break the chain of the spread of Covid-19. In order to break the chain of the spread of Covid-19, the Indonesian government established a policy in the form of the implementation of Large-Scale Social Restrictions (PSBB). Unfortunately, this policy contradicts efforts to improve the economy⁴. Various social restriction policies have caused the economy to slow down. Trade activities in the microeconomic sector immediately declined. Traditional markets and supermarkets were forced to limit their activities. As a result, in 2020 Indonesia experienced an economic recession. Indonesia's economic growth was recorded at minus 2.07 percent. This is the second economic recession that previously occurred in 1998. The results of the World Bank assessment in the report "World Bank Country Classifications by Income Level: 2021-2022" states that Indonesia's GNP per capita has decreased from US\$ 4,050 in 2019 to US\$ 3,870 in 2020. Based on this value, Indonesia has experienced a decline in rank from the upper middle income country group to the lower middle income group.

Some studies show that the performance of Islamic mutual funds is influenced by the macroeconomic conditions of a country. Such as research conducted by Sumantyo and Savitri entitled "Macroeconomic Variable Towards Net Asset Value of Sharia Mutual Funds in Indonesia and Malaysia" states that macroeconomic variables consisting of money supply (M1), GDP, and inflation have a positive influence and significance on sharia mutual fund Net Asset Value (NAV) in Indonesia and Malaysia. The next research conducted by Nafisah and Supriyono with the title "Analysis of The Effect of Macroeconomics on Net Assets Value (Nav) of Sharia Mutual Funds In Indonesia" concluded that macroeconomic variables consisting of rupiah exchange rate, inflation and JII and SBIS affect the NAV of Islamic mutual funds simultaneously. Further research conducted by Arifin and Nur with the title "Stability of Islamic Mutual Fund Performance in the Face of Macroeconomic Turmoil" concluded that simultaneously macroeconomic variables consisting of money supply, inflation, central bank interest rates, rupiah exchange rates, and Islamic stock indices in Indonesia affect the performance of Islamic Mutual Funds in Indonesia.

² n Asian developing economies," *Journal of Asian ...*, 2019, <https://www.sciencedirect.com/science/article/pii/S1049007818302896>. R R Maulayati, M A Bahril, dan ..., "Effect of macroeconomic variables

³ on third-party funds in Islamic commercial banks in Indonesia," *Journal of Islamic ...*, 2020, <https://repository.unair.ac.id/119004/>. M Adnan, "Exploring the role of domestic and foreign factors in Indonesian Islamic mutual funds," *Journal of Enterprise and Development (JED)*,

⁴ I A Ardhani, J Effendi, dan M I Irfany, "The effect of macroeconomics variables to Net Asset Value (NAV) growth of sharia mutual funds in Indonesia," *Jurnal Ekonomi dan Keuangan ...*, 2020, <https://journal.uin.ac.id/JEKI/article/view/15345>.

In line with research conducted by Othman, Kameel and Aziz with the title "Relationship between Macroeconomic Variables and Net Asset Value (NAV) of Islamic Equity Unit Trust Funds: Cointegration Evidence from Malaysian Unit Trust Industry" concluded that there is a significant short-term and long-term relationship between equity/returns in the unit trust industry (stock mutual funds, bonds, balanced funds, money market mutual funds and protected mutual funds) in Malaysia with macroeconomic factors (Consumer Price Index, Industrial Production Index, Three-month Treasury bill Rate, money supply, exchange rate, crude oil prices, corruption index, National Political Election, and global financial crisis) in the stock market⁵. Slightly different from the research mentioned above, research conducted by Ardhani, Effendi, and Irfany with the title "The effect of macroeconomic variables to Net Asset Value (NAV) growth of sharia mutual funds in Indonesia" states that macroeconomic variables consisting of inflation, money supply, and gross domestic product have a positive and significant effect on the net asset value of Islamic mutual funds, but the rupiah exchange rate has a negative effect so it is not significant to the net asset value of Islamic mutual funds.

One of the risks in investing in Sharia Mutual Funds is the risk of crisis fluctuations, both economic and financial crises. For example, in 2008 there was a global financial crisis. According to data from the Financial Services Authority, at the end of 2008 the performance of Sharia Mutual Funds in Indonesia based on the NAV of Sharia Mutual Funds decreased by 21.40% from the previous year, while in total with all Mutual Fund NAVs in Indonesia decreased by 22.47% from the previous year⁶. As is currently the case, Indonesia is still in a period of economic recovery due to the impact of the Covid-19 pandemic and global inflationary pressures. The momentum of national economic recovery created at the end of 2020 faces new challenges. Although the acceleration of the vaccine program during 2021 brought positive sentiments, the emergence of a wave of spread caused by a new variant of the Covid-19 virus brings uncertainty risks to the national economy. As of mid-2022, there have been three waves of Covid-19 cases.

With the occurrence of several fluctuations in the economic crisis, it is interesting to see the relationship between macroeconomic variables and the performance of Islamic mutual funds in Indonesia during the covid-19 pandemic, namely from March 2020 to December 2022 when the President of the Republic of Indonesia lifted the Restrictions on Community Activities (PPKM) in Indonesia. This study aims to analyze the relationship between the Net Asset Value (NAV) of Islamic Mutual Funds in Indonesia as a reference for the performance of Islamic Mutual Funds with macroeconomic variables consisting of inflation, money supply, rupiah exchange rate, central bank interest rate, and Islamic stock index during the Covid-19 pandemic with multiple linear regression analysis models.

⁵ R Sukmana, M U Al Mustofa, dan ..., "Can country risks predict Islamic stock index? Evidence from Indonesia," *Journal of Islamic ...*, 2021, <https://doi.org/10.1108/JIABR-04-2020-0127>.

⁶ R Alaika et al., "Changes In Macroeconomic Factors And Their Implications On Islamic Banking Profitability In Indonesia (A Case Study Of Pt. Bank Muamalat): English," *Tamansiswa ...*, 2022, <https://jurnal.stiekn.ac.id/index.php/tmji/article/view/190>.

Methods

This research method uses a quantitative approach because the data used are numbers and are analyzed using statistics. Quantitative research is a method of testing certain theories by examining the relationship between variables. Population is a generalization area consisting of objects / subjects that have certain qualities and characteristics set by researchers to study and then draw conclusions. Meanwhile, the sample is part of the number and characteristics started by the population. To determine the sample to be used in this study, namely using saturated sampling techniques, where all members of the population are used as samples. The population used in this study is inflation, money supply, rupiah exchange rate, central bank interest rate, Islamic stock index, and Islamic mutual fund NAV per month in Indonesia from March 2020 to December 2022 which is also a sample in this study, so that a total of 204 data is obtained. The data sources used in this study are all secondary data obtained from publications of various related agencies taken from the agency's website and also other websites related to this research. The relevant agencies and websites are the Central Bureau of Statistics (www.bps.go.id), the Financial Services Authority (www.ojk.go.id), the Ministry of Trade (<https://satudata.kemendag.go.id>), and the Indonesia Stock Exchange (<https://www.idx.co.id>). This research uses monthly time-series data from March 2020 to December 2022. The data collection technique in this research is online observation. Descriptive analysis carried out in this study by inputting data into Microsoft Excel XP software and then converting it to SPSS 25 software for further analysis using statistical tests. The Multiple Linear Regression Model in this study is as follows:

$$Y = \alpha + b_1X_1 + b_2X_2 + b_3X_3 + b_4X_4 + b_5X_5 + e$$

Description:

Y	= NAV of Islamic Mutual Funds
α	= Constant
X_1	= Inflation
X_2	= money supply
X_3	= rupiah exchange rate
X_4	= central bank interest rate
X_5	= Islamic stock index
b_((1,2...))	= Regression coefficient of each independent variable
e	= Standard Error

Result

Descriptive Analysis

Descriptive analysis works by describing the distribution of data. The data distribution in question is the measurement of central tendency and the measurement of shape. The techniques used in descriptive statistics in this study are mean, standard deviation, variance, maximum, minimum, sum, range, kurtosis, and skewness, measuring mean, maximum, minimum, standard deviation, and standard error. The results of the descriptive analysis can be shown in the following table:

Tabel 1. Descriptive analysis One

Inflation	Money Supply	IDR Exchange Rate	Central Bank Interest Rate	Shariah Stock Index	NAV of Islamic Mutual Fund
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	25 ,001000	6778462,2500	14309,2500	3,5000	161,4388	40927,5000
Percentiles	50 ,002000	7186030,5000	14493,5000	3,5000	179,5120	43323,5000
	75 ,006000	7858253,5000	14885,7500	4,0625	201,3173	70194,2500

Source: SPSS data processing results, 2023

First, Percentile Values, which contains calculations of quartiles and percentiles, Quartile is a point or score or value that divides the entire frequency distribution into four equal parts while percentile is a point or value that divides the data distribution into one hundred equal parts, therefore percentile is often called "hundredth measure". In the data above, it is stated that the percentage value obtained from the specified size is as follows The value of the divisor of the distribution in Inflation is determined as 0.006 for 75% and 0.002 for 50% and 0.001 for 25%. The value of the divisor of the distribution in the amount of money in circulation is determined as 7858253.5 for 75% and 7186030.5 for 50% and 6778462.25 for 25%. The value of the divisor of the distribution in the exchange rate is 14885.7500 for 75% and 14493.5000 for 50% and 14309.2500 for 25%. The value of the divisor of the distribution in the central bank interest rate is 4.0625 for 75% and 3.5000 for 50% and 3.5000 for 25%. The value of the divisor of the distribution in the Islamic stock index is set at 201.3173 for 75% and 179.5120 for 50% and 161.4388 for 25%. The value of the divisor of the distribution in the Islamic Mutual Fund NAV is determined to be 70194.2500 for 75% and 43323.5000 for 50% and 40927.5000 for 25%.

Tabel 2 Analisis Deskriptif Two

	Inflation	Money Supply	IDR Exchange Rate	Central Bank Interest Rate	Shariah Stock Index	NAV of Islamic Mutual Fund
Mean	,007618	7289330,3824	14669,0294	3,8676	179,6345	52842,2353
Median	,002000	7186030,5000	14493,5000	3,5000	179,5120	43323,5000

Source: SPSS data processing results, 2023

Central Tendensy (measure of central tendency), in this group what is calculated is the mean (average), median (middle value), mode (mode), and sum (total value). Based on the data above, the mean value of Inflation is ,007618 and the Amount of Money in Circulation is 7289330.3824 while the Exchange Rate is 14669.0294. The mean value for Interest Rates is 3.8676 and for the Sharia Stock Index is 179.6345. And for the median based on the data above, it is obtained sequentially the median value of Inflation is ,002000 and the Amount of Money in Circulation is 7186030,5000 while the Exchange Rate is 14493,5000. The median value for Interest Rates is 3.5000 and for the Islamic Stock Index is 179.5120.

Discussion

The Effect of Inflation on the NAV of Islamic Mutual Funds

Stable inflation is a prerequisite for sustainable economic growth that ultimately benefits the improvement of people's welfare. The importance of controlling inflation is based on the consideration that high and unstable inflation has a negative impact on the socio-economic conditions of the community. In this study inflation is measured to determine the relationship with the NAV of Islamic Mutual Funds. Based on the results of this study, it is stated that inflation does not significantly affect the NAV of Islamic Mutual Funds. This is evidenced by the t-count value of the Inflation variable of 1.055 is smaller than the t-table of 1.69092, and the value of Sig. 0.301

is greater than 0.05. Based on these results, it can be concluded that the hypothesis is rejected. And inflation has no effect on the NAV of Islamic Mutual Funds.

The results of this study support the results of research from Jhon which shows that inflation has no significant effect on the net asset value of stock mutual funds. And also supports research from Danu and Widiyanto which shows that inflation has no effect on the rise and fall of the net asset value of Islamic Mutual Funds in Indonesia for the period 2013 to 2018. Besides that, it also supports the results of research from Putri which shows that inflation has no significant effect and has a negative direction. And based on these results, this study rejects research from the Arbitrage Pricing Theory (APT) theory discovered by Ross and supported by Sumantyo, Nafisah, Arifin, Othman, Ardhani, Mutiara, Ridlo, and Setyani's research.

These results can be assumed that there are no significant fluctuations in changes in the inflation rate on the NAV of Islamic mutual funds. By looking at the results of the inflation trend graph in previous years investors are able to determine the estimated increase and decrease in the following years. With these results, inflation can be considered as a variable that investors do not consider in investing in Islamic mutual funds in Indonesia during the covid-19 pandemic. Inflation that occurred during the Covid-19 pandemic did not change the NAV value of Islamic mutual funds. This is because there are investors who take the opportunity to invest so that the NAV value is still increasing. Although before the covid-19 pandemic when inflation rose it could be said that the NAV would decrease because some investors experienced economic difficulties and withdrew some of their investment money, it can be concluded that changes in inflation were unable to affect changes in the performance of the NAV of Islamic mutual funds in the period March 2020 to December 2022, namely during the covid-19 pandemic. Another thing to consider is the covid-19 pandemic which requires all work activities to be carried out at home and has minimal interaction so that even though inflation remains the value of the NAV of Islamic mutual funds will continue to decline because investments made by mutual fund managers are hampered. Companies that manage investment funds are also careful in managing investment funds due to the limited work activities of the company.

Effect of money supply on NAV of Islamic Mutual Funds

Money has a central role in the modern economy, on the one hand if there is too much money circulating in society it results in a lot of demand. If production or supply in the market is limited, the inflation rate will increase and if the inflation rate is too high, it will negatively affect economic growth. Up to a certain level, rising prices will provide incentives for industries to increase production. In the research that has been done, researchers measure the relationship between the amount of money in circulation and the NAV of Islamic Mutual Funds⁷. The results of research that has been conducted by researchers based on secondary data processed so as to obtain the results that the t-count value of the variable Money in Circulation of -3.614 is greater than the t-table of 1.69092, and the value of Sig. 0.001 is smaller than 0.05, it can be concluded that the variable Money in Circulation (X2) has an influence on the NAV of Islamic Mutual Funds and based on these results, the hypothesis is accepted. The results of this study support the research results of the Arbitrage Pricing Theory (APT) theory.

It can be assumed that during the covid-19 pandemic the government's monetary policy was massive so that the existence of the money supply in Indonesia was in a fairly stable category. This

proves that if real wealth increases, it will be followed by an increase in the demand for money, so greater wealth means that the investment portfolio is also higher and it is certain that the NAV of the mutual fund increases, it will increase the amount of money in circulation owned by investors. The amount of money in circulation is considered to have an influence on the NAV of Islamic mutual funds. The amount of money in circulation is very influential on the NAV of Islamic mutual funds. If the money supply is high, economic activity will be faster. Of course the value of mutual fund NAV will be high this is because the amount of investment made by investors increases. This happens because of the covid-19 pandemic which gives a tendency not to do outdoor activities so that investors' money will be invested in mutual funds so that the NAV value of mutual funds increases.

Statistics

	Inflation	Money Supply	IDR Exchange Rate	Central Bank Interest Rate	Shariah Stock Index	NAV of Islamic Mutual Fund
Skewness	2,864	,154	1,553	1,620	-,297	,693
Std. Error of Skewness	,403	,403	,403	,403	,403	,403
Kurtosis	6,992	-1,091	2,269	2,172	-,956	-1,267
Std. Error of Kurtosis	,788	,788	,788	,788	,788	,788

Distribution, to determine the skewness and kurtosis of the data distribution. Skewness is a statistical quantity that shows the slope of the data. This skewness shows that the data tends to be in the middle or tilted on one side. This statistic can be used to see the normal distribution of data, namely the skewness ratio, the data is said to be normal when the skewness ratio value is in the range of values -2 to 2, in the results of this analysis the skewness value shows 0.403 and 0.788, meaning that the data is normal. While kurtosis can be used to determine the value of data tapering, this will be more specific if tested in detail using the classic assumption test on each variable.

Normalitas Test

It is known that the significance value of Asymp.Sig (2-tailed) of 0.799 is greater than 0.05. So in accordance with the basis for decision making in the Kolmogorov-Smirnov normality test above, it can be concluded that the data is normally distributed. Thus, the assumptions or normality requirements in the regression model have been met.

Table Heteroskedastisity Test

Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	108151,366	34736,254		3,114	,004
Inflasi	290864,436	150741,423	,763	1,930	,064
Jumlah Uang Beredar	-,005	,005	-,509	-1,021	,316
Nilai Tukar Rupiah	-1,503	2,666	-,136	-,564	,577
Suku Bunga Bank Sentral	-6499,010	4321,876	-,593	-1,504	,144
Indeks Saham Syariah	-116,028	121,130	-,466	-,958	,346

a. Dependent Variable: Abs_RES

Sumber: Hasil olah data SPSS, 2023

Based on the results of the heteroscedasticity test using the Glejser test, all variables stated that there were no symptoms or problems of heteroscedasticity. So it can be concluded that there is no heteroscedasticity problem using the regression model test.

Multicollinearity Test

Coefficients^a

Model	Collinearity Statistics		Description
	Tolerance	Tolerance	
Inflasi			No Multicorrelation Occurred
Jumlah Uang Beredar	,132 > 0,1	7,580 < 10	
Nilai Tukar Rupiah	,829 > 0,1	2,063 < 10	
Suku Bunga Bank Sentral	,352 > 0,1	2,842 < 10	
Indeks Saham Syariah	,132 > 0,1	7,549 < 10	

a. Dependent Variable: NAV of Islamic Mutual Fund

Source: SPSS data processing results, 2023

Based on the conclusion of the table above, the interpretation that can be concluded from these results is that the components in the variables that measure dividend policy (Inflation, Money Supply, Rupiah Exchange Rate, Central Bank Interest Rate, and Sharia Stock Index) do not occur multicollinearity problems in the regression model.

Autocorrelation Test

Model Summary^b

Model	R	R Square	Adjusted Square	RStd. Error of the Estimate	Durbin-Watson
1	,763 ^a	,583	,508	10168,88276	1,779

a. Predictors: (Constant), Islamic Stock Index, Central Bank Interest Rate, Rupiah Exchange Rate, Inflation, Money Supply

b. Dependent Variable: NAV of Islamic Mutual Fund

Source: SPSS data processing results, 2023

Based on the Model Summary output table above, it is known that the Durbin-Watson (d) value of 1.779 is greater than the upper limit (dU) of 1.6519 and less than (4-du) $4 - 1.6519 = 2.3481$. So as the basis for decision making in the durbin watson test above, it can be concluded that there are no problems or symptoms of autocorrelation. Thus, multiple linear regression analysis for the research hypothesis test above can be carried out or continued. So as the basis for decision making in the durbin watson test above, it can be concluded that there are no autocorrelation problems or symptoms. Thus, multiple linear regression analysis for the research hypothesis test above can be carried out or continued. This is also evident when a run test is carried out as shown below:

Tabel 1 Hasil Uji Test Run-Autokorelasi

Runs Test

	Unstandardized Residual
Test Value ^a	-,01411
Cases < Test Value	295
Cases >= Test Value	295
Total Cases	590
Number of Runs	286
Z	-,824
Asymp. Sig. (2-tailed)	,410

a. Median

Source: SPSS data processing results, 2023

From the results of the analysis above, it can be concluded that the value of Asymp. Sig. (2-tailed) is 0.410 greater than 0.05 and this indicates that in this research data there is no autocorrelation. So that the autocorrelation problem can be resolved through the run test so that linear regression analysis can be continued.

Table of Simultaneous Regression Test Results

ANOVA^a

Model	Sum of Squares	Df	Mean Square	F	Sig.
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1	Regression	4044387877,279	5	808877575,456	7,822	,000 ^b
	Residual	2895372944,838	28	103406176,601		
	Total	6939760822,118	33			

a. Dependent Variable: NAB Reksadana Syariah

b. Predictors: (Constant), Islamic Stock Index, Central Bank Interest Rate, Rupiah Exchange Rate, Inflation, Money Supply

Source: SPSS data processing results, 2023

Based on the results of the analysis, it is concluded that the variables of Inflation (X₁), Money Supply (X₂), Rupiah Exchange Rate (X₃), Central Bank Interest Rate (X₄), and Sharia Stock Index (X₅) simultaneously affect the dependent variable, namely Sharia Mutual Fund NAV (Y) significantly. This is based on the significance value (Sig) of $0.000 < 0.05$ and the F-table value of $2.38 < 7.822$ F-count value. Based on these results it can be concluded that when each variable is used as a measure to determine the NAV of Islamic Mutual Funds, the effect is significant and the hypothesis is accepted.

Table Determination Coefficient Test Results (R)

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,763 ^a	,583	,508	10168,88276

a. Predictors: (Constant), Islamic Stock Index, Central Bank Interest Rate, Rupiah Exchange Rate, Inflation, Money Supply

Source: SPSS data processing results, 2023

Based on the table above, the coefficient of determination or R Square value of 0.016 indicates that there is a relationship between the independent variable and the dependent variable. The Adjusted R Square value is 0.508. This figure shows that the contribution of the independent variables (Inflation (X₁), Money Supply (X₂), Rupiah Exchange Rate (X₃), Central Bank Interest Rate (X₄), and Sharia Stock Index (X₅)) to explain the dependent variable Sharia Mutual Fund NAV is 50.8%. While the rest ($100\% - 50.8\% = 49.2\%$) is influenced by other variables outside the regression equation or variables not examined. This is in line with the simultaneous value of the f-test where each independent variable simultaneously has an influence on the dependent variable, namely the NAV of Islamic Mutual Funds and is significant.

Table Partial Regression Test Results

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	269648,358	73225,004		3,682	,001

Inflation	335102,910	317767,177	,354	1,055	,301
Money in circulation	-,036	,010	-1,532	-3,614	,001
Rupiah Exchange Rate	-1,938	5,620	-,071	-,345	,733
Central Bank Interest Rates	-693,027	9110,637	-,026	-,076	,940
Shariah Stock Index	412,031	255,346	,668	1,614	,118

a. Dependent Variable: NAV of Islamic Mutual Fund

Source: SPSS data processing results, 2023

Looking at the SPSS output coefficients results in the table above, the following is a discussion of the partial test between Inflation (X1), Money Supply (X2), Rupiah Exchange Rate (X3), Central Bank Interest Rate (X4) and the Islamic Stock Price Index (X5) on the dependent variable, namely the Islamic Mutual Fund NAV (Y):

$$Y = \alpha + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \beta_4X_4 + \beta_5X_5 + e$$

$$Y = 269648,358 + 335102,910X_1 + (-,036X_2) + (-1,938X_3) + (-693,027X_4) + 412,031X_5 + e$$

The constant 269648.358 means that if X1, X2, X3, X4 and X5 are fixed or constant, the NAV value is 269648.358 one unit. If Inflation (X1) increases by one unit, with a record of other X variable records in a constant state (constant) then Y will increase by 335102.91 one unit and vice versa. And the result of the t-count is 1.055 and this value is smaller than the t-table which is 1.69092. Here is also the Sig value. 0.301. Based on these results it is concluded that the t-count value of the Inflation variable (X1) is $1.055 < t\text{-table of } 1.69092$, and the Sig value. $0.301 > 0.05$, it can be concluded that the Inflation variable (X1) has no significant effect on the NAV of Islamic Mutual Funds (Y) and the hypothesis is rejected. If the Money Supply (X2) increases by one unit, with a record of other X variables in a constant state (constant) then Y will decrease by 0.036 units. And the result of the t-count is -3.614 and this value is greater than the t-table of 1.69092. Here is also the Sig value. Sebesar 0.001. Based on these results, it is concluded that the t-count value of the variable Money in Circulation (X2) is $3.614 > t\text{-table of } 1.69092$, and the Sig value. $0.001 < 0.05$, it can be concluded that the variable Money in Circulation (X2) has a significant effect on the NAV of Islamic Mutual Funds (Y) and the conclusion is that the hypothesis is accepted.

If the Exchange Rate (X3) increases by one unit, with a record of other X variables in a constant state (constant) then Y will decrease by 1.938 units and vice versa. And the result of the t-count is -0.345 and this value is smaller than the t-table which is 1.69092. Here is also the Sig value. 0.733. Based on these results, it is concluded that the t-count value of the Exchange Rate variable (X3) is $1.0.345 < t\text{-table of } 1.69092$, and the Sig value. $0.733 > 0.05$, it can be concluded that the Exchange Rate variable (X3) has no significant effect on the NAV of Islamic Mutual Funds (Y) and the hypothesis is rejected. If the Central Bank Interest Rate (X4) increases by one unit, with a record of other X variables in a constant state (constant) then Y will decrease by 693.027 units and vice versa. And the result of the t-count is 0.076 and this value is smaller than the t-table which is 1.69092. Here is also the Sig value. 0.940. Based on these results, it is concluded that the t-count value of the Central Bank Interest Rate variable (X4) is $0.076 < t\text{-table of } 1.69092$, and the Sig value. $0.940 > 0.05$, it can be concluded that the Central Bank Interest Rate variable (X4) has no significant effect on the Islamic Mutual Fund NAV (Y) and the hypothesis is rejected. If the stock price index (X5) increases by one unit, with a record of other X variables in a constant state (constant) then Y will increase by 412.031 and vice versa. And the result of the t-count is

1.614 and this value is smaller than the t-table which is 1.69092. Here is also the Sig value. 0.301. Based on these results, it is concluded that the t-count value of the stock price index variable (X5) of $1.614 < t\text{-table of } 1.69092$, and the Sig value. $0.118 > 0.05$, it can be concluded that the stock price index variable (X5) has no significant effect on the NAV of Islamic Mutual Funds (Y) and the hypothesis is rejected.

The effect of the rupiah exchange rate on the NAV of Islamic Mutual Funds

An exchange rate is an exchange between two different currencies, which is a comparison of the value or price between the two currencies⁸. So, the exchange rate is a comparison between the value of a country's currency and another country. If the exchange rate decreases, it means that the value of the domestic currency relative to the foreign currency has decreased. In this study, researchers only measured the relationship of the effect of the rupiah exchange rate on the NAV of Islamic mutual funds based on the results of secondary data obtained by researchers⁹. And the results of data processing that have been carried out by researchers obtained the results that the t-count value of the Exchange Rate variable (X3) of 1.0.345 is smaller than the t-table of 1.69092, and while the Sig value. 0.733 is greater than 0.05, it can be concluded that the Exchange Rate variable has no influence on the NAV of Islamic Mutual Funds, based on these results, the hypothesis is rejected. The results of this study support the results of research from Apriyanto et al. which states that the exchange rate has no effect on the NAV of Islamic mutual funds. In addition, it also supports research from Addina, but in contrast to the results of his research, this study rejects research from the Arbitrage Pricing Theory (APT) theory discovered by Ross and supported by the research of Nafisah, Arifin, Othman, Ardhani, Mutiara, Ridlo, Setyani, Ramzan, and Cai Li.

With these results it is concluded that the exchange rate fluctuation is not too significant so it is still said to be stable and reasonable¹⁰, but if one day there is an increase in the exchange rate it will affect the NAV of the Sharia Mutual Fund because according to the correlation between the exchange rate and the NAV is in the opposite direction, if there is a depreciation of the exchange rate, the NAV will decrease, otherwise if the exchange rate appreciates, the NAV will increase. As well as the results of Sulsitiyowati's research, et al. stated that it did not have a significant effect on the net asset value of Islamic mutual funds.

As we know the position of the rupiah exchange rate tends to move flat and is still perched in a weak position, so it is not a threat to investors in investing¹¹. It can be assumed that there are no significant fluctuations in changes in the level of the rupiah exchange rate so that it is still said to be stable and reasonable. By looking at the results of the rupiah exchange rate trend chart in previous years, investors are able to determine the estimated increase and decrease in the following years. So it can be considered a variable that investors do not consider in investing in Islamic

⁸ A Gyamfi Gyimah, B Addai, dan ..., "Macroeconomic determinants of mutual funds performance in Ghana," *Cogent Economics & ...*, 2021, <https://doi.org/10.1080/23322039.2021.1913876>.

⁹ S I P Firty Irhamni dan MMVS SM, "Macroeconomic Determinants of NAV (Composite Stock Price Index as Variable Z)," *ieomsociety.org*, n.d., <http://ieomsociety.org/proceedings/2021monterrey/558.pdf>.

¹⁰ S N Istiqomaha et al., "Macroeconomic Factors and Bank-Specific on Profitability: The Case of Islamic Rural Bank in Indonesia," *ijicc.net*, n.d., https://www.ijicc.net/images/vol_13/Iss_10/131023_Istiqomah_2020_E_R.pdf.

¹¹ C Ikramina dan P S Sukmaningrum, "Macroeconomic Factors on Non-Performing Financing in Indonesian Islamic Bank: Error Correction Model Approach," ... *Ekonomi Dan Bisnis Islam ...*, 2021, <https://repository.unair.ac.id/118797/>.

mutual funds in Indonesia during the covid-19 pandemic. So some investors do not really think that the increase or decrease in exchange rates will change their investment interest. This is because the number of mutual fund investors calculated based on the data obtained, the number of single investor identification (SID) recorded at KSEI as of December 2022 has increased by 40.41% to 9,604,269 compared to the number at the end of 2021 of 6,840,234. The number of local investors has no effect because each uses rupiah to invest. In addition, it can be assumed that the monetary policy chosen by BI is correct, so that economic growth is good, it will encourage investors to increase their investment. So the results concluded that the exchange rate (KURS) had no effect on the value of the NAV of the Sharia Mutual Fund.

The effect of central bank interest rates on the NAV of Islamic Mutual Funds

High interest rates cause investors to shift their investment structure away from the capital market towards fixed-term income securities, such as government bonds. Conversely, a decrease in interest rates leads to an increase in the present value of future dividends. Interest rates are considered one of the most significant determinants of stock prices¹². In this study, researchers want to measure the relationship or influence that exists from the central bank interest rate on the NAV of Islamic Mutual Funds¹³. In this study, researchers measured the relationship between central bank interest rates on the NAV of Islamic Mutual Funds based on secondary data, namely from monthly time-series data from March 2020 to December 2022. Based on the secondary data, the results show that the t-count value of the Central Bank Interest Rate variable of 0.076 is smaller than the t-table of 1.69092, and the Sig value. Obtained at 0.940 greater than 0.05, it can be concluded that the Central Bank Interest Rate variable has no significant effect on the NAV of Islamic Mutual Funds. These results conclude that the hypothesis is rejected. The results of this study support the results of research from Herlina and Nazirah where the results of their research are interest rates (BI-Rate) have no effect on the NAV of Islamic Mutual Funds. However, this also rejects research from the Arbitrage Pricing Theory (APT) theory discovered by Ross and supported by the research of Arifin, Othman, Ramzan, Cai Li, Fajarwati, Bandonu, and Zulkarnain.

This shows that an increase or decrease in the BI Rate does not affect the Net Asset Value (NAV) of Islamic mutual funds¹⁴. In the long run, BI Rate has a significant negative effect on the Net Asset Value (NAV) of Islamic mutual funds in Indonesia. This shows that if the BI Rate increases, the Net Asset Value (NAV) of Islamic mutual funds will decrease. Vice versa, if the BI Rate decreases, the Net Asset Value (NAV) of Islamic mutual funds will increase. Theoretically, Islamic mutual funds have investment policies based on investment instruments in portfolios that are categorized as halal and directly supervised by the Sharia Supervisory Board. It is said to be halal, if the company that issues the investment instrument is free from usury, maysir, and gharar. Thus, in its operation, the issuers that are the investment targets of Islamic mutual funds are

¹² S Sanjaya, "Macroeconomic Factors That Affect Depositor Funds Of Sharia Bank In Indonesia," *e-journal.unair.ac.id*, n.d., <https://e-journal.unair.ac.id/JDE/article/download/22279/14353>.

¹³ S A Suciningtias, "Macroeconomic impacts on sukuk performance in indonesia: co-integration and Vector Error Correction Model approach," *Journal of Islamic Finance*, 2019, <https://journals.iium.edu.my/iiibf-journal/index.php/jif/article/view/351>.

¹⁴ R Sumantyo dan D A Savitri, "Macroeconomic variables towards net asset value of sharia mutual funds in Indonesia and Malaysia," *Jurnal Keuangan dan Perbankan* (academia.edu, 2019), <https://www.academia.edu/download/73541126/pdf.pdf>.

Islamic issuers that do not use the principle of interest¹⁵. This indicates that the rise and fall of interest rates also does not affect investors' interest in investing their funds in Islamic mutual fund instruments¹⁶. It is likely that Islamic mutual fund investors do not consider the return value generated from interest when investing in Islamic mutual funds. Thus when interest rates change, it does not affect investors in investing their funds in Islamic Mutual Funds. Based on this, it can be confirmed that interest rates are not used as a reference for investors to determine or invest in Islamic mutual funds. It can be concluded that interest rates (BI-Rate) have no effect on the NAV of Islamic mutual funds.

The effect of the Sharia Stock Index on the NAV of Sharia Mutual Funds

The Islamic stock index is a statistical measure that reflects the price movement of a group of Islamic stocks selected based on certain criteria by the Financial Services Authority (OJK) by issuing a Sharia Securities List (DES) which aims to facilitate investors in finding references in investing in sharia in the capital market¹⁷. In this study, researchers tried to measure the influence that occurred between the Sharia Stock Index on the NAV of Islamic Mutual Funds based on secondary data obtained from monthly time-series data from March 2020 to December 2022. And the results of the study concluded that the t-count value of the stock price index variable of 1.614 was smaller in value compared to the t-table value of 1.69092, and while the value of Sig. equal to 0.118 the value is greater than 0.05, it can be concluded that the stock price index variable has no effect on the NAV of Islamic Mutual Funds. And these results conclude that the hypothesis is rejected. The results of this study support the results of research from Indah, et al where the results of the research examined the Islamic stock index has no significant effect on Islamic NAV. And based on these results, this study rejects research from the Arbitrage Pricing Theory (APT) theory discovered by Ross and supported by research by Nafisah, Arifin, Othman, Ridlo, Rusmita, Mochlasin, and Mubarak.

So it can be concluded that ISSI does not have a significant effect on the NAV of Sharia Mutual Funds invested¹⁸. This can happen because in the research period the ISSI index had experienced a fairly drastic decline at the beginning of the co-19 pandemic, so this can cause investment managers to tend to divert their managed funds to debt or money market securities. In addition, Islamic mutual funds in Indonesia are more dominated by mutual funds that invest their funds through debt or money market securities, so that the portion of investment funds is less on stock securities. Not all Islamic mutual fund instruments are a small part of the ISSI, because in the Islamic index there are many Islamic stocks, and those that are used as Islamic mutual funds are only a small part of all stocks in the Islamic capital market. So ISSI is considered to have very little influence on the NAV of Islamic mutual funds.

¹⁵ M Ridlo, T Yunianto, dan I A Rohmah, "... of Exchange Rate, Jakarta Islamic Index (JII) and Indonesian Sharia Bank Certificate (SBIS) on Islamic Mutual Funds Growth with Inflation as a Moderate Variable," *Al-Amwal: Jurnal Ekonomi dan ...*, 2021, <https://www.syekhnuurjati.ac.id/jurnal/index.php/amwal/article/view/7663>.

¹⁶ S F N Hasanah, R Hadiani, dan ..., "... of Macroeconomic Factors and Fundamental Factors to Sharia Stock Return on Trade, Services and Investment Sector Companies in Jakarta Islamic Index (JII) Period ...," *First International ...*, 2021, <https://www.atlantis-press.com/proceedings/icsteir-20/125954064>.

¹⁷ H Nugraha, S Putriani, dan ..., "Pengaruh harga komoditas global terhadap industri reksa dana Indonesia," *Journal of ...*, 2023, <https://journal.nurscienceinstitute.id/index.php/jerps/article/view/602>.

¹⁸ M R Ramli et al., "The Analysis Effect of Macroeconomic Variables on Shariah and Conventional Market Share at Indonesia," *PalArch's Journal of ...*, 2021, <https://archives.palarch.nl/index.php/jae/article/view/5366>.

The Effect of Inflation, Money Supply, Exchange Rate, Central Bank Interest Rate, and Sharia Stock Index) on the NAV of Islamic Mutual Funds

One way to measure the performance of Islamic mutual funds is by looking at net asset value. Net asset value is the amount of assets after deducting existing liabilities. While the NAV per participating unit is the total net asset value divided by the number of participation units (shares issued) in a certain period. In this case, macroeconomics certainly has a relationship with Sharia NAV¹⁹. This macroeconomic measurement is obtained from several variables, namely inflation, money supply, rupiah exchange rate, central bank interest rate, and Islamic stock index. In this study, several macroeconomic variables were simultaneously analyzed to determine their effect on Islamic NAV using monthly time-series data from March 2020 to December 2022. Based on the results of data processing conducted by researchers, it is concluded that the independent variables, namely inflation, money supply, rupiah exchange rate, central bank interest rate, and Islamic stock index simultaneously affect the dependent variable, namely the Islamic Mutual Fund NAV significantly²⁰. This is based on the significance value (Sig) of 0.000 which is smaller than 0.05 and the F-table value of 2.38 is small compared to the results of the F-count value of 7.822.

Based on these results it can be concluded that when each macroeconomic variable is used as a measure to determine the NAV of Islamic Mutual Funds simultaneously has a significant effect. And these results concluded that the hypothesis was accepted²¹. The results of this study support the research results of the Arbitrage Pricing Theory (APT) theory discovered by Ross, and supported by the research of²². This proves that the ability of Islamic mutual funds to reflect the real sector is quite good. The NAV of Islamic mutual funds provides a positive response in improving the performance of the Islamic capital market in Indonesia despite the Covid-19 pandemic so that it can contribute to economic recovery.

Conclusion

In this study, it was found that a number of macroeconomic variables, including inflation, money supply, rupiah exchange rate, central bank interest rate, and Islamic stock index, together have a significant influence on the Net Asset Value (NAV) of Islamic Mutual Funds. The results of this study support the proposed hypothesis and reflect the ability of Islamic Mutual Funds to reflect the real sector well. Regarding macroeconomic variables, inflation does not have a significant influence on the growth of NAV of Islamic Mutual Funds during the Covid-19 pandemic. However, broad money has a significant influence, indicating that government

¹⁹ F Fakhrunnas, M A M Chowdhury, dan ..., "The asymmetric impact of macroeconomic variables on Islamic bank home financing in Indonesia," ... & *Keuangan Islam* (journal.uui.ac.id, 2023), <https://journal.uui.ac.id/JEKI/article/download/28299/15506>.

²⁰ Y Trisnowati et al., "The effect of ESG score, financial performance, and macroeconomics on stock returns during the pandemic era in Indonesia," *International Journal of ...* (zbw.eu, 2022), http://www.zbw.eu/econis-archiv/bitstream/11159/12279/1/181690466X_0.pdf.

²¹ M Istan dan M Fahlevi, "The effect of external and internal factors on financial performance of Islamic banking," *Jurnal Ekonomi & Studi Pembangunan*, 2020, <https://journal.umy.ac.id/index.php/esp/article/view/8047>.

²² M Ridlo dan L D Wardani, "The effects of investment, monetary policy, and ZIS on economic growth in Indonesia," *Indonesian Journal of Islamic ...*, 2020, <https://www.e-journal.iainsalatiga.ac.id/index.php/ijer/article/view/3776>; K Purnamasari dan T P Ramayanti, "The effects of macroeconomic and bank specific factors on nonperforming financing in sharia commercial bank in Indonesia," *Global Review of Islamic ...*, 2020, <https://ejournal.uin-suka.ac.id/febi/grieb/article/view/1112>; M Sanusi dan S Zulaikha, "The impact of bank-specific and macroeconomic variables on profitability of Islamic rural bank in Indonesia," *Jurnal Ilmiah Ekonomi Islam* (core.ac.uk, 2019), <https://core.ac.uk/download/pdf/270263034.pdf>.

monetary policy plays an important role in providing sufficient money supply to support economic growth. The rupiah exchange rate does not have a significant influence, perhaps because the exchange rate tends to be stable and does not pose a threat to investors. Central bank interest rates also do not affect investor interest in investing in Islamic Mutual Fund instruments. The Islamic stock index also has no significant impact on the NAV of Islamic Mutual Funds, perhaps because most of the funds are invested in debt or money market securities. In conclusion, macroeconomic variables, as a whole, play an important role in determining the performance of Islamic Mutual Funds during the Covid-19 pandemic, which proves the positive contribution of Islamic Mutual Funds to economic recovery in Indonesia.

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