

## INDONESIAN ISLAMIC STOCK INDEX: MACROECONOMIC IMPACT

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**Abstract:** The purpose of this study is to ascertain how the Indonesian Sharia Stock Index is impacted by macroeconomic factors such as interest rates, inflation, and exchange rates. The study sample for the Indonesian Sharia Stock Index's Annual Report for the years 2016 through 2020. The multiple linear regression analysis approach was used to test the data. According to the study's findings, the Indonesian Sharia Stock Index is influenced by the exchange rate variable to a lesser extent than previously thought, as seen by the significant values of  $0.012 < 0.05$  and  $t_{count} (-2.063) < t_{table} (-2.00247)$ , The results of a significant value of  $0.288 > 0.05$  and a  $t_{count}$  value of  $1.072 < t_{table} 2.00247$  indicate that the inflation variable has no significant impact on the index of Indonesian Sharia shares, and the results of a significant value of  $0.768 > 0.05$  and a  $t_{count}$  value of  $0.297 < t_{table} 2.00247$  indicate that the interest rate variable has no significant impact on the index of Indonesian Sharia stocks. The simultaneous values of  $F_{count} = 5,693 > F_{table} 2.77$  and  $Sig. F = 0.002 < 0.05$ . So, it can be inferred that the Indonesian Sharia Stock Index is significantly impacted by the fluctuating exchange rate, inflation, and interest rates. The coefficient of determination, or adjusted R square, is 0.193. According to this finding, exchange rates, inflation, and interest rates alone can account for 19.3% of the volatility in the Indonesian Sharia Stock Index, while other factors account for 80.7% of the variation.

**Keywords:** Indonesian Sharia Stock Index, interest rates, inflation, exchange rates

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### Introduction

One of the key indicators of a nation's economy's health is the financial markets. They play a crucial role through the functions of financial intermediation and financial innovation, whether at the macro level by producing an efficient allocation of capital, which in turn leads to promoting economic efficiency, or at the micro level by directly influencing wealth and business firm behavior, as well as individual well-being. Several viewpoints can be used to categorize financial markets. (Hassan et al., 2018) Stock, bond, and foreign exchange markets have historically existed. Bond markets are associated with debt financing, while stock markets are associated with equity financing. (Mohammed & Abu Rumman, 2018) (Asif Khan et al., 2019). The Islamic financial system is regarded as a market for alternative investment opportunities. Islamic finance refers to the process of investing and handling money according to Sharia law. Islamic financial products are said to promote social welfare and public goods, prevent social crises, stop potential injustice, and add actual economic value. (Asif Khan et al., 2019) (Sholihah & Primasari, 2020)

Islamic finance forbids the volatility of the capital markets and the misalignment of returns with the actual rate of economic growth and net rate of profit. It is founded on taking

and sharing risks, and it is closely related to legitimate economic activity. Stock returns are unaffected by speculation and accurately reflect the net rate of profit in the productive sectors. As there is no or very little interest-based credit, there is also no bankruptcy. Islamic banking does not require a government bailout to keep the capital markets operating as they should. Since money is a tool for policymaking in conventional finance and is not neutral, it is neither a tool for policymaking nor neutral in Islamic finance. (Krichene, 2013). On the other hand, a variety of factors, including political stability, social issues, and macroeconomic indicators, have an impact on the financial markets. Policymakers could make firm decisions to encourage the financial markets to perform at higher levels by understanding the true relationships between these issues and the financial markets. As a result, these financial markets will be better able to perform their primary function, which is the efficient allocation of capital. (Mohammed & Abu Rumman, 2018) (Rajabi & Muhammad, 2014)

Being one of the largest Muslim nations in the world, Indonesia represents a very sizable opportunity for the growth of the Islamic finance sector. The Islamic finance sector, which includes the capital market, plays a significant part in expanding the market share of the sharia financial sector in Indonesia. The Jakarta Islamic Index (JII), which aims to assist investors who wish to invest their money in accordance with sharia law, was introduced on July 3, 2000 by the Indonesia Stock Exchange in partnership with PT. Danareksa Investment Management. In addition to JII, the Indonesian Sharia Stock Index was relaunched on May 12, 2011. (ISSI). the introduction of the Indonesian Sharia Stock Index (ISSI), or the Indonesian Sharia Stock Index (ISSI), which serves as a guide for stock investors. (Setyani, 2017). The Indonesian Sharia Stock Index (ISSI) is a stock index that reflects all Islamic stocks listed on the Indonesia Stock Exchange (IDX). The existence of ISSI complements the pre-existing sharia index, namely the Jakarta Islamic Index (JII).

The selected macroeconomic indicators are: interest rate (BI Rate), inflation, and rupiah interest rates. Multiple regression will be used to analyze the monthly data that are related to the period from January 2016 to December 2020. (Indonesia, 2020) The results of this regression will be used to test the relationship between each of these variables on Indonesian Sharia Stock Index (ISSI).

A broad and transient increase in prices is referred to as inflation. A price increase that just affects one or two things cannot be referred to constitute inflation unless it also affects (or drives up the price of) other commodities. The purchasing power of the invested rupiah will decline with higher inflation. Consequently, the risk to the purchasing power of inflation is another name for it. (Tandelilin, 2001). Investors will typically request an additional inflation premium if inflation increases to make up for the loss of purchasing power they face. The value of a currency (exchange rate) is determined by the prices in the market. A currency's value in relation to other currencies was also based on its exchange rate. While the exchange rate influences this area of trade associated to imports and exports, it also affects the development of the Indonesian Sharia Stock Index (ISSI). The performance of enterprises listed on ISSI may be impacted by uncontrolled exchange rate swings.

When the rupiah weakens against the dollar, imported items become more expensive, especially for businesses whose primary raw materials are imported commodities. Imported materials will increase automatically and will increase production costs and ultimately have an impact on the fall in the company's profit level, thus this will also have an impact on the trend of the company's share price in the following time. The stock price index declines as a result. The amount of interest that must be paid is determined by the interest rate. the proportion of the total payment made every borrowing period. Investors will have possibilities to engage in the capital market as a result of the influence of Bank Indonesia interest rates and the growth of the Indonesian Sharia Stock Index (ISSI) as a result of lower interest rates. In

contrast, if the level increases, interest rates would lead to a decline in stock prices and investors selling their shares.

### **Literature Review**

The Sharia stock index is a metric that depicts the movement and performance of the Indonesia Stock Exchange's Sharia stock price index. The Jakarta Islamic Index (JII) and the Indonesian Sharia Stock Index are the two Sharia stock price indexes that have been part of the IDX since May 12, 2011. (ISSI). All sharia shares listed on the Indonesia Stock Exchange are included in the Indonesian Sharia Stock Index (ISSI), a stock index (IDX). All of the sharia shares that make up the SSI are listed on the IDX and registered in the Sharia Securities Registry (DES). The Stock Exchange has never performed a selection of ISSI-compliant sharia stocks. According to the review timetable for the DES (Sharia Securities List), the Indonesian Sharia Stock Index will be re-selected twice a year, in May and November. The weighted average of market capitalization will be utilized to create the sharia stock index in the same way as other IDX stock index calculations are done, with December 2007 serving as the base date (ISSI). (Hairunnisa et al., 2021)

The BI Rate is an interest rate set by the Indonesian bank and made public to reflect attitudes or monetary policy. The Bank Indonesia (BI) Rate is a short-term interest rate with a one-month maturity that is determined and released on a periodic basis. It serves as a signal for monetary policy to accomplish the inflation objective and maintain rupiah value stability. (Astuti, 2022)(Murni, 2006). Continuously raising overall prices is the process of inflation. People's purchasing power declines as a result of inflation in general since retail income levels generally drop. As can be observed from every rise or fall in the inflation rate will effect the monetary authority in formulating policies, which will ultimately affect investors in deciding where to place their investment capital, inflation has a significant impact on the world of investments.(Mankiw, 2012)(Murhadi, 2009)

The market price of a foreign currency in terms of domestic currency, or the price of domestic currency in foreign currency, is recorded as the exchange rate or currency exchange rate. Because it is based on the balance between supply and demand that exists in the market, the exchange rate may also be seen as one of the crucial prices in the economy. The exchange rate is a technique used to assess a nation's economic health. Steady currency values show that the nation's economic situation is generally favorable and stable.(Setyani, 2017)(Kamal et al., 2021)

### **Method**

Using a descriptive quantitative methodology, this study. The macroeconomic variables used in the study are interest rates, inflation, and exchange rates. The data source is the Annual Report of the Indonesian Sharia Stock Index, which is released by the Indonesia Stock Exchange (IDX). Data was downloaded from the official websites [www.idx.co.id](http://www.idx.co.id) and [www.bi.go.id](http://www.bi.go.id) to collect the data sources.

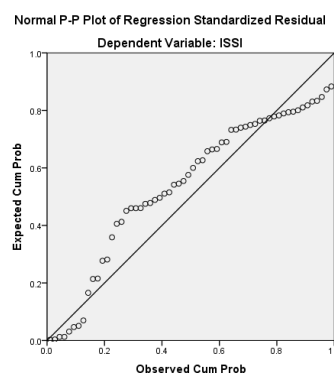
The population of this study is the movement of the Indonesian Sharia Stock Index (ISSI), inflation and exchange rates (rupiah exchange rate) during the period January 2016 to December 2020. Furthermore, the sampling technique uses saturated sampling technique so that the sample used in this study is inflation data, exchange rates (rupiah exchange rate) and the Indonesian Sharia Stock Index (ISSI) for the period January 2016 to December 2020 as many as 60. Data analysis techniques use Classical Assumption Tests namely Normality, Multicollinearity, Autocorrelation, and Heteroscedasticity, t Tests, Tests F, and Determination Test ( $R^2$ ). (Sugiyono, 2015)

### **Result and Discussion**

### Classical Assumption Test Results

The classical assumption test must be carried out before testing the hypothesis in this study, following the results of the classical assumption test;

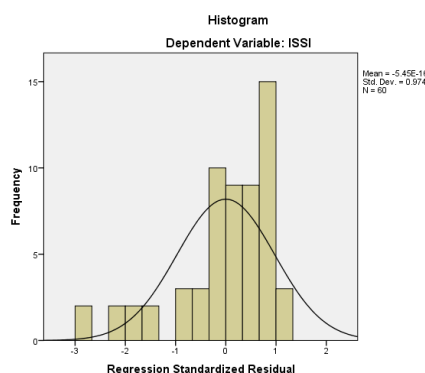
In the normal PP-Plot graph, if the points spread between the diagonal lines and follow the direction of the diagonal line or the PP-Plot graph shows a normally distributed pattern, then the regression model meets the assumption of normality of the data. On the Histogram graph, if the parabola or bell histogram lines are not slanted to the right or left, thus forming a perfect parabola or bell indicating that the data is normally distributed, then the regression model meets the assumption of normality. In the One Sample Kolmogrov-Smirnov analysis, if it is significant  $> 0.05$  with  $\alpha = 5\%$  it means that the data is normally distributed and  $H_0$  is accepted, conversely if the significant value is  $< 0.05$  it means that the data is not normally distributed  $H_a$  is accepted. The results of the PP-Plot graph normality test by looking at the normal pp-plot graph of regression standardized residuals in Figure 1 below:



**Figure 1: Results of the Normality Test with the Normal PP-Plot**

Source: Data processed with SPSS (2023)

In Figure 1 it shows that the data is normally distributed where on the normal line of the P-plot it can be seen that the dots spread following the diagonal line. Thus it can be concluded that the data is normally distributed, and fulfills the normality test. Analysis of the histogram graph is done by looking at the histogram graph. Good data is data that has a pattern similar to normally distributed data, that is, if the bells are not skewed left and right.



**Figure 2: Normality Test Results with a Histogram**

Source: Data processed with SPSS (2023)

The histogram in figure 2 reveals that the variables are regularly distributed. This is demonstrated by the data's distribution, which is straight and to the right so as to create a perfect bell or parabola. The histogram's results show that the data is regularly distributed and passes the normality test.

Table 1 below shows the results of the Kolmogorov-Smirnov analysis's normality test using SPSS.

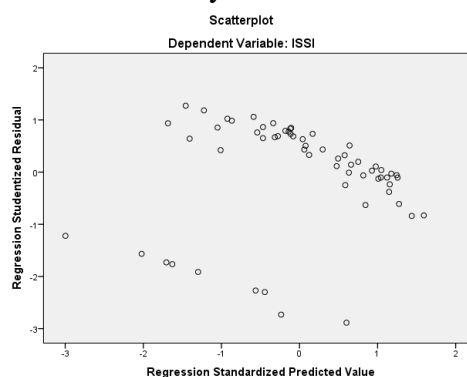
**Table 1: Kolmogorov-Smirnov Test Results**

One-Sample Kolmogorov-Smirnov Test		Unstandardized Residual
N		60
Normal Parameters <sup>a,b</sup>	Mean	0E-7
	Std. Deviation	52343.40559034
	Absolute	.183
Most Extreme Differences	Positive	.114
	Negative	-.183
Kolmogorov-Smirnov Z		1.416
Asymp. Sig. (2-tailed)		.036

a. Test distribution is Normal.

b. Calculated from data.

Based on table 1 above, it shows that the sig value from the One-Sample Kolmogorov-Smirnov analysis has an asymp value. Sig > 0.05, which is equal to 0.036, so it can be concluded that the regression data is normally distributed.



**Figure 3: Heteroscedasticity Test Results with Scatterplot**

Source: Data processed with SPSS (2023)

It is clear from the scatterplot graph above that the points are dispersed randomly and are dispersed both above and below the value 0 on the Y axis, indicating that this regression model does not contain heteroscedasticity. The autocorrelation test looks for a relationship between confounding mistakes in period t and errors in period t-1 or the prior year in a linear regression model. Because there are similar sequential observations throughout the year, autocorrelation results. Time series typically contain examples like this.

**Table 2 : Autocorrelation Test Results**

Model Summary <sup>b</sup>	
Model	Durbin-Watson
1	1.575
a. Predictors: (Constant), Interest Rates, Inflation, and Exchange Rates	
b. Dependent Variable: ISSI	

From the results of management using SPSS for windows, it can be seen that table 2 shows a D-W statistical value of 1.575. From this observation it can be concluded that the D-W value obtained is 1.575 which means there is no autocorrelation in this regression because the D-W value is between -2 to +2.

### Hypothesis Test Results

From the results of data processing using SPSS for windows, the following results are obtained:

#### Simultaneous Test Results (F-Test)

The F-test was conducted to determine whether the independent variables (Exchange Rate, Inflation, Interest Rate) simultaneously can be accepted as a research model. In this case the research criteria with a significant level of 5%, if the sig. F > 0.05 then H<sub>0</sub> is accepted and H<sub>1</sub> is rejected. Meanwhile, if the sig. F < 0.05 then H<sub>0</sub> is rejected and H<sub>1</sub> is accepted.

**Table 3 Simultaneous Test Results (F-Test)**

ANOVA <sup>a</sup>						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	49300170747.268	3	16433390249.089	5.693	.002 <sup>b</sup>
	Residual	161650094418.91	56	2886608828.909		
	Total	210950265166.18	59			

a. Dependent Variable: ISSI

b. Predictors: (Constant), Interest Rates, Inflation, and Exchange Rates

Source: Data processed with SPSS (2023)

The statistical results show that the sig. F is 0.000 < a significant level of 0.05 (5%) and the value of Fcount (5.693) > Ftable (2.77) thus, H<sub>0</sub> is rejected and H<sub>1</sub> is accepted. This means that it can be concluded that the variables of Exchange Rate, Inflation, Interest Rate simultaneously have a significant effect on the Indonesian Sharia Stock Index.

#### Partial Test Results (t-test)

The t-test was conducted to determine whether the independent variables (Exchange Rate, Inflation, Interest Rates) have an individual effect on the Indonesian Sharia Stock Index. Using a significant level of 5%, if the significant value of t > 0.05 then H<sub>0</sub> is accepted and H<sub>2</sub> is rejected. Conversely, if the significant value of t < 0.05 then H<sub>0</sub> is rejected and H<sub>2</sub> is accepted.

**Table 4: Partial Test Results (t-test)**

Model	t	Sig.
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	(Constant)	2.830	.006
1	Exchange Rates	-2.603	.012
	Inflation	1.072	.288
	Interest Rates	.297	.768

a. Dependent Variable: ISSI

Source: Data processed with SPSS (2023)

The explanation of the t test is as follows:

1. From the research results obtained a significant value of  $0.012 < 0.05$  and tcount (-2.063) < ttable (-2.00247). this shows that  $H_0$  is rejected and  $H_2$  is accepted. Thus it can be concluded that partially the Exchange Rate variable has an effect on the Indonesian Sharia Stock Index.
2. From the research results obtained a significant value of  $0.288 > 0.05$  and a tcount value of  $1.072 < ttable 2.00247$ , this shows that  $H_0$  is accepted and  $H_2$  is rejected. Thus it can be concluded that partially the inflation variable has no effect on the Indonesian Sharia Stock Index.
3. From the research results obtained a significant value of  $0.768 > 0.05$  and a tcount of  $0.297 < ttable 2.00247$ , this shows that  $H_0$  is accepted and  $H_2$  is rejected. Thus it can be concluded that partially the interest rate variable has no effect on the Indonesian Sharia Stock Index.

The partial test results on the inflation variable are in line with the results of research conducted by Ima Dwi Astuti, et al, and Mustafa Kemal, et al. The results of this study indicate that inflation has no effect on the Indonesian Sharia Stock Index.

### Result Coefficient of Determination ( $R^2$ )

This test is used to see or measure how far the model's ability to explain variations in the dependent variable or test the accuracy of the regression model, by looking for a coefficient of determination which states that several proportions or percentages of variation in the dependent variable can be explained by the independent variables included in the following regression model:

If  $R^2 > 0.5$  means accurate

If  $R^2 = 0.5$  means medium

If  $R^2 < 0.5$  means less

**Table 5: Results of the Coefficient of Determination ( $R^2$ )**

Model	R	R Square	Adjusted R Square
1	.483 <sup>a</sup>	.234	.193

a. Predictors: (Constant), Interest Rates, Inflation, and Exchange Rates

b. Dependent Variable: ISSI

Source: Data processed with SPSS (2023)

The correlation coefficient (R) in the summary model is 0.483, which indicates that there is a weaker correlation or relationship between the independent variables and the exchange rates, inflation, and interest rates on the Indonesian Sharia Stock Index. This is because the

correlation coefficient (R) is less than 0.5. Coefficient of determination or adjusted Rsquare is 0.193. According to this finding, differences in exchange rates, inflation, and interest rates can account for 19.3% of the variance or change in the Indonesian Sharia Stock Index, while other factors (80.7%) account for the remaining variance.

### Conclusion

Based on the test results and discussion, it can be concluded that the Indonesian Sharia Stock Index is influenced by a smaller exchange rate variable than previously thought, as seen from a significant value of  $0.012 < 0.05$  and  $t_{count} (-2.063) < t_{table} (-2.00247)$ . the result is a significant value of  $0.288 > 0.05$  and a  $t_{count}$  value of  $1.072 < t_{table} 2.00247$  indicating that the inflation variable has no significant effect on the Indonesian sharia stock index, and a significance value of  $0.768 > 0.05$  and a  $t_{count}$  value of  $0.297 < t_{table} 2.00247$  indicates that the interest rate variable has no significant effect on the Indonesian sharia stock index. Simultaneous value of  $F_{count} = 5.693 > F_{table} 2.77$  and  $Sig. F = 0.002 < 0.05$ . So, it can be concluded that the Indonesian Sharia Stock Index is significantly influenced by fluctuations in exchange rates, inflation and interest rates. The coefficient of determination, or adjusted R squared, is 0.193. According to these findings, exchange rates, inflation and interest rates alone can account for 19.3% of the volatility in the Indonesian Sharia Stock Index, while other factors contribute 80.7% of the variation.

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