

WHAT DRIVES ISLAMIC STOCK MARKET PRICES IN INDONESIA?

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Abstract

Saat ini, pasar modal syariah berkembang semakin pesat. Hal ini ditandai dengan munculnya berbagai indeks saham syariah termasuk Jakarta Islamic Index (JII). Pasar modal adalah lembaga keuangan yang berkontribusi dalam pengelolaan dana investasi, serta menjadi penggerak utama dalam sistem ekonomi. Namun, pasar modal syariah dalam beberapa dekade terakhir menunjukkan pergerakan yang fluktuatif, diduga ada faktor-faktor yang mempengaruhi pergerakannya. Tujuan dari penelitian ini adalah untuk mengkaji faktor-faktor yang mempengaruhi pergerakan Jakarta Islamic Index. Metode yang digunakan dalam penelitian ini adalah deskriptif kuantitatif dengan data time series tahun 2009–2021. Variabel independen dalam penelitian ini adalah ekonomi makro yang terdiri dari inflasi (INF), Indeks Produksi Industri (IPI), BI Rate, nilai tukar, dan Indeks Harga Saham Gabungan Indonesia (IHSG) sedangkan variabel dependennya adalah Jakarta Islamic Index (JII). Alat analisis yang digunakan dalam penelitian ini adalah Vector Error Correction Model (VECM). Hasil penelitian ini menunjukkan bahwa secara umum, dalam jangka pendek, pergerakan Indeks Saham Syariah yaitu Jakarta Islamic Index (JII) tidak banyak dipengaruhi oleh variabel makroekonomi. Sementara itu, dalam jangka panjang, pergerakan indeks saham syariah di Indonesia dipengaruhi oleh variabel makroekonomi.

Currently, the Islamic capital market is growing rapidly. This is marked by the emergence of various Islamic stock indices, including the Jakarta Islamic Index (JII). The capital market is a financial institution that contributes to the management of investment funds as well as being the main driving force in the economic system. However, the Islamic capital market in recent decades has shown fluctuating movements; allegedly, some factors affect its movement. The purpose of this study is to examine the factors that influence the movement of the Jakarta Islamic Index. The method used in this study is quantitative-descriptive with time series data from 2009 to 2021. The independent variable in this study is macroeconomics, consisting of inflation (INF), industrial production index (IPI), BI rate, exchange rate, and Indonesia Composite Stock Price Index (ICI), while the dependent variable is the Jakarta Islamic Index (JII). The analysis tool used in this study is the Vector Error Correction Model (VECM). The results of this study show that, in general, in the short term, the movement of the Sharia Stock Index, namely the Jakarta Islamic Index (JII), is not much influenced by macroeconomic variables. Meanwhile, in the long run, the movement of Islamic stock indices in Indonesia is influenced by macroeconomic variables.

INTRODUCTION

Indonesia is the country with the largest Muslim population in the world (Haron & Mukhtar, 2021) . This can be seen from *Global Religious Futures data* which shows that in 2020 Muslims in Indonesia will reach 229.6 million people or 87.2% of the total population of Indonesia (Kholisdinuka, 2021). In this regard, it will certainly greatly influence the growth of the halal industry in Indonesia. There are various types of halal industry, starting from tourism, fashion, culinary and what is no less important is industry in the financial sector. Currently, the Islamic finance industry in the investment sector is growing increasingly rapidly . In addition, considering the difficulty of predicting future conditions that are full of uncertainty, this makes the financial industry more focused than



other fields. Because there will be many people who put some of their funds into investing. Basically, the benefits of investing itself will be received and will be felt much more at a later date (Pasaribu & Firdaus, 2013).

In its application in the investment sector, Indonesia uses the sharia capital market which adheres to the principles of justice in Islam. According to Sudarsono (2018) The capital market is defined as a financial institution that contributes to the management of investors' investment funds (Soemitra, 2021). Capital market products ranging from sukuk, bonds, mutual funds and sharia shares are one of the attractive products and are in great demand by investors (Chotib & Huda, 2019). Indonesia also has various stock indexes on the Indonesian Stock Exchange (BEI) which are used to measure capital market developments, including the Indonesian Sharia Stock Index (ISSI), the Indonesian Composite Stock Price Index (ICI), LQ45, and the Jakarta Islamic Index (JII). The Jakarta Islamic Index is a group of shares of publicly traded companies listed on the Indonesia Stock Exchange (BEI), JII only consists of 30 liquid sharia shares listed on the sharia capital market provided they meet sharia criteria (Rachmawati & Laila, 2015).

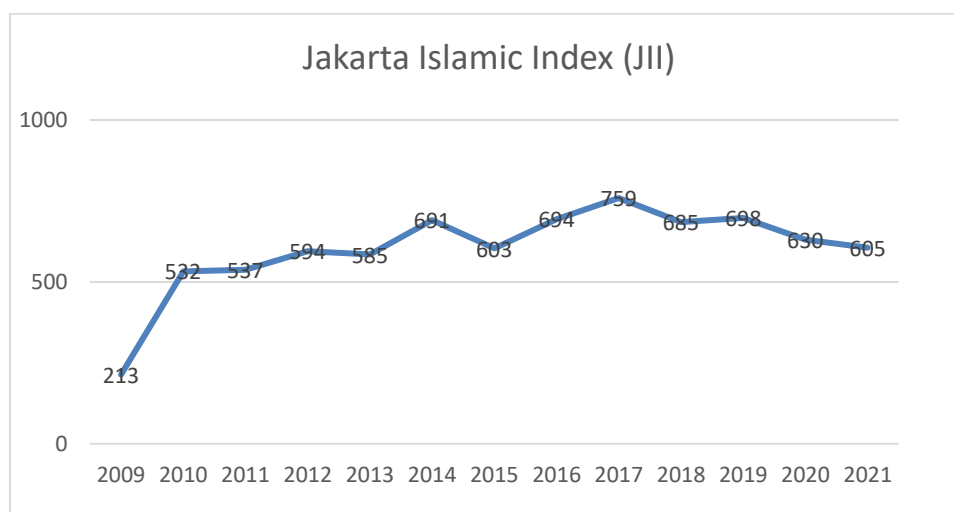


Figure 1 . Volatility movements of the Jakarta Islamic Index (JII) for the 2009 – 2021 period

Figure 1. shows that in each period, the Jakarta Islamic Index (JII) does not necessarily experience a spike and also experiences a decline. In other words, the Jakarta Islamic Index does not just stop at one point, but also tends to experience upward and downward movements. The movement of the Jakarta Islamic Index (JII) above occurred from 2009 to 2021. The JII movement seems very volatile and not stagnant. 2009 was the lowest JII movement, namely at 213 . As time went by, from 2010 to 2012 JII continued to increase to 594. In 2013 JII experienced a decline, although not significantly, to 585. In 2014 JII showed more positive development to 691. In 2015 JII experienced another decline to 603. Slowly Gradually the JII movement experienced an increasing trend until in 2017 it reached its peak at 759 . However, in the last years of the research period, JII again experienced a significant decline to only 605.

Figure 1 shows that in each period, the Jakarta Islamic Index (JII) did not necessarily experience a spike and also experienced a decline. In other words, the Jakarta Islamic Index does not only stop at one point, but also tends to experience upward and downward movements. The movement of the Jakarta Islamic Index (JII) above occurred from January 2009 to March 2021. The JII movement seems very volatile and not stagnant. January 2009 was the lowest JII movement, namely 213.630005 points. JII's highest movement in

December 2017 was 759.07001 points, although finally in March 2021 it experienced a quite significant decline.

According to Chotib and Huda (2019), the fluctuating movement of the Islamic stock index shows that there are several factors that influence its movement. These factors can come from microeconomic and macroeconomic factors. This fluctuating movement certainly cannot be separated from a risk that investors must pay attention to before investing (Humaira, 2021; Soemitra, 2021). From micro factors, it can be seen from how performance is carried out and can be controlled by the company itself. Meanwhile, macro factors are external factors that cannot be controlled by the company (Triuspitorini, 2021).

Macroeconomic condition factors, because they cannot be controlled directly by the company, are factors that have a higher risk compared to micro factors (Chotib & Huda, 2019). Thus, researchers will be more interested in studying the influence of macroeconomic variables on the Islamic stock index in Indonesia, which in this case is projected by the Jakarta Islamic Index (JII). JII is used as a sharia stock index variable because it is the most liquid stock compared to other stocks. There are many macroeconomic factors that can be used as a reference in influencing JII movements. However, in this study, researchers only selected several variables that can be predicted to influence JII movements, including Inflation (INF), Industrial Production Index (IPI), Indonesian Policy Interest Rate (BI Rate), Indonesian currency exchange rate against America dollar (exchange rate), and the Indonesian Composite Stock Price Index (ICI).

In previous studies, several researchers have examined the influence of macroeconomic variables on JII, including Suciningtias & Khoiroh (2015), Pasaribu & Firdaus (2013), Ridha (2016), Beik & Fatmawati (2014), Hakim (2020) Nurzain (2020), Triuspitorini (2021), and Putri (2018). However, in previous studies, there were inconsistencies in research results. So this research tries to review the influence of macroeconomic variables on JII. Apart from that, this research was also carried out with different variables and time. This means that the variables used are not the same as previous research. The time used in this research is quite long, namely from 2009 to 2021. Meanwhile, previous research only used a period ranging from the last 5 years, for example from 2016 to 2021. In this research, only used five independent variables, because it was considered that the variables used were quite important and represented in the research.

The aim of this research is to examine the influence of macroeconomic variables including inflation (INF), Industrial Production Index (IPI), BI Rate, exchange rate, and Indonesian Composite Stock Price Index (ICI) on the Jakarta Islamic Index (JII) for the period January 2009 to March 2021. The research period was chosen because there were several events during the research. Including in 2009 where there was a very severe global financial crisis, and in 2020–2021 there was economic silence due to the Covid–19 outbreak which could weaken various sectors, especially the Islamic capital market itself. Therefore, the author chose this time to be used as the research period. It is hoped that this research can be a reference and consideration for investors before deciding to invest.

Literature Review

Sharia shares are proof of a person's ownership of a company. In the concept, shareholders provide part of the funds as capital to the company and shareholders have the right to obtain profits or results from the funds that have been provided, provided that they use sharia principles (Mishkin, 2017). Sharia shares are a buying and selling instrument in the form of investment carried out by investors. Thus, from the paragraph above, it is known that shares are transactions that may be carried out based on Islamic law, the legal basis of which comes from the Koran.

Several studies from research that are relevant to this research will be discussed in this section. The discussion of previous research in this section refers to each independent variable which explains how it influences the dependent variable. The independent variables in this research include Inflation (INF), Industrial Production Index (IPI), BI Rate, Exchange Rate, and Indonesian Composite Stock Price Index (ICI). Meanwhile, the dependent variable is JII. Each independent variable and how it influences the dependent variable in previous studies will be discussed in detail in this section.

Inflation is a situation where there is a widespread and continuous increase in prices over a certain period of time (Oktawati, 2020) . The high level of inflation indicates increasing prices of company raw materials and weakening people's purchasing power. The decline in sales has an impact on the company's profitability, so investors tend to think twice about investing their funds. This of course has an impact on weakening the company's share price which ultimately has a negative impact on share prices on the capital market. Supported by the research results of Suciningtias & Khoiroh (2015), Pasaribu & Firdaus (2013), Ridha (2016), Beik & Fatmawati (2014), & Hakim (2020) that inflation has a negative effect on the sharia stock index. This is different from the results of research conducted by Nurzain (2020), Triuspitorini (2021), and Putri (2018), that inflation has no effect on the sharia stock index.

The Industrial Production Index (IPI) is an indicator that is able to reflect the condition of a country's production index (As – Sadiqqy, 2019) . In other words, IPI is a benchmark related to a company's production expenditure or output. On the other hand, before investing, investors tend to pay attention to the company's industrial production index. By knowing the increase in IPI, the company is able to provide a level of profitability that is greater than expected and of course this will make investors interested in investing their funds.

A high IPI level has an impact on strengthening company share prices and this will have a positive impact on the sharia stock index in the capital market. In line with the results of research conducted by Firdausi, et al (2016), Beik & Fatmawati (2014), Lisdawami (2021), and Ridha (2016) , that the industrial production index has a positive relationship with the sharia stock index. However, this is different from the results of research conducted by As – Shaddiqy (2019) , that IPI has a negative effect on the sharia stock index and according to Wulan (2020), Nisa & Sukmana (2017), IPI has no effect on the sharia stock index.

The exchange rate is the value or price of the rupiah currency in terms of US dollars, where this value can be influenced by supply and demand (Suciningtias & Khoiroh, 2015). In practice, exchange rates are related to export and import activities in a company. Increasing the cost of importing raw materials for companies will of course reduce the profitability that the company will obtain. This will result in lower dividends received by shareholders. This will have an impact on the company's weak share price which will ultimately have a negative impact on the sharia stock index.

On the other hand, the increase in export companies will certainly increase shareholder dividends. The high level of dividends received will tend to make investors more interested in investing. This can increase the company's share price and the capital market. So it can be concluded that increasing company exports will have a positive effect on the sharia stock index. According to the research results of Ashshidiq and Setiawan (2015), Sudarsono (2018), Suciningtias & Khoiroh (2015), Oktawati (2020), Lisdawami (2021), AlGhifari, et al (2021), and Putri (2018), the exchange rate or rupiah exchange rate influences negative for the sharia stock index. Meanwhile, according to the research results of Yuniarti and Litriani (2017), Ali (2014), Fitriyanti & Herlambang (2016), Pantas, et al (2017), the exchange rate has a positive effect on the sharia stock index.

The BI Rate is a policy interest rate which in this case reflects the monetary policy stance that has been determined by Bank Indonesia and then announced to the public (Wulan, 2020). This determination is of course a reference for the public in relation to the banking world, both in providing loans and savings. With high interest rates, of course the public or investors will be tempted to allocate their funds to banks and tend to think that investing their funds in the capital market is not profitable.

Thus, this will have a negative impact on the sharia stock index in the capital market. Supported by the research results of Ardana (2016), Oktawati (2020), Sudarsono (2018), Tripuspitorini (2021), Hakim (2020), and Junaidi, et al (2021), that the BI Rate has a negative effect on the sharia stock index. However, on the other hand, it is different from the results of research conducted by Chotib and Huda (2019), Pasaribu & Firdaus (2013), and Putri (2018) which stated that the BI Rate had a positive effect on the sharia stock index.

ICI is a stock price index that reflects conditions or circumstances in the capital market (Suryaputri & Kurniawati, 2020b) . ICI also provides indications regarding share movements in the capital market. Investors who are always hungry for information tend to use ICI as a guide before investing. A high ICI level will have a positive impact and influence on the sharia stock index in the capital market. Vice versa, a low ICI level in the capital market indicates that the economy in the capital market is in decline. According to the results of research conducted by Firdausi, et al (2016), ICI has a negative effect on the sharia stock index in the capital market. Meanwhile, according to the results of research conducted by Kismawadi (2013), Asih (2016), Suryaputri & Kurniawati (2020), ICI has a positive effect on the sharia stock index.

Based on the description above, the framework model used is:

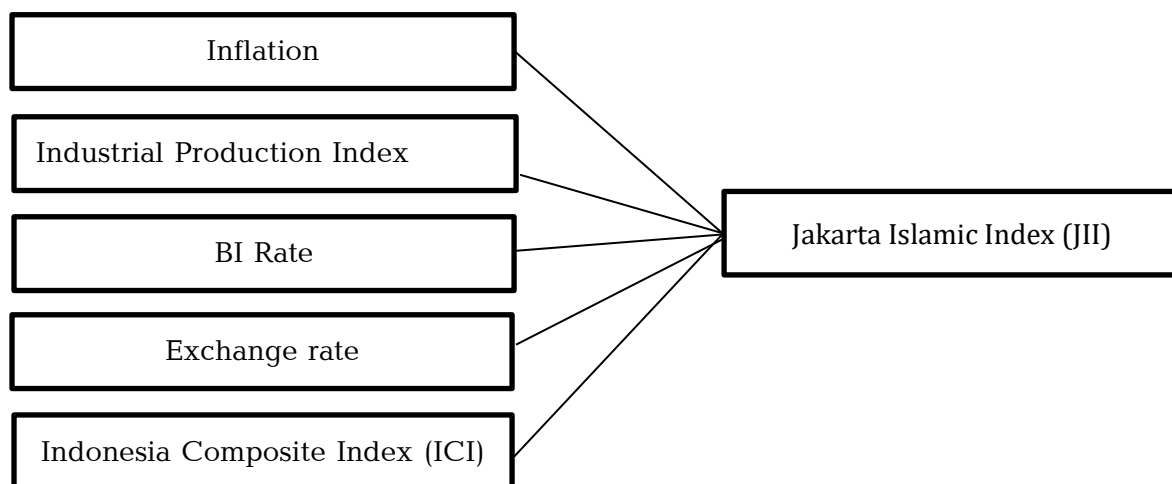


Figure 2. Research Analysis Model

Source: Author, 2023

METHOD

This research uses a quantitative approach and is based on time series data. The data used is secondary data which includes data from the Jakarta Islamic Index (JII), the Indonesian Composite Stock Price Index (ICI) obtained from the Indonesian Stock Exchange (BEI) in rupiah units, exchange rates in rupiah units, economic growth which is proxied by the Production Index Industry (IPI) is obtained from the official website of the Central Bank of Indonesia (BI) in percent units, and inflation and interest rate (BI

Rate) data is obtained from the official website of the Indonesian Central Bureau of Statistics in percent units. The data used is aggregate data presented in the monthly period January 2009 to March 2021. This research period was chosen because there were several events during the research. Including in 2009 where there was a very severe global financial crisis, and in 2020 – 2021 there was economic silence due to the Covid – 19 outbreak which could weaken various sectors, especially the Islamic capital market itself. Therefore, the author chose this time to be used as the research period.

Data analysis in this study uses the vector error correction model (VECM) as an approach to see short – term relationships, and a cointegration test as an approach to see indications of long – term relationships (Widarjono, 2018). VECM is a form of Restricted Vector Autoregressive (VAR) because the data is not stationary but rather cointegrated (Andri, et al, 2015). The stages in estimating using VECM include data stationarity testing, determining optimal lag, cointegration testing, VECM modeling, Impulse Response Function (IRF), and variance decomposition (Widarjono, 2018). Meanwhile, to determine the causal relationship between variables, the Granger causality test is used, with the following equation:

$$Y_{1t} = \beta_{01} + \sum_{i=1}^p \beta_{in} Y_{1t-i} + \sum_{i=1}^p \alpha_{in} Y_{2t-i} + \sum_{i=1}^p \alpha_{in} Y_{3t-i} + \sum_{i=1}^p \alpha_{in} Y_{4t-i} + \sum_{i=1}^p \alpha_{in} Y_{5t-i} + \sum_{i=1}^p \alpha_{in} Y_{6t-i} + e_{nt}$$

Explanation: Y_1 = Jakarta Islamic Index (JII); Y_2 = Industrial Production Index (IPI); Y_3 = Indonesian Composite Stock Price Index (ICI); Y_4 = Exchange rate; Y_5 = Inflation (INF); Y_6 = Indonesian Policy Interest Rate (BI RATE).

To find out whether there will be a balance in the long term between the variables in this research, a cointegration test was carried out using the Johansen's Cointegration Test method. If the variables JII, IPI, ICI, Exchange Rate, INFLATION and BI RATE are cointegrated then Vector Error Correction Model (VECM) analysis will be used. Next, IRF and VD analysis was carried out to determine the shock between the variables JII, IPI, ICI, Exchange Rate, INFLATION and BI RATE. IRF analysis is carried out to determine the effect of a variable's shock on the variable itself and other variables in the equation. Meanwhile, to determine the level of distribution of a variable regarding changes in the variable itself and other variables in the following periods, VD analysis is used.

RESULTS AND DISCUSSION

The first step in testing time series data is to carry out a unit root test to determine whether the data is stationary or not. According to (Widarjono, 2018) , stationary data is time series data that does not contain unit roots, otherwise data is said to be non – stationary if the mean, variance and covariance of the data are constant over time. To get good and correct regression results, the data used in the research must be stationary . The stationarity test was carried out by comparing the augmented Dickey Fuller (ADF) statistical value with the Mackinnon critical value. If the ADF value is greater than the Mackinnon critical value, it can be concluded that the data does not contain a unit root. On the other hand, if the ADF value is smaller than the Mackinnon critical value, it can be concluded that there is a unit root or the data is not stationary. The magnitude of the comparison between the ADF value and the Mackinnon critical value can be seen from the probability value at the $\alpha = 1\%$, 5% or 10% level. The unit root test results show that

all variables JII, IPI, ICI, Exchange Rate, INFLATION and BI_Rate are stationary at the First Difference. The stationarity test results are presented in Table 1, as follows:

Table 1
Unit Root Test Results

Variable	Stationarity Level					
	Level			First difference		
	DF test	problem	Explanation	DF test	Problem	Explanation
LNJII	- 5.202094	0.0000	Not Stationary*	- 11.14142	0.0000	Stationery*
LNPI	- 1.493318	0.5343	Not Stationary	- 11.05889	0.0000	Stationery*
LNICI	- 4.850866	0.0001	Stationery*	- 10.08703	0.0000	Stationery*
LN exchange rate	- 0.474759					
		0.8916	Not Stationary	- 11.55643	0.0000	Stationery*
INF	- 10.34143	0.0000	Stationery *	- 11.63307	0.0000	Stationery*
BI_RATE	- 1.196287	0.6753	Not Stationary	- 7.731392	0.0000	Stationery*

Explanation: MacKinnon Critical Value *: $\alpha = 1\%$, **: $\alpha = 5\%$, ***: $\alpha = 10\%$

Source: Author Estimates, 2023

The next stage is to determine the optimal lag length. Andri et al, (2015) explained that determining the optimal lag length is important in VAR modeling. If the optimal lag entered is too short, it is feared that it will not be able to fully explain the model dynamics. However, an optimal lag that is too long will produce inefficient estimates due to reduced degrees of freedom (especially for models with small samples). Therefore, before estimating VAR, it is necessary to know the optimal lag first. The optimal lag is determined using the final prediction error (FPE) correction criteria or the smallest AIC, SC and HQ values. The results of the optimal lag test in Table 2 show that the smallest number of AIC, SIC and HQ marked with an asterisk (*) is lag 2 (two). Thus the optimal lag chosen is 2 (two).

Table 2
Optimal Lag Test Results

Left behind	LogL	L.R	FPE	AIC	S.C
0	165.4696	NO	4.33e-09	2.230344	2.106029
1	1206.461	1980.067	3.41e-15	16.28616	15.41596*
2	1271.316	117.9183	2.28e-15*	16.68973*	15.07363
3	1301.043	51.55549	2.51e-15	16.60200	14.24002
4	1337.691	60.48080*	2.51e-15	16.61106	13.50318

Source: Author Estimates, 2023

Before entering the further analysis stage, the results of the estimation of the VAR system of equations that have been formed need to be tested for stability by examining the stability conditions of the VAR in the form of the polynomial roots of the characteristics of all the variables used multiplied by the number of lags of each VAR. This is done to obtain valid IFR and FEVD analysis. If the VAR stability estimation results

are unstable then the IFR and FEVD analysis will be invalid. A VAR system is said to be stationary if all its roots have a modulus that lies on the unit circle (Andri, et al, 2015). Figure 1 below shows that all roots have a modulus that lies on the unit circle, so it can be concluded that the VAR model is stable so that the resulting IRF and FEVD are valid.

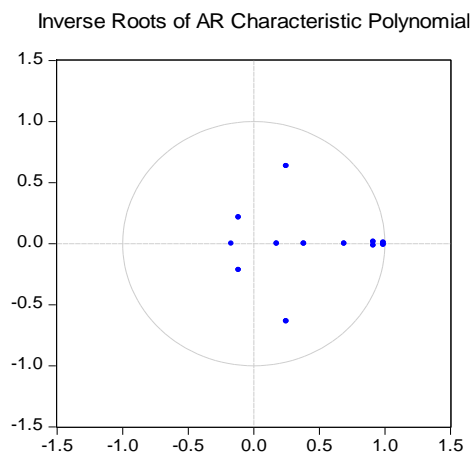


Figure 2

Stationarity Test Plot Results

Source: Author Estimates, 2023

Next, the Granger causality test is carried out to see the direction of the relationship between the variables JII, IPI, ICI, Exchange Rate, INF and BI RATE. Whether there is a relationship or not can be seen from the probability value of each causality test. Table 3 shows the one-way relationship between ICI and IPI, exchange rate with ICI and exchange rate with INFL. Meanwhile, the BI RATE and the exchange rate and the exchange rate with the BI RATE have a two-way relationship.

Table 3

Granger Causality Test Results

Null Hypothesis:	Problem.	Test results	Causality Relationship
LNIPi is not Granger Cause of LNICI	0.3030	Accept H ₀	One – way relationship from ICI to IPI
LNICI is not Granger Cause of LNIPi	0.0058	Reject H ₀	
LNJII Is Not a Granger Cause of LNICI	0.2091	Accept H ₀	There is no relationship between JII and ICI
LNICI is not Granger Cause of LNJII	0.6775	Accept H ₀	One – way relationship from the exchange rate to ICI
LNexchange rate does not Granger Cause LNICI	0.0497	Reject H ₀	
LNexchange values does not Granger Cause LNexchange values	5.E – 06	Accept H ₀	There is no relationship between BI RATE and ICI
BI_RATE Does Not Granger Cause LNICI	0.6631	Accept H ₀	
LNexchange values does not Granger Cause BI_RATE	0.4737	Accept H ₀	There is no relationship between INF and ICI
INF Does Not Granger Cause LNexchange values	0.0822	Accept H ₀	
LNexchange values does not Granger Cause INF	0.6457	Accept H ₀	There is no relationship between JII and IPI
LNJII is not a Granger Cause of LNIPi	0.0914	Accept H ₀	
LNIPi is not the Granger Cause of LNJII	0.4132	Accept H ₀	Accept H ₀
LNexchange rate does not Granger Cause LNIPi	3.E – 05	Accept H ₀	

Null Hypothesis:	Problem.	Test results	Causality Relationship
LNIPi does not Granger Cause LNExchange rate	0.8324	Accept H ₀	There is no relationship between exchange rates and IPI
BI_RATE Does Not Granger Cause LNIPi	0.7113	Accept H ₀	There is no relationship between BI RATE and IPI
LNIPi Does Not Granger Cause BI_RATE	0.2867	Accept H ₀	
INFLATION Doesn't Granger Cause LNIPi	0.7553	Accept H ₀	There is no relationship between INFLATION and IPI
LNIPi Does Not Granger Cause INFLATION	0.1954	Accept H ₀	
LNExchange rate does not Granger Cause LNJI	0.1607	Accept H ₀	There is no relationship between the exchange rate and JII
LNJI is not a Granger cause of LNExchange rate	9.E – 07	Accept H ₀	
BI_RATE No Granger Cause LNJI	0.7204	Accept H ₀	There is no relationship between BI RATE and JII
LNJI Does Not Granger Cause BI_RATE	0.3971	Accept H ₀	
INFLATION Doesn't Granger Cause LNJI	0.5783	Accept H ₀	There is no relationship between INF and JII
LNJI Does Not Granger Cause INF	0.7800	Accept H ₀	
BI_RATE does not Granger Cause the LNExchange value	0.0195	Reject H ₀	Two – way relationship between BI RATE to the exchange rate and exchange rate to BI RATE
LNExchange rate does not Granger Cause BI_RATE	0.0335	Reject H ₀	
INF does not Granger Cause LNExchange rate	0.0851	Accept H ₀	One – way relationship from the exchange rate to INF
LNExchange rate does not Granger Cause INF	0.0139	Reject H ₀	
INFL does not Granger Cause BI_RATE	0.1526	Accept H ₀	There is no relationship between INF and BI RATE
BI_RATE does not Granger Cause INF	0.0546	Accept H ₀	

Source: Author Estimates, 2023

Then a cointegration test is carried out to see the long – term relationship or balance between variables. Cointegration testing in this research was carried out using the Johansen Cointegration Test method. The results of the cointegration test in Table 4 show that the trace statistic value none (0) is 159.3468 which is greater than the critical value with a 5% significance level of 95.75366, thus it can be concluded that there is cointegration. This means that it is indicated that there is a long – term relationship between the research variables (JII, IPI, ICI, Exchange Rate, INF and BI Rate).

Table 4
Johansen Cointegration Test results between LNJI, LNIPI, LNICI, LNExchange rate, INF and BI RATE

Hypothesized		Footsteps	0.05	
Number of CEs	Eigenvalues	Statistics	Critical value	Problem.**
There isn't any *	0.444817	159.3468	95.75366	0.0000
At most 1*	0.206548	74.60886	69.81889	0.0197
At most 2	0.135993	41.29272	47.85613	0.1795
3 at most	0.091634	20.24364	29.79707	0.4065
At most 4	0.039788	6.404048	15.49471	0.6478
5 at most	0.003864	0.557494	3.841466	0.4553

Source: Author Estimates, 2023

With cointegrated and non-stationary data at this level, the step taken is to estimate the VECM model. The VECM model estimates the balance in the short term and long term between the variables tested. In addition, the VECM model also measures error correction, that is, the speed at which variables move towards equilibrium in the long term. To determine the relationship between variables in the VECM estimation, a significance test is used. The VECM estimation results can be seen in Table 5 as follows:

Table 5
VECM results

Long-term		
Variable	Coefficient	T-Statistics
D(LNJI(-1))	1.000000	
D(LNIPI(-1))	0.651732	[1.17348]
D(LNICI(-1))	-0.465939	[-2.59318]***
D(Next exchange rate(-1))	-0.784858	[-1.89160]**
D(INF(-1))	-1.343693	[-10.3378]***
D(BI_RATE(-1))	0.056201	[1.54448]*
C	1.888217	
Short-term		
Variable	Coefficient	T-Statistics
CointEq1	0.000264	[0.02044]
D(LNJI(-1))	0.076654	[0.25629]
D(LNJI(-2))	0.307970	[1.13268]
D(LNIPI(-1))	0.052957	[0.58953]
D(LNIPI(-2))	-0.064019	[-0.70990]
D(LNICI(-1))	0.063228	[0.18710]
D(LNICI(-2))	-0.327522	[-1.08112]
D(Next exchange rate(-1))	0.236190	[0.98840]

D(Next exchange rate(-2))	-0.089109	[- 0.39430]
D(INF(-1))	-0.007694	[- 0.62624]
D(INF(-2))	0.005313	[0.44041]
D(BI_RATE(- 1))	-0.016305	[- 0.58733]
D(BI_RATE(- 2))	-0.021297	[- 0.77498]
C	0.004982	[0.97899]

Note: ***, **, and * indicate significant levels at 1%, 5% and 10%

Source: Author Estimates, 2023

Based on the data presented in Table 5, it can be seen that in the long term JII is influenced by ICI, exchange rate, INFLATION and BI RATE. Several variables show a significant negative relationship, namely ICI of -0.465939 , INFLATION of -1.343693 at $\alpha = 1\%$, and Exchange Rate of -0.784858 at $\alpha = 5\%$. Meanwhile BI RATE shows a significant positive effect of 0.056201 at $\alpha = 10\%$.

The research results which show that in the long term ICI has a significant effect on the sharia stock price index are in line with the research of Firdausi, Fahmi, and Saptono (2016), Paramita (2016), Yusuf and Hamzah (2014). ICI is a reflection of the condition of a country's capital market. ICI shows the general price movements of shares listed on the stock exchange, thus ICI has a contribution to the movement of JII. This index is the most widely used reference for the development of activities in the capital market. ICI is generally used to assess the general market situation or measure whether stock prices are increasing or decreasing. ICI involves all stock prices listed on the stock exchange. The negative impact of ICI means that when the price of ICI rises, many investors tend to choose other stock indexes on the stock exchange besides the sharia stock index. The relationship between ICI and JII is an alternative choice for investors in making investments.

Long-term exchange rate variables have a negative effect on JII. Similar results were also found by Pasaribu and Firdaus (2013), Junaidi, Wibowo, and Hasni (2021), Firdausi, Fahmi, and Saptono (2016), Paramita (2016), Yusuf and Hamzah (2014), Sudarsono (2018), Suryaputri and Kurniawati (2020) and Asshadiqqy (2020). Asshadiqqy (2020) also explains that a decrease in the value of the rupiah against the dollar or depreciation indicates a decrease in the value of the rupiah against goods. This situation makes investors decide to save their money in the form of shares or shares of foreign companies (Sudarsono, 2018). Saving money in shares is considered more comfortable as an investment value when exchange rates are unstable.

In the long term, the inflation variable has a negative effect on JII. Similar results were also found by Yusuf and Hamzah (2014) and Sari (2020). Inflation is a condition where there is a general and widespread increase in the price of goods (Mishkin, 2017). The inflation rate in Indonesia, which is always fluctuating, does not rule out the possibility that it will affect investment levels in the Indonesian capital market, including the Jakarta Islamic Index (JII) (Asshadiqqy, 2020). Apart from that, Sari (2020) explains that inflation is not the main reason for investors to make a decision to buy a share or not, because when a company's shares have good performance and have the potential to provide profits, investors will continue to buy those shares. Inflation can affect a company's production costs. As explained by Suciningtias & Khoiroh (2015), Pasaribu and Firdaus (2013), if there is an increase in inflation, this will have an impact on increasing production costs, due to an increase in raw material prices compared to the

increase in selling prices set by the company. This will reduce the company's profitability, and this decrease in profitability will have an impact on reducing the interest of investors who want to invest in the company, causing a decline in share prices and stock indices.

The BI RATE variable in the long term has a positive effect on JII. Similar results were also found by Pasaribu and Firdaus (2013). The positive relationship between BI RATE and JII shows that there is no substitution relationship between banking and the capital market Pasaribu and Firdaus (2013). This means that the capital market is not a substitute for banking, but is a complement to banking. This can happen because investors assess that each sector has its own characteristics so that the capital market and banking can run side by side without significant competition. However, different results were found by Junaidi, Wibowo, and Hasni (2021), Firdausi, Fahmi, and Saptono (2016) and Yusuf and Hamzah (2014) who found that interest rates had a negative effect on Indonesian sharia stocks. index.

IPI variables, both long term and short term, have no effect on JII. This finding is in line with Paramita (2016) who found that IPI had no effect on the Indonesian Sharia Stock Index. This means that, in the long or short term, investors do not use the IPI as the main indicator in making investment decisions (Paramita, 2016). Given the limited scope of the IPI, the IPI is less able to represent overall economic growth.

Meanwhile, the short – term VECM estimation results show that JII in the short term is not influenced by IPI, ICI, exchange rates, inflation and BI RATE. This shows that investors in the sharia capital market, including the sharia stock market, are not really affected by shocks in macroeconomic conditions. Muslim investors have full confidence in Islamic investment so that when shocks occur they are not easily affected. Investors in the Islamic capital market are more long – term oriented so they are less affected by short – term conditions. Thus, these results are in line with the existing sharia financial system theory that investors in the sharia capital market are long – term oriented investors.

IRF analysis is used to determine the effect of a shock or shaking of a variable on the variable itself and other variables in the equation. IRF describes the impact of shocks or shocks of one variable on other variables so that it can be seen how long the influence of a shock of one variable will have on other variables. The IRF test results based on Figure 3 show that when a shock occurs at IPI, JII will respond positively in the first and second periods then experience a decline in the third period and then reach stability until the 10th period. When a shock occurs at ICI, JII will respond positively in the first period and then weaken in the second period. The negative response continued until the 10th period. Furthermore, when exchange rate volatility occurs, JII will respond positively first in the second period and experience a decline in the 3rd period and then reach stability in the 4th to 10th periods.

In the context of this research, IRF is used to see the relationship between variables when a shock occurs. When an inflation shock occurs, JII will respond negatively in the initial period, namely period 1 to 3. Then in the 4th to 5th period it increases before decreasing again and reaching stability in the 6th period. Meanwhile, if there is a shock to the BI RATE, JII will respond negatively at the beginning of the period and continue to decline until the 10th period.

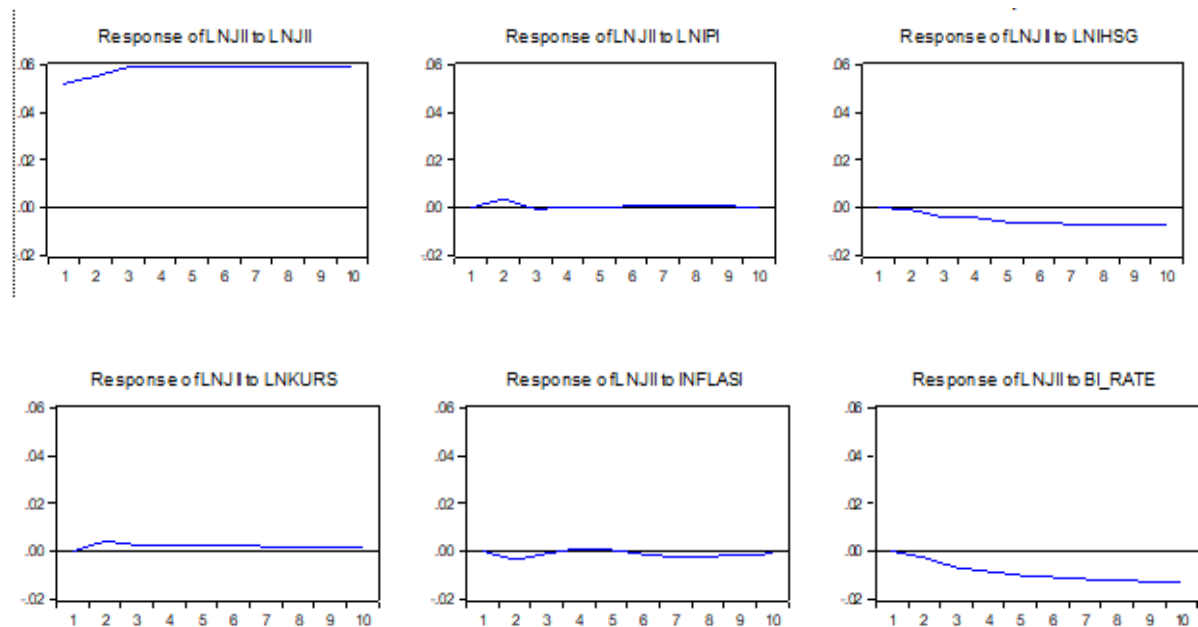


Figure 3

Impulse Response Function (IRF) Results.

Table 6 provides information regarding the proportion of movements in the shock impact of other variables, both in the current period and in the future. Based on the FEVD test results in Table 6, it can be seen that the variable that is estimated to have the greatest contribution to JII in the next ten months is the JII variable itself, followed by BI RATE, ICI and exchange rate.

Table 6
LNJII Variance Decomposition

Period	S.E	LNJII Variance Decomposition:					
		LNJII	LNIPI	LNICI	LN exchange rate	INFLATION	BI_RATE
1	0.051953	100.0000	0.000000	0.000000	0.000000	0.000000	0.000000
2	0.076070	99.08388	0.257766	0.007387	0.323893	0.217368	0.109711
3	0.096587	98.68487	0.162161	0.173270	0.278278	0.142000	0.559417
4	0.113600	98.32241	0.117924	0.254716	0.253281	0.112937	0.938734
5	0.128613	97.81809	0.092919	0.412889	0.251649	0.091321	1.333132
6	0.141979	97.38367	0.078020	0.543074	0.244195	0.081554	1.669484
7	0.154323	96.99024	0.068752	0.653403	0.224853	0.091478	1.971273
8	0.165905	96.65270	0.061282	0.741535	0.208865	0.094117	2.241502
9	0.176828	96.36548	0.054889	0.816150	0.197676	0.088094	2.477707
10	0.187125	96.12117	0.049783	0.880670	0.190056	0.081159	2.677167

Source: Author Estimates, 2023

CONCLUSION

Based on the research results and discussions that have been presented, it can be concluded that the Jakarta Islamic Index (JII), which is one of the Indonesian Sharia Stock Indexes, is influenced in the long term by macroeconomic conditions which are proxied by the variables ICI, exchange rate, BI RATE and inflation. Meanwhile, in the short term, the Jakarta Islamic Index (JII) is not affected by macroeconomic conditions, this is in line with the theory that investors in the Islamic capital market are oriented towards the long term and not the short term. Meanwhile, the IRF analysis shows that JII's response to

other variables shows that in the next 10 months the highest response will be JII's response to the exchange rate and it is predicted that it will stabilize in the 4th period. Meanwhile, DV analysis of the JII variable shows that the variable estimated to have the largest contribution to JII in the next 10 months is the JII variable itself, followed by BI RATE, ICI and exchange rate. The limitations of this research are that it only uses a few independent variables and the research period is not very long. So it is recommended for future similar researchers to use a longer research period, for example up to 2023 or 2024 and with much more diverse variables such as world oil prices, so that researchers can produce maximum findings.

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