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Research Article

Causality of the Islamic Stock Market and the Indonesia-Malaysia Macroeconomic Variables

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Abstract: This study aims to analyze the causality relationship and the long-term and short-term effects of the Islamic stock market and the Indonesia-Malaysia macroeconomic variables. The model used is ARDL (Auto-Regressive Distributed Lag), with monthly data from 2008: 01 to 2018: 12. The results showed that the JII variable had a positive and significant effect on the exchange rate in the long run. Short-term estimation results for Malaysia only variable interest rates have a negative and significant effect on Malaysian sharia shares. The results of the testing of the causality of the Indonesian sharia stock market and the five macroeconomic variables namely interbank interest rates (JIBOR), inflation, exchange rates, and foreign exchange reserves are one-way related. Unlike the case with Malaysia, the KLIBOR Interest Rate has a two-way relationship to Malaysian Sharia Shares. Certainty the right monetary policy will drive the development of the Indonesian economy. The results of this study can be useful for evaluating the development of sharia investment in order to avoid crisis shocks and macroeconomic impacts that occur at any time, both in Indonesia and Malaysia. Therefore, research on the causality of macroeconomic variables is very important to continue to be done to minimize the risks associated with Islamic investment.

Keywords: JII (Jakarta Islamic Index), FBMHS Malaysia Index, JIBOR, KLIBOR, Inflation, Exchange Rate, Foreign Exchange Reserves, ARDL (Auto-Regressive Distributed Lag)

INTRODUCTION

The development of capital markets follows the update of information that has changed the stock markets throughout the world. Investors can easily find out various information related to the investment world both locally and globally. The development of the global economy has had an impact on the development of capital market movements in Indonesia. Considering that in the current era of globalization there is almost no limit to gaining access to international economic development by all market players in the world. One important element that gives the effect of the development of a country's economy is the capital market.

Empirical studies in the financial literature have shown that the relationship between international stock markets has increased over the past few years subject to several factors (for example, globalization, bilateral trade, and financial liberalization) and hence the opportunities for diversification in international stock markets have declined. Therefore, academics and practitioners in financial professionals have focused on exploring alternative investment tools to increase returns by minimizing risk. Thus, there may be potential benefits from the Islamic financial stock market in terms of portfolio diversification (Nazlioglu, 2015).

One of the attractive capital market products for investors is the stock which is used as an alternative investment. However, not all investment products in the capital market are in accordance with Islamic economic principles. A Muslim in carrying out his economic activities has principles that must be carried out in accordance with Islamic religious rules such as having to avoid usury or interest, avoiding gharar (obscurity), and avoiding maysir (Sutedi, 2011). To ensure clarity in carrying out economic activities in accordance with Islamic economic principles, an Islamic capital market was formed. Sharia shares are a form of ordinary shares that have special characteristics in the form of tight controls in regard to the halal scope of business activities. During this time, Sharia investment in the Indonesian capital market is identical to the Jakarta Islamic Index (JII).

Sharia-based assets in 2011 amounted to USD 939 billion worldwide. While there are more than 600 Sharia funds available, investors have begun to shift their assets from actively managed mutual funds based

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on investment indexes. The Islamic capital market is now gaining momentum to grow into a crowded market, especially for developing markets in the Middle East, Southeast Asia, South Asia, and North Africa. The increased awareness and demand for investment in accordance with the principles of Islamic Sharia on a global scale has created a growing Sharia capital market (Bekiros, 2018).

In Indonesia, the number of Syariah shares continues to grow and in January 2012 it reached 252 shares with a market capitalization of Rp. 2,056.61 trillion and covers 56 percent of the total market capitalization value of the Composite Stock Price Index (CSPI) which reached Rp 3,665.32 trillion. As for the development of Shariah shares in Malaysia, as of September 2011, there were 847 shares with a market capitalization of RM 723 billion (Rp2,167.32 trillion) and covering 62 percent of the total market capitalization value of the Kuala Lumpur Composite Index which reached RM 1.17 trillion (Shofiyullah, 2014).

Indonesia was made a representative of the local stock market (ASEAN) together with Malaysia because of its geographical proximity. The Jakarta Islamic Index was chosen in this study because it is the first Islamic stock market in Indonesia. Indonesia and Malaysia are among the 10 countries with the largest quantitative development indicator values based on a report from the Islamic Finance Development Indicator (IFDI). Malaysia is at the first level and Indonesia is ranked tenth.

Indonesia and Malaysia have a market share value of sharia shares that is greater than the value of conventional shares (percentage of Indonesian sharia shares 54.98 percent and Malaysia 75 percent) and occupy the top position in the issuance of the largest sukuk in the world.

There are several important factors that can influence the development of the Islamic stock market, namely macroeconomic and monetary variables. The instability of macroeconomic variables greatly influences international traffic such as capital market activities. The relationship between the values of an investment can occur with interest rates and changes in interest rates which are then followed by changes in the price of goods (Misgianti *et al.*,2009). Likewise, the condition of domestic currency fluctuations against foreign currencies will be reflected in the movement of the stock price index. Appreciation and depreciation of the rupiah can cause significant changes to stock prices (Mujayana, 2014).

Indonesia and Malaysia have developed the Islamic stock market but still, use interest rates. Fluctuating interest rates cause low investment flow in the capital market resulting in instability in stock prices, where changes in interest rates can affect the movement of stock prices in the capital market because basically investors will look for the most profitable investment alternatives so that if interest rates high then investors will tend to invest their funds into banks. As a result, stock prices often go down when interest rates rise (Misgiyanti *et al.,* 2009).

The current global financial crisis is a result of the shock of a macroeconomic variable in the economy. Countries that have highly developed markets and lead throughout the world are also affected by the crisis (Anwar, 2012). The research (Hanif *et al.,* 2018) and (Naseri, 2013) shows that there is cointegration between the Islamic stock market and macroeconomic variables, namely the money supply, the consumer price index and the exchange rate against the Islamic stock market in Malaysia. But unlike the case with Mushtaq et al (2017), the results of his study showed that the exchange rate, inflation, the money supply, and the BI rate did not have a significant effect on the Jakarta Islamic index.

The tendency of interdependence and the long-term relationship between two or more macroeconomic variables are examples of issues that concern investors. Although there are many studies that look at the relationship between conventional stock markets and macroeconomic fundamentals, there are still certain gaps in the literature relating to the relationship between Islamic stocks and macroeconomic variables which are an interesting area of research, where the strength of Islamic finance is growing so fast.

Empirical analysis shows the strong interaction and volatility between the stock market, the conventional stock market and a series of key risk factors considered. This finding means that Islamic equity is not an alternative for investors who want to invest safely, because it will be exposed to the same global factors and risks in the economy (Bekiros, Shahzad, 2018). Similar opinion with (Jebran *et al.*, 2017) that Islamic and conventional indexes respond positively to shocks to each other.

In line with the research of (Krasicka *et al.*, 2014) comparing the prices of Islamic and conventional Malaysian security and their responses to macroeconomic factors. Their results show that the prices of Islamic and conventional bonds and equities are driven by general factors and that the gap between Islamic and conventional financial practices is diminishing. In line with the results of Umi's research (2014) that there is no long-term relationship between the two variables. The 2 variables tested were the Jakarta Islamic Index which is a representation of Islamic stocks and SBI.

According to (Mujayana, 2014), fluctuations in the exchange rate of the rupiah against a stable foreign

currency will greatly affect the investment climate in the country, especially the capital market. Changes in exchange rates have a long-term negative effect on the stock price index in the period 2000-2011. The relationship of exchange rates and stock prices is that the more the exchange rate of the rupiah strengthens against the US dollar, it will increase the flow of capital into Indonesia so that investors have confidence in Indonesia, which of course they will invest in Indonesia, so as to increase share price movements. Not only the exchange rate, but the foreign exchange reserve variable must also be considered, in which the purpose of managing foreign exchange is an inseparable part of changes in the exchange rate. If the foreign exchange reserves run low it will invite rupiah speculation from speculators so that meeting liquidity needs will need to maintain exchange rate stability. As with research from (Firmansyah, 2018) where foreign exchange reserves have a positive and significant effect on stocks.

This study differs from research from (Baroroh, 2013) and (Naseri *et al.*, 2013) who only examine the causality of macroeconomic variables and Islamic stocks in one country. Their findings have implications in controlling macroeconomic variables such as inflation, aggregate money and the exchange rate where it can help improve the Islamic stock market in a country.

The purpose of this study is to analyze the causality relationship and the long-term and short-term effects between the Islamic stock market and macroeconomic variables in Indonesia and Malaysia. To strengthen the analysis of the causality relationship, it is also seen the effect arising from the research variables on the predicted variables. To illustrate the Systematics of this writing begins with the background of the research presented in the introduction, then supported by theoretical studies strengthened by the method of analysis. Results are discussed in the discussion section and concludes with conclusions and recommendations.

RESEARCH METHODS

The model used in this study is the ARDL (Auto-Regressive Distributed Lag) model. This model is used because there are differences in the level of data stationarity on the variables tested, in which this study uses a time series that is partly stationary at the level of the other part and is stationary at the first difference level. Therefore, the ARDL model is the right model to use in this study.

The ARDL model is a regression model that includes not only the value of variables that explain the time that is taking place but also the value of the past distributed lag model and includes one or more lagged past values of the dependent variable among the variables that explain it (autoregressive model) (Gujarati, 2004).. The ARDL model has enormous use in empirical economics because it has made static economic theory dynamic by taking into account the explicit role of time. This model distinguishes the response between the short run and the long run from the dependent variable to a unit change in value (Gujarati, 2004). Mathematically it can be written as follows:

$$\mathrm{JII} = \beta_0 + \sum_{i=0}^{k} \beta_1\ \mathrm{JIBOR}_{t-i} + \sum_{i=0}^{k} \beta_2\ \mathrm{KURS}_{1t-i} + \sum_{i=0}^{k} \beta_3\ \mathrm{INFLASI}_{2t-i} + \sum_{i=0}^{k} \beta_4 \mathrm{CADEV} + \theta_1 \mathrm{JIBOR}_{t-1} + \theta_2 \mathrm{KURS}_{t-1} + \theta_3 \mathrm{INFLASI}_{2t-1} + \theta_4 \mathrm{CADEV}_{3t-1} + \varepsilon_t \dots\dots\dots\dots\dots\dots (1)$$

$$\mathrm{FTSE\ MLY} = \beta_0 + \sum_{i=0}^{k} \beta_1\ \mathrm{KLIBOR}_{t-i} + \sum_{i=0}^{k} \beta_2\ \mathrm{KURS}_{1t-i} + \sum_{i=0}^{k} \beta_3\ \mathrm{INFLASI}_{2t-i} + \sum_{i=0}^{k} \beta_4 \mathrm{CADEV} + \theta_1 \mathrm{KLIBOR}_{t-1} + \theta_2 \mathrm{KURS}_{t-1} + \theta_3 \mathrm{INFLASI}_{2t-1} + \theta_4 \mathrm{CADEV}_{3t-1} + \varepsilon_t \dots\dots\dots\dots\dots\dots (2)$$

Where:

JII: Dependent Variable for Indonesia, FTSE MLY: Dependent Variable for Malaysia, JIBOR: Interest Rate for Indonesia, KLIBOR: Interest Rate for Malaysia, KURS: Exchange Rate, INFLASI: Inflation (%), CADEV: Foreign Exchange Reserves (Million USD), β_{01}: Constanta, β_1-β_4: Coefficient in Short Term, θ_1-θ_4: Coefficient in Long Term, k: Length of *Lag*, t:Year, i: Order of *Lag*, ε_t:Error Term.

RESULT AND DISCUSSION

Stationary Test

The unit root test is used to prove whether each variable has a stable pattern or not. There are several ways that are done to see the stationary data, namely by using the Augmented Dickey-Fuller Test (ADF), Philips-Pheron (PP) and Kwiatkowski Philips Schmidt Shin (KPSS). By using the Augmented Dickey-Fuller Test approach a variable is said to be stationary if the ADF statistical value is greater than the MacKinnon critical value (both at alpha 1 percent, 5 percent, and 10 percent) then H0 is rejected which means the variable is free from unit root symptoms. The Philip-Perron (PP) method is another alternative to the stationary test in time series data. PP test is able to capture changes in a data structure on a variable which the ADF test is unable to do. The stationarity test results for each variable are explained in Table 1.

Tab1e1. Unit Root Test

Indonesia		
Variabel	At Level	First_Difference
	Prob*	Prob*
JII	0.7564	0.0000
SK_JIBOR	0.0109	
KURS	0.8373	0.0000
INFLASI	0.0000	
CADEV	0.5021	0.0000
Malaysia		
LOGSAHAMMly	0.7156	0.0000
SK_KLIBOR	0.1702	0.0000
LOGKURS	0.0004	
LOGINFLASI	0.0000	
LOGCADEVMLY	0.0000	0.0000

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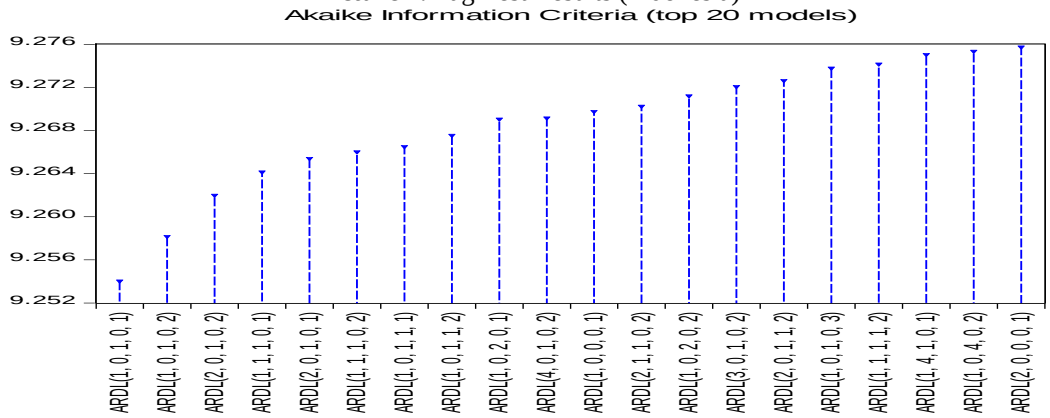
Lag Optimum

This test is used to test the hypothesis about the amount of lag that is appropriate for the research model, which aims to provide a representative picture of the relationship between research variables. In the ARDL model, it needs to be determined on the lag of how many variables will produce the best estimate. Selecting the optimum lag in the Auto Regressive Distributed Lag Model used the Schwarz Criterion (SC) and Akaike Information Criterion (AIC). If the magnitude of a lag gives the smallest SC and AIC values to the model, the number of lags is chosen.

Picture 1. Lag Test Results (Indonesia)



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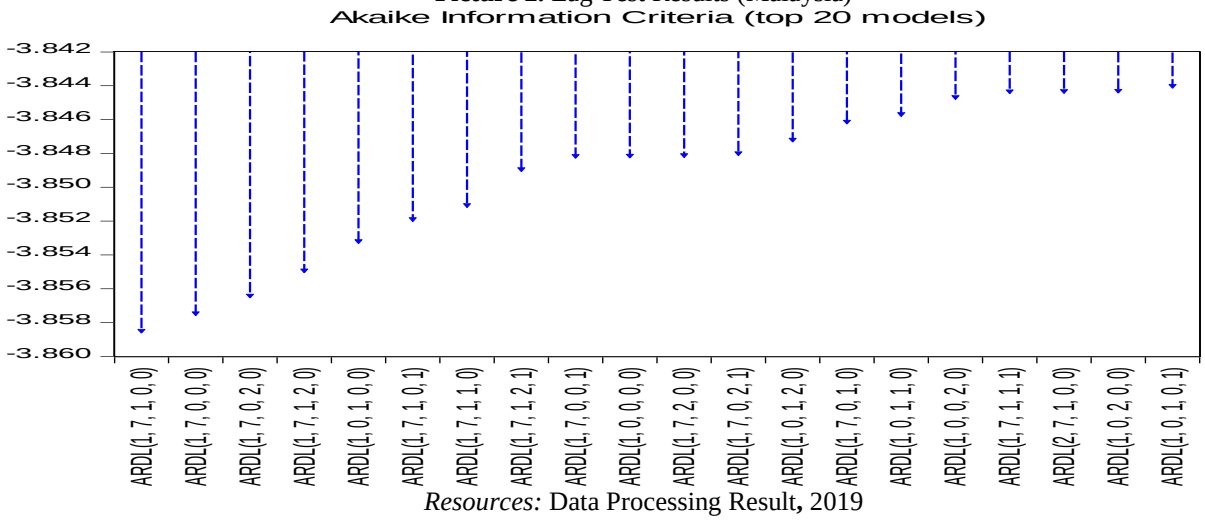
Picture 2. Lag Test Results (Malaysia)



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Based on Figure 1, it appears that the optimal lag for Indonesia is ARDL lag (1,0,1,0,1) or lag 1. While Figure 2, shows that the optimal lag for Malaysia is in ARDL (1,0,1,0, 1) or lag 20. The two images above can be seen from the smallest Akaike value.

Cointegration Test

A cointegration test on the ARDL method is performed to determine whether there is a long-term relationship between variables. It is said that there is a long-term relationship if the regression model is cointegrated. The method that can be used to test for cointegration is the Bound Test Cointegration by comparing the value of F-statistics with the F-tables that have been compiled by (Pesaran, 2001).

If the F-statistic value is below the lower bound value, it can be concluded that there is no cointegration. If the F-statistic value is above the upper bound value of I (1), it can be concluded that cointegration occurs. However, if the F-statistic is between the lower bound value I (0) and upper bound I (1), then the result is inconclusive. The hypotheses in this F test are as follows:

H0 = $\theta_1 = \theta_2 = \theta n = 0$; no long term relationship (no cointegration)
$H_1 \neq \theta_1 \neq \theta_2 \neq \theta n \neq 0$; there is a long term relationship (cointegration)

If the F-statistic value is below the lower bound value, we cannot reject H0, which means there is no cointegration. Conversely, if the F-statistic value exceeds the upper limit value, then reject H0 so that cointegration occurs. However, if the F-statistic is located between the lower and upper limits, then it cannot be concluded. Cointegration test results are described in Table 2.

Table 2. Cointegration Test

	Critical Value	
F-statistics= 2.3904674	Lower BoundI(0)	Upper BoundI(1)
	Indonesia	
1 % significance level	3.74	5.06
5 % significance level	2.86	4.01
10 % significance level	2.45	3.52
F-statistics= 7.3456114	**Malaysia**	
1 % significance level	2.45	3.52
5 % significance level	2.86	4.01
10 % significance level	3.74	5.06

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Based on Table 2, the F-statistic value calculated for Indonesia is 2.3904674 and Malaysia is 7.3456114. The F-statistic value calculated for Indonesia is smaller than the critical value of I (0) bound and I (I) bound, which means there is no cointegration relationship, ie it does not have a long-term equilibrium relationship. Unlike the case with Malaysia, the F-statistic value is greater than the critical value of I (0) bound and I (I) bound, which is 7.3456114, which means there is a cointegration relationship.

ESTIMATION RESULT OF ARDL

Table3. Estimation Result and Discussion ARDL Model

*Dependent vaiable:*JII	**Indonesia**			
Variable	Coefficient	Std. Error	t-Statistic	Prob.*
JII(-1)	0.881388	0.036206	24.34350	0.0000*
SK_JIBOR	0.693397	1.517854	0.456827	0.6486
KURS	-0.012930	0.008302	-1.557404	0.1219
KURS(-1)	0.015065	0.008276	1.820289	0.0711***
INFLASI	0.000274	0.003184	0.086156	0.9315
CADEV	3.88E-06	8.17E-07	4.753673	0.0000*
CADEV(-1)	-3.19E-06	8.04E-07	-3.964105	0.0001*

Dependent vaiable: Stock of SM	**Malaysia**			
LOGSAHAMSM(-1)	1.017329	0.020880	48.72344	0.0000*
SK_KLIBOR	-0.019499	0.035752	-0.545399	0.5866
SK_KLIBOR(-1)	0.000105	0.063220	0.001665	0.9987
SK_KLIBOR(-2)	0.022442	0.067979	0.330128	0.7419
SK_KLIBOR(-3)	-0.060571	0.067769	-0.893787	0.3734
SK_KLIBOR(-4)	-0.050308	0.067983	-0.740001	0.4608
SK_KLIBOR(-5)	0.163974	0.068142	2.406355	0.0177**
SK_KLIBOR(-6)	-0.164016	0.062699	-2.615911	0.0101**
SK_KLIBOR(-7)	0.086323	0.033773	2.555957	0.0119**
LOGKURS	-0.035645	0.018956	-1.880417	0.0626***
LOGKURS(-1)	0.025879	0.018659	1.386940	0.1682
LOGINFLASI	0.003441	0.011566	0.297538	0.7666
LOGCADEVMLY	0.002351	0.004272	0.550345	0.5832
R-squared (Indonesia)= 0.972831				
R-squared (Malaysia)= 0.969578				

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*Note:****,**,* significant at 1%, 5%, 10%

Table 3 is the estimation results using different lags in Indonesia and Malaysia countries taken in accordance with the ARDL model lag test for each sharia stock variable, interest rate, exchange rate, inflation, and foreign exchange reserves. So from the lag test results, it is found that the use of lag for Indonesia is (1,0,1) and Malaysia (1,7,1). Estimation results for Indonesia show that JII Syariah shares affect the JII variable itself in the previous period. JII affects the exchange rate at 10 percent and then JII also affects the current year's foreign exchange reserves and one previous period at 1 percent.

Unlike the case with Malaysia, the estimation results show that Malaysian Islamic stocks affect the variable interest rates in the previous five, six and seven periods with a level of 5 percent, then Malaysian Islamic stocks also affect the Exchange at a 10 percent level.

In addition, the ability of the regression model to explain the relationship between the independent variables and the dependent variable in Table 3 can be seen from the coefficient of determination (R^2) in this study, namely Indonesia at 0.972831 and for Malaysia at 0.969578. This means that the influence of each variable of Islamic stocks, interest rates, exchange rates, inflation, and foreign exchange reserves is 97 percent for Indonesia, and Malaysia also by 97. While the remaining 3 percent is influenced by other variables outside this study. This is an early indication that this research model is good enough to do.

The estimation results in Table 4 show that there are large differences in looking at the effect of Islamic stocks on interest rates, exchange rates, inflation, and long-term foreign exchange reserves in Indonesia and Malaysia. JII sharia stock variable has an influence and significant effect on the exchange rate in the long run with a probability at the level of 10 percent, JII also affects the foreign exchange reserves at the level of 1 percent. These results are supported by research (Firmansyah, 2018) the results found are foreign exchange reserves affect stock returns on LQ 45.

Table 4. Effect in The Long Run (Long Run Model)

Variable	**Coefficient**	**Std. Error**	**t-Statistic**	**Prob.**
Indonesia				
SK_JIBOR	5.845924	12.90705	0.452925	0.6514
KURS	0.017999	0.010597	1.698405	0.0920***
INFLASI	0.002313	0.026712	0.086576	0.9311
CADEV	5.86006	1.05006	5.559641	0.0000*
SK_JIBOR	5.845924	12.90705	0.452925	0.6514
Malaysia				
SK_KLIBOR	1.243533	1.383699	0.898702	0.3707
LOGKURS	0.563501	0.684802	0.822867	0.4123
LOGINFLASI	-0.198578	0.730930	-0.271678	0.7864
LOGCADEVMLY	-0.135662	0.342825	-0.395718	0.6931
SK_KLIBOR	1.243533	1.383699	0.898702	0.3707

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*Note:****,**,* significant at 1%, 5%, 10%

For variable interest rates and inflation no significant effect in the long run. The results of the study are in line with (Darmayanti, 2015) which says that there is no long-term relationship between Islamic stocks and conventional interest rates. Different findings by (Kristanti *et al.,* 2013) and (Mikail at al., 2013.) who say that there is a long-term relationship of inflation with JII shares. The inflation rate has a negative relationship with the Indonesian Sharia Stock Index. JII's negative stock response indicates that rising inflation will affect the Indonesian stock market.

Then by (Ahdi, 2014) and (Kristanti at al., 2013) who said that there is a long-term relationship between SBI interest rates and foreign exchange rates with JII where the relationship between the Islamic stock market and interest rates is not consistent with Sharia rules.

Estimation results for Malaysia are that all variables have no relationship in the long run. In contrast to the research of Mirza et al (2013) the results of the study indicate that interest rates have a positive relationship with Islamic stocks in the FTSE Bursa Malaysia Hijrah Syariah. Different opinions by El Alaoui et al (2019) which says that in the long run, the money supply, inflation, and KLIBOR interest rates show a high correlation. Malaysian regulators may need to strengthen the position of Islamic finance in its domestic market to make the economy less dependent on conventional interest rates.

Table 5 explains the results of the short-term Error Correction term (ECT) estimation. Based on the short-term estimation results, it is known that for Indonesia the Exchange rate variable has a negative and significant effect and the foreign exchange reserve has a positive and significant effect on JII Syariah Shares at 10 and 1 percent. Like the research (Abakah, 2012)The results of the study show that foreign exchange reserves have a significant positive impact on the stock market capitalization. While for Malaysia only variable interest rates for the 4.5 and 6 periods prior to that had a negative and significant effect on Malaysian sharia shares at level 5 percent. In line with Rashid et al (2014) the results of his research show that interest rates, currency indexes, and the FTSE Bursa Malaysia Composite Index exert a greater influence on the Islamic price index when compared to industrial production, consumer price indexes, money supply, and investor sentiment indices.

Table 5. Effect in The Short Run (Short Run Model)

Indonesia				
Variabel	Coefficient	Std. Error	t-Statistic	Prob.
D(KURS)	-0.012930	0.007756	-1.667083	0.0980***
D(CADEV)	3.88E-06	7.58E-07	5.121957	0.0000*
CointEq(-1)*	-0.118612	0.033612	-3.528827	0.0006
Malaysia				
D(LOGINFLASI)	0.002666	0.008626	0.309090	0.7578
D(SK_KLIBOR)	-0.027601	0.032009	-0.862292	0.3904
D(SK_KLIBOR(-1))	0.012986	0.036761	0.353267	0.7246
D(SK_KLIBOR(-2))	0.038725	0.037044	1.045369	0.2981
D(SK_KLIBOR(-3))	-0.023374	0.036472	-0.640889	0.5229
D(SK_KLIBOR(-4))	-0.078534	0.036952	-2.125287	0.0358**
D(SK_KLIBOR(-5))	0.084905	0.036431	2.330559	0.0216**
D(SK_KLIBOR(-6))	-0.074495	0.031163	-2.390483	0.0185**
CointEq(-1)*	-0.041706	0.008619	-4.838897	0.0000

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*Note:****,**,* significant at 1%, 5%, 10%

Short-term estimation results can be seen from the value of the ECT which if negative and significant means cointegration occurs in the model. The ETC value in the short-term estimation in the ARDL model serves to determine the speed of the short-term balance adjustment towards the long-term wherein table 4.7, the ETC value has negative and significant signs below the level of one percent with a coefficient for Indonesia of -0.118612 and Malaysia of -0.041706. The coefficient value concludes that if there is a difference between the desired result and what actually happened or there is an error disturbance that increases or decreases at the level of sharia shares in both Indonesia and Malaysia by 1 percent, then corrections or adjustments to the imbalance (disequilibrium) in the Sharia variable itself each period is 11 percent for Indonesia, and 0.41 percent for Malaysia.

GRANGER CAUSALITY TEST

From the results of the Granger Causality Test in Table 4.8, it can be seen that for Indonesia all variables are related in one direction, and for Malaysia, there are one-way and two-way relationships. For Indonesia, the JII variable has a one-way relationship with the JIBOR interest rate, this is evidenced by looking at the probability value smaller than 0.1. Agree

with (Firdausi, 2016) that the behavior of investors who are not fully loyal to sharia, so that they still compare the benefits of investing in the Islamic capital market with conventional money markets. Opinions are different from Umi (2014) which says that there is no long-term relationship between the two variables.

Table 6. *Granger Causality* Test

Indonesia		
Null Hypothesis:	F-Statistic	Prob.
JII does not Granger Cause SK_JIBOR	2.89070	0.0593
JII does not Granger Cause KURS	4.56353	0.0122
SK_JIBOR does not Granger Cause KURS	2.73719	0.0686
CADEV does not Granger Cause SK_JIBOR	3.44545	0.0350
INFLASI does not Granger Cause KURS	4.14874	0.0180
CADEV does not Granger Cause KURS	4.84519	0.0094
CADEV does not Granger Cause INFLASI	3.58223	0.0307
Malaysia		
Null Hypothesis:	F-Statistic	Prob.
SK_KLIBOR does not Granger Cause SAHAM	10.9038	0.0012
SAHAM does not Granger Cause SK_KLIBOR	24.3141	2.E-06
SAHAM does not Granger Cause INFLASI	5.50418	0.0205
SK_KLIBOR does not Granger Cause INFLASI	4.59664	0.0339
INFLASI does not Granger Cause KURS	7.35790	0.0076
KURS does not Granger Cause INFLASI	4.80531	0.0302
KURS does not Granger Cause LOGCADEVMLY	4.38188	0.0383

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Furthermore, foreign exchange reserves also have a one-way relationship with exchange rates, in line with the research of Azar et al. (2017) the results show that a negative and significant relationship between foreign exchange reserves accumulation, and the real effective exchange rate, debt to GDP ratio. Furthermore, foreign exchange reserves with JIBOR interest rates, inflation with exchange rates and foreign exchange reserves with inflation. Such findings (Ray, 2012) The results of his study illustrate that foreign exchange reserves have a positive impact on the stock market capital. Then also in accordance with research Carl B (2013) in his research found that there is cointegration between the exchange rate with the stock market index in the four ASEAN countries. However, for other variables that do not have a causal or directional relationship, this is proved by the probability value above 0.05.

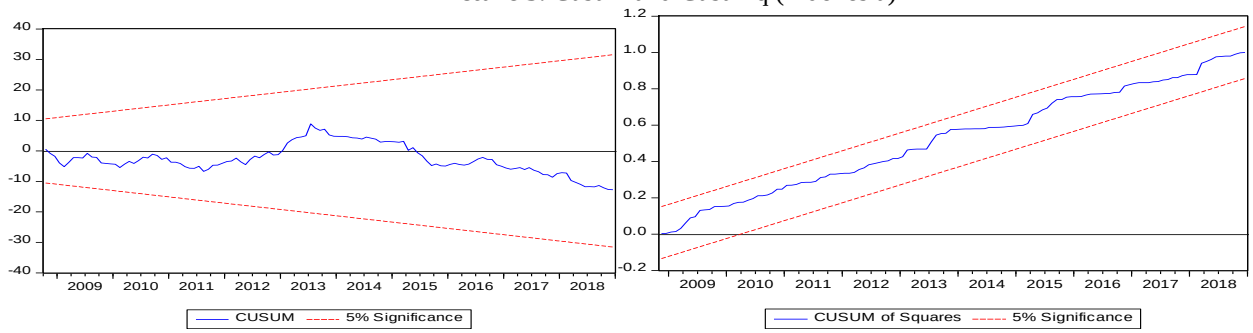
Related to the direct relationship of foreign exchange reserves with interest rates, the results of this study are in line with (Chowdhury*et al.,* 2015) the results confirm that there is a strong relationship between foreign exchange reserves, exchange rates, money transfers, interest rates, money supply, exports and imports, and GDP per capita. In contrast to the study of (Azar, 2017) foreign exchange reserves in the GCC countries (Gulf and Cooperation Council countries) are not sensitive to the effective nominal exchange rate, both to the ratio of imports to GDP and also to interest rates in the US Dollar.

Unlike the case with Malaysia, the KLIBOR Interest Rate has a two-way relationship to Malaysian Sharia Shares, as seen from its significant probability value below 0.05. These results are consistent with research (Ergeç dkk, 2013) that explores the impact of interest rates on Islamic banks versus conventional banks in Turkey and Malaysia and find that contrary to their expectations, Islamic banks are influenced by interest rates despite relying on interest-free banking. The same finding by (Adam, 2017) estimation results found that interest rates only affect the Malaysian Islamic stock price index, not the *Jakarta Islamic Index* .

Then the two-way relationship also occurs in the Exchange Rate and Inflation variable. Furthermore, direct relationship occurs with Malaysian sharia stock variables with inflation, KLIBOR interest rates with inflation, and also with foreign exchange reserves . In line with research Ahmed et al. (2012) The results show that the nominal exchange rate has a significant positive impact on foreign exchange reserves while FDI has insignificant impact on FER (Foreign Exchange Reserves).

STABILITY TEST

Picture 3. Cusum and Cusumq (Indonesia)



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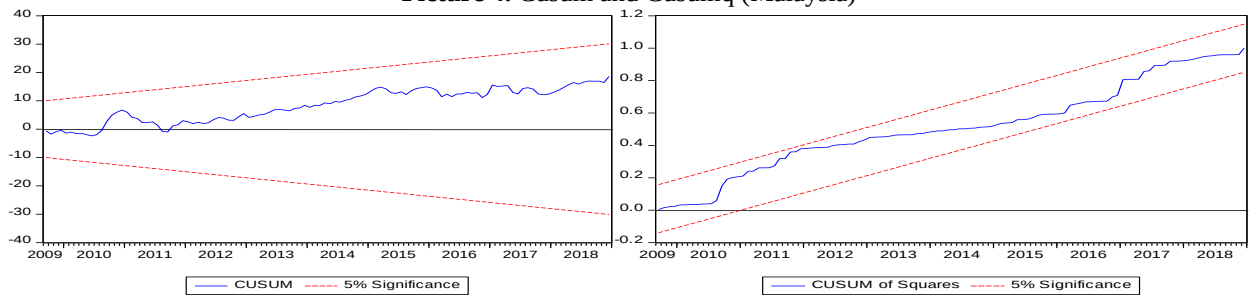
Picture 4. Cusum and Cusumq (Malaysia)



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Based on the results of the test that presents the CUSUM and CUSUMSQ plots it can be seen that the ARDL model has a stable estimation coefficient. This can be seen from the statistics remain within 5 percent significance level (illustrated by two straight lines) so that the estimation results can be concluded that the model estimated in this study has stable parameters in both countries, both Indonesia and Malaysia.

CONCLUSION

This Study Found That:

- JII sharia stock variable has a positive and significant effect on the exchange rate in the long run. JII also has a positive effect on foreign exchange reserves at the level of 1 percent. Different from the variable interest rates and inflation does not have a significant effect in the long run. While the estimation results for Malaysia are that all variables have no relationship in the long run.
- The short-term estimation results can be seen from the ECT value, namely the coefficient for Indonesia of -0.118612 and Malaysia of -0.041706, which means that the speed of adjusting the short-term balance towards the long-term is easily negative and significant.
- Based on the short-term estimation results it is known that for Indonesia the Exchange rate variable has a negative and significant effect and foreign exchange reserves have a negative and significant effect on JII Sharia Shares at levels of 10 and 1 percent. Whereas for Malaysia only variable interest rates for the 4.5 and 6 periods preceding it had a negative and significant effect on Malaysian sharia shares at 5 percent.
- The results of the testing of the causality of the Indonesian Islamic stock market and the evaluation of macroeconomic variables interbank interest rates (JIBOR), inflation, exchange rates, and foreign exchange reserves are related to one direction. For Indonesia, the JII variable has a one-way relationship with the JIBOR interest rate. JII also has a one-way relationship with the exchange rate, foreign exchange reserves with JIBOR interest rates, foreign exchange density, foreign exchange reserves with exchange rates and also foreign exchange reserves with inflation.
- Unlike the debate with Malaysia, the KLIBOR Interest Rate has a two-way relationship to Malaysian Sharia Shares, as seen from its significant probability value below 0.05. Then the two-way relationship also occurs on the variable Exchange and Inflation. Furthermore, direct relationship occurs with the Malaysian sharia stock variable with inflation, the KLIBOR interest rate with inflation, and also the exchange rate with foreign exchange reserves.

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