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Global Risk Factors and Macroeconomic Conditions Affect Jakarta Islamic Index (JII): Evidence from Indonesia

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***Abstract**:*
This study aims to analyze three things, namely analyzing the causality relationship between variables. Analyze the short-term relationship between macroeconomic variables with JII Stock Price and Trade Volume and analyze the long-term relationship between macroeconomic variables with JII Stock Price and Trade Volume. The sample used is the JII30 Index and the trading volume from JII 30 from 2008-2020. The results of this study indicate three things, firstly it is found that several variables have a causal relationship in either one or two directions, then from testing the short-term effect it is found that only the oil price variable has a significant effect on JII while other variables do not, while the short-term effect test It was found that all macroeconomic variables had no significant effect on volume. Finally, from the long-term test results, only the Inflation variable has no significant effect on the JII variable in the long term, while only the BI Rate and Inflation variables have no significant effect on trading volume.

Keywords: VECM, BI Rate, Inflation, Exchange Rate, Gold Price, Oil Price.

JEL Classification Code: E44, F65, G12

1. Introduction

The capital market in Indonesia has a vital role in the economy. In this case, the capital market is a source of financing for companies, substantial companies that demand significant capital in their operational activities. Investors as parties who have excess funds can invest in the capital market to earn profits (returns). Meanwhile, on the other hand, companies that need funds for development and supporting operational activities can take advantage of these investment funds.

This dynamic relationship is an activity that can support the economy. At a macro level, this activity will also drive economic performance and be able to improve welfare for the community (Mensi et al. 2017). The development of the capital market in Indonesia, especially the stock market itself, has experienced a significant increase, and the Islamic stock market in Indonesia is no exception (Nugraha 2021). Economic conditions, political situation, and security stability are some of the factors that can directly influence its movement.

That context has also been study and justified with several findings. For example, research by Kristanto and Idris (2016), researchers using the Vector Error Correction Model (VECM) method concluded that inflation as a macroeconomic factor harms JII. Meanwhile, according to Sanjaya and Pratiwi (2018), researchers using OLS Regression found that interest rates, inflation, and exchange rates significantly affected JII.

Therefore, it is essential to know the economic condition of a country. Because the dynamic and ever-evolving economic situation is also an appropriate indicator to be studied as a benchmark in determining stock investment. Investors tend to invest when the economic or political situation is safe because this is related to the level of risk and profit, they will get.

However, even so, not many studies discuss the influence of macroeconomics on trading volume, especially on the trading volume of Islamic stock indexes. Researchers found a previous study that discussed the effect of macroeconomics on JCI stock returns and trading volume in Indonesia. The research conducted by Yahya (2020), where the researcher found that inflation, exchange rates, and interest rates did not affect trading volume.

The researcher also found previous research on the effect of macroeconomics on the volume of trade carried out abroad, one of which was in the African capital market as conducted by Igbinosa and Uhunmwangho (2019). The researcher found that macroeconomic factors such as the Money Supply (JUB), Inflation, and Exchange rates significantly affect trading liquidity in the African capital market.

In addition, Ellington (2018) has also carried out related research in England. There is a causal relationship between the 2008 subprime mortgage crisis. which caused the stock market to become illiquid and resulted in a decline in Gross Domestic Product (GDP) of 1.89% and inflation of 1.78% in the UK. In addition, there is a significant relationship between macroeconomics and market liquidity.

In addition to macroeconomic variables, there is a control variable in this study, namely commodity prices. Commodity prices such as gold and crude oil prices have a relationship with stock prices and trading volume. Like the research conducted by Fitrianto (2020), researchers found that world oil prices have a partial and simultaneous influence on Jakarta Islamic Index (JII). Then, Mawarni and Widiasmara (2018) show that world oil has an indirect effect. Significant effect on the Indonesian Sharia Stock Index (ISSI). Furthermore, research according to Agestiani and Sutanto (2019) found that world gold prices positively affected the Jakarta Islamic Index (JII).

At least research on the effect of macroeconomics on the Jakarta Islamic Index (JII) and its trading volume became the background for researchers to conduct a study. It has entitled "global risk factors and macroeconomic conditions affect Jakarta Islamic Index (JII). " The 2008 election was related to the subprime mortgage crisis that hit the real and non-real sectors throughout the world, including the Indonesian Islamic capital market. The macroeconomic factors use based on the availability of the data period.

2. Literature Review

The results of research from Sanjaya and Pratiwi in 2018 showed that the BI rate affected JII, the exchange rate affected JII, and inflation affected JII. This is

because these macroeconomic factors are a reference used by investors when they want to invest in the stock market. Therefore, every time there is a change in the BI rate, exchange rate, and inflation, the investors' portfolio will also change, increasing the JII stock index.

Research conducted by Nasarudin, et al. (2021) showed that the exchange rate and interest rate had a significant effect on JII, while inflation had no significant effect on JII. Exchange rates and interest rates have a significant effect because there is a two-way relationship or causality between exchange rates and interest rates with JII's stock prices. Inflation has no significant effect because there is no relationship or two-way causality between inflation and JII's stock price.

Research conducted by Putri and Rizal (2019) showed that world gold prices significantly affected JII, while world oil prices did not affect JII. According to the researcher, because the price of gold tends to increase, investors use gold as a portfolio diversification tool from stocks to have a relationship with JII. At the same time, oil prices do not directly influence JII because oil prices are related to oil-producing companies. In JII, the composition of oil companies is small, so it does not affect the price movements of JII itself.

H1: There is a causal relationship between the variables of the exchange rate, BI rate, inflation, gold prices, and world crude oil prices on the JII stock index.

H2: There is a short-term relationship between the variables of the exchange rate, BI rate, inflation, gold prices, and world crude oil prices on the JII stock index.

H3: There is a long-term relationship between the variables of the exchange rate, BI rate, inflation, gold prices, and world crude oil prices on the JII stock index.

According to Sampurnaningsih (2018) BI rate and inflation did not affect trading volume, while the exchange rate affected trading volume. Then Kristanto and Idris (2016) found that inflation, interest rates, and exchange rates did not affect trading volume. This is because investors tend to accept that inflation is below 10%, which means the inflation rate is low. However, if inflation exceeds 10%, stock trading activities will be disrupted. If inflation exceeds 10%, Bank Indonesia will increase the Bi rate, which will cause investors to tend to shift their capital to the banking sector(Mohammed and Abu Rumman 2018).

Meanwhile, the exchange rate has no effect. Because investors who invest in the Indonesian capital market tend to see it as a capital market with a half-strong form compared to an emerging market. In a semi-strong market, investors can still get a standard return from their investment (Rashid, et al. 2014). So that when investors can still get up standard returns, investors will continue to trade in the capital market even though macroeconomic conditions are not supportive. Then the interest rate has no effect because the investor in Indonesian capital is a trader, i.e., taking shorter profit-taking than long-term investors. With interest

rates that tend to be stable, investors prefer to invest in long-term deposits so that trading activities are not too affected by changes in interest rates. Zheng and Su (2017) found that trading volume will increase when the price of oil from the seller's side increases.

H4: There is a causal relationship between the variables of the exchange rate, BI rate, inflation, gold prices, and world crude oil prices on the trading volume.

H5: There is a short-term relationship between the variables of the exchange rate, BI rate, inflation, gold prices, and world crude oil prices on the trading volume.

H6: There is a long-term relationship between the variables of the exchange rate, BI rate, inflation, gold prices, and world crude oil prices on the trading volume.

3. Research Methods

The data used quantitative time series data sourced from secondary data. This data already exists and does not need to be collected by researchers. The population in this study is the stock price and trading volume in Jakarta Islamic Index (JII30). The technique used in sampling is purposive sampling, namely the determination of the sample based on the criteria determined by the researcher. The research sample desired in this study is the JII30 Index stock price and trading volume from 2008 to 2020.

The data used is the price of the JII 30 index and the trading volume of the JII 30 index. In addition, the data used by other researchers is macroeconomic data, such as inflation, the BI Rate, and the exchange rate of the US Dollar (USD) against the Rupiah (IDR). In addition, this study uses control variables, namely the Gold Price and Oil Price. The data period used is monthly data from January 2008 to June 2020 using the VECM approach.

4. Finding and Discussion

The stationarity test is the first step in building a VAR model to ensure that spurious regression does not occur. Alternatively, variables that appear to be statistically significant are not in reality.

Table 1: Unit Root Test Results

Variable	1st Difference		
	ADF Statistic	t-Statistic 5%	Prob*
BI Rate	-7.056526	-2.880853	0.0000***
Inflation	-8.052768	-2.880987	0.0000***
Exchange Rate	-11.72934	-2.880853	0.0000***
Gold Price	-14.00484	-2.880853	0.0000***

Oil Price	-9.007305	-2.881541	0.0000***
JII	-9.433045	-2.880853	0.0000***
Trading Volume	-11.39009	-2.880987	0.0000***

Note: ***, ** and * indicates significant at 1%, 5% and 10% level of significance

In table 1, from the unit root test using Augmented Dickey-Fuller, it can be seen test statistic value is smaller than the critical value test value at the 5% level) This test found that all variables had results rejecting the null hypothesis, or no unit root was found in the data (data is stationary). So, according to research conducted by Abdullah et al. (2016) research can be carried out to the next step.

After the data is stationary, the next step is to perform an optimal lag test to estimate VAR.

Table 2: Optimal Lag Length Test

Lag	LogL	LR	FPE	AIC	SC	HQ
0	1150.737	NA	2.98e-16	-15.88524	-15.74087*	-15.82657
1	1240.113	168.8213	1.70e-16*	-16.44601*	-15.29109	-15.97672*
2	1281.042	73.33047	1.91e-16	-16.33391	-14.16842	-15.45398
3	1303.005	37.21567	2.81e-16	-15.95840	-12.78235	-14.66784
4	1336.894	54.12855	3.55e-16	-15.74853	-11.56192	-14.04733
5	1362.415	38.28189	5.10e-16	-15.42244	-10.22526	-13.31060
6	1414.542	73.12221*	5.16e-16	-15.46586	-9.258129	-12.94339

Note: ***, ** and * indicates significant at 1%, 5% and 10% level of significance

Optimal lag length testing is determined from several criteria. It is choosing from the best results from several tests, namely the Akaike Information Criterion (AIC), Schwarz Information Criterion (SC), and Hannan Quinnon (HQ) tests. The optimal lag selection used in research based on the results is lag one because it has the highest number of stars.

The stability of the VAR needs to be tested first before carrying out further analysis. Suppose the VAR estimation results combined with the error correction model are unstable. The Impulse Response Function and Variance Decomposition will be invalid (Rusydiana, 2019).

Table 3: Stability Test

Root	Modulus
0.481572	0.481572
-0.474765	0.474765
0.312800	0.312800
-0.293197	0.293197
0.012088 - 0.175822i	0.176237
0.012088 + 0.175822i	0.176237
-0.091664	0.091664

Note: No root lies outside the unit circle. VAR satisfies the stability condition

To ensure shock test using the Impulse Response Function (IRF) and Variance Decomposition (VD) becomes valid. It is necessary to ensure that the VAR model is stable with a modulus value below one. The results of the VAR stability test in table 3 show that the VAR value is stable.

A cointegration test determines a relationship between variables, especially in the long term. Suppose there is cointegration in the variables used in the model. In that case, it can ascertain that there is a long-term relationship between the variables. The method that can use in testing this cointegration is the Johansen Cointegration method.

Table 4: Cointegration Test

Hypothesized No. Of CE(s)	Eigenvalue	Trace Statistic	0.05 Critical Value	Prob.
None *	0.616872	563.1155	125.6154	0.0001***
At most 1 *	0.530737	421.1264	95.75366	0.0001***
At most 2 *	0.510266	309.1506	69.81889	0.0001***
At most 3 *	0.397660	203.4943	47.85613	0.0000***
At most 4 *	0.339335	128.4683	29.79707	0.0000***
At most 5 *	0.261837	67.12100	15.49471	0.0000***
At most 6 *	0.139231	22.18955	3.841466	0.0000***

Note: ***, ** and * indicates significant at 1%, 5% and 10% level of significance

Researchers conducted the Johansen Cointegration test to ensure that the equations tested were cointegrated. Table 4.5 relate that there is a long-term relationship between the independent variable and the dependent variable. That is shown in the Johansen Cointegration test table. Namely, the trace statistic value at lag 1 is 563.1155, which is greater than the 0.05 critical value, 125.6154, meaning that the variables studied have a long-term relationship (cointegration).

A causality test determines whether an endogenous variable can be treated as an exogenous variable. This stems from ignorance of the influence between variables. If there are two variables, y, and z, then either y causes z or z causes y or both. The variable y causes y, which means how much the value of z can explain the value of z in the current period in the previous period and the value in the previous period Witte and Witte (2017).

Table 5: Granger Causality Test

Null Hypothesis	Obs	F-Statistic	Prob.
Trading Volume does not Granger Cause JII	149	1.03253	0.3587
JII does not Granger Cause Trading Volume	149	5.09228	0.0073***
BI Rate does not Granger Cause JII	149	1.89008	0.1548
JII does not Granger Cause BI Rate	149	2.09984	0.1262
Inflation does not Granger Cause JII	149	3.35929	0.0375**
JII does not Granger Cause Inflation	149	0.68104	0.5077
Exchange Rate does not Granger Cause JII	149	6.23689	0.0025***
JII does not Granger Cause Exchange Rate	149	16.6124	0.0000***
Gold Price does not Granger Cause JII	149	2.86783	0.0601*

JII does not Granger Cause Gold Price	149	2.12280	0.1234
Oil Price does not Granger Cause JII	149	1.36564	0.2585
JII does not Granger Cause Oil Price	149	1.17360	0.3122
BI Rate does not Granger Cause Trading Volume	149	0.82539	0.4401
Trading Volume does not Granger Cause BI Rate	149	1.08655	0.3401
Inflation does not Granger Cause Trading Volume	149	2.09671	0.1266
Trading Volume does not Granger Cause Inflation	149	2.33644	0.1003
Exchange Rate does not Granger Cause Trading Volume	149	3.17035	0.0449
Trading Volume does not Granger Cause Exchange Rate	149	0.45045	0.6382
Gold Price does not Granger Cause Trading Volume	149	1.07356	0.3445
Trading Volume does not Granger Cause Gold Price	149	1.85923	0.1595
Oil Price does not Granger Cause Trading Volume	149	2.13216	0.1223
Trading Volume does not Granger Cause Oil Price	149	1.38627	0.2533

Note: ***, ** and * indicates significant at 1%, 5% and 10% level of significance

Based on table 5, explain that the variables that have a Granger causality relationship are those with a probability value less than = 0.05.

Table 6 shows the long-term VECM results against the Jakarta Islamic Index (JII) or the first dependent variable. In the long term, the BI Rate and Oil Prices significantly negatively affect the Jakarta Islamic Index (JII). because the t-statistic > t-table, which is 2.36508 > 1.97601 on the BI Rate, 9.11694 > 1.97601 on the Oil Price. While the Exchange Rate and Gold Price significantly positively affect the Jakarta Islamic Index (JII). As evidenced by the value of t-statistic > t-table, namely 7.71578 > 1.97601 on the Exchange Rate and 3.64625 > 1.97601 on the Oil Price. The inflation variable does not affect the Jakarta Islamic Index (JII) because the value of t-statistic < t-table is 0.13898 < 1.97601.

Table 6: Long-Term VECM Test Results on JII and Trading Volume

Long-Term JII				
Variable	**Coefficient**	**t-statistic**	**t-table**	**Description**
BI Rate	0.56606	-2.36508**	1.97601	Significant
Inflation	0.24340	0.13898		Not Significant
Exchange Rate	1.055564	7.71578		Significant
Gold Price	0.51882	3.64625**		Significant
Oil Price	0.65943	-9.11694***		Significant
Long-Term Trading Volume				
Variable	**Coefficient**	**t-statistic**	**t-table**	**Description**
BI Rate	0.295496	-1.87178	1.97601	Not Significant
Inflation	1.27062	0.84081		Not Significant
Exchange Rate	5.51070	8.40727***		Significant
Gold Price	2.70837	5.79058***		Significant
Oil Price	3.44238	8.30837***		Significant

Note: ***, ** and * indicates significant at 1%, 5% and 10% level of significance

Table 6 shows the long-term VECM results on trading volume or the second dependent variable. In the long term, the Exchange Rate, Gold Price, and

Oil Price have a significant positive effect on Trading Volume because the value of t-statistic > t-table, namely 8.40727 > 1.97601 on the Exchange Rate, 5.79058 > 1.97601 on the Gold Price, and 8.30837 > 1.97601 for the Oil Price. Meanwhile, BI Rate and Inflation do not affect Trading Volume, as evidenced by the value of t-statistic < t-table, namely 1.87178 < 1.97601 on the BI Rate and 0.40727 < 1.97601 for Inflation.

Table 7: Short-Term VECM Test Results on JII and Trading Volume

Short-Term JII				
Variable	**Coefficient**	**t-statistic**	**t-table**	**Description**
BI Rate	0.15883	-0.81177	1.97601	Not Significant
Inflation	0.04426	-1.243888		Not Significant
Exchange Rate	0.22782	1.57796		Not Significant
Gold Price	0.10520	-1.87729		Not Significant
Oil Price	0.4049	-2.09019**		Significant
Short-Term Trading Volume				
Variable	**Coefficient**	**t-statistic**	**t-table**	**Description**
BI Rate	1.011471	0.55573	1.97601	Not Significant
Inflation	0.28280	-0.83077		Not Significant
Exchange Rate	1.45553	-0.48493		Not Significant
Gold Price	0.67210	-1.11687		Not Significant
Oil Price	0.25868	-0.84030		Not Significant

Note: ***, ** and * indicates significant at 1%, 5% and 10% level of significance

The short-term VECM results are shown in table 7. only the oil price variable affects the Jakarta Islamic Index (JII) because it has a t-statistic value more significant than the t-table value. Futhermore the short-term VECM results are in table 7. Show that all variables do not affect Trading Volume because all variables have a t-statistic value smaller than the t-table value.

The results of the Granger causality test (Table 5) show a one-way relationship between JII and trading volume. Where JII causes trading volume, there is a one-way relationship between inflation and JII. In contrast, inflation causes JII, Exchange Rate, and JII to have a two-way relationship, and there is a one-way relationship. The direction between Exchange Rate and Volume where Exchange rate causes volume.

Table 6 is the result of the VECM test to determine the long-term relationship between global risk factors and macroeconomic variables with the Jakarta Islamic Index (JII). The test results show that all variables except the inflation variable have a t-statistic value above the t table. Results show that the four variables, namely the BI Rate, Exchange Rate, Gold Price, and Oil Price variables, significantly influence JII. In addition, the influence given by all variables on the JII variable seen from the coefficient value is positive.

Research result in line with Harsono and Worokinasih (2018) and Suryanto (2017), that the BI rate can influence the price of JII because the BI rate has a close relationship with fixed income instruments such as Sukuk or bonds

that apply return of its coupon rate using a floating rate system. This means that the yield on the fixed income instrument can vary according to the current benchmark interest rate. If the benchmark interest rate rises, the return will also increase. If the bond yield rises, investors tend to trade their portfolios in stocks and put them in bonds with lower risk. Therefore, the BI Rate can affect JII.

The exchange rate effect on JII can occur due to several things, one of which is the action of investors who trade foreign exchange as a form of their diversification. If the rupiah depreciates, some investors will move their money into the stock market and enter the foreign exchange market.

Commodity prices such as gold and oil also influence JII because part of the companies included in the Jakarta Islamic Index (JII) are mining companies that profit apart from business efficiency and depend on market commodity prices. If commodity prices fall, the company's income will also fall. This is a negative response by investors and releases their portfolios which can cause the stock price to fall. In addition, gold is also a hedging instrument where investors will diversify apart from buying shares but will also buy gold as their hedging asset. Meanwhile, concerning the purpose of further research regarding the long-term effect of global risk factors and macroeconomic variables on JII's trading volume, we use the same analysis. Long-term VECM results show that the BI Rate and Inflation variables have no significant effect on trading volume. In contrast, the exchange rate, gold price, and oil price significantly affect JII's trading volume.

The BI rate has no significant effect. This is the same as previous research conducted by Kaluge (2019), Mawarni and Widiasmara (2018). In the long term, changes in the BI Rate will not affect trading activities. The reason investors ignore changes in the BI Rate and are more focused on realized profits (actual returns) from their selected stock investments. The focus of investors on the actual return of the selected stock investment causes changes in interest rates that can ignore. It is not always seen as a negative sentiment by investors.

Exchange rates, gold prices, and oil prices affect trading volume because changes in these three variables can trigger changes in company income. This change in income can change the valuation of the company's shares which will then be responded to positively or negatively by investors causing stock trading transactions.

The second research objective; Analyzes the short-term relationship of global risk factors and macroeconomic variables to JII and trading volume. Uses the VECM model to see the short-term effect. As shown in Table 7, the result is that only the oil price variable affects JII in the short term. In contrast, other variables do not affect JII. Meanwhile, no independent variable has a significant effect on trading volume. However, all variables have positive coefficient values. This is in line with research conducted by Pantas (2017) and Naifar (2016).

5. Conclusions

Following the three objectives to be studied and based on the results of research using the Vector Error Correction Model (VECM). The researcher draws the following conclusions: inflation and JII, where inflation causes JII, Exchange Rate and JII have a two-way relationship, and there is a one-way relationship between Exchange Rate and trading Volume, where Exchange rate causes trading volume.

Based on the short-term effect test results using VECM, all variables have no significant effect on JII except for the Oil Price variable. Meanwhile, the results of the short-term test on volume found that all variables had no significant effect on the variables. In both the JII test and the variables, all variables have positive coefficient values.

Based on the results of the long-term effect test using VECM, it is known that the BI Rate, Exchange Rate, Gold Price, and Oil Price variables have a significant effect. In contrast, the inflation variable has no significant effect on JII. Significant effect on volume, but the variable BI Rate and Inflation have no significant effect on volume. All variables have positive coefficient values.

The researcher recommends further research to increase macroeconomic variables such as economic growth to represent the reality of actual market conditions and extend the research period.

References

Abdullah, Ahmad Monir, Buerhan Saiti, and Mansur Masih. 2016. "The Impact of Crude Oil Price on Islamic Stock Indices of South East Asian Countries: Evidence from MGARCH-DCC and Wavelet Approaches." *Borsa Istanbul Review* 16 (4): 219–32.

Agestiani, Ari, and Himawan Arif Sutanto. 2019. "Pengaruh Indikator Makro Dan Harga Emas Dunia Terhadap Indeks Harga Saham Syariah (Jakarta Islamic Index)." *Econbank: Journal of Economics and Banking* 1 (1): 26–38.

Ellington, Michael. 2018. "Financial Market Illiquidity Shocks and Macroeconomic Dynamics: Evidence from the UK." *Journal of Banking \& Finance* 89: 225–36.

Fitrianto, Fitrianto. 2020. "Pengaruh Dow Jones Islamic Market Index (DJIMI), Nilai Tukar/Kurs Rupiah Dan Harga Minyak Dunia Terhadap Pergerakan Jakarta Islamic Index (Jii) 2014--2018." *HUMAN FALAH: Jurnal Studi Ekonomi Dan Bisnis Islam* 7 (1).

Harsono, Ardelia Rezeki, and Saparila Worokinasih. 2018. "Pengaruh Inflasi, Suku Bunga, Dan Nilai Tukar Rupiah Terhadap Indeks Harga Saham Gabungan Studi Pada BEI Periode 2013-2017." *Jurnal. Malang: Universitas Brawijaya*.

Igbinosa, S O, and Monday Uhunmwangho. 2019. "Macroeconomic Aggregates and Stock Market Liquidity: Evidence from African Stock Markets."

International Journal of Economics and Financial Management 4 (1): 18–27.

Kaluge, David. 2019. "Multifactor on Macroeconomic Fundamentals to Explain the Behavior of Sectoral Indices in the Indonesian Stock Exchange." *Entrepreneurship and Sustainability Issues*. https://doi.org/10.9770/jesi.2019.7.1(4).

Kristanto, Muhamad Enggal, and Idris Idris. 2016. "Analisis Pengaruh Inflasi, Kurs, Dan Suku Bunga Terhadap Pergerakan Bersama Return Saham IHSG Dan Volume Perdagangan Periode Januari 2006--Desember 2015." *Diponegoro Journal of Management* 5 (3): 792–806.

Mawarni, Citra Puspa, and Anny Widiasmara. 2018. "Pengaruh FED Rate, Harga Minyak Dunia, BI Rate, Inflasi Dan Kurs Rupiah Terhadap Indeks Saham Syariah Indonesia (ISSI) Periode Tahun 2011-2017." *Inventory: Jurnal Akuntansi* 2 (2): 281–97.

Mohammed, Hassan Yousef, and Amer Ali Abu Rumman. 2018. "The Impact of Macroeconomic Indicators on Qatar Stock Exchange: A Comparative Study between Qatar Exchange Index and Al Rayyan Islamic Index." *Journal of Transnational Management* 23 (4): 154–77.

Naifar, Nader. 2016. "Do Global Risk Factors and Macroeconomic Conditions Affect Global Islamic Index Dynamics? A Quantile Regression Approach." *The Quarterly Review of Economics and Finance* 61: 29–39.

Nasarudin, Indo Yama, Deni Pandu Nugraha, and others. 2021. "Shariah Stock Exchange In Islamic Conference Organization Members (Oic) Is There Any Integration?" *JIsEB* 2 (1): 54–63.

Nugraha, Deni Pandu. 2021. "Comparative Analysis Of Risk And Return On Indonesian Islamic Stock Index In Different Economic Conditions." *Jurnal Ekonomi Dan Manajemen* 15 (1): 51–64.

Pantas, Pribawa E. 2017. "Guncangan Variabel Makroekonomi Terhadap Jakarta Islamic Index (JII)." *Cakrawala: Jurnal Studi Islam* XII (1): 28–43.

Putri, Prileka Penta, and Nora Amelda Rizal. 2019. "Pengaruh Inflasi, Nilai Tukar, Harga Emas, Dan Harga Minyak Terhadap Indeks Harga Saham Jakarta Islamic Index Periode 2012-2016." *ISEI Accounting Review* 3 (1): 22–31.

Rashid, Mamunur, M Kabir Hassan, and Ng Yuen Yein. 2014. "Macroeconomics, Investor Sentiment, and Islamic Stock Price Index in Malaysia." *Journal of Economic Cooperation and Development* 35 (4): 219–34.

Rusydiana, Aam Slamet. 2019. "Mekanisme Transmisi Syariah Pada Sistem Moneter Ganda Di Indonesia." *Bulletin of Monetary Economics and Banking* 11 (4): 345–67.

Sampurnaningsih, Sri Retnaning. 2018. "Analisis Makroekonomi Yang Mempengaruhi Likuiditas Pasar Dan Harga Saham Index Consumer Goods Bursa Efek Indonesia Selama Tahun 2017." *Jurnal SEKURITAS (Saham, Ekonomi, Keuangan Dan Investasi)* 1 (4).

Sanjaya, Sigit, and Nila Pratiwi. 2018. "Pengaruh Tingkat Suku Bunga, Kurs Dan Inflasi Terhadap Jakarta Islamic Index (JII)." *JEBI (Jurnal Ekonomi Dan*

Bisnis Islam) 3 (1): 47–58.

Suryanto, Suryanto. 2017. "Pengaruh Harga Minyak Dan Emas Terhadap Indeks Harga Saham Gabungan Di Bursa Efek Indonesia." *JURISMA: Jurnal Riset Bisnis \& Manajemen* 7 (1): 1–13.

Witte, Robert S, and John S Witte. 2017. *Statistics*. John Wiley \& Sons.

Yahya, Thoha. 2020. "The Effect of Macro Variables on the Jakarta Islamic Index." *Asian Journal of Islamic Management* 2 (1): 36–45.

Zheng, Xinwei, and Dan Su. 2017. "Impacts of Oil Price Shocks on Chinese Stock Market Liquidity." *International Review of Economics \& Finance* 50: 136–74.