

# **Analysis of the Effect of Novel Coronavirus 2019 (Covid-19) Spreading Toward Sharia Stock Market in Indonesia**

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## **Abstract**

The purpose of this research is to identify and analyze the influence of the spread of Novel Coronavirus 2019 (Covid-19), the policies of Indonesian Government during pandemic (i.e. work from home, large-scale social restrictions (PSBB) and community activities restriction enforcement (PPKM), the movement of FTSE 100 and Nasdaq Composite indexes on Islamic stock market in Indonesia (represented by the Indonesian Sharia Stock Index). This study utilizes the Vector Error Correction Model (VECM), Impulse Response Function (IRF), and Forecast Error Correction Model (FEVD) approach, with the range data from September 2019 to November 2022. The results of this research indicates that the VECM test showed that Covid-19 case in Indonesia and the movement of FTSE 100 had a significant positive effect on ISSI in the long term. Meanwhile, in the short term, Covid-19 case in Indonesia and government policies have had a significant negative effect on ISSI. In the IRF test, this shows that the Covid-19 case in Indonesia and government policies during pandemic have had a significant negative effect on ISSI. Conversely, the movement of the FTSE 100 and Nasdaq Composite Index has a significant positive effect on ISSI.

In the FEVD test, it can be seen that the biggest contribution to ISSI shock movement was the shock itself of 85.24% and was followed by government policies, the Covid-19 case, FTSE 100 and Nasdaq. This investigation use three variables in order to search the effect of these factors on the movement of sharia stock market in Indonesia. The stock market represented by Indonesian Sharia Stock Index (ISSI).

**Keywords:** Covid-19, ISSI, VECM, Influence.

### Abstrak

Tujuan dari penelitian ini adalah untuk mengidentifikasi dan menganalisis pengaruh penyebaran Novel Coronavirus 2019 (Covid-19), kebijakan Pemerintah Indonesia pada masa pandemi (yaitu bekerja dari rumah, pembatasan sosial berskala besar (PSBB) dan pembatasan kegiatan masyarakat. pemberlakuan (PPKM), pergerakan indeks FTSE 100 dan Nasdaq Composite pada pasar saham syariah di Indonesia (diwakili oleh Indeks Saham Syariah Indonesia). Penelitian ini menggunakan pendekatan Vector Error Correction Model (VECM), Impulse Response Function (IRF), dan Forecast Error Correction Model (FEVD), dengan rentang data pada bulan September 2019 hingga November 2022. Hasil penelitian ini menunjukkan bahwa uji VECM menunjukkan kasus Covid-19 di Indonesia dan pergerakan FTSE 100 berpengaruh positif signifikan terhadap ISSI dalam jangka panjang. Sementara itu, dalam jangka pendek, kasus Covid-19 di Indonesia dan kebijakan pemerintah memberikan dampak negatif yang signifikan terhadap ISSI. Pada uji IRF menunjukkan bahwa kasus Covid-19 di Indonesia dan kebijakan pemerintah selama pandemi memberikan pengaruh negatif yang signifikan terhadap ISSI. Sebaliknya, pergerakan FTSE 100 dan Indeks Harga Saham Gabungan Nasdaq berpengaruh positif signifikan terhadap ISSI. Pada pengujian FEVD terlihat bahwa kontribusi terbesar terhadap pergerakan shock ISSI adalah shock itu sendiri sebesar 85,24% dan disusul oleh kebijakan pemerintah, kasus Covid-19, FTSE 100 dan Nasdaq. Penelitian ini menggunakan tiga variabel untuk mengetahui pengaruh faktor-faktor tersebut terhadap pergerakan pasar saham syariah di Indonesia. Pasar saham diwakili oleh Indeks Saham Syariah Indonesia (ISSI).

**Kata Kunci:** Covid-19, ISSI, VECM, Pengaruh.

## Introduction

Muhammad Al Faridho Awwal, 2021. In writing this research, author purposed to test the effect of the Corona pandemic on the Jakarta Islamic Index (JII) stock price, simultaneously and partially. The test result shows that the stock prices which included in the Jakarta Islamic Index (JII) are significantly affected by the pandemic simultaneously for three quarters. Partially, not all issuers are affected by this pandemic. It can be seen that the issuers affected in the Q1 range are ADRO, INCO, SCMA, UNVR; in the Q2 range are ADRO, ASII, BTPS, ERAA, ICBP, INDF, INTP, MDKA, MNCN, PTBA, SCMA, SMGR, and INTP; and in the Q3 range are ANTM, MDKA, PGAS, and TPIA. The similarity between the previous and latest one is the dependent variable, i.e. an index of Indonesia Sharia Stock Indexes; and the independent variable, i.e. Covid-19 cases in Indonesia. Meanwhile, the difference between them is the independent variables, i.e. pandemic policy, FTSE 100 index, and Nasdaq index; and the used research method.<sup>1</sup>

Said Setiandika Pambudi and Suyatmin Waskito Adi, 2022. In writing this journal, authors purposed to analyze the differences in Abnormal Return, Trading Volume Activity, and Security Return Variability before and after the announcement of the COVID-19 Emergency Community Activity Restriction (PPKM) policy. This means the announcement contains information for stakeholders, especially investors. They can consider in investing along this event, moreover they have experienced the same event while Large-Scale Social Restrictions (PSBB) are applied before. The similarity between the previous and latest one is the independent variable, i.e. pandemic policy (Emergency Community Activity Restriction (PPKM)). Meanwhile, the difference between them is the dependent variable, i.e. Indonesia Sharia Stock Index; the independent variables, i.e. Covid-19 cases in Indonesia, FTSE 100 index, and Nasdaq index; and the used research method.<sup>2</sup>

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<sup>1</sup> Muhammad Al Faridho Awwal, "The Corona Pandemic on Sharia Capital Market in Indonesia", *IQTISHODUNA: Jurnal Ekonomi Islam*, Vol. 10 No. 2, October 1, 2021

<sup>2</sup> Said Setiandika Pambudi and Suyatmin Waskito Adi, "Analysis of The Indonesia Capital Market Reaction to The Announcement Implementation of Emergency Community Activity Restriction (PPKM) (Event Study on Companies Listed in the LQ45 Index for January-July 2021 Period)", *Proceeding Book of The 4th International Conference on Business and Banking Innovations (ICOBBI) 2022*, January 29, 2022

As the world economy crashes, the stock market followed and shocked its prices. FTSE 100 index, one of London Stock Exchange index, has market cap of £1.996 trillion.<sup>3</sup> It is an internationally-focused index, by 82% of FTSE 100 revenues are from overseas markets.<sup>4</sup> This market was affected by pandemic. At March 12, 2020, the FTSE 100 index had plunged by 311 points, or 5.3% down to 5,565. This index had fallen by around 25% since the last month trading which around 7,404. The following day, the Dow Jones Industrial Average had fallen down 2,352 points or -9.99% at 21,200. Similarly, Nasdaq, as technology-focused index, had fallen down 750 points or -9.43% at 7,201. This index has market capitalization about \$23.46 trillion USD and bigger than Dow Jones market capitalization.<sup>5</sup> Then, the Euro STOXX 600 index, as the tracker of the aggregate stock market across Europe, had fallen by 11.48%.<sup>6</sup> At March 19, 2020, Nikkei 225 index, as the indicator for Japanese stock trade, had fallen to its lowest point by 16,552. It fell after recording the highest stock index by 24,083 in mid-January ago.<sup>7</sup>

Similar to other stock markets, the Indonesian stock market was shocked along with its economy shock. On March 24, 2020, Indonesia Composite Index (ICI/ IHSG) had plunged by 3,973 from 6,283 which achieved at first year 2020. This decrease was the largest one which occurred less than a month from its peak point and was declared as the serious case compared to the crisis in 2008.<sup>8</sup> Most of major indices in Indonesia Stock Exchange experienced the worst decline on the same day, both conventional and sharia indices. As reported by the Indonesia Stock Exchange in its monthly report, LQ45 hits 566.829 from its highest point in month, 922.508. IDX30 hits 311.880 from its highest point in month, 504.851. JII hits 393.863 from its highest point in month, 604.524. ISSI hits 115.946 from its highest point in month, 164.120.<sup>9</sup> These decline was caused by the panic selling of investors in the event of Covid-19 outbreak.

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<sup>3</sup> Zoe Stabler, "FTSE 100 vs Dow Jones: Key Differences and Performance Data," finder.com, 2023, <https://www.finder.com/uk>.

<sup>4</sup> Ben McPoland, "3 Reasons to Invest in the FTSE 100 in 2023," fool.co.uk, 2023.

<sup>5</sup> Zoe Stabler and Stacie Hurst, "Nasdaq vs Dow Jones," finder.com, 2022.

<sup>6</sup> Werden, Graeme, and Jasper Jolly, "Wall Street and FTSE 100 Plunge on Worst Day since 1987 – as It Happened," theguardian.com, 2020.

<sup>7</sup> Taufik Fajar, "Bursa Saham Dunia Mengalami Situasi Yang Sama," economy.okezone.com, 2020.

<sup>8</sup> Danang Sugianto, "Kondisi Genting Pasar Modal Saat Pandemi, Lebih Gawat Dari Krisis 2008," finance.detik.com, 2020.

<sup>9</sup> Data Service Division, "IDX Monthly Statistics March" Vol. 29, no. No. 3 (2020).

Based on introduction above, the researcher want to identify and analyze the influence of the spread of Novel Coronavirus 2019 (Covid-19), the policies of Indonesian Government during pandemic (i.e. work from home, large-scale social restrictions (PSBB) and community activities restriction enforcement (PPKM), the movement of FTSE 100 and Nasdaq Composite indexes on Islamic stock market in Indonesia (represented by the Indonesian Sharia Stock Index).

## Content/Discussion

### Sharia Capital Market

According to Irwan Abdalloh, sharia capital market is all activities in the capital market that comply with Islamic principles. Based on this definition, there are two main factors which shape the sharia capital market. It is the capital market and Islamic principles in the capital market. It can be said that in studying sharia capital markets, these two things are inseparable from each other.<sup>10</sup> According to M. Nur Rianto Al Arif, sharia capital market in the simple meaning is a capital market which apply sharia principles in the economic transaction activities and apart from the matters which forbidden by sharia, such as usury, gambling, speculative, etc. The principles in sharia capital market are totally different with the principles in conventional one. The issued instruments in this market, i.e. stocks and obligation, are issued and screened with certain criteria in accordance with sharia principles.<sup>11</sup>

The activities of capital market can categorize as economics activities which include to mu'amalah activity. Mu'amalah activity is an activity which organized the business relationship. As written in Fiqh principle, the origin law of mu'amalah activity is allowed (mubah), except there is an argumentation (dalil) which forbid it explicitly. As long as no argumentation from Qur'an and Sunnah which forbid, all activities in capital market are allowed.<sup>12</sup>

Some of prohibitions in its activities are the transaction which contained usury (riba'), speculation and indistinctness (gharar). The meaning of indistinctness (gharar) is transaction which inside

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<sup>10</sup> Irwan Abdalloh, *Pasar Modal Syariah* (Jakarta: PT. Elex Media Komputindo, 2019), p. xix

<sup>11</sup> M. Nur Rianto Al Arif, *Lembaga Keuangan Syariah* (Bandung: CV. Pustaka Setia, 2017), p. 345

<sup>12</sup> Khaerul Umam, *Pasar Modal Syariah & Praktik Pasar Modal Syariah* (Bandung: Pustaka Setia, 2013), p. 85

it possible to happen a deception. The activities which include to this prohibition, i.e. making a false deal (najsy); transacting the unpossessed goods or short selling (bai' maa laisa bimamluk); selling the unclear goods (bai'al-ma'dum); buying for stock accumulation (ihtikar); disseminating the misleading information or using internal information for gaining profit from illegal transaction or known as insider trading.<sup>13</sup>

The difference of this market with the conventional one, it based on some main things. They are Islamic stock index, the sold instruments, and transaction mechanism. Islamic index wasn't launched by sharia stock market only, but also by conventional stock market. Because before the existence of sharia stock market in this nation, this index was launched by the conventional stock market. But, the based different between conventional and sharia capital market is the conventional index includes all of recorded stock in the market with ignoring the halal haram aspects and the importance is the stock had listed as the obtained regulation.<sup>14</sup>

## Research Methodology

### Data Stationary Test

Each variable is tested by Augmented Dickey Fuller. If probability value of ADF statistic is smaller than real level (p-value  $< \alpha = 5\%$ ), then the data used is stationary data. Result is summarized in the table 1.

**Table 1. Stationary Test with ADF Test Method Result**

Variable	Augmented Dickey-Fuller	
	Level	1st Difference
	Prob.	Prob.
ISSI	0.7258	0.0000
COVID	0.1645	0.0000
NASDAQ	0.3870	0.0000
FTSE	0.3101	0.0000

At unit root test above, based on stationary test with ADF shows

<sup>13</sup> Ibid, p. 86

<sup>14</sup> Adrian Sutedi, *Pasar Modal Syariah: Sarana Investasi Keuangan Berdasarkan Prinsip Syariah* (Jakarta; Sinar Grafika, 2014), p.52

that ISSI, COVID, NASDAQ, and FTSE are stationer at first difference level and are not stationer in level.

Test Stability of VAR Model

Stability of VAR model will be seen from root reverse value of polynomial AR characteristics. This can be seen from modulus value in the AR-roots table, if modulus is less than 1, then VAR model is stable. This is to determine an optimal lag. Use of optimal lags is expected to avoid the autocorrelation problem again.

**Table 2. VAR Stability Test Result**

Root	Modulus	Lag
0.932327 - 0.354973i	0.997617	23

Result of VAR stability test above shows that all modulus obtain a value smaller than one. Thus optimum lag is declared stable.

Optimum Lag Test

Before doing cointegration test to find out its cointegration, variables needed for the value will be used for next test by testing lag length.

**Table 3. Optimum Lag Length Test Result**

Lag	LR	FPE	AIC	SC	HQ
0	NA	2.12E-11	-10.38669	-10.28977	-10.34733
1	882.7607	8.75E-14	-15.87787	-15.29637	-15.64171
2	120.2202	5.31E-14	-16.37924	<b>-15.31315*</b>	-15.94629
3	88.90474	<b>3.90e-14*</b>	<b>-16.68887*</b>	-15.13819	<b>-16.05912*</b>
4	23.06497	4.54E-14	-16.54078	-14.50551	-15.71423
5	<b>57.68319*</b>	4.06E-14	-16.66131	-14.14146	-15.63797
6	28.10292	4.51E-14	-16.56614	-13.56170	-15.34600
7	36.03432	4.68E-14	-16.54505	-13.05602	-15.12811
8	14.76528	5.77E-14	-16.35479	-12.38117	-14.74105

Notes: \*significant at 5%

In the table 4, it shows that the optimum lag are lag 5 in LR, lag 3 in FPE, lag 3 in AIC, lag 2 in SC, and lag 3 in HQ. It shows that the

suitable lag to be used is lag 3. It is taken as shown by asterisk for lag 3 in FPE, AIC and HQ.

Cointegration Test

Cointegration test is done to determine whether variables that are not stationary at cointegrated level or not. This cointegration presents a long-term relationship. Cointegration test in this study uses a Johansen approach by comparing trace statistics with a critical value of 5 percent. If statistical trace value is greater than critical value, then there is cointegration in the system of similar equations. If used data is stationary at the first different level, then testing is done to see the probability of cointegration. Cointegration testing is used to see if there is cointegration among variables.

**Table 4. Johansen Cointegration Test**

Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	0.05 Critical Value	Prob.**
None *	0.219704	94.02882	79.34145	0.0026
At most 1	0.141491	53.34340	55.24578	0.0728
At most 2	0.086742	28.32378	35.01090	0.2167
At most 3	0.067098	13.44301	18.39771	0.2149
At most 4	0.012436	2.052340	3.841466	0.1520
At most 5	0.093235	3.621272	9.164546	0.4714

Based on the results of the cointegration test in table 5 above, we can conclude that there is one cointegrated equation. It is able to be seen any one probability value < alpha ( $\alpha=5\%$ ).

Vector Error Correction Model (VECM) Test

Results of Johansen integration test, it is known that there are equations or cointegration in the VECM system. So next stage is estimating coefficient.

**Table 5. VECM Estimation Results (Long Term)**

	Long Term	
	Coefficient	t-statistics
ISSI(-1)	1.000000	



COVID(-1)	0.151457	[ 6.05236]*
FTSE(-1)	1.679382	[ 3.00325]*
NASDAQ(-1)	-0.338052	[-1.54025]
POLICY(-1)	-0.465443	[-6.07817]*
TREND(1)	-0.007718	
C	-16.92945	

Based on the results of VECM test on the table above, COVID, FTSE, and POLICY have significant effect on ISSI. This can be seen from t-statistic value greater than 1.98. T-statistic value of COVID is 6.05236, t-statistic of FTSE is -3.00325, and t-statistic of POLICY is -6.07817. So, in long-term, COVID, and FTSE are significant positive (increasing). Meanwhile, POLICY is significant negative (decreasing).

**Table 6. VECM Estimation Results (Long Term)**

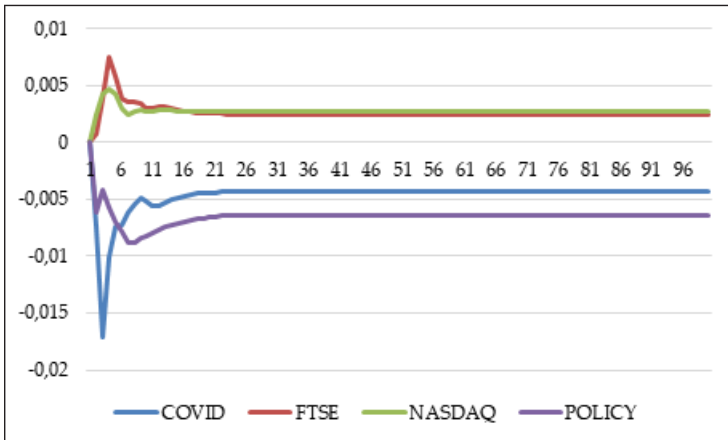
Short Term		
	Coefficient	t-statistics
CointEq1	0.02600	[ 1.78962]
D(ISSI(-1))	-0.202619	[-2.02298]*
D(ISSI(-2))	0.021521	[ 0.22927]
D(ISSI(-3))	0.011352	[ 0.12713]
D(COVID(-1))	-0.043588	[-4.78021]*
D(COVID(-2))	0.011105	[ 0.78271]
D(COVID(-3))	0.049679	[ 4.25964]*
D(FTSE(-1))	-0.075186	[-0.87385]
D(FTSE(-2))	0.030964	[ 0.36024]
D(FTSE(-3))	0.065789	[ 0.79533]
D(NASDAQ(-1))	0.084553	[ 1.44153]
D(NASDAQ(-2))	0.057636	[ 1.00081]
D(NASDAQ(-3))	-0.058409	[-1.00377]
D(POLICY(-1))	-0.06733	[-4.00479]*
D(POLICY(-2))	0.009326	[ 0.54609]
D(POLICY(-3))	-0.011464	[-0.76348]

Based on the results of VECM test above, in the short term, ISSI, COVID, and POLICY are significant for decreasing ISSI. This can be seen from values of t-statistic are bigger than 1.98.

## Output of VECM

### Impulse Response Function (IRF)

This IRF aims to look at the current and future response traces of a variable against shocks from certain variable. IRF is a vector moving average application that aims to see how long shock of one variable affects other variables.



**Figure 1. IRF Test Result**

Results of IRF analysis shown in the graph above showing ISSI variables responded positively to shocks on FTSE and NASDAQ variables from beginning and begin to stabilize in the 23rd period. This indicates that if there is an increase in COVID, the initial period of ISSI will experience instability. But in the long term, the increase in COVID will result in the number of ISSI also increase.

ISSI variables respond negatively to shocks in COVID and POLICY variables from the beginning and begin to stabilize in the 23rd period. This indicates that when there is an increase in COVID and POLICY make the initial period of ISSI will experience instability. But in the long term, the increase in COVID and POLICY will result in ISSI numbers decreasing.

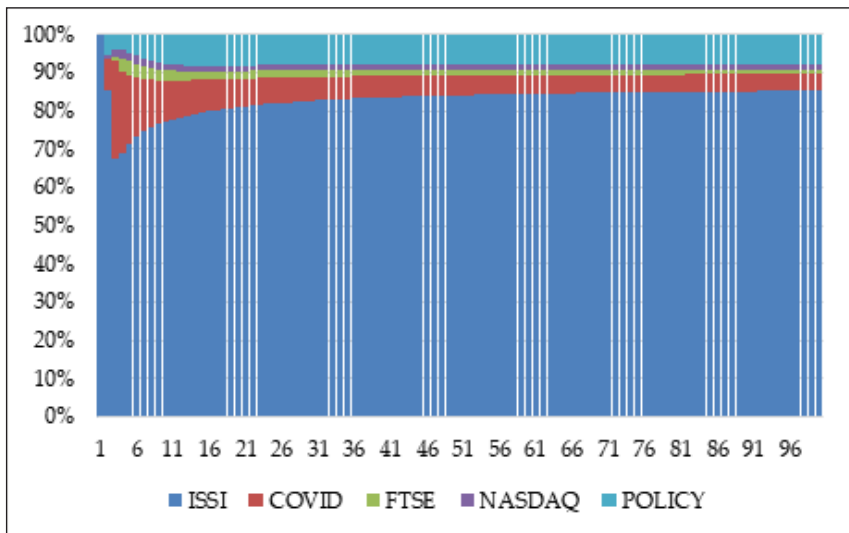
### Forecast Error Variance Decomposition (FEVD)

Next analysis is that forecast error variance decomposition (FEVD) analysis that can be done to predict the contribution of each variable to shocks or changes in certain variables.

**Table 7. FEVD Test Result**

Period	ISSI	COVID	FTSE	NASDAQ	POLICY
1	100	0	0	0	0
20	80.9356	7.464347	2.015270	1.444120	8.14069
40	83.5187	5.576231	1.61539	1.38689	7.90281
60	84.4583	4.890080	1.4709	1.366570	7.81418
80	84.9445	4.534950	1.39611	1.35604	7.76842
100	85.2417	4.317843	1.35039	1.3496	7.740440

The results of the FEVD above show that in the initial period the ISSI responded 100% in the 100th of the period. ISSI contributes 85.24%, COVID contributes 4.32%, FTSE contributes 1.35%, NASDAQ contributes 1.35%, and POLICY contributes 7.74%. So, at the end of period, ISSI made very large contribution, POLICY, COVID, FTSE, and least contributing is NASDAQ.



**Figure 2. FEVD Test Result**

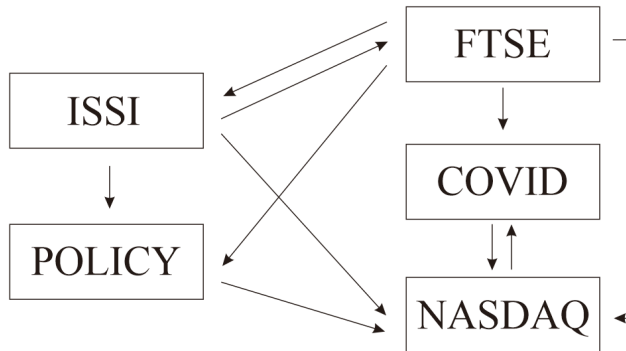
### Granger Causality

After carrying out VECM test, Granger Causality test was carried out to determine causal relationship among variables used in this study. Test uses pairwise granger causality to find out results

of a causal relationship among variables. A variable is said to have a causal relationship (causality) with other variables if probability value is smaller than real level.

**Table 8. Granger Causality Test**

No	Null Hypothesis		Obs	Lag	F-Statistic	Prob.	Direction of Causality
	X	Y					
1	NASDAQ	ISSI	165	2	2.56092	0.0804	-----
	ISSI	NASDAQ	166	1	4.15911	0.0430	<b>ISSI &gt; NASDAQ</b>
2	FTSE	ISSI	165	2	8.98590	0.0002	<b>FTSE &gt; ISSI</b>
	ISSI	FTSE	165	2	3.69304	0.0270	<b>ISSI &gt; FTSE</b>
3	COVID	ISSI	165	2	29.5458	1.00E-11	-----
	ISSI	COVID	165	2	0.82372	0.4406	-----
4	POLICY	ISSI	165	2	24.1055	7.00E-10	-----
	ISSI	POLICY	165	2	8.02035	0.0005	<b>ISSI &gt; POLICY</b>
6	FTSE	NASDAQ	165	2	5.17672	0.0066	<b>FTSE &gt; NASDAQ</b>
	NASDAQ	FTSE	165	2	0.81805	0.4431	-----
7	COVID	NASDAQ	165	2	7.95900	0.0005	<b>COVID &gt; NASDAQ</b>
	NASDAQ	COVID	165	2	3.65071	0.0282	<b>NASDAQ &gt; COVID</b>
8	POLICY	NASDAQ	166	1	4.42229	0.0370	<b>POLICY &gt; NASDAQ</b>
	NASDAQ	POLICY	165	2	1.50920	0.2242	-----
10	COVID	FTSE	165	2	18.7981	5.00E-08	-----
	FTSE	COVID	165	2	5.11742	0.0070	<b>FTSE &gt; COVID</b>
11	POLICY	FTSE	165	2	2.41031	0.0930	-----
	FTSE	POLICY	165	2	4.93557	0.0083	<b>FTSE &gt; POLICY</b>
13	POLICY	COVID	165	2	0.21160	0.8095	-----
	COVID	POLICY	165	2	31.6346	3.00E-12	-----



**Figure 4. Granger Test Result**

From results of Granger causality test on the effect the spreading of Novel Corona virus disease (COVID-19) toward sharia stock market describes as follows:

- a. ISSI has causality relationship to NASDAQ in 1st Lag or 1st Period, but NASDAQ has not causality relationship to ISSI.
- b. ISSI has two-way causality relationships to FTSE in 2nd Lag or 2nd Period.
- c. ISSI has not any causality relationship to COVID.
- d. ISSI has a one-way causality relationship to POLICY in 2nd Lag or 2nd Period, but POLICY has not causality relationship to ISSI.
- e. FTSE has a one-way causality relationship to NASDAQ in 2nd Lag or 2nd Period, but NASDAQ has not causality relationship to FTSE.
- f. COVID has two-way causality relationships to NASDAQ in 2nd Lag or 2nd Period.
- g. POLICY has a one-way causality relationship to NASDAQ in 1st Lag or 1st Period, but NASDAQ has not causality relationship to COVID.
- h. FTSE has a one-way causality relationship to COVID in 2nd Lag or 2nd Period, but COVID has not causality relationship to FTSE.
- i. FTSE has a one-way causality relationship to POLICY in 2nd Lag or 2nd Month, but POLICY has not any causality relationship to FTSE.
- j. COVID has not any causality relationship to POLICY.

From the result of VECM test, COVID and FTSE have significant effect on ISSI in long term. Covid-19's cases and FTSE 100 Index are

significantly positive (increasing) on Indonesia Sharia Stock Index. That the increasing of Covid-19's cases and FTSE 100 Index are effecting to increase Indonesia Sharia Stock Index. This shows that the increasing of Covid-19's cases in Indonesia didn't effect to shock the index price well, except for a short time. Investors also lean on buying the stock instead of the spreading news of the pandemic. They are not affected by this case in transaction choice, except for a short time in the beginning. FTSE 100 index did not affect also on the decreasing of ISSI, but it will effect to its increase.

In another side, Capital Market and Financial Institution Supervisory Agency (Bapepam-LK) is the stakeout of national capital market until 2011. However, since the enforcement of Law of the Republic of Indonesia Number 21 of 2011, this institution was changed into Financial Services Authority (OJK). They had issued the regulation related to the development of sharia capital market. At November 23, 2006, Capital Market and Financial Institution Supervisory Agency (Bapepam-LK) had issued regulation through Decree of the Chief of Bapepam-LK No. Kep-130/BL/2006 (Regulation No. IX.A.13) about issuance of sharia stock and the Decree of the Chairman of Bapepam-LK No. Kep-131/BL/2006 (Regulation No. IX.A.14) about the used contracts in issuance of sharia stock. The background of this issuance is under the demand of society, even from enterprises or investors in order to sharia stock circles, there are some base regulations for issuance stock in capital market based on sharia principles.<sup>15</sup>

Meanwhile, POLICY has significant effect also on ISSI in long term. The government policy during Covid-19 pandemic is significantly negative (decreasing) on Indonesia Sharia Stock Index. That the alteration of government policy effects to decrease Indonesia Sharia Stock Index. This policy changes most of economic activities in every sector, especially in the policy of PSBB. The citizens change their income and consumption along the application of this policy. Most of them cannot get the income as much as they got before this pandemic. Their income is decreasing and is impacting to their consumption. They consider to spend on their primary needs rather than their secondary and tertiary needs. When citizens consider in this way, the amount of stock investor will decrease, although not in serious case. Because they will decrease their money spending on investment, include the

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<sup>15</sup> Burhanuddin Susanto, *Pasar Modal Syariah (Tinjauan Hukum)* (Yogyakarta; UII Press, 2008), p. 12

investment on stock.

For short term, ISSI, COVID and POLICY have significant effect on ISSI. The movement of Indonesia Sharia Stock Index, Covid-19's cases, and government policies in pandemic era (work from home, large-scale social restrictions (PSBB) and community activities restriction enforcement (PPKM)) are significantly negative (decreasing) in ISSI Index. The movement of Indonesia Sharia Stock Index in nearest period of present can cause the decrease of stock price itself. It can be existed along with the newest event in the exact time. One of these effecting event is the number of Covid-19's cases increased day by day. Along with that, the Government applies some regulation to be obeyed by the citizen. If the Covid-19's cases become worst and increase in its number, the policy will become strict than before. If the policy is stricter than before, people will be restricted in their activities. When the citizen's activities are hampered, it will cause in decreasing the stock price. Because the economic activities cannot run well and do not give any profit.

The research above is similar with Miezsko Mazur et. al. (2020) which found that Dow Jones Industrial Average (DJIA) was fallen into 26% in four days and 90% of S&P 500 stocks was generated asymmetrically and has negative returns. Md. Lutfur Rahman et. al. (2021) also found that the declaration of Covid-19 as the pandemic had a great impact to the stock market rather than its declaration as the public health emergency at first. Ayodele Thomas Duro et. al. (2020) also found in his research that an increase of Covid-19's cases will lead to the decrease of stock market rate about 1,4% in Nigerian stock market. Divya Jain (2020) found that the Covid-19's panic has made the Indian stock market instability with the fallen of some sectoral return.

Nur Hidayah (2020) found that Indonesian sharia capital market has fallen about 20-30%. Relating to this problem, many investors take their stocks down which cause into big capital outflow which risk Indonesia's investments. Aam Slamet Rusydiana and Dito Prakoso (2021) found that JII was affected by the United States S&P 500 index and the Covid-19 dummy variable. Then, Rossanto Dwi Handoyo, et.al (2021) also found that JCI responds positively to its own shock and responds negatively to Covid-19 cases.

In IRF (Impulse Response Function) test, it results that the movement of FTSE 100 and Nasdaq Composite are responded positively by ISSI. When the number of FTSE 100 and Nasdaq

Composite are increasing, they will make ISSI's number moves instability. But, in the long term, both of instrument have a positive effect to increase the number of ISSI. It will stimulate the stock market in case of buying and selling its stocks.

But, in other part, IRF also results that COVID and POLICY were responded negatively by ISSI. When the government policies are applied and the number of Covid-19's cases are increase, they will make ISSI's number moves instability. But, in the long term, they have a negative effect to decrease the number of ISSI. These instruments will affect people in case buying and selling the stock. People will think twice in having and getting stock. Because it will have a small return for them.

This result is similar with the research of Rossanto Dwi Handoyo, et.al (2021). They found in their research that their IRF shown the JCI return responds negatively to the shock of the Covid-19 cases as its respond toward the United States stock indices. In addition, it responds positively to the shock of the Malaysia and Japan stock indices.

According to FEVD (Forecast Error Variance Decomposition) test, ISSI has largest contribution into its number, then POLICY, COVID, FTSE, and least contribution is NASDAQ. They indicate that the foreign stock index has a big contribution in Indonesia's stock market stability, and followed by the government policies and the Covid-19 cases' number.

In Granger Causality test, it found that ISSI has two-ways causality relationship to FTSE. Besides, ISSI has also one-way causality relationship to NASDAQ and POLICY. This show the foreign stock market can affect each other with ISSI, either affects ISSI or affected by ISSI. It is in line with some suitable researches. Dahlia Br. Pinem (2019) found in her research that FTSE 100, Dow Jones Index, Singapore Index, Korean Kospo Index, Hangseng Hong Kong Index, and Nikkei Japan affect CSPI. Suwardi and Agus Amri Mokoginta (2021) also found that Dow Jones Index, FTSE 100 Index, and Nikkei 225 Index had an effect toward CSI.

This all along with the theory of investment. Some factors can affect the investment and the stock price in the market. The prediction of Covid-19 cases are effecting well to stock price in Indonesia Stock Exchange, especially Indonesia Sharia Stock Exchange. The pandemic makes investor feels confuse in their stock. Many of them decide to sell their securities in order avoiding the loss of their wealth. In other



side, many people can't invest their wealth cause of financial crisis. But, after several month, the stock price begin to increase better even few movement. This movement makes people start to invest cause of good future prediction.

The prediction of global stock market also affect the investor. Because when it price growth better, investor will be confident that the price will be recover, vice versa. Besides, the application of government policy during pandemic era also affects the market. The investor will be suspicious and worry about their stock. Because the labor will not work in their workplace and the effectiveness of company will be disturbed by the government policy. It may cause loss in their profit too.

## Conclusion

Based on VECM test, Covid-19 cases in Indonesia and the movement of FTSE 100 Index have affected toward the movement of Indonesia Sharia Stock Index (ISSI) in the long term. Meanwhile, in the short term, the movement of ISSI, Covid-19 cases in Indonesia, and the application of Government policy during pandemic era have affected toward the movement of ISSI.

Furthermore, IRF test shows FTSE and NASDAQ variables are fluctuated and begin to stabilize in the 22nd period to the 24th period. This indicates when there is an increase in FTSE and NASDAQ, the initial period of ISSI will experience instability. But they will result in ISSI numbers increasing in the long term. Meanwhile, COVID and POLICY variables are fluctuated and begin to stabilize in the 23rd period. ISSI will experience instability, but they will result in ISSI number decreasing while they move. In FEVD test, it shows that the shock-forming variable up to 100th period is POLICY which contributes and gives effect in 7.74% and followed by COVID in 4.31%, FTSE in 1.35%, and NASDAQ in 1.34%. Besides, in the Granger Causality test, it result shows FTSE has two-way relationship to ISSI.

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