

MAP OF RETURN OF SHARES AND VOLUME ACTIVITY TRADING OF COMPANIES IN INDONESIA ON THE PANDEMIC TIME OF COVID-19

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Abstract

This research was conducted to determine the impact of Covid-19 on the Company's stock returns and trading volume activity. The covid-19 pandemic event is important for research because it includes investor's assessment of the information generated in the capital market. This study was conducted to test the following hypotheses: before and after the Covid-19 pandemic was declared a national non-natural disaster, (1) there was a significant average change in the average abnormal return; (2) it is a significant average change in average trading volume activity. This research was conducted using event research methods. The sample for this study comes from 45 companies in the JII index. The analysis tool used is a regression with the SPSS. The descriptive statistic can be confirmed by calculating the standard deviation value. The result shows that the standard deviation range is 0.0002 to 0.03, so the research tool could be described as data obtained is suitable to the measurement variable. The conclusions explain that the events before and after the declaration of the Covid-19 outbreak as a national non-natural disaster have positive and a significant impact on the average abnormal return rate of stock activity and changes in trading volume activity.

Keywords : abnormal return; trading volume activity; Covid-19 pandemic; national non-natural disaster.

Abstrak

Penelitian dilakukan untuk mengetahui dampak Covid-19 terhadap return saham dan aktivitas volume perdagangan perseroan. Peristiwa pandemi Covid-19 penting untuk penelitian karena memuat penilaian investor terhadap informasi yang dihasilkan di pasar modal. Studi ini dilakukan untuk menguji hipotesis sebagai berikut : sebelum dan sesudah pandemi Covid-19 dinyatakan sebagai bencana non alam nasional, (1) terhadap perubahan rata-rata yang signifikan pada abnormal return; (2) terjadi perubahan rata-rata yang signifikan dalam aktivitas volume perdagangan rata-rata. Penelitian ini dilakukan dengan menggunakan metode penelitian peristiwa. Sampel penelitian berasal dari 45 perusahaan yang ada di indeks JII. Alat analisis menggunakan regresi dengan bantuan aplikasi SPSS. Statistik deskriptif dapat dikonfirmasi dengan menghitung nilai standar deviasi. Hasil penelitian menunjukkan bahwa kisaran standar deviasi adalah 0,0002 sampai 0,03; sehingga alat penelitian dapat digambarkan sebagai data yang diperoleh sesuai untuk variabel pengukuran. Kesimpulan menunjukkan bahwa peristiwa sebelum dan sesudah penanaman wabah Covid-19 sebagai bencana non alam nasional berdampak positif dan signifikan

terhadap rata-rata pengembalian abnormal trading saham serta perubahan aktivitas volume perdagangan.

Kata Kunci : *pengembalian abnormal; aktivitas volume trading; pandemi Covid-19; bencana non alam nasional.*

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INTRODUCTION

In 2020, the threat of the Covid-19 pandemic will shock the world. The pandemic resulted in more than 1.4 million confirmed cases also more than 83,000 death worldwide (Nicola et al., 2020). Due to the Covid-19 pandemic, financial markets have reacted tremendously. March 2020, US stock market touched circuit breaker mechanism four times in ten days. The Japanese stock market has fallen more than 20% from Desember 2019. The main UK index FTSE fell by more than 10% on March 12, 2020 (Zhang et al., 2020).

It is feared that the government announcement about the Covid-19 Pandemic as a Non-Natural Disaster is feared to trigger an economic crisis and recession. Pandemic Covid-19 has the potential to destroy the livelihoods of individuals, industries, businesses, and entire economies Laing, (2020). Covid-19 pandemic will deliver in the economic sector, especially it will cause a crisis in financial markets Goodell (2020). The financial market on the Indonesia Stock Exchange reacted by providing a strong response to this information. Government-issued policies cause concern for company shareholders. For this reason, researchers make research sketches and partial equations to examine the role of pandemics in the financial sector. In this study also presented research that the impact of epidemics and pandemics in the past is as

frightening as a large-scale event such as Covid-19, and its economic consequences.

The existing literature focuses on the cost of disease or the economic impact of disease caused by disease morbidity and mortality. H. Liu, Manzoor, Wang, Zhang, & Manzoor, (2020) studying the spread of the SARS epidemic in Hong Kong, solve its economics impact, and obtain the greatest negative impact from consumers, because the short-term economic impact is largely affected by local consumers, tourism, and air travel-related services.

Del Giudice (2017), by observing the monthly flow and results during 2015-2016, evaluated 78 regional equity funds in African countries, and obtained the results of Ebola Virus and Arab Spring seriously affecting the flow of funds, controlling fund performance, expenditures, and market returns. Seeing the impact on the stock market, (Delisle, 2014), said the costs of the 2003 SARS pandemic caused the biggest loss in the Asian Financial Crisis, with an estimated GDP value of US\$3 trillion and a financial market value of US\$2 trillion in stocks. (Nippani & Washer, 2006), studied impact of SARS in Canada, Hong Kong, Indonesia, China, Singapore, Philippines, Vietnam, and Thailand and other special administrative regions, and concluded that SARS just affects Chinese and Vietnamese Stock Market.

Macciocchi (2016), studied short-term economic impact of Zika virus pandemic in Argentina, Brazil, and

Mexico. M. Chen et al., (2007), used event research method for study impact of the SARS pandemic on efficiency of Taiwan's hotel stocks, and found that during the SARS pandemic, the stocks of 7 trading companies dropped sharply in 2008. Earning and stock prices.

X. Chen & Chiang (2020) analyzed impact of the SARS epidemic on the longterm relationship in the total stock price index, and they also found that the pandemic has major impact on performance of Taiwan's biotech stocks. According Bai (2014), and Baker, Wirgler and Yuan (2012), investor may be pessimistics about the prospect of investing in specific market due to selling these market shares under the pandemic.

The stock market is intertwined and interdependent. Researchers found cross-market conclusions during a critical period. Donadelli & P.G, (2016), the trend of the stock market is becoming more and more relevant. Events such as the pandemic of infectious diseases may trigger negative fluctuations in investors sentiment, profoundly affecting their investment decision, and then affecting stock market price. Chen and Chiang (2020), studied the daily stock returns of 9 Asian Markets from 1996-2003 and found that there was high correlation among the sample Asian Countries during crisis. Shu (2010) found that Southeast Asian Market such as Malaysia, Vietnam, and Thailand have the highest degree of integration with China. Lucia & B.A.O (2012), the global stock market becomes more and more dependent, and the crisis in 1 country will soon spread other countries. Zouaoui (2011), in countries that culturally more susceptible to herd activities also overreactions or country with low institutional participation, investor sentiment has a more obvious impact on the stock market.

An information is able to influence price determination in the capital market. Investment decision making by investors can be known by the presence of a signal from the information published as an announcement (Hartono, 2015). The Covid-19 pandemic will cause Covid-19 pandemic will cause investors to avoid huge losses by selling their shares. On the other hand, there are investors who speculate by selling stocks at the right time when the price shows a profit.

LITERATURE REVIEW

The market will react if an event contains information (Bernanke, 2010). If the market reacts to events, a significant abnormal return will be obtained (Gorton, 2009). Investment is an investment that is expected to generate additional funds in the future (Abraham, 1991). By understanding every investment risk, the investment can anticipate losses that can occur (Tachibana, 2018). In investment theory, one way to find out the answer to uncertainty due to an outbreak is to use the historical approach (Gatot, 2014). In making investment decisions, investors always try to minimize the various conditions that require an investor to decide what to do and what strategies are implemented so that he still gets a return (Tjiptono, 2011). Black Swan Event Theory reads "stock market returns respond to major events". Theory of Black Swan Events Theory refers to rare events that have a large impact, are difficult to predict and are beyond normal estimates and also cause a stir in the financial markets (Taleb, 2007). In the world of capital markets, if there is a Black Swan Event, it can be utilized by realizing profits if it rises rapidly and investing if it goes down (Rusdin, 2016). The Covid-19 outbreak was considered a negative signal by investors because this information made

conditions in the capital market not conducive (Al-Wadhi, 2020).

Hypothesis Development

Relationship between Outbreaks with Average Abnormal Returns

WHO and public health officials act as mediators, communicating risk of an outbreak to investors and forming investors' views on the disease (Burns, 2011). Investor sentiment significantly affects the stock market (Lu, 2012). Engelberg, J.; & Parsons (2011) shows that investment decision may be affected by bad mood and anxiety. Investors who have information that the equilibrium price will reach a certain price level can buy certain securities and will later sell them at the equilibrium price and vice versa (Liu, 2020). Hendriswari (2017), the impact of the outbreak of avian Influenza virus on the stock returns and trading volume activities of livestock company on the Jakarta Stock Exchanges was studied. Results show that the differences in average abnormal stock returns before-after Avian Influenza Virus outbreak is determined to be a national disaster can be seen that the Avian Influenza Virus outbreak has an impact on the Stock Returns of Chicken Farms on the Jakarta Stock Exchange.

H1: There is a significant average change in the average abnormal return (AR) of the company's shares before and after the announcement of the Covid-19 Pandemic as a National Non-Natural Disaster.

Relationship between Outbreaks with Average Trading Volume Activity

According to Shu (2010), the more active stocks are traded, the greater the trading volume activity. Wang (2013), investigated how infectious disease outbreaks affect the performance from

biotech stock, showing Taiwan's biotechnology industry has obvious abnormal trading volume activity results due to infectious diseases. Ichev, R.; & Marinic (2017), studied the geographic proximity the information disseminated by Ebola in 2014 and whether extensive media coverage has affected the price of US equity assets. Results show that impact on stock price is negative, and media local have reported significant impact on local trade. Impact is pronounced when the industry is unstable, and stocks are more volatile.

H2: Before and after the pandemic Covid-19 was declared a "national non-natural disaster", the trading volume of stock-active companies changed significantly.

RESEARCH METHODS

This type of research conducted using a statistical inferences approach and use a method of studying the events of the Covid-19 outbreak announcement as a National Non-Natural Disaster to analyze data and test hypotheses. Data source used in this research is auxiliary data. Data collection methods use are the non-partisan observation methods. The sample used is daily data from 45 listed companies in the JII index, with provisions 15 days before and 15 days after the announcement of the National Non-Natural Disaster.

The Dependent Variable

Dependent variables are stock price and trading volume activity from each industry. Stock price refer to investment that change over time (from time for time). Because price of stock used as research material is close to the price in Maret-Mei 2020. Stock income is the main goal of an individual or company's investment. In this method, measurement of stock returns will be used as dependent variable.

Which formula is :

$$R_{i,t} = \frac{R_{i,t} - P_{i,t-1}}{P_{i,t}}$$

For Information:

$R_{i,t}$ = Current Return

$P_{i,t}$ = Current Stock Price

$P_{i,t-1}$ = Share Last Period

Independent Variable

Rmt : Average Abnormal Return

TVA : Average Trading Volume Activity

The Model of Data Analysis

To test research and investigate relationship between outbreaks with return also trading volume activity, following multiple regression are used:

$$R_{it} = \alpha + \beta_1 R_{mt} + \beta_2 TVA + \varepsilon_{it} \dots (1)$$

Information:

$R_{i,t}$ = Current Return

α = A constant

β_1, β_2 = The Coefficient of the Independent Variable

Rmt = Average Abnormal Return

TVA = Trading Volume Activity

ε = Term Error

RESULT AND DISCUSSION

Result

Descriptive statistic can be confirmed by calculating the standard deviation value. Table 1 shows that the standard deviation range is 0.0002 to 0.03, so research tool could be describe as data obtained is suitable to the measurement variable.

The Kolmogorov Smirnov test is used to test distribution of normal data and if Sig value for data is greater than 0.05, this means that data is distributed naturally (Field, 2013). Table 2 shows that data distributions is normal, because Sig value to all study variables is morethan 0.05.

Table 3 shows the changes in the average abnormal return analyzed using

the t-test. This shows that there are fluctuations during the period of events taking place. If the event is depicted on a chart, it will look like the image in Figure 1.

According the calculation of the t-test in Table 4, it shows that before and after the Covid-19 is announced, the average abnormal return has a significant change, and its t value significantly larger than t-table (2,045). As an outbreak of non-natural disasters in the country, the market reacted to changes in average abnormal returns during the observation period, which showed the stock price level in the form of average abnormal return, which increased or decreased with the market. Form these results, it can be concluded that the study obtained H1. Table 4 shows the average change in trading volume activity that was analyzed using the t-test.

According to the calculation of the t-statistical test in Table 4, it is shown that after announcing that the transaction volume is confirmed, the average transaction volume activity has a significant change, and the significant value of t count is greater than the t-table (2,045). The covid-19 outbreak is a non-natural disaster across the country, and the market has responded to changes in the average stock trading volume activity during the observation period. This shows that in terms of trading volume, the level of stock liquidity appears as the trading volume increase or decrease. From these results, it can be concluded that the study accepted H2.

Table 5 reports regression analysis results of research models. F statistic value is 258,586, and the value of P is 0.00 which is greates than the table values 2.045. This shows the applicability and statistical significance of model in degrees

freedom (4/60). R-Squared is 0.952, which indicates that all explanatory variables in model explain 95.2% from the variation of the dependent variable.

Regarding the hypothesis testing, we found that average abnormal return due to Covid-19 outbreak has changed with a coefficient value of $\beta = 0.976$. Calculated value (T) is 16,861, which is greater than the table values (2.045) and is at significant level (Sig = 0.00). As a result, first hypothesis is accepted; this shows that the announcement of the announcement of the Covid 19 outbreak as a National Non-Natural Disaster after the event date was negative, causing investors to tend to sell their shares and wait and see after the announcement of the determination of the Covid-19 outbreak as a National Non-Natural Disaster. We found that the average transaction volume activity has changed due to the Covid-19 outbreak, with a coefficient $\beta = 0.300$. Calculated value (T) is 11,132, which is greater than the table values (2.045) and is at significant level (Sig = 0.278). As a result, the second hypothesis was accepted. This shows that with the increase in market trading volume the stock circulation has risen or fallen in terms of stock trading volume.

Ho: FEM (Fixed Effect Model) selected (if probability > 0.05)

H1: REM (Random Effect Model) selected (if probability < 0.05)

According to Hausman test table, value is $1.000 > 0.05$. The fixed effects model is selected. Covid-19 has a major impact on the stock market.

This shows that there are fluctuations during the period of events taking place. If

the event is depicted on a chart, it will look like the image in Figure 2.

Based on the completed test, in this study, researchers use the hypothesis applicable to F&t test, which is as follows:

H0 = Not significant;

H1 = Significant

In t test or partial test, it can be seen that result of t test shows that value of independent variables is > 0.05 , which mean value of Prob. $> \alpha$, then H1 is accepted, H0 is rejected. In other words, the independent variables have no significant effect on dependent variable. In this F test, researcher uses Prob (F statistic) or p-value, where Prob (F statistic) must be compared with the significance level or α ($\alpha = 0.05$). Then, the results of the F test or the simultaneous test is 0.80, which means that Prob (F-statistic) $> \alpha$ accepted by H1, H0 is rejected. In other words, independent variable has no significant effect on dependent variable. For R-Squared (R²) test, result obtained R-Squared ((R²)) is 0.749408, which means that dependent variable can have an impact of 74.94% (0.749408) on the dependent variable. While remaining 86.54% (0.865465) influenced by other variables outside study. So results of R² test are independent variables don't significantly influence dependent variable. Because hypothesis in this R² test is if value of R-Squared (R²) is greater than 0.5 then ability of independent variable is strong in explaining dependent variable is strong in explaining dependent variable, but conversely if value of R² is less than 0.5 then ability of independent variable is not strong in explaining dependent variable.

Table 1. Descriptive Statistic Results

	N	Min	Max	Mean	Std Deviation
AAR Before	15	-0.0429421	-0.0821243	-0.0548899	0.039564114
AAR After	15	-0.0275791	-0.0241219	-0.0002677	0.019583674
ATVA Before	15	0.0016083	0.0045766	0.0027824	0.000912489
ATVA After	15	0.0022072	0.0028399	0.0023910	0.000239194
Valid	15				

Source: Own calculation based on reports the JII Index

Table 2. Kolmogorov-Smirnov One-Sample Data Process Results

		AAR Before	AAR After	ATVA Before	ATVA After
N		15	15	15	15
Normal	Mean	0.000000	0.000000	0.000000	0.000000
Parameter α, β	Std. Deviation	0.000954274	0.00439324	0.00038344	0.0007150
Most Extreme Differences	Absolute	0.173	0.128	0.161	0.334
	Positive	0.137	0.128	0.161	0.183
	Negative	-0.73	-0.114	-0.112	-0.334
Test Statistic		0.173	0.128	0.161	0.334
Asymp. Sig. (2-Tailed)		0.200	0.200	0.200	0.200

Source: Own calculation based on reports the JII Index

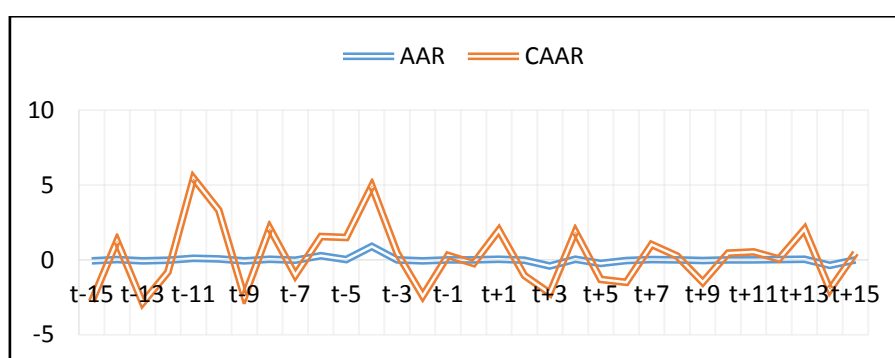
Table 3. Test Results t-test for Changes in Average Abnormal Return

DAY	AAR	CAAR	t-count	t-table
t-15	-0.0602864	-2.71289	-7.64396	2.045
t-14	0.0273969	1.232859	3.47376	2.045
t-13	-0.0622912	-2.80311	-7.8981	2.045
t-12	-0.0175667	-0.7905	-2.2273	2.045
t-11	0.1184607	5.330733	15.0201	2.045
t-10	0.0720354	3.241591	9.13366	2.045
t-9	-0.0534479	-2.40515	-6.67768	2.045
t-8	0.0458676	2.064044	5.81574	2.045
t-7	-0.0223020	-1.00359	-2.8277	2.045
t-6	0.283829	1.27723	3.59878	2.045
t-5	0.032794	1.473272	4.1511	2.045
t-4	0.899360	4.047118	11.40335	2.045
t-3	0.0103587	0.46614	1.3134	2.045
t-2	-0.0526532	-2.36939	-6.7611	2.045
t-1	0.006263	0.298184	0.8401	2.045
t=0	-0.00507	-0.22834	-0.64339	2.045
t+1	0.0430491	1.937208	5.45836	2.045
t+2	-0.0229671	-1.03352	-2.91209	2.045
t+3	-0.402320	-1.81044	-5.10118	2.045
t+4	0.0407082	1.831869	-5.16156	2.045
t+5	-0.235887	-1.06149	-2.99091	2.045

Table 3. Continue

DAY	AAR	CAAR	t-count	t-table
t+6	-0.0324891	-1.46201	-4.11942	2.045
t+7	0.0221814	0.998164	2.812473	2.045
t+8	0.0057317	0.257925	0.726742	2.045
t+9	-0.0322807	-1.45263	-4.093	2.045
t+10	0.0095761	0.430926	1.214198	2.045
t+11	0.0118481	0.533167	1.5022	2.045
t+12	0.0134416	0.0604872	1.704316	2.045
t+13	0.0444914	2.002111	5.641244	2.045
t+14	-0.360205	-1.62092	-4.56718	2.045
t+15	0.0103652	0.466432	1.314241	2.045

Source: Own calculation based on reports the JII Index

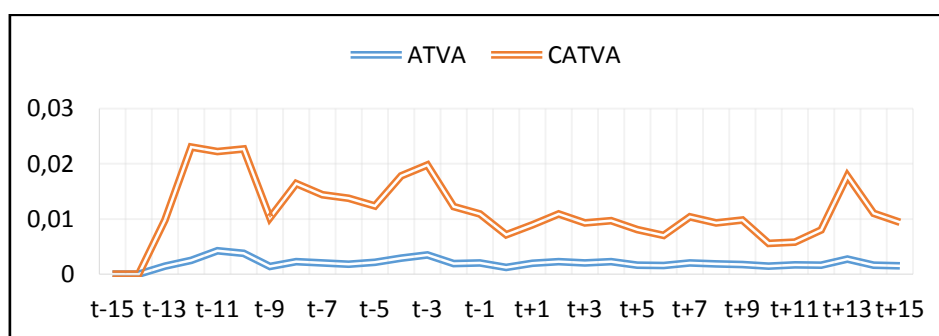
**Figure 1.** Graph of T Abnormal Return Test Results
Source: Own calculation based on reports the JII Index**Table 4.** Test Results Changes in Average Trading Volume Activity

DAY	ATVA	CATVA	t-count	t-table
t-15	0.0011374	0.01387042	8.3851	2,045
t-14	0.0034183	0.018825157	25.201	2,045
t-13	0.0014534	0.008341003	10.7147	2,045
t-12	0.0025101	0.020522315	18.5055	2,045
t-11	0.0042383	0.017971625	31.2467	2,045
t-10	0.0037921	0.018917923	27.9566	2,045
t-9	0.0014167	0.008784728	10.4448	2,045
t-8	0.0022488	0.014174947	16.579	2,045
t-7	0.0020202	0.012354525	14.8935	2,045
t-6	0.0017845	0.011978451	13.1562	2,045
t-5	0.0021524	0.0101911	15.8685	2,045
t-4	0.0028978	0.01491323	21.3637	2,045
t-3	0.0034785	0.016312206	25.6447	2,045
t-2	0.0019255	0.01033693	14.1953	2,045
t-1	0.0020522	0.008884824	15.1297	2,045

Table 4. Test Results Changes in Average Trading Volume Activity

DAY	ATVA	CATVA	t-count	t-table
t0	0.001234	0.005934184	9.10432	2,045
t+1	0.0019796	0.006973082	14.5941	2,045
t+2	0.0022632	0.008632418	16.6849	2,045
t+3	0.0020353	0.007255459	15.0049	2,045
t+4	0.0022443	0.007454426	16.5456	2,045
t+5	0.0016307	0.006433421	12.0223	2,045
t+6	0.0015585	0.005477342	11.4849	2,045
t+7	0.0020384	0.008361763	15.028	2,045
t+8	0.0018857	0.007421851	13.902	2,045
t+9	0.0017236	0.008097749	12.7074	2,045
t+10	0.0014496	0.004108651	10.6872	2,045
t+11	0.0016855	0.004108651	12.4265	2,045
t+12	0.0016483	0.006353844	12.1518	2,045
t+13	0.0027181	0.01512073	20.0391	2,045
t+14	0.0016377	0.00936946	12.0739	2,045
t+15	0.0015022	0.007922493	11.0751	2,045

Source: Own calculation based on reports the JII Index

**Figure 2.** Test Result Graph t Average Trading Volume Activity

Source: Own calculation based on reports the JII Index

Table 5 Regression Test Result

ANOVA					Coefficient						
R	R ²	F	F Sig	DF	Variables	B	Std	Beta	T	T Sig	
0.976	0.952	258.586	0.00	4/60	AAR	0.653	0.041	0.976	16.861	0.000	
					ATVA	0.656	0.580	0.300	11.132	0.278	

Source: Own calculation based on reports the JII Index

Table 6. Results Hausman Test

Test Summary	Chi Square Statistic	Chi Square d.f	Probability
Cross Section Random	0.000000	4	1.0000

Source : Data Proces (2020)

Table 7. R-Squared (R^2) Test & T Test

R Squared	0.749408	Probability (F statistic)	0.865465
Adjusted R Squared	-2.04727	Mean Dependent Variable	0.657466
S.E of Regressions	0.568346	S.D Dependent Variable	1.862325
Sum Square Resid	0.576812	Akaike info criterion	1.947568
Log Likelihood	-8.76574	Schwarz criterion	2.173824
F Statistic	0.808645	Hannan Quinn Criter	1.974659
		Durbin Watson Statistic	2.200456

Source: Data Processed (2020)

Discussion

The results of this research are also consistent with research conducted by Bash (2019), who examined the Khassogi Events Study and the Saudi Stock Market Return. This study found that uncertain events have very significant negative impact on Saudi stock return. Results of this study are also consistent with research conducted by Guo (2019), who examined the Stock Response to Environmental Policy in China. Researchers found the stock market generally reacted negatively to strict environmental regulations. Subsequent research was conducted by Shanaev (2017), who examined Regional Political Risk and the Stock Return Panel. The research resulted in the conclusion of Russian stock returns inversely proportional to regional political stability. The political process greatly contributes to the synchronization of stock returns. The next research was conducted by Kowalski (2018) who examined Impact of the Earthquake on Stock Return. Research concluded that the earthquake had a significant negative impact on stock returns. The results of this study are also in accordance with studies conducted by Mokni (2020), who examined the Varied Time Effect from Oil Price Shocks on Stock Returns and Trading Volume Activity. X. & T. C. C. Chen (2020), examines the Empirical Investigation of Changes in Policy Uncertainty Against Stock Return and Trading Volume

Activity. Aziz (2017), examines whether Stock Return and Extreme Volume Negative Activity Volumes Are Valued in India. The object of this research is the S&P BSE-500 Index for the period April 1999 to June 2014. Dong (2018), examines whether Global Economic Factors Encourage Emerging Asian Stock Return and Trading Volume Activity. Mo (2019), examines about Can Oil Returns Affect Stock Return and Trading Volume Activity?

Economic Impact of a Virus Plague

According to the result of the panel data regression has been completed, it could be seen that values of CAR and CATVA obtained are negative, which has a significant impact on stock return. Results of this study are consistent with study from Wang (2013), which studied the spread of the SARS epidemic in Hong Kong, overcoming the economic impact, and from the consumer's point of view, the most serious negative effects appear to be serious. The short-term economic impact is strongly influenced by local consumers, tourism, and air travel related services.

Impact of Virus Outbreaks on Stock Market Performance

According to results of the panel data regression has been completed, it could be seen that values of CAR and CATVA obtained are negative, which has a significant impact on stock return. Results of this study are consistent with study from

Delisle (2014). He said that the loss caused by the SARS outbreak in 2003 was the highest in the Asian Financial crisis, with an estimated GDP value of US\$3 trillion and US\$ 2 trillion at 2004. Financial Market Equity, Nippani (2006), studied the impact SARS in China, Canada and special administraty regions of Hong Kong, Singapore, Indonesia, Philipines, Vietnam, Thailand, and concluded that SARS only affected stock markets of Vietnam and China. Del Guidice (2017), evaluate 78 region-based equity funds in African Countries from 2015-2016. The results is that the Ebola virus and the Arab Spring have severely affected flow of funds and controlled performance of funds, Expenditures, also market returns. Macciocchi (2016), studied shortterm echonomic impact of Zika Virus outbreak in Argentina, Brazil, and Mexico. The result show that each accident will produce a large negative return. Chen, M. H.; Jang, S. S.; & Kim (2017), used event research method for study impact of the SARS outbreak on efficiency of Taiwan's hotel stocks, and found that during the SARS outbreak, the earnings and stock prices of the seven hotel stocks traded fell sharply. Chen (2018), analyzed impact of SARS epidemic on the longterm relationship with 4 Asian Stock Market. The results shows showed that the desease outbreak had a significant impact on performance of Taiwan's biotech stocks. According to Bai (2014), Baker, M.; Wirgler, J.; & Yuan (2012), investors may be pessimistic about the prospect of in certain markets and selling these market shares under the infectious plagues.

Linkages Between the Stock Market During Critical

According to the result of the panel data regression has been completed, it could be seen that negative values of the T test and F test obtained have a significant

impact on stock return. Result of this study are consistent with study from T. Chiang (2007), which studied the daily stock returns of 9 Asian Markets from 1996-2003, and found that there was high correlation between the sample country in Asia in the crisis. Shu (2010), found that Southeast Asian stock markets, such as Malaysia, Vietnam, and Thailand, have the highest degree of integration with China. Lucia (2012), the global stock market becomes more and more dependent, and the crisis in 1 country will soon spread other countries. Events such as the outbreak from infectious diseases may trigger negative change investor sentiment, greatly affectly their investments decicions, also cause stocks market price to rise (Donadelli, 2016). In country that culturally more susceptible obvious action and reactions of livestock groups or country with low institutional participation and investor sentiment has a more obvious impact on the market (Zouaoui, 2011).

CONCLUSIONS

The conclusions explained above show that the events before and after the declaration of the Covid-19 outbreak as a national non-natural disaster have positive and significant impact on the average abnormal return rate of stock activity and changes in trading volume activites. In addition, the conclusion is that the best way to deal with average abnormal returns and changes in trading volume activity is to wait and see when conducting investment analysis. Because from the current situation, it could be seen from independent variables that the won't have a significants impact at stock return, thus making future lack from competition.

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