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Steel and aluminium industry reactions of import rate announcement: event study analysis

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ABSTRACT

The study to find out the investor reaction to the announcement of import tariffs changes for the steel and aluminium sector. The study used the event study method, through the calculation of abnormal returns and trading volume activities which has the 11 event periods (ARCH/GARCH). The sample is public listed steel and aluminium firms, consisting of daily stock prices, trading volume, and price index. The one-sample test result showed abnormal returns variable is significant in the period before the announcement event, whereas the significant results only occurred in the period three after the event. Meanwhile, for the trading volume activities, the significant result show differences during the entire period. It can be said that the steel and aluminium industries are being affected by the tariff announcement. For two-samples test showed that there is no significant differences before and after the announcement event displayed, in abnormal returns and trading volume activity variable. Therefore, there is a shock that influenced the stock return and shows a reaction to the announcement. From the study, abnormal return quickly returns to normal state and proved that the market is in the semi-strong efficiency category.

Keywords:
abnormal return; ARCH/GARCH, event study; trading volume activity; comparative analysis

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1. Introduction

International trade is an activity that greatly contributes to financing a country. International activity includes exports and is an important factor in other countries' industries. Economic policies in a country can impact industries, Donald Trump who was elected president of the United States certainly had an impact in many ways. The economic policies made by Donald Trump on March 1, 2018, are to increase import tariffs on steel and aluminium industries, 25% import tariff for steel and 10% for aluminium. Import tariffs that are being implemented in America may have influenced the steel and aluminum industry in Indonesia, given the companies doing international trade activities by exporting to the United States. The policy, aside from being able to make goods from Indonesian steel and aluminium companies, have become more

expensive in prices in the United States which then impacts the competitiveness of companies, as well as can also create losses in domestic competition, thus, there will be an oversupply which results in the price drop as mentioned by Roberto Cola as the Vice President of the ASEAN Steel and Iron Council.

The price of steel and aluminium industry shares decreased at the time of the announcement related to the implementation of import tariffs. This indicated the investor response is affected by the news of the imposition of import duty rates for the two commodities. Most of these industrial shares declined from February 28, 2018.

According to Tandelilin in Octafilia (2016), the event study is a study that discusses the market reaction to the related information. The market reaction, in this case, is abnormal return and trading volume activity. The study of events can be used to test the information content of the announcement, which can be used to measure the level of market efficiency, if the market reacts quickly to the information that has been published, the market is said to be efficient market. Based on the explanation above, the study objective is to conduct an event study analysis of the United States announcement on March 1, 2018, about the imposition of import tariffs on the steel and aluminium industries.

The research problems are as follows:

a) The study aims to investigate whether there are significant differences in the average abnormal returns variable during the United States Announcement (H0) regarding tariffs on imports of steel and aluminium?
b) The study aims to investigate whether there are significant differences in the average abnormal return before and after the United States Announcement event regarding tariffs for imported steel and aluminium?
c) The study aims to investigate whether there are significant differences in the Trading Volume Activity variable during the United States announcement (H0) regarding tariffs on imports of steel and aluminium?
d) The study aims to investigate whether there are significant differences in the Trading Volume Activity variables before and after the United States Announcement event regarding tariffs on imports of steel and aluminium?

The research purposes are as follows:

a) This study is anticipated to give a better assess whether there is any investor reaction due to the announcement of import tariff changes among the steel and aluminium public listed firms.
b) The result of the study is expected to give insights to the management board on investor behaviour. Hence, the management board will be more alert to any external information by considering the impact of the stock price on the value of the firm as well as the risk and return that the shareholders will receive.

In this section, the study will emphasize the literature review in terms of the event study theory, and the general principles of market efficiency. Ary Gumanti et al. (2018) revealed that the results of analysis using standard event study methodology, the companies in the Travel and Leisure industry are not affected by the crash. In this case, although the abnormal returns tend be decreasing in the period after the crash. Consistently, Suryanto (2015) failed to find any difference in the average abnormal return in the period before and after the announcement of the rating change. Sample there were 41 companies on Indonesia Stock Exchange. Analysis using the 11day window period. The data used is the daily stock price and the stock price index. The calculation of the expected return using the market model.

The results of the study that there is a significant abnormal return the day before the announcement of the Investment Grade. Similar results were shown by Praditha et al. (2019) that the overreaction phenomenon did not occur in their study (in the implementation of the Asian Games 2018 event). The changes in CAR value before and after the Asian Games 2018 event do not occur significantly. This also explains that investors are still rational in determining stock prices on the stock exchange.

Octafilia (2016) conducted a study entitled "Dampak Pemilihan Presiden Republik Indonesia Tahun 2014 Terhadap *Abnormal Return* dan *Trading Volume Activity* di Bursa Efek Indonesia" for 11 days, the result of which was a market reaction during the 2014 Republic of Indonesia presidential election from changes in abnormal return and trading volume activity is not significantly different. This is indicated by no significant difference in abnormal return and

trading volume activity before and after the event except for the event of the presidential inauguration.

Vahini et al. (2015) conducted a study entitled "Event Study: Analisis Reaksi Investor Pada Publikasi Laporan Keuangan Tahunan" with an event period of 11 days, the result of which was an average abnormal return and trading volume using a paired test. The sample t-test shows that there is no difference in the average abnormal return and stock trading volume which is statistically significant both before and after the publication of financial statements.

Agustin (2017) discovered that there was no significant difference in trading activity volume and abnormal return before and after the event. This indicates that investors in Indonesia have not anticipated rapidly the information it receives in the capital market and may even be an investor assumes that stock split events are not good news. In addition, investors and issuers need to pay attention to external factors such as economic factors, political instability, and market conditions because they will indirectly affect the activities of the capital market.

According to Fahmi in Satria et al. (2017), Signaling Theory states that every event that has a relationship with a company has the potential for information content as a signal. Based on signalling theory an event or announcement can be said to have information content if it can cause investors to react to the announcement so that changes in stock prices that occur can reflect the condition of the information content. Moreover, Elad & Bongbee (2017) stated that the market model applied in the study to predict future stock returns and the use of simple regression to get the parameters of the regression equation. Thus, the authors use a market model in this paper.

Tucker et al. (2013), conducted a study entitled "Short-run reaction to news announcements: UK evidence" by determining the expected return value using a market model with an estimated period of 50 days, the result was a change in equilibrium stock prices around and during the announcement, the market response to negative news is generally stronger than responding to positive news.

Octafilia (2016) and Dimson & Mussavian (2020) state that market efficiency manifests the speed and accuracy of market reactions against information in achieving a new equilibrium price. There are two (2) types of efficient markets. Firstly, the informationally efficient market, which is an efficient market based on the available information only. Secondly, the market is efficient according to the decision which is the market participates in making decisions based on available information.

According to Manurung in Octafilia (2016), an event study is one of the most popular statistical designs in the finance area that allows researchers to assess the effects of a particular event on a company's stock price. According to Tandelilin in Octafilia (2016), the event study is part of the efficient market hypothesis. More specifically, an event study examines the market reaction to the information content of an announcement or publication of a particular event.

The importance between local adaptation and global standardization has been discussed, particularly in the economic phenomenon, and international trade importance (Dubravska & Sira, 2015; V. Vijayasri, 2013). More economists believe that trade is the engine of development in modern societies. They claim that international trade creates possible of benefiting from the potential economic empowerment (Shafiei, 2014). Safitriani (2014) stated that Indonesia's dependence on international trade as the core of the national economy is quite significant. Therefore, the authors want to study how US policy regarding the import rate influences the Indonesian market, particularly in Steel and Aluminium industry. Also, some of the above references indicate that some markets do not react to an event. Therefore, the authors are interested in further investigating whether there is a market reaction to the Import Rate Announcement event by using an event study (one-sample & two-sample test), particularly Steel and Aluminium Industry.

2. Methods

Research methods contain data and data sources, samples, testing techniques, and hypothesis testing. The capital market reaction to the information of an event can be measured by using the abnormal returns. The return gained depends on the investors' expertise in analyzing the information contained in the market. Investors in investing stocks can get abnormal returns. Abnormal Returns are the advantages of returns that occur against normal returns. Based on the description of abnormal returns, the hypothesis proposed by the authors are:

H_1: Are there significant abnormal returns during the United States announcement regarding tariffs on imports of steel and aluminium?

H_2: Are there significant differences in the average abnormal return before and after the United States Announcement event regarding tariffs for imported steel and aluminium?

The capital market reaction to information can also be seen with trading volume activity (TVA). According to Wardhani in Octafilia (2016), TVA is an instrument that can be used to see the reaction of the capital market towards information through the parameters of the movement of stock trading volume activities in the capital market. If the announcement of the United States related to the import tariff of the steel and aluminium industry has beneficial or relevant information content, it will affect the shares seen from the changes in TVA. Based on the description of trading volume activity, the hypothesis proposed by the author is:

H_3: Is there significant trading volume activity during the announcement of the United States regarding tariffs on imports of steel and aluminium?

H_4: Is there a significant difference in the average trading volume activity before and after the United States Announcement event regarding tariffs for imported steel and aluminium?

The data collected from the historical data on stock prices and stock trading volume will be tested quantitatively. In this study, the data used is secondary data. Data is taken from obtained by researchers from other sources, in this case, the secondary data is obtained from the websites www.IDX.co.id and www.yahoofinance.com, namely the metal sub-sectors and the like listed on the IDX. The data used is the company's daily stock price at end of the year and stock trading volume. This study analyses the abnormal return and trading volume activity of steel and aluminium companies during the observation period.

The window period or event period is during the 11 observation period which is in the period 5 years before (H-5), the year of the announcement (H0), and 5 years after (H+5) the announcement of the United States regarding the import tariff for the steel and aluminium industry (2013-2021). Following is the research framework used in this study.

In conducting the analysis, there is a process that must be passed, such as:

1. Determine the Event Period for Abnormal Return and Trading Volume Activity variable and determine the Estimated Period for Abnormal Return

The results of ARCH/GARCH are used to find out how much the shock volatility occurred around the announcement of the United States regarding import tariffs on the steel and aluminium industries. In the ARCH/GARCH graphic display, the researcher determined the length of the event period as seen from the large volatility shock on the days tested. Meanwhile, in the process of determining the length of the estimation period, the author analyzes the journals in the previous studies.

1) Calculating Abnormal Return

To get the abnormal return value, several processes are carried out as follows:

a. Calculating the expected return

In this study to calculate the expected return used Market Return.

$$R_{mt} = \frac{IHSG_{it} - IHSG_{it-1}}{IHSG_{it-1}}$$

Whereby:

R_{mt} = Market Return
$IHSG_{it}$ = IHSG Closing Price (t)
$IHSG_{it-1}$ = IHSG Closing Price (t-1)

b. Calculate the actual return

This Actual Return is obtained using the formula:

$R_{it} = \frac{P_t - P_{t-1}}{P_{t-1}}$

Whereby:

R_{it} = Actual Return on shares i on day t
P_t = Share price i on day t
P_{t-1} = Stock price i the day before

c. Calculate abnormal return

This abnormal return is obtained using the formula:

$AR_{i,t} = R_{I,t} - E(R_{i,t})$

Whereby:

$AR_{i,t}$ = abnormal return stock i on day t
$R_{I,t}$ = actual return stock i on day t
$E(R_{i,t})$ = expected return stock i on day t

d. Calculating the average abnormal return

The average abnormal return is obtained from the formula:

$AAR = \frac{\sum AR}{n}$

Whereby:

AAR = *average abnormal return*
AR = *abnormal return*
n = number of securities

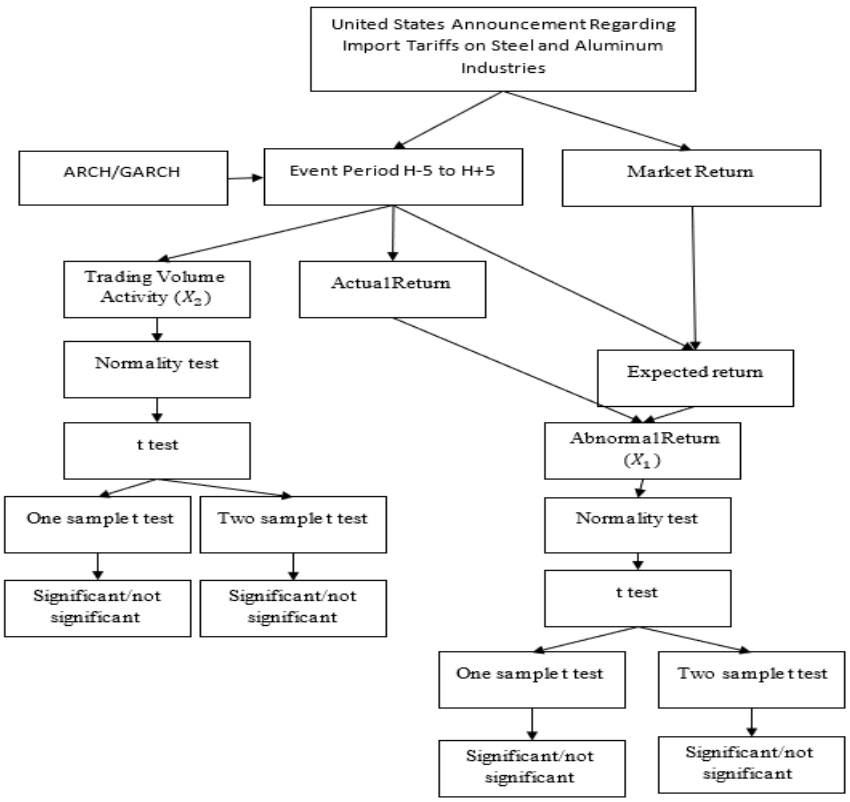

Figure 1. Research Framework

2) Calculating Trading Volume Activity (TVA)

Trading volume activity is obtained from the formula:

$$TVA = \frac{\text{the number of shares i traded at time t}}{\text{number of shares i outstanding at time t}}$$

Calculating the average *Trading volume activity*

The average trading volume activity is obtained from the formula:

$$ATVA = \frac{\sum TVA}{n}$$

Whereby:

$ATVA$= *Average Trading volume activity*

TVA = *Trading volume activity*

n = number of securities

2. Comparative analysis

Different test or comparative analysis is a form of variable analysis that aims to determine whether there are differences between groups of data.

i) One-Sample Test

One sample test aims to see whether there is a significant abnormal return/trading volume activity during the announcement of the United States regarding import tariffs on the steel and aluminium industries, using a significance level of 5% (0.05). In this study for the two variables, the non-parametric test is used, which is the binomial test.

ii) Two-Samples Test

The two-sample test aims to see whether there is a difference in the average abnormal return/trading volume activity which is significant before and after the announcement of the United States regarding the import tariff for the steel and aluminium industries using a significance level of 5% (0.05). In this study the two variables used the non-parametric test, such as the Wilcoxon sign rank test.

Table 1. Applications in Different Tests

Application	Parametric Test	Non-Parametric Test
One-Sample Test		
One sample	One sample t-test	Binomial Test
Test Two Samples		
Two samples are interconnected	Paired sample t-test	Wilcoxon Test
Two samples are not interconnected	Independent sample t-test	Mann Whitney

3. Testing step, Normality Test

The normality test on the abnormal return data and the trading volume activity will be tested to determine the appropriate analysis tools for the study. If the results show that the data are normally distributed, therefore, the parametric tests used will be a one-sample t-test (one sample) and test paired samples test (two samples). Meanwhile, if the results are not normally distributed, the non-parametric will be carried out by using binomial tests for the one-sample test and the Wilcoxon sign rank test for two samples test.

3. Results

The following are the results and discussion of the tests conducted for each Variable.

3.1 Abnormal Return Variable

The following are the results of the normality test for abnormal returns in each event period. This test uses a significance level of 5% (0.05). Data is said to be normally distributed if the p-value is in the sig column. > 0.05.

Table 2. Normality Test for abnormal returns variable

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
AR_3	.227	12	.088	.862	12	.051
AR_2	.157	12	.200*	.931	12	.393
AR_1	.229	12	.082	.891	12	.121
AR0	.318	12	.002	.768	12	.004
AR1	.159	12	.200*	.896	12	.142
AR2	.200	12	.200*	.866	12	.059
AR3	.233	12	.071	.903	12	.173

From the results of the normality test, the abnormal return data in each period of the event by using the Kolmogorov-Smirnov test, the significance value at the event period is greater than the level of significance or p> 0.05 on the AR-3, AR-2, AR-1, AR + 1, AR + 2, AR + 3 which means data is normally distributed. Then on AR0, the significance value is smaller than the level of significance or p <0.05, which means that the data is not normally distributed.

In one sample testing, data that is not normally distributed is done using the binomial test. In testing two interrelated samples used the Wilcoxon Signed Ranks Test.

i) One-Sample Test for Abnormal Return

The binomial test is used for H_1 which aims to prove whether there are significant abnormal returns during the United States announcement regarding import tariffs for the steel and aluminium industries, using a 5% (0.05) level of significance. The criterion for testing the hypothesis is that the H_1 is accepted if the p-value is in the sig column. ≤ 0.05. The following test results abnormal return of one sample in the event period:

Table 3. One-sample test for abnormal return

		Category	N	Observed Prop.	Test Prop.	Exact Sig. (2-tailed)	Results
AR_3	Group 1	<= 0	0	.00	.50	.000	there is a significant abnormal return
	Group 2	> 0	12	1.00			
	Total		12	1.00			
AR_2	Group 1	<= 0	11	.92	.50	.006	there is a significant abnormal return
	Group 2	> 0	1	.08			
	Total		12	1.00			
AR_1	Group 1	<= 0	12	1.00	.50	.000	there is a significant abnormal return
	Group 2	> 0	0	.00			
	Total		12	1.00			
AR0	Group 1	<= 0	3	.25	.50	.146	there is no significant abnormal return
	Group 2	> 0	9	.75			
	Total		12	1.00			
AR1	Group 1	<= 0	9	.75	.50	.146	there is no significant abnormal return
	Group 2	> 0	3	.25			
	Total		12	1.00			
AR2	Group 1	<= 0	4	.33	.50	.388	there is no significant abnormal return
	Group 2	> 0	8	.67			
	Total		12	1.00			

		Category	N	Observed Prop.	Test Prop.	Exact Sig. (2-tailed)	Results
AR3	Group 1	<= 0	12	1.00	.50	.000	there is a significant abnormal return
	Group 2	> 0	0	.00			
	Total		12	1.00			

The results are shown in Table 3, abnormal returns in the periods H0, H+1, and H+2 are sig. > 0.05, which means that on H0, H+1, and H+2 can be concluded that abnormal returns are not significant. And the results are shown in Table 3, abnormal returns in the H-3, H-2, H-1, and H+3 are sig values <0.05, which means that at H-3, H-2, H-1, and H+3 there is a significant abnormal return. If the event is anticipated, then the market reaction will occur in this period of H-3 to H-1 events. This result showed that the announcement of the United States regarding import tariffs on the steel and aluminium industries is an anticipated event so the market reacted due to the event. The shock that occurs from the event can be caused by the previous announcement, or there may be a leak of information about the event before the event occurs.

ii) Test Two Samples for Abnormal Return

The following is a test of two interrelated samples of the average data of abnormal returns in the period before and in the period carried out by the Wilcoxon test. The trial was used to review H_2 which aims to see whether there is a difference in the average significant abnormal return before and after the United States announcement regarding the tariffs for the steel and aluminium industry using a significance level of 5% (0.05). The hypothesis testing criteria is an alternative hypothesis is accepted if the p-value is in the sig column. ≤ 0.05.

The following are the results of testing abnormal returns before and after the events of the United States announcement due to import tariffs on steel and aluminium industries.

Table 4. Test two samples related to average abnormal return

	AAR After – AAR Before
Z	-.535[b]
Asymp. Sig. (2-tailed)	.593

Source: data processed.

Based on these tests, the significance level of 0.593 > 0.05, means that there is no difference in the average abnormal return before and after the United States announcement regarding the import tariff for the steel and aluminium industry.

The insignificant results show means that investors were not too affected by the United States announcement regarding the steel and aluminium industry import tariffs for events before and after the announcement, thus the market support a semi-strong theory of market efficiency. The US announcement does not significantly affect the investors' perception of investment as investors also consider other things in making investment decisions, thus, the investor still believes these companies can still be competitive in the domestic market and other countries in operation although the change of tariff.

3.2 Trading Volume Activity (TVA)

From the results of the normality test for the trading volume activity data, in each period of the event using the Kolmogorov-Smirnov test, the significance values at the TVA-3, TVA-2, TVA-1, TVA0, TVA+1, TVA + 2, TVA + 3, significance values are smaller than the level of significance or p <0.05, which means that data is not normally distributed.

Table 5. Test for the Normality of Trading volume activity

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistics	df	Sig.	Statistics	df	Sig.
TVA_3	.324	12	.001	.662	12	.000
TVA_2	.364	12	.000	.661	12	.000

TVA_1	.357	12	.000	.720	12	.001
TVA0	.290	12	.006	.667	12	.000
TVA1	.493	12	.000	.355	12	.000
TVA2	.290	12	.006	.817	12	.015
TVA3	.446	12	.000	.430	12	.000

In one sample testing, data that is not normally distributed is done using the binomial test. In testing two interrelated samples used the Wilcoxon Signed Ranks Test.

i) One-Sample Test for Trading Volume Activity variable

The following is the test of one sample of trading volume activity data for each period of events carried out by the binomial test. This test is used to test H_3 which aims to see whether there is a significant trading volume activity during the announcement of the United States related to the import tariff of the steel and aluminium industry using a significance level of 5% (0.05). The criterion for testing the hypothesis is that the alternative hypothesis is accepted if the p-value is in the sig column. ≤ 0.05.

The H_3 test results state that during the period of observation the sig value is obtained. < 0.50 which means that there is no significant trading volume activity during the event that the United States announced that the import tariffs for steel and aluminium industries were rejected, and H_3 which states that there is a significant trading volume activity during the United States announcement regarding the steel industry import tariff and aluminium is accepted.

The results from table 6 show the information content of United States announcements regarding steel and aluminium industry import tariffs which the market responded with the changes in the average trading volume activity during the observation period. Changes in the volume of stock trading can be caused by falling demand from market participants. This shows market participants are responding to the news from the United States Announcement regarding the import tariffs.

Table 6. Test one sample Trading Volume Activity

		Category	N	Observed Prop.	Test Prop.	Exact Sig. (2-tailed)	Results
TVA_3	Group 1	<= 0	0	.00	.50	.000	there is a significant Trading Volume Activity
	Group 2	> 0	12	1.00			
	Total		12	1.00			
TVA _2	Group 1	<= 0	0	.00	.50	.000	there is a significant Trading Volume Activity
	Group 2	> 0	12	1.00			
	Total		12	1.00			
TVA _1	Group 1	<= 0	0	.00	.50	.000	there is a significant Trading Volume Activity
	Group 2	> 0	11	1.00			
	Total		12	1.00			
TVA0	Group 1	<= 0	1	.08	.50	.006	there is a significant Trading Volume Activity
	Group 2	> 0	11	.92			
	Total		12	1.00			
TVA1	Group 1	<= 0	1	.08	.50	.006	there is a significant Trading Volume Activity
	Group 2	> 0	11	.92			
	Total		12	1.00			
TVA2	Group 1	<= 0	1	.08	.50	.006	there is a significant Trading Volume Activity
	Group 2	> 0	11	.92			
	Total		12	1.00			
TVA3	Group 1	<= 0	1	.08	.50	.006	there is a significant Trading Volume Activity
	Group 2	> 0	11	.92			
	Total		12	1.00			

ii) Two samples are interconnected

The following is a test of two samples related to the average trading volume activity data in the period before and after the period of events carried out by the Wilcoxon test. This test is used

to test H_4 which aims to see whether there is a significant difference in the average trading volume activity before and after the announcement of the United States regarding import tariffs for steel and aluminum industries using the Wilcoxon signed ranks test using a significance level of 5% (0.05). The criteria for testing the hypothesis is that the alternative hypothesis is accepted if the p-value is in the sig column. ≤ 0.05.

The following are the testing results of the trading volume activity before and after the events of the United States announcement due to the import tariff for the steel and aluminium industries.

Table 7. Test two samples interconnected average trading volume activity

	TVA_Before - TVA_After
Z	-1.069[b]
Asymp. Sig. (2-tailed)	.285

The H_4 test results show a significant level of 0.285 > 0.05, so that, it can be concluded that there are no differences in the average abnormal return before and after the announcement of the United States related to the import tariff on the steel and aluminium industry.

The insignificant results caused by the average value of trading volume activity before and after the event tend to be not much different because at that time market participants are more careful in the decision-making process even though every day during the observation period there is a significant trading volume activity.

4. Discussion

Overall, the findings of this study do not show consistent results between two variables which are abnormal returns and trading volume activity during the event. From the results of one sample test, an Abnormal return show a significant result in the event period before the announcement (H-3 to H-1). A significant abnormal return identified that Indonesian capital market investors reacted to the announcement. The shock that occurs from the event can be caused by the previous announcement, or there may be a leak of information about the event before the event occurs. The results of this study meet the assumptions of market efficiency, as the information is widely available to all market participants at the same time and the price to obtain the information cheaply. Investors then react by using the information in a quick reaction, so the price of the securities changes accordingly in achieving a new equilibrium. The market can be said to be a semi-strong efficiency, whenever the Abnormal Returns can be quickly returned to a normal state. Furthermore, the results of the two-sample tests performed on abnormal returns show that the abnormal return is not significant before and after the event. This is due to the theory of semi-strong market efficiency.

The results of one sample test on trading volume activity show significant results in all periods of events both before announcements, on announcement days, and after the announcement, which means there is a change in trading volume during the event period. Under the purpose of using trading volume activity analysis, as a tool to see investors' response against an event that is not caught in abnormal returns, the results show investors reacting to the announcement of the United States related to steel and aluminium import tariffs with changes in trading volume during the event period analyzed. Moreover, the results of the two-sample tests conducted on the trading volume activity show that the trading volume activity is not significant before and after the event. This is following the results of the one-sample test on the trading volume activity which shows the trading volume activity in the event period before the announcement and the event period after the announcement shows the same results.

The above results are consistent with Praditha et al. (2019), Ary Gumanti et al. (2018), Agustin (2017), Suryanto (2015), which failed to find any difference in the average abnormal return in the period before and after the announcement of an event.

5. Conclusion

This study examines whether the announcement of the import tariff on 01 March 2018 affects the investor reaction in the steel and aluminium industry listed on the Indonesian stock

market. Investigating 12 companies and using seven-period windows, the study does not find the existence of abnormal returns in the period surrounding the event. Abnormal returns were identified in periods one, two and three before the event and period three after the event. Another finding reveals that there is an abnormal return difference between before and after the event. Examination of the trading volume activity shows that there are significantly different between before and after the event for all periods. As for two-samples test showed that there is not significant differences before and after the announcement event displayed, on abnormal returns and trading volume activity variable. Overall, we come to conclude that the announcement of import tariff by US government does lead abnormal returns on the stock prices in the steel and aluminum industry, however, the market can be quickly return to normal state.

Further research is suggested to be able to develop other market reaction measurement indicators, such as bid ask spread. Future studies can also use all three models to determine the expected return to gain in depth research for shock reaction. Based on the research conducted, here are some suggestions that can be considered, firstly, investors are advised to be quick and more precise in sorting and checking all information from abroad and are expected to be wiser so that they are not easily affected, because it can be used by other investors to get their own benefit. Secondly, the government should participate in providing business certainty to steel and aluminum companies related to this policy. This can be done by making an agreement that does not harm domestic steel and aluminum industry companies regarding tariffs for importing steel and aluminum industries with the United States

6. References

Agustin, S. (2017). Comparative Analysis of Trading-Volume Activity and Abnormal Return Before and After Stock Split. *International Journal of Scientific and Research Publications*, *7*(11), 478. www.ijsrp.org

Ary Gumanti, T. A. G., Savitri, E., Wahidatun Nisa, N., & Sri Utami, E. (2018). Event Study on the Crash of Airasia Plane: A Study on Travel and Leisure Companies Listed at Malaysian Stock Market. *Jurnal Akuntansi Dan Keuangan*, *20*(1), 20–26. https://doi.org/10.9744/jak.20.1.20-26

Dimson, E., & Mussavian, M. (2020). Market efficiency. *The Current State of Business Diciplines*, *3*, 959–970. https://doi.org/10.3905/jpm.1985.409033

Dubravska, M., & Sira, E. (2015). The Analysis of the Factors Influencing the International Trade of the Slovak Republic. *Procedia Economics and Finance*, *23*(October 2014), 1210–1216. https://doi.org/10.1016/s2212-5671(15)00569-9

Elad, F. L., & Bongbee, N. S. (2017). Event Study on the Reaction of Stock Returns to Acquisition News. *International Finance and Banking*, *4*(1), 33. https://doi.org/10.5296/ifb.v4i1.10409

Octafilia, Y. (2016). Dampak Pemilihan Presiden Republik Indonesia Tahun 2014 Terhadap Abnormal Return Dan Trading Volume Activity Di Bursa Efek Indonesia (Event Study Pada Saham Indeks Kompas 100. *Kurs : Jurnal Akuntansi, Kewirausahaan Dan Bisnis*, *1*(2), 218–236. https://www.ejournal.pelitaindonesia.ac.id/ojs32/index.php/KURS/article/view/283

Praditha, R., Haliah, Habbe, A. H., & Rura, Y. (2019). Market Overreaction on LQ45 Stock Index before and after Asian Games 2018. *Interatioal Journal of Academic Research in Accouting, Finance and Management Sciences*, *9*(2), 117–125. https://doi.org/10.6007/IJARAFMS/v9-i2/6047

Safitriani, S. (2014). Perdagangan Internasional Dan Foreign Direct Investment Di Indonesia. *Buletin Ilmiah Litbang Perdagangan*, *8*(1), 93–116. https://doi.org/10.30908/bilp.v8i1.89

Satria, G. A., Artini, L. G. S., & Rahyuda, H. (2017). *Reaksi Pasar Terhadap China's Black Monday*. *7*, 2635–2664.

Shafiei, E. (2014). International Trade and Its Impact oInternational Trade and Its Impact on Economic Growthn Economic Growth. *International Journal of Innovative Research in Science, Engineering and Technology*, *3*(3), 10277–10280.

Suryanto. (2015). Analysis Of Abnormal Return Before And After The Announcement Of Investment Grade Indonesia. *International Journal of Business and Management Review*, *3*(1), 11–23. www.eajournals.org

Tucker, J., Guermat, C., & Prasert, S. (2013). Short-Run Reaction to News Announcements:

UK Evidence. *Studia Universitatis Babes-Bolyai*, *58*(2), 41–71. https://search.proquest.com/docview/1445454567?accountid=29104%0Ahttps://openurl.wu.ac.at/resolve?url_ver=Z39.88-2004&rft_val_fmt=info:ofi/fmt:kev:mtx:journal&genre=article&sid=ProQ:ProQ%3Aabiglobal&atitle=SHORT-RUN+REACTION+TO+NEWS+ANNOUNCEMENTS%3A+UK+EV

V. Vijayasri, G. (2013). the Importance of International Trade in the World. *International Journal of Marketing, Financial Services & Management Research*, *2*(2(9)), 111–119.

Vahini, Y. P., Wijana, N., & Putra, A. (2015). *Event Study : Analisis Reaksi Investor Pada*. *13*(2), 387–404.