

The Evaluation of Non-Economic Events towards the LQ-45 Index in Indonesia Stock Exchange by Using Event Study Method

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ABSTRACT

In this study, the effects of non-economic events toward the LQ-45 index in Indonesia Stock Exchange (IDX) were investigated using an event study method. The increase of gas and oil prices on June 21st 2013 and announcement of the presidential election in USA on November 07th 2012 were opted as the non-economic events. The purposive sampling method was employed for collecting the sampling data from the secondary data of daily stock returns, trading volume, IHSG (JSX composite), and listed shares. Subsequently, the sampling data were evaluated by using the event study method. The results showed that the stocks in LQ-45 index reacted negatively towards the announcement of the increase of gas and oil prices on June 21st 2013. The T-testing indicated for the average abnormal return (AAR) as a negative and significant value, whereas the trading volume activity (TVA) did not reveal a significant value. On the other hand, the announcement of the presidential election in USA on November 07th 2012 performed a positive and significant value of TVA. However, this event did not indicate a significant value of AAR.

Keywords: Average abnormal return (AAR), Event study method, LQ-45 index, Trading volume activity (TVA).

1. Introduction

According to Hartono (2010), the investment can be defined as the delay process of the current consumption for an efficient production at specific period of time. The investment itself can be divided into real and financial asset. Moreover, financial asset normally can be found in the banking and capital market. The fluctuation of investment value generally occurs in the capital market owing to the economic and non-economic events.

Indonesia as one of the countries with high number of population in the world plays an important role in the global economic activity since Indonesia has a lot of natural and human resources. So many investors are interested to invest their investment in Indonesia. In order to accommodate the economic activities in Indonesia, the capital market, namely Indonesia Stock Exchange (IDX) was established in 1912. IDX has grown well until now, although there was several political disturbances previously. Generally, the capital market will react quickly when some events are occurred. The events can be economic or non-economic events such as political, social, etc. Normally,

the non-economic events will not affect to the capital market directly, however the capital market will regard this as one of the considerations in the future. Furthermore, for the non-economic events such the stable political situation tends to increase the economic performance in a country and vice-versa.

The characteristic of non-economic events can be divided into good and bad news. The good news relates with the increase of return or over high return value that was expected by the investor. Otherwise, the bad news relates with the decrease of return value compared with the previous time.

This study investigated the effect of non-economic events toward the LQ-45 index in Indonesia Stock Exchange (IDX) using an event study method. Originally, LQ-45 index was established from 45 stocks which were actively traded in IDX. Furthermore in this investigation, an increase of gas and oil prices on June 21st 2013 and announcement of the presidential election in USA on November 07th 2012 were opted as the non-economic events.

Practically, the investigation about the effect of non-economic events has been performed previously by some researchers. However, the consistent results were not achieved yet. According to Li and Born (2006), the capital market response did not show the fluctuation of stock prices, and the return value tended to increase when there was a presidential election. Trisnawati (2009) in her study also confirmed that there was no difference of abnormal return value before and after presidential election in Indonesia in 2004. It indicated that investors did not react to this moment. In addition, Suryawijaya and Setiawan (1998) and Nippani and Arize denoted that the political events has an information content. Hence, it is interesting to assess the appropriate moment for determining the reaction of capital market due to the non-economic events.

Indonesia as one of the biggest countries with its gas and oil resources has raised the price of gas and oil several times previously. Comparing with another countries in Asia, the gas and oil prices in Indonesia is relatively low since the government still gives a subsidy. Thus, the increase of gas and oil should not give a significant influence globally. However, that information may become a consideration for the capital market in Indonesia indirectly. As one of the non-economic events, the capital market will respond to that event. Since the increase of gas and oil prices will induce to increase the basic commodities prices up to 15 %. Moreover, the prices of basic commodities will be more increase towards to the national holiday such as Eid holiday. Consequently, this will give an influence to a lot of people in Indonesia. According to the data from www.bps.go.id, the inflation tended to increase along July 2013 and it had reached the highest value until 3.29% since 2008. And also according to the data from statistical institutions (BPS), the inflation of year on year had reached up until 8.61%. Therefore, the highest inflation on July 2013 has given a significant effect for a lot of things such as the increase of foodstuff prices, transportation, communication, financial services, and the depreciation value of Rupiah to US Dollar.

The non-economic events can also come from the international political events. The international political event as occurred in United State of America (USA) had influenced the capital market in a lot of countries in the world. Nippani and Arize (2005) explained that the capital market in Mexico and Canada had been influenced a lot, owing to the delay announcement of the winner of presidential election in USA on November 07th 2012. It showed that the capital market in another countries such as in Mexico and Canada was integrated with the capital market in USA. It may also occur in Indonesia, since there are a lot of cooperative relationship between Indonesia and USA.

Accordingly, the purpose of this study is empirically examine the investor reactions to the non-economic events such as the increase of gas and oil prices on June 21st 2013 and announcement of the presidential election in USA on November 07th 2012. This investigation was carried out to verify the information content in the non-economic events that can cause the reactions of Indonesian capital market, namely Indonesia Stock Exchange (IDX). The indication of the reaction can be seen from the alteration of stock price (abnormal return) and trading volume at IDX. The sampling data used in this study were collected by using the purposive sampling method from the secondary data of daily stock returns, trading volume, IHSG (JSX composite), and listed shares. Subsequently, the sampling data were evaluated by using event study method.

2. Literature Review

2.1 Event Study

According to Hartono (2010), event study is a statistical method that is used to assess the impact of an event on the value of a company. Bowman (1983) also defines the event study as a method which was involved an analysis of the behavior of price securities during the period of event or announcement. Moreover, Hartono (2010) explained that event study consists of window and estimation period. Generally, several confounding events may be appeared when performing the investigation an event. The confounding events can be as a stock split, dividend announcements, announcement of corporate lawsuits, succession, terrorist bombing, etc. Furthermore, this confounding events will affect the results which were obtained using event study. Therefore, prior applying the event study result, the confounding events must be filtered and separated. The event study should only based on the observed events not from another events or confounding events.

2.2 Normal and Abnormal Return

The return can be defined as a result which was achieved from the investment. Normally, investors are expecting the return in terms of normal return. Normal return can be obtained when there were no events such as economic or non-economic events in particular period of investment. Yet in fact, there are a lot of events during the period of investment. Therefore, the return value does not represent the normal return anymore but it will become the actual total return. Meanwhile, the abnormal return can be defined as a difference between normal return and actual total return. The abnormal return appears when it is triggered by some events such as a stock split, dividend announcements, announcement of corporate lawsuits, succession, terrorist bombing, etc.

2.3 Trading Volume Activity

Trading volume activity (TVA) is an instrument that is applied to observe the capital market reactions towards the informations through the parameter used to measure the capital market reaction to the events. TVA is calculated by comparing a number of stocks which was traded in a particular period of time with the total number of circulation stocks in the similar period of time. TVA can also be classified as a variety of the event study. The information content of an announcement can be examined by involving a factor such abnormal return. Whereas, two factors are required to examine the information of market efficiency, namely abnormal return and reaction rate. Bandi and Hartono (1999) explained that mostly the investors use the information from the capital market as references to make a decision.

2.4 LQ-45 Index

LQ-45 index indicates a stock market index which was registered in IDX. The designation “45” refers to 45 stocks which are actively traded in IDX. Normally, the stocks in LQ-45 index are updated every six months in the beginning of February and August. Comparing with others capital markets, the capital market in Indonesia, namely IDX, is classified as a thin market since its securities are not actively traded. However, there are several considerations for choosing the stocks in LQ-45 index for this investigation owing to liquidity and capitalization.

2.5 Previous Research and Hypothesis Development

The investigation of the effect of events such as economic and non-economic towards the capital market reaction has been carried out previously. Yet, it is still interesting to be investigated currently. Several investigation of some issues already performed by using the event study method as the following explanations:

- a. Blankespoor, Miller, and White (2011): In an effort to reduce information barriers and improve market efficiency, the Securities and Exchange Commission (SEC) has mandated that financial statements be filed using eXtensible Business Reporting Language (XBRL). This research find lower trading volume, particularly small trade volume, around 10-K filings. Further, find higher bid ask spreads and lower depths, consistent a subset of investors feeling more disadvantaged by the new mandate. This research also find evidence of slowed price formation, indicating that there may not be a significant net increase in informed trading. Collectively this evidence suggest that financial reporting regulation requiring investors to incur nontrivial setup costs may adversely impact markets in the short term.
- b. Christiansen, Hail, and Leuz (2010): This paper examines capital market effects of changes in securities regulation. This research analyze two key capital market directives in the European Union (EU) that tightened market abuse and transparency regulation and, in particular, their enforcement. The research find that, on average, market abuse and transparency regulation. The effects are large in countries that implement and enforce the directives more strictly. They are also stronger in countries with traditional stricter securities regulation and with a better track record of implementing regulation and government policies in general. Overall, these findings show that the effects of regulation depend crucially on implementation and enforcement. Moreover, the results indicate that the same forces that have limited the effectiveness of securities regulation in the past are still at play when new rules are introduced, which has important implications for the expected outcomes of regulatory reforms as well as efforts to harmonize regulation across countries.
- c. Li and Born (2006): There is substantial evidence on the influence of political outcomes on the business cycle and capital. The research hypothesis that uncertainty about the outcome of a U.S. presidential election should be reflected in pre-election common stock returns. Prior research pools returns based on the party of the winning candidate, assuming that the outcome of the election is known a priori. This paper use candidate preference (i.e., polling) data to construct a measure of election uncertainty. The research find that if the election does not have a candidate with a dominant lead, capital volatility (risk) and average returns rise.

- d. Nippani and Arize (2005): Recent empirical evidence indicates that the delay in the 2000 presidential election results impacted the capital market performance in the United States. In the present study this paper examines the impact of the same delay on the performance of the Canadian and Mexican capitals. The research find evidence indicating that both the Canadian and the Mexican capitals were affected negatively during the period. This study not only shows that the Mexican and Canadian capitals are closely integrated with their American counterparts but also indicates that the markets of these countries follow the U.S. presidential elections as closely as U.S. markets do.

From all of the previous investigations, it can be empirically concluded that the capital market will react to the events or announcement of the new regulation. The reactions were indicated and measured by the alteration of abnormal return stocks in a company. Hence, According to the background, literature review, and some investigation in the past about the effect of domestic and international events, the investigation will examine the hypothesis of the IDX reactions to the increase of gas and oil prices on June 21st 2013 and announcement of the presidential election in USA on November 07th 2012.

Since the events may induce to the company expense and profit in the short-term, the fluctuation of profit in a company will generate the alteration of dividend which must be paid. Moreover, the investors will react to the increase of gas and oil prices on June 21st 2013 and announcement of the presidential election in USA on November 07th 2012. Subsequently, the abnormal return will be incurred around the event period. Hence, the hypothesis in this study were formulated as follows:

The 1st Event : The increase of gas and oil prices on June 21st 2013

H1: The event of increase of gas and oil prices on June 21st 2013 has a negative effect on the level AAR LQ-45 index stock phase in event period.

H2: The event of increase of gas and oil prices on June 21st 2013 has a negative effect on the level TVA LQ-45 index stock phase in event period.

The 2nd Event : The announcement of the presidential election in USA on November 07th 2012

H1: The event of presidential election result in USA on November 07th 2012 has a positive effect on the level AAR LQ-45 index stock phase in event period.

H2: The event of presidential election result in USA on November 07th 2012 has a positive effect on the level TVA LQ-45 index stock phase in event period.

3. Research Methods

3.1 Population and Sample

The references data which were used in this study were the secondary data from www.finance.yahoo.com and www.idx.co.id, as follows:

- 1) The data of companies listed in IDX and categorized as LQ-45 index during the event period.
- 2) Closing price for each sample during the observation period.
- 3) JSX Composite (IHSG) during the observation period.
- 4) The companies data sample from the daily data of trading volume during the observation period.
- 5) A number data sample of outstanding share from the companies during the observation period.
- 6) The data of corporate actions (stock split, stock dividend, right issue, etc) during the observation period.

In this investigation, the purposive sampling method was employed to determine the sample data of companies. By applying this method, the sample data was specified by the author's criteria. According to Hartono (2013), It was performed to avoid a biased result due to another events. Tables 1 and 2 shows the data of companies in LQ-45 index for each events.

3.2 Event Period

The time period of investigation is 21 days of stock and it can be explained as follows:

- 1) 10 days before the events (t-10 until t-1).
- 2) 1 day at the events (t0).
- 3) 10 days after the events (t1 until t10).

The event one was investigated on June 21st 2013, while the event two was investigated on November 07th 2012.

3.3 Hypothesis Testing

In this study, the market adjusted model was applied to examine the hypothesis. Using this model, the return estimation of securities was based on the return index in capital market at that period of time. Furthermore, according to Hartono (2010), the estimation model can be formulated without using the estimation period, since the estimation return of securities was similar with the return index in capital market. Each of the variables can be calculated using the steps as follows:

The examination of hypothesis 1

The examination of hypothesis one was applied to determine the effect of events one and two to the AAR during the event period. The AAR can be calculated by

Table 1. LQ-45 index for the increase of gas and oil prices in 2013.

No	Code	Issuers
1.	AALI	Astra Agro Lestari Tbk.
2.	ADRO	Adaro Energi Tbk.
3.	AKRA	AKR Corporindo Tbk.
4.	ANTM	Aneka Tambang (Persero) Tbk.
5.	ASII	Astra International Tbk.
6.	ASRI	Alam Sutera Realty Tbk.
7.	BBCA	Bank Central Asia Tbk.
8.	BBNI	Bank Negara Indonesia (Persero) Tbk.
9.	BBRI	Bank Rakyat Indonesia (Persero) Tbk.
10.	BBTN	Bank Tabungan Negara (Persero) Tbk.
11.	BDMN	Bank Danamon Indonesia Tbk.
12.	BHIT	Bhakti Investama Tbk.
13.	BKSL	Sentul City Tbk.
14.	BMRI	Bank Mandiri (Persero) Tbk.
15.	BMTR	Global Mediacom Tbk.
16.	BSDE	Bumi Serpong Damai Tbk.
17.	BUMI	Bumi Resources Tbk.
18.	BWPT	BW Plantation Tbk.
19.	CPIN	Charoen Pokphand Indonesia Tbk.
20.	EXCL	XL Axiata Tbk.
21.	GGRM	Gudang Garam Tbk.
22.	GIAA	Garuda Indonesia (Persero) Tbk.
23.	HRUM	Harum Energy Tbk.
24.	ICBP	Indofood CBP Sukses Makmur Tbk.
25.	IMAS	Indomobil Sukses Internasional Tbk.
26.	INCO	Vale Indonesia Tbk.
27.	INDF	Indofood Sukses Makmur Tbk.
28.	INDY	Indika Energy Tbk.
29.	INTP	Indocement Tunggul Prakasa Tbk.
30.	ITMG	Indo Tambangraya Megah Tbk
31.	JSMR	Jasa Marga (Persero) Tbk
32.	KLBF	Kalbe Farma Tbk.
33.	LPKR	Lippo Karawaci Tbk.
34.	LSIP	PP London Sumatra Indonesia Tbk.
35.	MAIN	Malindo Feedmill Tbk.
36.	MAPI	Mitra Adiperkasa Tbk.
37.	MNCN	Media Nusantara Citra Tbk.
38.	PGAS	Perusahaan Gas Negara (Persero) Tbk.
39.	PTBA	Tambang Batubara Bukit Asam(Persero)
40.	SMCB	Holcim Indonesia Tbk.
41.	SMGR	Semen Gresik (Persero) Tbk.
42.	SSIA	Susya Semesta Internusa Tbk.
43.	TLKM	Telekomunikasi Indonesia (Persero)Tbk.
44.	UNTR	United Tractors Tbk.
45.	UNVR	Unilever Indonesia Tbk.

Table 2. LQ-45 index for presidential election in USA in 2012.

No	Code	Issuers
1.	AALI	Astra Agro Lestari Tbk.
2.	ADRO	Adaro Energi Tbk.
3.	AKRA	AKR Corporindo Tbk.
4.	ANTM	Aneka Tambang (Persero) Tbk.
5.	ASII	Astra International Tbk.
6.	ASRI	Alam Sutera Realty Tbk.
7.	BBCA	Bank Central Asia Tbk.
8.	BBNI	Bank Negara Indonesia (Persero) Tbk.
9.	BBRI	Bank Rakyat Indonesia (Persero) Tbk.
10.	BDMN	Bank Danamon Indonesia Tbk.
11.	BHIT	Bhakti Investama Tbk.
12.	BJBR	Bank Pembangunan Daerah Jawa Barat
13.	BKSL	Sentul City Tbk.
14.	BMRI	Bank Mandiri (Persero) Tbk.
15.	BORN	Borneo Lumbang Energi dan Metal Tbk.
16.	BSDE	Bumi Serpong Damai Tbk.
17.	BUMI	Bumi Resources Tbk.
18.	BWPT	BW Plantation Tbk.
19.	CPIN	Charoen Pokphand Indonesia Tbk.
20.	ELTY	Bakrieland Development Tbk.
21.	ENRG	Energi Mega Persada Tbk.
22.	EXCL	XL Axiata Tbk.
23.	GGRM	Gudang Garam Tbk.
24.	HRUM	Harum Energy Tbk.
25.	ICBP	Indofood CBP Sukses Makmur Tbk.
26.	INCO	Vale Indonesia Tbk.
27.	INDF	Indofood Sukses Makmur Tbk.
28.	INDY	Indika Energy Tbk.
29.	INTA	Intraco Penta Tbk.
30.	INTP	Indocement Tunggul Prakasa Tbk.
31.	ITMG	Indo Tambangraya Megah Tbk
32.	JSMR	Jasa Marga (Persero) Tbk
33.	KIJA	Kawasan Industri Jababeka Tbk.
34.	KLBF	Kalbe Farma Tbk.
35.	LPKR	Lippo Karawaci Tbk.
36.	LSIP	PP London Sumatra Indonesia Tbk.
37.	MNCN	Media Nusantara Citra Tbk.
38.	PGAS	Perusahaan Gas Negara (Persero) Tbk.
39.	PTBA	Tambang Batubara Bukit Asam(Persero)
40.	SMGR	Semen Gresik (Persero) Tbk.
41.	TINS	Timah (Persero) Tbk.
42.	TLKM	Telekomunikasi Indonesia(Persero) Tbk.
43.	TRAM	Trada Maritime Tbk.
44.	UNTR	United Tractors Tbk.
45.	UNVR	Unilever Indonesia Tbk.

subtracting the individual return (R_{it}) with market return stock (R_{mt}). Hypothesis testing one can be modeled as follows:

(i). Market adjusted abnormal return

$$AR_{it} = R_{it} - R_{mt} \quad (1)$$

where AR_{it} is the abnormal return stock at period-t, R_{it} is the individual return stock at period-t, and R_{mt} is the market return stock at period-t.

(ii). Individual return stock

$$R_{it} = \frac{(P_t - P_{t-1})}{P_{t-1}} \quad (2)$$

where R_{it} is the individual return stock at period-t, P_t is the stock price at period-t, and P_{t-1} is the stock price at period-t-1.

(iii). Market return stock

$$R_{mt} = \frac{(P_{mt} - P_{mt-1})}{P_{mt-1}} \quad (3)$$

where R_{mt} is the market return stock at period-t, P_{mt} is the stock price index at period-t, and P_{mt-1} is the stock price index at period-t-1.

The subsequent step is to determine the event window after obtaining abnormal return. By using the market adjusted model, the estimation model can be formulated without using the estimation period, since the estimation return was similar with the return index in the capital market (IDX). The observation period was 21 days which was consisted of 10 days before the event date, at the event date, and 10 days after event date.

The examination of hypothesis 2

The examination of hypothesis two was applied to define the effect of events one and two to the TVA during the event period. The steps to examine the hypothesis two can be explained as follows:

(i). Calculating the TVA of stock-i during the period-t

$$TVA_{i,t} = \frac{\sum \text{Stock of company-i at period-t in transaction}}{\sum \text{Stock of company-i at period-t outstanding shares}} \quad (4)$$

where $TVA_{i,t}$ is the trading volume activity of stock-i during period-t.

(ii). Calculating the abnormal of TVA for all of observation stocks during the events

$$ATVA = \frac{\sum_{t=-10}^{t=+10} TVA_t - TVA_{t-1}}{TVA_{t-1}} \quad (5)$$

where ATVA is the abnormal of trading volume activity of stock-i during period-t, TVA_t is the trading volume activity at period-t, and TVA_{t-1} is the trading volume activity during period t-1.

4. Results and Discussion

In this investigation, the data sample from public companies which registered in IDX was employed. The data sample was categorized as the data in LQ-45 index. It was collected during the particular period of observation. There was 45 companies when the increase of gas and oil prices on June 21st 2013 was occurred. However, only 38 companies that did not perform the corporate actions during the event period. In addition, there was a gas and oil company that must be separated from the investigation to avoid a biased result. On the other hand, there was 43 companies in accordance with the event of presidential election in USA on November 07th 2012. Only two companies did not match the criteria due to corporate actions.

The sampling data used in this study were obtained by using the purposive sampling method where the data sample was restricted into a particular number. According to Sekaran (2003), 30 ~ 500 data sample is sufficient for the investigation by considering the cost and time effectiveness. Subsequently, the maximum, mean, and standard deviation value can be determined after processing the data calculation.

The 1st Event : The increase of gas and oil prices on June 21st 2013

The N value in Tables 3 and 4 indicates the period time of observation. It was around 21 days of observation period. The AAR in Table 3 has the minimum value of -0.0122, maximum value of 0.0082, and average value of -0.0019 with the standard deviation of 0.005. While, the cumulative average abnormal return (CAAR) variable shows the minimum value of -0.04, maximum value of 0.001, and average value of -0.023 with the standard deviation of 0.0107. Moreover, the TVA shows the minimum value of -0.4982, maximum value of 2.1499, and average value of 0.3034 with the standard deviation of 0.5860.

The 2nd Event : The announcement of the presidential election in USA on November 07th 2012

The AAR in Table 4 has the minimum value of -0.0044, maximum value of 0.0063, and average value of -0.0009 with the standard deviation of 0.0028. While, the CAAR variable shows the minimum value of -0.0190, maximum value of 0.0050, and average value of -0.0037 with the standard deviation of 0.0078. Moreover, the TVA shows the minimum value of -0.1614, maximum value of 1.0732, and average value of 0.3110 with the standard deviation of 0.3531.

Table 3. Descriptive statistic of AAR, CAAR, TVA for the 1st event.

	N	Minimum	Maximum	Mean	Std. Dev
AAR	21	-0.0122	0.0082	-0.0019	0.0050
CAAR	21	-0.0400	-0.0010	-0.0230	0.0107
TVA	21	-0.4982	2.1499	0.3034	0.5860

Table 4. Descriptive statistic of AAR, CAAR, TVA for the 2nd event.

	N	Minimum	Maximum	Mean	Std. Dev
AAR	21	-0.0044	0.0063	-0.0009	0.0028
CAAR	21	-0.0190	0.0050	-0.0037	0.0078
TVA	21	-0.1614	1.0732	0.3110	0.3531

Using Kolmogorov-Smirnov test, the data was normally distributed for both the AAR and TVA. Hence, the parametric testing or one-sample T-Testing was selected for the next step of investigation.

4.1 Statistical Analysis

The 1st Event : The increase of gas and oil prices on June 21st 2013

Using one-sample T-Testing, the AAR value for 38 companies indicated negative and significant value at 0.0998 ($\alpha \leq 10\%$) during the event period. Hence, the CAAR was performed since the AAR did not show the significant value ($\alpha \leq 5\%$). The CAAR showed the negative and significant value at 0.0000 ($\alpha \leq 5\%$), and the TVA was positive and significant at 0.0284 ($\alpha \leq 5\%$).

According to the results of AAR, CAAR, and TVA, H1 expressed the negative reaction towards the abnormal return for the increase of gas and oil prices on June 21st 2013 event. This is consistent with the investigation results that was performed by Suryawijaya and Setiawan. The political event can affect the economic stability in the country as a bad news. Thus, the capital market will respond it negatively.

The H2 for TVA did not indicate the negative reaction due to the increase of gas and oil prices on June 21st 2013. The TVA showed the positive and significant value ($\alpha \leq 5\%$). In this case, the increase of TVA could have two meanings. First, the increase of gas and oil prices will become a good news when the number of demand increase. Second, it will become a bad news when the increase of TVA was caused by the increase sale of the shares.

The positive reaction of TVA in accordance with the investigation of Suryawijaya and Setiawan was appropriate with the increase sale of the shares by the investors. The investors worried since they will lose more due to storing the stock. Moreover, the CAAR tended to decrease after the event date.

Tables 5 and 6 show the T-testing result for the 1st event. Specifically, Table 6 performs the division of the day for the CARR according to the investigation of Malhotra, Thenmozhi, dan Kumar (2007). The T-testing result generated as the capital market reacted negative and significant to CAAR from the tenth until first day before the event. And also the capital market performed the negative and significant reaction from the t0 to the t+5 and t-10 to the t-1. It indicated the bad news due to the increase

of gas and oil prices. Hence, the examination of hypothesis one was supported at the level of 10%.

In this investigation, PT. Perusahaan Gas Negara, Ltd was not included since the investors may react to the increase of gas and oil prices on June 21st 2013 event positively. The investors in the public companies such as gas and oil company may get the abnormal return from this event and a biased result will be derived for the calculation.

Table 5. T-testing of AAR, CAAR, and TVA for the 1st event.

	Test Value = 0					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
AAR	-1.726	20	*0.0998	-0.0019	-0.0042	0.0004
CAAR	-9.83	20	***0.0000	-0.023	-0.0279	-0.0182
TVA	2.363	20	**0.0284	0.2984	0.0350	0.5617

Table 6. T-testing of CAAR for the 1st event.

	Test Value = 0					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
t-10, t-1	-1.9528	37	*0.0584	-0.0182	-0.0371	0.0007
t-5, t-1	0.9427	37	0.3520	0.0077	-0.0089	0.0243
t-5, t0	0.1499	37	0.8817	0.0016	-0.0202	0.0234
t-2, t0	-0.9554	37	0.3456	-0.0093	-0.0291	0.0104
t-1, t0	-0.6897	37	0.4947	-0.0060	-0.0235	0.0116
t-1, t+1	-0.6234	37	0.5368	-0.0058	-0.0247	0.0131
t0, t+1	-0.8579	37	0.3965	-0.0059	-0.0199	0.0081
t0, t+2	0.0199	37	0.9842	0.0002	-0.0162	0.0165
t0, t+5	-1.8528	37	*0.0719	-0.0201	-0.0420	0.0019
t+1, t+5	-1.3752	37	0.1773	-0.0140	-0.0345	0.0066
t+1, t+10	-1.4881	37	0.1452	-0.0153	-0.0361	0.0055
t-5, t+5	-0.9524	37	0.3471	-0.0124	-0.0386	0.0139

Where:

*** Significant in α 1%

** Significant in α 5%

* Significant in α 10%

The AAR, CAAR, and TVA at Perusahaan Gas Negara, Ltd (PGN) indicated the positive value of T-testing but not significant. It means that the increase of gas and oil prices did not relate with the abnormal return and TVA or it does not contain any information for the PGN. It may due to the sampling error or error analysis technique.

The 2nd Event : The announcement of the presidential election in USA on November 07th 2012

Tables 7 and 8 show the T-testing result for the 2nd event. Table 8 performs the T-testing results for CAAR. The results were negative but not significant during 21 days. The T-testing results for CAAR showed -2.151 of t-value ($\alpha \leq 5\%$). It indicated the announcement of the presidential election in USA on November 07th 2012 of H1 was not affected.

The above result was not consistent with some previous investigation where the political event will be responded by capital market. However, this result was appropriate with the Li and Born (2006) investigation. They said that the average return of stock price did not increase as the announcement of the presidential election in USA on November 07th 2012. It may be induced by the winner that had been predicted. Therefore, the capital market did not feel surprise at that time due to the candidate domination for the next president.

The one way to consider that an event can affect the capital market was indicated by the TVA activity. The investigation was performed by calculating the TVA issuer. Table 7 shows the result of TVA calculation. T-testing exhibited the 4.036 of t-value ($\alpha \leq 1\%$). It indicated that the announcement of the presidential election in USA on November 07th 2012 of H2 was affected.

This investigation proved that the announcement of events can induce the investor reaction. The TVA tended to increase after the event date, since the investor believed that Obama had a lot of chance to win the election. Hence, It was regarded as a good news for the market.

Table 8 shows the distribution day for CAAR in accordance with the investigation of Malhotra, Thenmozhi, and Kumar (2007). T-testing showed as the capital market reacted significantly but negatively from the event date into the tenth day after the event announcement. It indicated the negative and significant reaction due to announcement of the presidential election in USA. Hence, H1 of the events did not appropriate.

Table 7. T-testing of AAR, CAAR, and TVA for the 2nd event.

	Test Value = 0					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
AAR	-1.441	20	0.1649	-0.0009	-0.0022	0.0004
CAAR	-2.151	20	**0.0439	-0.0037	-0.0072	-0.0001
TVA	4.036	20	***0.0006	0.3110	0.1503	0.4717

Table 8. T-testing of CAAR for the 2nd event.

	Test Value = 0					
	t	df	Sig (2-tailed)	Mean Difference	95% confidence Interval of the Difference	
					Lower	Upper
t-10, t-1	.396	42	0.6943	0.0034	-0.0138	0.0205
t-5, t-1	-.122	42	0.9035	-0.0006	-0.0112	0.0099
t-5, t0	-.767	42	0.4474	-0.0045	-0.0164	0.0074
t-2, t0	-.625	42	0.5356	-0.0024	-0.0100	0.0053
t-1, t0	-.578	42	0.5662	-0.0020	-0.0089	0.0049
t-1, t+1	-1.198	42	0.2378	-0.0049	-0.0131	0.0034
t0, t+1	-2.503	42	**0.0161	-0.0068	-0.0123	-0.0013
t0, t+2	-2.299	42	**0.0265	-0.0072	-0.0135	-0.0009
t0, t+5	-2.476	42	**0.0174	-0.0116	-0.0211	-0.0021
t+1, t+5	-1.615	42	0.1137	-0.0077	-0.0173	0.0019
t+1, t+10	-2.402	42	**0.0208	-0.0181	-0.0334	-0.0029
t-5, t+5	-1.717	42	*0.0933	-0.0122	-0.0266	0.0021

Where:

- *** Significant in α 1%
- ** Significant in α 5%
- * Significant in α 10%

5. Conclusion

In this study, the effect of non-economic events towards the LQ-45 index in Indonesia Stock Exchange (IDX) were investigated using an event study method. An increase of gas and oil prices on June 21st 2013 and announcement of the presidential election in USA on November 07th 2012 were opted as the non-economic events. Through this study, the following results were drawn.

The 1st Event: The increase of gas and oil prices on June 21st 2013

1. Based on the examination of hypothesis one, the average abnormal return (AAR) and cumulative average abnormal return (CAAR) revealed negative and significant value during the event period.
2. The examination of hypothesis two showed the trading volume activity (TVA) did not indicate the negative value during the event period.
3. PT. Perusahaan Gas Negara, Ltd was not included in the investigation. The AAR, CAAR, and TVA at Perusahaan Gas Negara, Ltd indicated the positive value of T-testing but not significant. It exhibited that the increase of gas and oil prices did not relate with the abnormal return and TVA.

The 2nd Event: The announcement of the presidential election in USA on November 07th 2012

1. Based on the examination of hypothesis one, AAR and CAAR revealed negative and significant value during the event period.
2. The examination of hypothesis two showed the TVA indicated the positive value during the event period.

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