

# Indonesian capital market reaction against changes in the exchange transaction settlement cycle From $t + 3$ to $t + 2$

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**Abstract:** The event study is the basis for this research, which explains the comparison of the average abnormal return and trading volume activity due to changes in the exchange transaction settlement cycle from  $T + 3$  to  $T + 2$ . Companies belonging to the LQ45 index for the period August 2018 to January 2019 were the objectives of the study. The population in this study were 45 companies. Market reaction to changes in the exchange transaction settlement cycle from  $T + 3$  to  $T + 2$  is measured using abnormal return and trading volume activity. Data analysis technique used is paired-sample t-test. This study found that there was no significant average difference in abnormal returns, but in trading volume activity there was a difference in the average before and after the change of the exchange transaction settlement cycle from  $T + 3$  to  $T + 2$  to all listed LQ45 company shares on the Indonesia Stock Exchange

**Keywords:** market reaction, event study; changes in transaction policies, abnormal returns; trading volume activity.

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## I. INTRODUCTION

The capital market supports the financing of productive businesses for individuals, business entities and institutions that create optimal levels of economic growth in Indonesia and the level of prosperity of the people effectively and efficiently. The important role of the capital market for the economy today is that the capital market is a facility to divert excess funds from investors to borrowers (issuers) who will spend the excess funds for investment activities. Another important role is to enable capital market investors to obtain a number of returns on the investment risk characteristics possessed (Husnan, 2003: 4)

The rate of return is the result obtained from the investment. According to Hartono (2017: 263), a return can be in the form of a realized return or an expected return that has not yet occurred, but which is expected to occur in the future. Investors make investments and decision making by looking at which securities will provide maximum returns and as expected. Trading volume is also one that can affect investors besides returns. Stock trading volume is the ratio between the number of shares traded at a certain time to the number of shares outstanding at a certain time (Masyithoh, 2018). The increasing volume of stock trading indicates that the stock is increasingly in demand by investors so that it will bring an effect on the rise or fall of the stock's price or return (Suryawijaya & Setiawan, 1998).

Another important thing for the capital market is the role of information. Investors in making investment decisions will pay close attention to the information content that can originate from various events (Chang et al., 2016). Information can change the confidence of investors in making decisions, then the information can be considered informative. Information obtained by investors will be valuable if the information is responded to by investors shown by the action of buying and selling shares and will be reflected in changes in stock prices which will certainly change the returns to be obtained by investors (Zuhroh & Sukmawati, 2003). The capital market as an economic instrument is strongly influenced by various events that have information content for investors. The information needed by this investor can come from internal and external conditions of the issuer. In an efficient capital market, the market will react quickly to all relevant information. In

general, this is indicated by changes in stock prices beyond normal conditions, causing abnormal returns. Various events that occur around the capital market, both economic and non-economic environment, basically also contain information, therefore it cannot be separated from the capital market (Wardhani, 2013).

According to Surwijaya in Gunistiyo, (2005) testing of the entry of new information that can influence market reactions is a form of event study testing. Event study testing initially focused more on internal company events, such as annual reports, dividend announcements, stock splits, and so on. Now the application of the event study method has experienced a development, where testing is not limited to corporate events, but has also touched on macroeconomic and even political to financial aspects. Event studies are used to find out whether abnormal returns that occur after the event are expected (anticipated) and used to measure how much influence the event has on capital market activities (Hartono, 2017). This study looks at the reaction of the Indonesian capital market in particular the movement of the composite stock price index before and after the change in the exchange transaction settlement cycle from T + 3 to T + 2 by looking at whether there are differences in the average abnormal return and trading volume activity.

This research is included in the cluster event study because it studies the market's response to the publicly announced events that occur at the same time and impacts on the issuer, so that it is expected to have an impact on the company's cash flow.

The T + 3 transaction completion cycle is familiar to investors. T + 3 is a term that refers to the cycle of completion of a stock transaction. The transaction settlement cycle is a settlement where the delivery of securities by the seller and the transfer of funds by the buyer are carried out after the Exchange Transaction occurs. In total, the transaction completion cycle in the Indonesia stock exchange (IDX) takes 3 days after the transaction is made ([www.kpei.co.id](http://www.kpei.co.id)).

Starting November 26, 2018 the Self Regulatory Organization (SRO) consisting of the IDX, PT. Kliring Penjaminan Efek Indonesia (KPEI) and the PT. Kustodian Sentral Efek Indonesia (KSEI) have announced to accelerate transaction settlement from the previous T + 3 to T + 2. It means, if we buy shares on Monday in the regular market, then the payment and listing of KSEI on our behalf will only take place on Wednesday. And vice versa, if we sell shares on Monday the money will go to our Investor Account on Wednesday ([www.kpei.co.id](http://www.kpei.co.id)).

According to the Indonesia Financial Services Authority Regulations No. 21 / POJK.04 / 2018 article 3, namely the regulation of the deadline for settlement of Exchange Transactions as stipulated in the regulations concerning accounting guidelines for Securities Companies adjusted to on the 2nd (second) Exchange Day after the day of the Exchange Transaction (T + 2). Along with technological advancements and the development of practices adopted by exchanges in the world, one of the recommendations for the development of the World Capital Market and current practices is to shorten the transaction settlement cycle. At present countries from Europe, Asia and America have begun to accelerate their Settlement Cycle from T + 3 to T + 2 ([www.idx.co.id](http://www.idx.co.id)).

The acceleration of the transaction settlement cycle has the potential to fail because there is a merging of settlements from T + 3 and T + 2 and this merger can lead to operational risks in securities, custodians, and investors because the merger period increases the level of instruction. SROs must really ensure that all market participants are ready for the transition, with the exception of exchange members who provide transactions for foreign investors with different time zones ([www.cnbcindonesia.com](http://www.cnbcindonesia.com)).

The acceleration of the exchange transaction settlement cycle cycle from T + 3 to T + 2 will cause the market to respond quickly to information that makes the stock market more sensitive to events around it, as stated by Suryawijaya and Setiawan (1998) that the increasingly important role of the stock market in economic activity makes the stock market more sensitive to events around it, whether related or not directly related to economic events. The application of T + 2 is beneficial for the industry, which among others can increase the efficiency of the settlement process, aligning the settlement time with the World Exchange, higher market liquidity, faster utilization of funds, to reducing overall market risk.

The closing of the Jakarta Composite Index Wednesday, November 28, 2018, decreased by 22.3 points or 0.37 percent. Indonesia Composite Index (ICI) was at the highest position at 6,030.89 and was at its lowest at 5,990.34. And there are 223 shares that have increased and 210 shares have decreased. In addition, there are 124 shares whose value has not changed and 144 shares have no trade ([www.finansialku.com](http://www.finansialku.com)).

The information can be found on the Indonesia stock exchange (IDX) or the Indonesian Stock Exchange (IDX) in which there are stock indexes (STODEX), which are the prices or values of a group of shares that are collected according to

certain categories. This index is an indicator of the price movement of all the stocks it represents. In Indonesia there are several Liquid-45 Index (ILQ-45). ILQ-45 is formed from the 45 most actively traded shares, which means that liquidity and market capitalization are good and in accordance with ILQ-45 stock selection criteria (Hartono, 2017: 56).

Previous studies have shown different results on information content from announcements of events that are external to the company. Research by Ria (2011) states that the event of the withdrawal of Sri Mulyani has information content for the capital market. Capital markets react to these events by showing a significant difference in abnormal returns before and after the announcement of resignation from the financial position. Pratama, Sinarwati, & Dharmawan (2015) found that there was no significant difference in the average market reaction to abnormal returns on the day before and after Joko Widodo's inauguration as the 7th President of Indonesia. Then when Indonesia is granted Investment Grade status by Fitch Ratings, there is no significant difference in abnormal returns before or after the event due to investors' tendency to adopt a wait and see strategy. In addition, the unfavorable condition of the global economy remains a shadow that has caused investors to hesitate to implement investment decisions (Suryanto, 2015).

Research conducted by Sanjiwani & Jati (2017) states that there is no difference in the average abnormal return obtained by investors at the time before and after the announcement and end of period I tax amnesty due to the lack of public knowledge about tax amnesty policies. But in the next tax amnesty period, there is a difference in the average abnormal return, showing that the market has reacted to the achievement of the period II tax amnesty program and there is also a tendency to wait and see the tax amnesty period III. Investors have estimated market movements based on the previous two tax amnesty periods by measuring the level of fluctuation based on market responses to the achievement of tax amnesty period II, so the market reaction has strengthened for period III (Cahyono & Fitriadiansyah, 2017).

Some other studies that show capital market reactions related to certain policies, such as events outside (external) companies, for example the issuance and enforcement of a rule or regulation that has inconsistencies in the results of these studies. Due to changes in the exchange transaction settlement cycle from  $T + 3$  to  $T + 2$  has just been implemented, the research that is used as a reference by researchers is similar research with the establishment of policies from both internal and external companies to enrich or strengthen the theory used.

## **II. CONCEPTUAL MODEL AND HYPOTESIS DEVELOPMENT**

### **The Difference Between The Average Abnormal Return Before And After The Change Event Of The Exchange Transaction Settlement Cycle From $T + 3$ To $T + 2$**

Market efficiency theory explains that when there is information or an event it can reflect the stock prices of all traded securities. Then because there is an information content value of the change event of the exchange transaction settlement cycle from  $T + 3$  to  $T + 2$ , it can be said that the information or event can increase abnormal return. Abnormal return is an excess of returns that actually occur against expected returns, whereas expected returns, are returns expected by investors. According to Azizah's research (2013), abnormal returns basically occur because there is new information or events that change the value of the company and are reacted by investors in the form of an increase or decrease in stock prices.

The results of the study by Ria (2011) stated that the market reacted to the event by showing a significant difference in abnormal returns before and after the announcement of resignation from the financial position. Primary, et al. (2015) found that there was no significant market reaction difference in the difference in the average abnormal return on the day before and after the inauguration of Joko Widodo as the 7th President of Indonesia. Then when Indonesia is granted Investment Grade status by Fitch Ratings, there is no significant difference in abnormal returns before or after the event because of the tendency of investors to adopt a wait and see strategy (Suryanto, 2015). Research conducted by Sanjiwani (2016) states that there is no difference in the average abnormal return obtained by investors at the time before and after the announcement and end of period I tax amnesty due to the lack of public knowledge about tax amnesty policies. But in the next tax amnesty period, there is a difference in the average abnormal return, showing that the market has reacted to the achievement of the period II tax amnesty program and there is also a tendency to wait and see tax amnesty period III (Cahyono and Fitriadiansyah, 2017). International research that is in line with the results of the above study was also carried out by Dasilas and Leventis (2011), namely there is an abnormal return when announcing dividends on the Greek capital market. Kang et al. (2015) examined the impact of oil price shocks on stock market returns and the relationship of volatility with structural VAR that the impact of oil price shocks has a significant effect on stock market returns and volatility relationships.

Changes in the exchange transaction settlement cycle can affect the difference in average abnormal returns, due to an acceleration of the transaction cycle. Then it can affect the mindset of investors, and affect the issuer's liquidity. Based on the description of abnormal returns, the hypotheses developed in this study are:

**H<sub>1</sub>: There is a difference in the average abnormal return before and after the change of the exchange transaction settlement cycle from T + 3 to T + 2.**

**The Difference In Average Trading Volume Activity Before And After The Change Of The Exchange Transaction Settlement Cycle From T + 3 To T + 2**

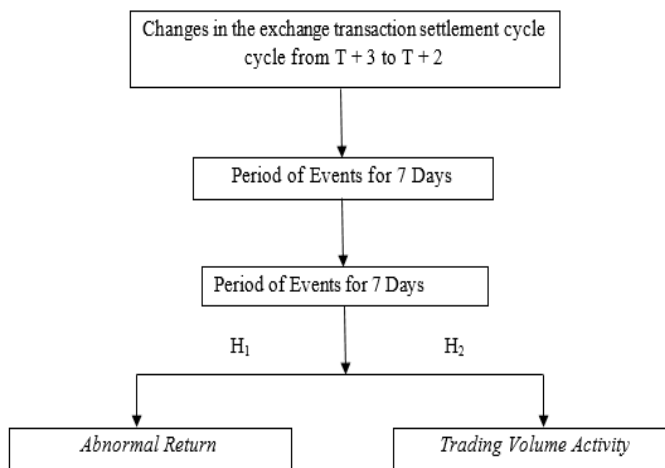
Market efficiency theory explains that when there is information or an event it can reflect the stock prices of all traded securities. Trading activities can be reflected in the presence of information or events that can cause trading volumes to increase. Liogu and Saerang (2015) state that the trading volume activity approach can be used as a proxy for market reactions. Trading volume activity is also one of the factors that has an influence on stock movements.

Utami et al. (2017) in his research found that there were significant differences in the activity of stock trading volume before and after the event of the strengthening of the highest US dollar exchange rate against the rupiah exchange rate. Likewise, the Islamic & Sarwoko (2012) study found significant trading volume activity after the change in the finance minister. Furthermore, Ackert et al. (2001) examine the market closure under supervision and the temporary halt of market behavior to find that trading activity has a significant effect on the event. Bjursell et al. (2010) found that trading frequency had a significant effect on announcements of changes in the magnitude of futures contracts. Research conducted by Budiman (2015) found the same results that there were significant differences in trading volume activity before and after the 2009 and 2014 presidential and vice presidential elections.

According to Purba (2017) conducting research on the implementation of Government Regulation no. 1 of 2014 concerning the prohibition of exporting raw minerals and the result that no significant trading volume activity was found. Prameswari and Wirakusuma (2018) stated that there was no significant difference in trading volume activity before and after the DKI Jakarta Governor Election in 2017. The same results were also expressed by Wulandari and Khairunnisa (2015) which showed that there was no difference in trading volume activity in insurance company shares before and after the catastrophic floods of 2007 and 2013. Suparsa and Ratnadi (2014) stated that there was no difference in stock trading volume activity on the announcement of the fuel price increase. Chandra (2015) examined the effect of the 2014 Indonesian presidential election on stock prices on the Indonesian stock exchange resulting in no significant effect on trading volume activity before and after the event.

Changes in the exchange transaction settlement cycle cause the number of shares traded to increase. This can affect investor interest in making investment decisions, and can affect the ups and downs of the stock's price or return. Based on the description of trading volume activity, the hypotheses developed in this study are:

**H<sub>2</sub>: There is a difference in the average trading volume activity before and after the change of the exchange transaction settlement cycle from T + 3 to T + 2.**



**Figure 1: Conceptual Model**

### III. RESEARCH METHODOLOGY

The location of this research was conducted at the Indonesia stock exchange (IDX) on the LQ45 stock index by accessing [www.idx.co.id](http://www.idx.co.id), which is the official website of the Indonesia stock exchange. The object of this study is the difference in the average abnormal return and trading volume activity that occurs before and after the events of the exchange transaction settlement cycle change from T + 3 to T + 2. The population in this study were all companies classified as LQ45 listed on the Indonesia stock exchange of 45 companies. The sampling method used in this study is the saturation sample method which is a nonprobability sampling technique. The saturated sample method is a sampling technique when all members of the population are used as samples.

The t-significance test used in this study is paired sample t-test, if the results of the Kolmogorov-Smirnov normality test show that data is normally distributed then the test uses the paired sample t-test for 7 days of the event period. The purpose of testing with paired sample t-test is to show whether there is a significant abnormal return and trading volume activity around the change of the exchange transaction settlement cycle from T + 3 to T + 2, namely before and after the event.

### IV. RESEARCH FINDING AND DISCUSSION

The results of the descriptive statistical analysis that will be tested for the average abnormal return (AAR) research variable and the average trading volume activity (ATVA) research variable are 45 company samples. The results of the descriptive statistical analysis of the study sample are presented as follows:

**TABLE 1: THE DESCRIPTIVE STATISTICS OF AVERAGE ABNORMAL RETURN BEFORE AND AFTER EVENT**

Variable	Total	Minimum	Maximum	Average	Std. Deviation
Before AAR	45	-0,0726	0,0563	0,0020	0,0209
After AAR	45	-0,0545	0,0248	-0,0012	-0,0148

Source: Data processed, 2019

Table 1 explains the minimum, maximum, average, and standard deviation values before and after the change of the exchange transaction settlement cycle from T + 3 to T + 2. Based on table 1 the average abnormal return (AAR) value before the event shows an average of 0.0020 with a standard deviation of 0.0209. This value has a positive average, this means that 3 days before the event investors tend to have a positive reaction in the purchase of company shares. AAR value before the lowest event is -0.07726 and AAR value before the highest event is 0.0563.

The average abnormal return (AAR) value after the event shows an average of -0.0012 with a standard deviation of -0.0148. This value has a negative average, this means that 3 days after the event investors tend to have a negative reaction in the purchase of company shares. The AAR value after the lowest event is -0.0545 and the AAR value after the highest event is 0.0248.

**TABLE 2: THE DESCRIPTIVE STATISTICS OF AVERAGE TRADING VOLUME ACTIVITY BEFORE AND AFTER EVENT**

Variable	Total	Minimum	Maximum	Average	Std. Deviation
Before ATVA	45	0,0001	0,0075	0,0022	0,0019
After ATVA	45	0,0001	0,0270	0,0028	0,4671

Source: Data processed, 2019

Based on Table 2 the average trading volume activity (ATVA) value before the event shows an average of 0.0022 with a standard deviation of 0.0019. The ATVA value before the lowest event is 0.0001 and the ATVA value before the highest event is 0.0075.

The average trading volume activity (ATVA) after the event shows an average of 0.0028 with a standard deviation of 0.4671. The ATVA value after the lowest event is 0.0001 and the ATVA value after the highest event is 0.0270. The average stock trading volume before the event shows a smaller number than after the change of the exchange transaction settlement cycle from T + 3 to T + 2. The results of this analysis indicate that the change in the transaction cycle settlement cycle of the exchange from T + 3 to T + 2 causes the average stock trading volume to increase.

The normality test used in this study is the Kolmogorov-Smirnov test with a confidence level of 95% or  $\alpha = 5\%$ . The results of the normality test in this study are presented as follows:

**TABLE 3: TESTING NORMALITY OF AVERAGE ABNORMAL RETURN BEFORE AND AFTER EVENT**

Variable	Total	Sig (2-Tailed)	Criteria	Explanation
Before AAR	45	0,087	0,05	Normal distribution
After AAR	45	0,407	0,05	Normal distribution

Source: Data processed, 2019

Based on Table 3. The significance value of KS average abnormal return (AAR) before the event is 0.087 and after the event is 0.200 which is above the criteria of 0.407, it means that the AAR variable before and after the event is normally distributed so that the next hypothesis testing using parametric statistics, namely paired sample t-test.

**TABLE 4: TESTING NORMAL TRADING VOLUME ACTIVITY NORMALITY BEFORE AND AFTER EVENTS**

Variable	Total	Sig (2-Tailed)	Criteria	Explanation
Before ATVA	45	0,058	0,05	Normal distribution
After ATVA	45	0,879	0,05	Normal distribution

Source: Data processed, 2019

Based on Table 4. The significance value of KS average trading volume activity (ATVA) before the event is 0.058 and after the event is 0.879, it means that the ATVA variable before and after the event is normally distributed so that the next hypothesis testing using parametric statistics, namely paired sample t-test.

Testing this hypothesis is done using paired sample t-test. The first hypothesis tests whether there is a difference in the average abnormal return before and after the change in the cycle of transaction settlement cycle from T + 3 to T + 2. The results of paired sample t-test were conducted on two samples in the same pair but underwent two different treatments. Decision making in this method is based on the Sig. (2-tailed). If Sig. (2-tailed) <0.05 then H1 is accepted, vice versa if Sig. (2-tailed) > 0.05 then H1 is rejected. Based on Table 3, it appears that the value of Sig. (2-tailed) 0.857 > 0.05. This means that H1 is rejected so that there is no difference in the average abnormal return in the event of a change in the exchange transaction settlement cycle from T + 3 to T + 2. The existence of an error level of 5% indicates that at a 95% confidence level there can be no certain difference between the average abnormal return 3 days before and 3 days after the change of the exchange transaction settlement cycle from T + 3 to T + 2.

Testing this hypothesis is done using paired sample t-test. The first hypothesis tests whether there is a difference in average trading volume activity before and after the event of a change in the exchange transaction settlement cycle from T + 3 to T + 2. The results of decision making in the paired sample t-test method are based on the Sig. (2-tailed). If Sig. (2-tailed) <0.05 then H2 is accepted, vice versa if Sig. (2-tailed) > 0.05 then H2 is rejected. Based on Table 4, it appears that the value of Sig. (2-tailed) 0,000 <0.05. This means that H2 is accepted so that there is a difference in average trading volume activity before and after the event of the change in the exchange transaction settlement cycle from T + 3 to T + 2.

**The Difference Between The Average Abnormal Return Before And After The Change Event Of The Exchange Transaction Settlement Cycle From T + 3 To T + 2**

The results of testing the first hypothesis (H1) through paired sample t-test showed that at a 95% confidence level Sig. (2-tailed) 0.857 > 0.05, it can be said that H1 is rejected. This means that there is no difference in the average abnormal return before and after the change of the exchange transaction settlement cycle from T + 3 to T + 2. Based on these results it can be said that the change in the cycle of exchange transaction settlement cycle from T + 3 to T + 2 has no effect on market participants on capital market activities. Investors in making investment considerations not only take into account the surrounding events, but also use fundamental analysis techniques such as looking at company performance and conducting technical analysis to obtain returns and avoid the risk of investment losses.

The results of this study are supported by research conducted by Sanjiwani and Jati (2017), Pratama, et al. (2015), Suryanto (2015) and Mahmood et al (2014) regarding non-economic events that there is no information content so that the market does not react as seen from the absence of abnormal return differences in other words the market requires a long time in achieving a new balance. Investors in this study did not react quickly in absorbing information so that it was not appropriate to the efficient form of a half strong market. Market reaction will be reflected by the difference in abnormal returns between before and after the event. This is consistent with the theory of information content which says that if an event contains information, it is expected that the market will react to events that are reflected by abnormal returns. Conversely, events that have no information content do not provide abnormal returns to the market.

Changes in the policy cycle of the exchange transaction settlement does not affect the average abnormal return, possibly because the information on this event cannot influence investors in making decisions. Investors may assume this event has no impact because it only accelerates on the day of transaction settlement which does not have direct implications on the value of the company. The results of this study do not support the theory of market efficiency, because there is no difference in the average abnormal return before and after the change in the cycle of transaction settlement.

### **The Difference In Average Trading Volume Activity Before And After The Change Of The Exchange Transaction Settlement Cycle From T + 3 To T + 2**

Research using event studies on changes in the exchange transaction settlement cycle from T + 3 to T + 2 shows that this event contains information that causes market participants to react to the event. The test results show that there is a difference in the average trading volume activity before and after the change event in the exchange transaction settlement cycle from T + 3 to T + 2. This result is in accordance with hypothesis 2 (H2).

The ATVA value before the event is 0.0028 and the ATVA value after the event is 0.0028, this result shows that the value of the ATVA before the event is lower than the ATVA after the event. This event might affect investors' interest in making transactions.

The results of this study support the theory of market efficiency in which the market responds to incoming information, and how this information can further influence the price of securities towards a new equilibrium price. The results of this study are consistent with research on the events of the global financial crisis September 7, 2008 found that there were significant differences in average trading volume activity (Hariyo, 2012). Furthermore, with the research of Islam & Sarwoko (2012) found a significant trading volume of activity after the event of the change of finance ministers. Likewise, Ackert et al. (2001) examine the market closure under supervision and the temporary halt of market behavior to find that trading activity has a significant effect on the event. The results of this study support the theory of market efficiency because there are differences in the average trading volume activity before and after the change in the cycle of transaction settlement.

### **Research Implication**

Information that is relevant to capital market conditions is something that is always sought by capital market players in an effort to make investment decisions. Information that is spread is not all valuable information, as a result capital market players must properly sort out relevant information that is relevant for decision making. Changes in the exchange transaction settlement cycle cycle from T + 3 to T + 2 indicate a reaction measured by abnormal return and trading volume activity before and after the event. The existence of these market reactions means that investors use information from the events of the changing cycle of the exchange transaction settlement from T + 3 to T + 2 to make investment decisions in order to obtain a profit.

## **V. CONCLUSIONS AND SUGGESTIONS**

Information that is relevant to capital market conditions is something that is always sought by capital market players in an effort to make investment decisions. Information that is spread is not all valuable information, as a result capital market players must properly sort out relevant information that is relevant for decision making. Changes in the exchange transaction settlement cycle cycle from T + 3 to T + 2 indicate a reaction that is measured by abnormal return and trading volume activity before and after the event. The existence of these market reactions means that investors use information from the events of the changing cycle of the exchange transaction settlement from T + 3 to T + 2 to make investment decisions in order to obtain a profit.

Based on the results of hypothesis 1 testing, there was no significant difference in abnormal returns before and after the change in the cycle of transaction settlement processes from T + 3 to T + 2 to the ranks of LQ45 companies listed on the Stock Exchange. Then based on the results of hypothesis 2 testing, it was found that there was a significant difference in trading volume activity before and after the change of the exchange transaction settlement cycle from T + 3 to T + 2 to the ranks of LQ45 companies listed on the IDX.

For policy makers, this research is expected to be an input and consideration before making a policy related to the exchange transaction settlement cycle. For prospective investors and investors, it is hoped that this research can be an input or consideration before investing in the capital market based on events that occur specifically related to changes in the exchange transaction settlement cycle policy.

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