Stock Market Reaction to the Tax Amnesty Announcement

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The Indonesian Government has put in place policies that are quite bold and that highly impact on both companies and the economy. This includes the endorsement tax amnesty policy in 2016. This study aims to investigate the reaction of the stock market against the policy. The dataset of this research was 100 companies listed on the Indonesian Islamic Stock Index (ISSI). Research methods used the event study market adjusted model to look at changes in the Average Abnormal Return (AAR) and Trading Volume Activity (TVA) during the announcement. The results of this research show there is a difference in the AAR and TVA before and after the announcement. The investors positively viewed the information content of the tax amnesty policy. The government has made a very good policy and it supports the improvement in the quality of corporate governance and company performance.

Keyword: tax amnesty; market reaction; Average Abnormal Return; AAR; Trading Volume Activity; TVA; event study; Islamic stock

JEL Classification: E62, D53, E44

Introduction

Capital Asset Pricing Model (CAPM) is a model on the equilibrium of the market portfolio between the expected return with a total risk. The theory states that the cross-sectional of expected stock return is a linear function of systematic risk with the underlying assumption of well-diversified portfolio (Sharpe, 1964). Systematic risk cannot be avoided due to the risk occurring within the scope of macroeconomics, political turmoil, the exchange rate, or the government policies that have an influence on the performance of the company. This affects the behavior of investors in the capital markets. However, systematic risk will impact the fluctuation of the stock prices listed on the capital market. Many studies have proven that stock prices can react to changes in the macroeconomic condition. Stock price can react to crude oil price changes (Khamis, Anasweh, & Hamdan, 2018), the volatility of the stock price caused by political turmoil (Johnson, Leão, & Fernandes, 2018; Conrad & Zumbach, 2016) and stock market reactions to the changes in exchange rate (Suriani, Kumar, Jamil, & Muneer, 2015; Ho & Odhiambo, 2018). Government policies can also have an impact on stock price changes (Ferguson & Lam, 2016); (Shen, Bui, & Lin, 2017; Wahyuni & Sukmaningrum, 2018; Sukmaningrum, Madyan, & Hendratmi, 2019).

In Indonesia, any policy by the government can influence the condition of society. Company, for example, can increase the price of oil; cause a basic tariff increase in electricity, a differentiation of Social Security Administering Agency (BPJS), or other policies. Research by (Gursida & Indrayono, 2019) shows that the stock market reacts negatively to the announcement of Indonesian Governance's Economic

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Policy Package.

In 2016, Indonesia conducted a Tax Amnesty policy stipulated in UU No. 11 /2016 2016. The Tax Amnesty policy endorsement of one of the government's policies might have an impact on the company. This policy aims to regulate the tax payers in order to encourage them to pay the tax on the property situated outside of the country as well as within the country. This has not been completely reported in the Annual Notice (SPT) income tax. This policy can be categorized as good information because the existence of a Tax Amnesty may increase the State revenue from the tax sectors that can be used for developing the country, particularly in the field of economics (Attiya & Laila, 2014). The tax policy will certainly have an impact on the value of the companies (Wagner, Zeckhauser, & Ziegler, 2018). The community response has led to the emergence of a wide range of issues as well as news about the Tax Amnesty policy. The investors in the capital market will analyze the content of the information and its impact on the corporate issuers. The capital markets will react in line with the content of the information that appears. According to (Hartono, 2010), the market reacted because the event contained information.

One of the indicators of Indonesia's stock market is related to looking at the development of the composite share price Index (IHSG). If a country's economic conditions are good, then the Jakarta Composite Index (JCI) will show a positive trend. However, if the condition of the economy is slumped, then this will show a negative trend. Recorded at the time, the H-3 prior to the passage of a Tax Amnesty on July 1st 2016, the JCI movement always increases up to the highest level at June 5th 2016. There was an increase of 36.5 points compared with the previous day's trading volume on that day, amounting to 8.498 trillion. However, when the passage on Tax Amnesty JCI weakened at the 4,971.6 level, it is accompanied by a decrease in the volume of trading amounting to 5.849 Trillion. This indicates that the Tax Amnesty passage of the capital markets has an impact on Indonesia.

Tax Amnesty is a form of announcement that contains information on the capital market which will cause the market to form a new balance. The new balance is formed from the stock market performance of the capital. Tandelilin (2010) stated that as a representation of the market reaction against an announcement (publication), and then surrounding the announcement there will be abnormal return (income not normal). The market will react positively which indicates that the presence of abnormal return is positive if the return ride and react negatively with indicated the presence of abnormal return negative if the return goes down. Other indicators that can be seen is a change in trading volume of the company at a time when the posting takes place. The market reaction, as indicated by the presence of changes in the trading volume activity (ATVA), show the existence of the actual against expected deviation of TVA (Suryawijaya & Setiawan, 1998). If the information (events) contains a positive signal, then it will be responded to positively by this variable. There will be a positive response, meaning that the ATVA markets respond favorably with the indicated volume of stock trading (stock liquid) when compared to the number of shares. This was recorded against the entire transaction market opportunities and vice versa.

The very high percentage of Muslims in Indonesia, which makes up 87.18% of the total population (BPS, 2010), leads to the need for halal or Sharia-compliant investment. Sharia-compliant stocks reflect the ownership or rights of a company that has been issued through the business activities. The method of processing also needs to be in accordance with the principles of Sharia. The investors have preferences when it comes to selecting investments in Sharia-compliant stocks listed on the Indonesian Islamic Stock Index (ISSI). ISSI is a constituent of all shares listed on the Indonesian Stock Exchange (IDX), entered into the list of Islamic Stocks published by OJK. Government formed Directorate of Sharia Capital Market; Financial Services Authority (OJK) to support in developing Islamic capital market. The development of Islamic stocks in Indonesia has been fast. In 2013, a total of 336 stocks increased to 414 stocks in 2018 (OJK, 2019). This indicates that
the number of companies whose performance is Sharia-compliant and where the investors have an interest in Islamic stocks is also increasing. Islamic stocks have low financial risk. The risks may also be charged to the shareholders as a result of the decision made on the use of debt as a source of funding (Brigham & Houston, 2015). Islamic stocks require a portion of the debt to be lower than the equity portion of the capital structure. Based on POJK No. 35/POJK.04/2017, registered companies should also have an interest-based debt ratio over total assets ≤ 45%, as well as a non-halal income compared to ≤ 10% revenue. In addition, investors can invest in stocks that have an appropriate Islamic value; investors will feel more secure if they are investing in Islamic stocks.

Research by (Lathifah, 2016) shows that the stock of the property and real estate sectors react in varying ways to the announcement of the tax amnesty. A positive reaction the day before the event indicates that the market is optimistic about the success of the tax amnesty in terms of enhancing the domestic business. In contrast, research by (Nadirsyah, Saputra, Djalil, & Damayanti, 2018) indicates that there is no difference in Abnormal Return and Trading Volume Activity in the company listed at LQ-45.

The researchers are interested in investigating the reaction of the stock market to the Tax Amnesty policy represented by Average Abnormal Return (AAR) and Trading Volume Activity (TVA) before and after the government policy endorsement of the shares registered in the Islamic Indonesian Stock Index (ISSI). This is because the tax amnesty policy indirectly forces the companies listed on the IDX to report any unpublished property, which relates to the growth of Islamic stocks in Indonesia where the majority of the population is Muslim. We have also looked into the inconsistencies in the results of the previous research.

**Literature Review**

**Tax Amnesty**

Tax amnesty is an exemption from the punishment or demands that are related to the obligatory contributions made by entities or persons who are forced by law. They do not get rewards directly and they instead are used for the purpose of the State for people's prosperity because do not make mistakes or errors (Siahaan, 2016).

In accordance with law No: 11/2016, the remission taxation applied in Indonesia aims to: 1) accelerate the growth and restructuring of the economy through the transfer of treasure, which among other things can affect the increase in domestic liquidity, the rupiah exchange rate improvements, interest rates decreased and raising investment and 2) push the tax reform into becoming a more equitable tax system. The expansion of taxation can make the data base more valid, comprehensive, and integrated. This is as well as improving the tax revenue, which will be used for the financing of development.

**Market Efficiency**

Efficient market forms are classified as follows (Fama, 1970):
1. **Efficient in the form of weakness (week form).** This points out that all of the information in the past (for example, price and volume of trading) will be reflected in the price. This means that investors cannot predict the stock market price at the upcoming time using the historical data, such as is done through the technical analysis.
2. **Efficient in form of half-strength (semi-strong);** this suggests that the stock prices are influenced by the data along with the stock price and trading volume. These are also influenced by the published information, such as dividends, the breakdown of shares (stock split), dividend stock (stock dividend), and earnings per share and so on.
3. **Efficient in the form of strong (strong form);** this indicates that all of the information, whether published or not published, is already reflected in the price of the securities today. In this market, there will not be any investors who can obtain optimal yields.

Each efficient market form is closely related to the extent of the absorption of the information
going into the market. This can be described in terms of the link between information and market efficiency.

**Event Study**

The focus on event studies refers to the impact of a company-specific event on the company’s securities price. Event studies can be utilized as a market efficiency test. The abnormal performance of the stocks is consistent with market efficiency. However, abnormal returns will only be achieved by the investors in the case of a predictable event (Brown & Warner, 1980). The methodology of Event Study using daily stock returns was developed by (Brown & Warner, 1985):

1. **Mean adjusted returns**
   
   If the market is efficient and returns stocks that vary randomly around the true value, then the average return of the security from the previous period can be used as a return expectation.

   \[ A_{(i,t)} = R_{(i,t)} - \bar{R}_t \]  

   Description:
   
   \( A_{(i,t)} \) = Excess Return for security \( i \) at day \( t \)
   
   \( R_{(i,t)} \) = Return for security \( i \) at day \( t \)
   
   \( \bar{R}_t \) = Average return of security in the estimation period

2. **Market-adjusted returns**

   Stand alone stock movements are often associated with market movements. One technique used to calculate an abnormal return eliminates the market's influence on the security daily return.

   \[ A_{(i,t)} = R_{(i,t)} - R_{m,t} \]  

   Description:
   
   \( A_{(i,t)} \) = Excess Return for security \( i \) at day \( t \)
   
   \( R_{(i,t)} \) = Return for security \( i \) at day \( t \)
   
   \( R_{m,t} \) = Market return

3. **OLS market model**

   This method uses ordinary least square to conduct a regression on the market-wide factors and systematic risk related to each sample in order to get the return of each security.

   \[ A_{(i,t)} = R_{(i,t)} - \hat{\alpha}_i - \hat{\beta}_i R_{m,t} \]  

   Description:
   
   \( \hat{\alpha}_i \) & \( \hat{\beta}_i \) = OLS values from estimation period

The objective of this event study was to investigate the market reaction to a published event (in this research, this is the announcement of the tax amnesty policy). The market reaction depends on the content of the information inherent in the event that is suspected to impact on the company’s cash flow in the future (Tan-delilin, 2010). Investors will react very quickly around the day of the announcement.

**Return**

Stocks have the known characteristics of high-risk and high-return, meaning that the shares constitute securities that provide high opportunities but also potentially high risks. Stocks allow investors to get a return or profit (capital gains) in large quantities in a short time. However, due to the fluctuation in the stock price, stocks can also make investors suffer heavy losses in a short period of time (Sute-di, 2009).

**Research Methods**

The event study method was used to test the reaction of the stock market to an event. This event study measures the direct influence of the event against the share price of the company at the time of the occurrence of the events focused on (Hartono, 2010). In this study, the observed event was one of the government's policies enacted in the tax sector, namely the announcement of a Tax Amnesty in Indonesia against the stock market reaction with the benchmarks of abnormal return and trading volume activity.

The observation (event window) using the 21 day exchange was divided into two parts, namely ten days (t-10) before the announcement and ten days (t+10) after the announcement, in addition to the t0 in terms of the time of day announcement of a Tax Amnesty. This research used a paired sample t-test (two different sample pairs).
**Sampling Method**

In the process of sampling, this research used the technique of purposive sampling that sought to determine the sample within certain considerations (Anshori & Iswati, 2017). Researchers have particular criteria in order to obtain a sample with appropriate and relevant results in the process of reaching the conclusion. The following is the sample process criteria used:

Hypotheses:
1. H0. A: There were no significant differences before and after the announcement of Tax Amnesty 2016 against AAR in the stocks listed on the ISSI.
2. H1. A: There are significant differences before and after the announcement of Tax Amnesty 2016 against AAR in the stocks listed on the ISSI.
3. H0. B: There were no significant differences before and after the announcement of Tax Amnesty 2016 against TVA in the stocks listed on the ISSI.
4. H1. B: There are significant differences before and after the announcement of Tax Amnesty 2016 against TVA in the stocks listed on the ISSI.

**Analysis Techniques**

To prove the hypothesis proposed that the Tax Amnesty announcement will affect the AAR and TVA, we have conducted an analysis based on the theories that support this research. The analysis techniques in this research are as follows: (Suteja & Gunardi, 2016; Tandelilin, 2010; Latan, 2014; Brown & Warner, 1985; Suryawijaya & Setiawan, 1998):

1. The period of observation (event window period) used in this study was 21 days over the stock exchange. The literature by (Tandelilin, 2010) provides case examples that show that the event window period was determined as many as 10 days before the announcement and 10 days after the announcement. There have been many studies that have used the same period (Hasib, Azasi, Laila, Hendratmi, & Sukmaningrum, 2017; Gursida & Indrayono, 2019; Huang, 2004).
2. Stocks allow investors to earn returns or capital gains. Investors, when calculating the actual return value (realized return), can obtain the information using the following formula:

\[
R_i = \frac{P_{i,t} - P_{i,t-1}}{P_{i,t-1}}
\]

Where:
- \( R_i \) = Return Securities i
- \( P_{i,t} \) = stock price at time t
- \( P_{i,t-1} \) = stock price at t-1 time

3. Market return or market income (\( R_{m,t} \)) is a reference used for determining the return expectations from the market adjustment on the model. The market return in this research used Indeks Harga Saham Gabungan (IHSG) via the following formula:

\[
R_{m,t} = \frac{IHSG_t - IHSG_{t-1}}{IHSG_{t-1}}
\]

4. The Average Abnormal Return (AAR) was obtained by conducting a test focused on the average abnormal return. In this research, we used the market adjusted return model (Equation 2). The formula for AAR is:

\[
AAR_{(t,d)} = \frac{1}{n} \sum_{i=1}^{n} A_{(i,t)}
\]

Where:
- \( AAR_{(t,d)} \) = Average Abnormal Return
- \( A_{(i,t)} \) = Abnormal Return of stock i in day t
- \( n \) = Number of securities

5. The Trading Volume Activity (TVA) calculation results reflect the comparison between the number of shares traded with the amount of shares circulating in a certain period

\[
TVA_{(i,t)} = \frac{\text{the number of shares of issuers listed in day } t}{\text{the number of shares of issuers that are recorded in ISSI on day } t}
\]
The test of normality is used to learn if whether the distribution of the sample is normal and if it is ready to be tested statistically using the Shapiro-Wilk W test.

7. Test of the hypothesis

Results and Discussions

Results

Normality Test

The test of normality used in this study was the Shapiro-Wilk normality test. If, after the test of normality proved that the data was normal, then it will be followed by testing it with a paired sample t-test. If the test results show that the data is not distributed, then the Wilcoxon test will be performed (Wilcoxon Signed Rank Test). If the calculation obtains a significance value $\geq 0.05$ then the data is normally distributed and if the test results obtained $\leq 0.05$, then the data is not normally distributed. Table 2 shows the Shapiro-Wilk normality test on the Average Abnormal Return.

From the results of the test of normality in Table 1, it shows that the Average Abnormal Return variable according to the test results exceeds the level of significance of 0.05. The probability of error in the period before and after the announcement amounted to 0.39082 and 0.26175.

From the results of the Shapiro-Wilk normality test in Table 2, it was recorded before the announcement of a Tax amnesty that there was normal distributed data with values above the 0.05 probability value of 0.12671. After the announcement of a Tax Amnesty, the distributed data did not have a normal probability value of 0.05, and it was less than 0.01185. This test of normality can be used to infer that the variable of Volume Trading Activity is not normally distributed.

Average Abnormal Return Test

Testing the paired sample t-test aims to prove the existence of a distinct average abnormal return before and after the event announcement. Table 4 shows the calculation of the paired sample t-test.

From the results of the Paired Sample T-test above, it can be seen that the value of the probability is $Pr (T > t) = 0.0365$. It can be
inferred that the probability values have a lower than 0.05 count which indicates that H0a is rejected and that H1a is accepted. From the test results, it can be concluded that there is a difference in the Average Abnormal Return before and after the announcement of a Tax Amnesty.

**Trading Volume Activity Test**

The purpose of the Wilcoxon Signed Rank Test is to see the difference before and after the announcement of a Tax Amnesty against the trading volume (Volume Trading Activity). The rank test (Wilcoxon) used as a test of normality in the previous section obtained a result that is not normal, so the test sample paired t-test could not be used and so we continued with the test ranking instead (Wilcoxon). The following data test results are from the Wilcoxon signed rank test focused on the trading volume of activity.

The result of the probability of the z value is 0.0001, which is less than 0.05. It can thus be inferred that the H0b rejected and H1b is accepted. The conclusion can be drawn that there are significant differences over the average transaction volume of stock trading activity (TVA) before and after the announcement.

**Discussion**

*Analysis of the Average Abnormal Return before and after the Announcement*

The test result statistics show that the difference in the Average Abnormal Return was significant before and after the announcement of the Tax Amnesty on capital markets was listed on the Indonesian Islamic stock index (ISSI). Figure 2 shows that at the time of the observation period of 10 days, before the date of the announcement of a Tax Amnesty, the average abnormal return was negative, i.e. registration-0.0009547. The decline was very drastic and this took place around the period prior to the event of the announcement of the Tax Amnesty. The period of t-2-0.00809 is accompanied by a decrease in the average abnormal return which is negative in the period t-10 and the t-periods of 3-0.00597 and-0.00542. The observation period of 10 days after the announcement of a Tax Amnesty average abnormal return showed a positive trend of 0.003707 with the highest positive increment in the period t 4 being 0.01380. This was accompanied by an increment in period t 2 and period t 6 of 0.01271 and 0.00760.

The reaction signifies that on average, in-
vestors respond positively to the Tax Amnesty policy. With the positive response in the capital market, it means that investors are confident of the policy taken by the government. The policy aims to force the taxpayer to disclose the property owned in the Annual Income Tax (SPT). This policy can be categorized as good information content because in the presence of this Tax Amnesty, it can increase the state revenue from the tax sector which can be used for the development of the country, especially in the field of economic development.

One of the indicators of a country's economy that is good can be seen from the country's capital market condition. If the country's capital market condition shows a positive trend, then certain conditions of the economy are also in good shape as well. These reactions indicate that investors respond favorably at the discretion of the Tax Amnesty. Investors are convinced that this policy is going in a good direction for the development of the economy which has an impact on the capital market.

**Analysis of the Trading Volume Activity before and after the announcement**

The results of the processing of the data, as well as the testing of this hypothesis, shows that there is a significant difference in the Average Trading Volume of Activity related to a Tax Amnesty.

Based on the graph above, it shows that there are changes in the volume of trading before and after the announcement of a Tax Amnesty where a decrease in the average of the lowest trading volume in the period before the announcement of a Tax Amnesty happened in period t-6 of 0.00186. The highest occurred after the announcement of a Tax Amnesty period t+2 of 0.00377. In period t-1, the average volume of trading in the stock experienced a rise of 0.00333 and the same happened the next day at exactly the same time as an announcement of a Tax Amnesty. The period (t0) from period t+1 of the average trading volume amounted to 0.00293 and 0.0024. Furthermore, in the period t+2, there was a rise in the average of the highest trading volume of 0.00377. Up to the 10 t period, this was accompanied by a decrease in the average trading volume. The observation period after the announcement of a Tax Amnesty saw an increase in the average trading volume with the highest range in the 21 days of observation occurring in the t+2 and t+3 periods. The significant difference in the average transaction volume of TVA before and after the announcement showed that investors had the perspective that the stock markets have good prospects with a focus on the future after the Tax Amnesty policy. The activity of buying and selling shares that resulted in a boost in the trading volume of the shares increased.

**Market Reaction of Tax Amnesty Announcement**

Investors analyze that there is information content in the announcement of a tax amnesty policy that has a positive value indicated by how the TVA and AAR increased after the announcement. The range of events that occur in relation to the Trading Volume of Activity and the Average Abnormal Return are in line with signaling theory which says that the information published can provide a signal to investors.
in terms of investment decision-making (Ross, 1977). The information was announced in advance, and so investors will digest and analyze the information that will be converted into either good news or bad news. If an announcement is considered to be good news, then the stock trading activities react by increasing their stock price and trading volumes.

In accordance with the theory of market efficiency, it is indicated that the market is in a state of half-strength (semi-strong) (Fama, 1970). The results of the research showed that the investors respond to the policy announcement. Stock prices are influenced by all of the published information. This announcement contains information that is reflected through the presence of changes in the stock trading volume and Average Abnormal Return.

The government has created a very good policy that supports improvement in the quality of corporate governance and company performance. Apart from increasing the revenue of the State, a tax amnesty can also improve the performance of the company. By reporting the company’s wealth in terms of property, it encourages the company to further optimize asset utilization in relation to enhancing company performance.

Companies are required to report all of the property owned by the company in order to support good corporate governance improvements in terms of transparency. Investors thus get to know the condition of the property owned by the company. The enforcement of the policy pushes every company to report any property that was previously unknown by investors. Companies automatically improve their corporate governance especially in terms of transparency.

**Conclusion**

The tax amnesty policy has a considerable influence related to both personal and corporate purposes by forcing them to report the entire property owned that is already recorded or that has not been recorded in the previous report. This policy will have an impact on tax reforms and improving the tax revenue of the State.

The findings of this study are very interesting. There is a strong difference in the Average Abnormal Return (AAR) and Trading Volume Activity (TVA) before and after the announcement of a Tax Amnesty on Sharia-compliant stocks listed on the Indonesian Islamic stock index (ISSI). Positive changes to AAR and TVA indicate that this announcement contains good information. This means that investors can react positively to the increase in activity in the stock market. This condition also pointed out that the market was in a condition of half-strength (semi-strong) efficiency, i.e. a share price change where there is information to be published.

Investors should always look into the content of the information on an occurrence such as domestic and global macroeconomic conditions or government policies. This way, investors can predict the impact of a policy against the company performance in the future. The government is expected to capitalize on the increased tax revenue optimally so then their economic growth can be increased. The government has created correct policies that the impact on the improved performance of the company. The government has helped to improve the quality of the corporate governance of the company in terms of transparency.

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