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## Market Reaction Analysis Before and After Ex-Dividend Date on Companies Listed in The Jakarta Islamic Index (JII) 2016-2020

# Adrian Dwi Nugraha

Faculty of Economics and Business, Riau University, Pekanbaru, Indonesia

#### Email: adriandwi.adn@gmail.com

**Abstract:** This study aims to examine the market reaction before and after the ex-dividend date and see whether there are differences in abnormal returns, trading volume activity, and security return variability before and after the ex-dividend date. The population in this study are companies listed in the Jakarta Islamic Index (JII) in 2016-2020 that consistently distribute dividends. The sample of this study amounted to 10 companies that consistently distribute dividends. The method used is the event study method with a window period of 10 days, five days before, and five days after. The analysis technique used is the Paired Sample T-Test and the Wilcoxon-Signed Ranked Test. The results show no differences in abnormal returns, trading volume activity, and security return variability before and after the ex-dividend date in the 2016-2020 Jakarta Islamic Index (JII). This result shows that investors do not consider dividend announcements in making investments.

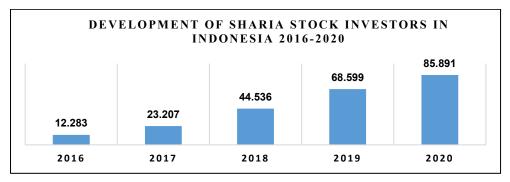
*Keywords:* Abnormal Return, Trading Volume Activity, Security Return Variability, Dividend Announcement.

### INTRODUCTION

The capital market is a place to trade financial instruments, such as stocks, bonds, mutual funds, derivative products, and other devices. According to Tandelin (2010), a capital market is a meeting between parties who have funds and those who need funds by trading securities. The party that needs funds is the company, and the party that has the funds is the investor.

The capital market in Indonesia is divided into two, namely, the conventional capital market and the Islamic capital market. Islamic capital market activities are not different from conventional capital markets. The type of business, goods, and services of sharia issuers must not contradict sharia principles, and the total interest-based debt compared to total assets cannot be more than 45%. Still, Islamic capital markets have

specific characteristics, namely products and transaction mechanisms, that must not contradict sharia principles.





The development of the Indonesian Islamic capital market every year experienced significant growth. Based on the chart above, it can be concluded that the number of Islamic investors in Indonesia is increasing every year. Indonesia is a country with the largest Muslim population in the world. Hence Indonesian Islamic capital market has good prospects for Muslim investors to invest in the future. One of the indexes of Islamic stocks in the Indonesian Capital Market is the Jakarta Islamic Index (JII). The Jakarta Islamic Index (JII) is the most liquid Islamic stock index on the Indonesia Stock Exchange.

Jakarta Islamic Index (JII) might increase investors' trust in making investments by sharia principles. Investors who invest their capital in shares expect to receive dividends or capital gains. Dividends are the proportion of profits or profits distributed to shareholders proportional to the number of shares they own. Meanwhile, a capital gain is a return that investors get from the difference between the selling value and the purchase value of the stock when the investor sells the stock.

Information is one of the critical factors for investors in the capital market to obtain a return on their investment. One of the information that reflects the internal condition of a company is the dividend announcement. The announcement of dividend payments is good news for investors that the company has good financial performance, influencing stock prices.

The theory that states that dividends affect investors is Signaling Theory. The signaling theory states that good quality companies will intentionally give signals to the market. Thus the market is expected to distinguish between good and bad quality companies (Jogiyanto, 2017). Investors use this information as a consideration for making decisions.

The theory to analyze information that can affect stock price reactions is the efficient market theory or Efficient Market Hypothesis (EMH). Fama (1970) defines an efficient market as a market whose security prices fully reflect available information. Fama (1970) categorizes three forms of market efficiency based on the available data's quality: a weak form of market efficiency, a semi-strong form of market efficiency, and the strong form of market efficiency. The announcement of dividend distribution is included in the semi-strong form of market efficiency, so an event study can be used to test it.

According to Jogiyanto (2017), event studies examine the market reaction to an event whose information is published as an announcement. This market reaction is indicated by changes in stock prices with the presence or absence of abnormal returns and stock trading volume. Abnormal returns are used because if an announcement contains information, it will give an abnormal return to the market. Conversely, if it does not have information, it does not provide any abnormal returns to the market.

Trading volume activity is the number of total shares traded by an issuer at a certain period. The higher the trading volume activity value of a stock, the easier the supplies can be sold since many more investors would be interested in purchasing the stocks. Trading volume activity is also an instrument to see the capital market's reaction to information through changes in stock trading volume parameters.

A measurement of security return variability can be used to eliminate the effects that may occur due to events that are informed as good news or bad news. In the calculation of security return variability, all values become positive. By using security return variability, it will be possible to see whether the market in aggregate assesses an event that contains information that results in changes in stock price movements around the time of dividend announcement.

Previous research that examines the market reaction to the dividend announcement shows different results. The results of a study by Ratnawati et al. (2009), Chaabouni (2017), Anwar et al. (2017), and Nurfadillah and Nuzula (2018) show that there is a significant difference in abnormal returns between before and after the ex-dividend date. On the other hand, other research by Miklus and Oplotnik (2016) and Abbas (2015) shows no significant abnormal return before and after the dividend announcement.

Other studies that show different results were conducted by Putra and Sujana (2014), Larasati and Nuraya (2018), and Juliana (2020). The development of the analysis shows that there is no significant difference between abnormal returns before

and after dividend announcements. As for the security return variability variable, there are differences in the research results by Ratnawati et al. (2009) with research by Tastaftiani and Khoiruddin (2015), which shows no significant difference in security return variability.

The increase in Sharia Stock Investors in Indonesia is one factor that drives the growth in value and volume of daily transactions in the Indonesian Islamic capital market. With the increase of transaction value in the sharia capital market, companies' stock prices included in sharia stocks would likely increase. In addition, stock prices can also be influenced by information on dividend distribution by the company. Based on the description above, there are still differences in research results related to the exdividend date, so this study aims to analyze the market reaction before and after the ex-dividend date on the Jakarta Islamic Index (JII) stocks listed on Indonesia Stock Exchange in 2016-2020.

#### LITERATURE REVIEW

#### Market Efficiency Theory

Market efficiency (efficient market) is a market where the prices of all traded securities reflect all available information (Tandelilin, 2010). Fama (1970) defines an efficient market as a market whose security prices fully reflect available information. The sooner new information is reflected in the deposit price, the more efficient the capital market will be. According to Fama (1970), there are three forms of market efficiency levels based on the level of absorption of information, namely:

1. Weak Form Market Efficiency (Week Form)

A market is considered efficient in the weak form if the prices of securities are fully reflected (fully reflect) past information.

2. Semi Strong Form Market Efficiency

A semi-strong form of efficient market occurs when the prices of securities fully reflect all publicly available information.

3. Strong Form Market Efficiency

An efficient market is potent when security prices reflect all available information, including private information.

#### Signaling Theory

This theory explains that the increase in dividends is in line with the rise in stock prices and vice versa. According to Miller and Modigliani in Brigham and Houston (2011) an increase in dividends will signal that the company's management predicts that the company's earnings will improve in the future. Gumanti (2009) explains the dividend signal model that the company provides dividends to signal positive company information from the manager (internal company), who believes that the information has advantage information to shareholders.

#### Event Study

Information content testing is intended to determine the reaction of an announcement. An event study is a study that analyzes the market reaction to an event whose information is published as an announcement. According to Jogiyanto (2017), event studies can test the content of a statement and can also be used to test semi-strong market efficiency.

#### Abnormal Return on Ex-Dividend Date

Based on signaling theory, the capital market will react to an event that contains good information (good news), which is marked by an increase in abnormal returns. On the contrary, if an event includes lousy information, it will impact decreasing abnormal returns. The results of Chaabouni's research (2017) show that statistically, there are significant differences in abnormal returns and cumulative abnormal returns from the market model after the announcement of dividends.

H1: There is a significant difference in abnormal returns before and after the exdividend date.

#### Trading Volume Activity on Ex-Dividend Date

Whether or not a dividend announcement impacts the stock can be seen from its trading volume, both before and after the dividend announcement event. Trading volume activity is a measuring tool that can be used as a measurement indicator to determine whether the dividend announcement affects the market reaction or not. According to signaling theory, if the market reacts to the dividend announcement, there will be an increase or decrease in trading volume activity around the dividend announcement. Saragih's research (2019) finds an impact of dividend announcements on trading volume activity, as indicated by the positive and significant value of average trading volume activity.

H2: There is a significant difference in trading volume activity before and after the ex-dividend date.

#### Security Return Variability on Ex-Dividend Date

Risk is often associated with variability or dispersion. If the return of an asset has no variability, then the purchase does not have risk. The more significant the variability of the return of an investment, the more likely it is that the return is different from the expected results (Tandelin, 2010). Security return variability is used to determine whether the market evaluates the informativeness of information that results in changes in stock returns. Utami et al. (2009). The research results by Ratnawati et al. (2009) show significant differences in security return variability before and after dividend announcements.

H3: There is a significant difference in the security return variability before and after the ex-dividend date.

#### METHOD

The data used in this research are daily closing price and trading volume activity. The data was used for ten days, consisting of 5 days before and five days after the ex-dividend date. The population in this study is companies included in the Jakarta Islamic Index (JII) listed on the Indonesia Stock Exchange (IDX) for the 2016-2020 period in 30 companies. The sample in this study amounted to 10 companies. The criteria for taking research samples using this purposive sampling method are as follows:

- 1. Companies consistently listed in the Jakarta Islamic Index (JII) in the 2016-2020 period.
- 2. The company consistently distributes dividends every year for the 2016-2020 period.
- 3. Companies that pay dividends two times a year will only be taken as one payment.

#### **Operational Definition Variable**

a. Abnormal Return

An abnormal return is the excess of the actual return compared to the expected return. The method used in this research is the market-adjusted model. In this model, the expected return is the market expectation return, with the following formula:

$$I_{i,t} = R_{i,t} - R_{m,t}$$

**AR**<sub>*i*,*t*</sub> = Abnormal Return of stock i at time t

 $R_{i.t}$  = Return of stock i at time t

 $E(R_{m,t}) = Expected return market at time t$ 

#### b. Trading Volume Activity

Trading Volume Activity or trading volume is the number of shares traded in a certain period. The following is the formula for calculating trading volume activity:

$$TVA = \frac{Number of shares of a company I sold at time t}{Number of shares outstanding at time t}$$

#### c. Security Return Variability

According to Husnan (2009), price reactions test and profit levels can be seen from the security return variability (SRV). The formula for security return variability can be calculated as follows:

$$SRV_{i,t} = \frac{AR_{i,t}^{2}}{V(AR_{i,t})}$$

 $SRV_{i,t} = Security Return Variability of stock i at time t$   $AR_{i,t} = Abnormal Return of stock i at time t$  $V(AR_{i,t}) = Varian Abnormal Return of stock i at time t$ 

#### Data Analysis Method

The data analysis method used in this study is descriptive statistical analysis, data normality test, and hypothesis testing using the Wilcoxon Signed Rank Test or Paired Sample T-Test. The normality test used in this study was the One-Sample Kolmogorov-Smirnov Test if the data has an Asymp. Sig (2-tailed) value smaller than the significance level of 0.05 (probability < 0.05), it can be determined that the data is not normally distributed, and the hypothesis is tested by using the Wilcoxon Signed Rank Test different test. Meanwhile, if Asymp. Sig (2-tailed) value is more than 0.05 (probability > 0.05), then the data is usually distributed, and then the Paired Sample T-Test is carried out differently (Kuncoro, 2003).

#### **RESULT AND DISCUSSION**

#### **Descriptive Statistic**

The results of descriptive statistics on abnormal return data, trading volume activity, and security return variability before and after the ex-dividend date:

Descriptive Statistics							
_	Ν	Minimum	Maximum	Mean	Std. Deviation		
AAR before	5	00276	.00120	0005120	.00179510		
AAR after	5	00827	.00354	0033220	.00433758		
ATVAbefore	5	.00160	.00202	.0017740	.00017799		
ATVAafter	5	.00153	.00197	.0016800	.00017059		
ASRVbefore	5	26.58100	2234.78300	486.5286000	977.56623785		
ASRVafter	5	17.58300	898.38100	236.2906000	374.90624375		
Valid N (listwise)	5						

 Table 1. Results of Descriptive Statistics

# Source: SPSS 26 (2021) Processed Data

Table 1 shows a decrease in the average (mean) abnormal return before and after the ex-dividend date. This result indicates a negative change to the abnormal

return after the ex-dividend date. In addition, the standard deviation value, which is greater than the average value, suggests that there is a deviation from the intermediate abnormal return variable.

The trading volume activity variable also shows a decrease in the average value (mean) of trading volume activity before and after the ex-dividend date. This result indicates an adverse change in trading volume activity after the ex-dividend date. In addition, the standard deviation value, which is greater than the average value, suggests that there is also a deviation from the intermediate trading volume activity variable.

The security return variability variable also shows a decrease in the mean value of security return variability before and after the ex-dividend date. This condition indicates an adverse change in security return variability after the ex-dividend date. In addition, the standard deviation value, which is greater than the average value, suggests that there is also a deviation from the intermediate security return variability variable.

#### **Data Normality Test**

Table 2. Normality Test Results Abnormal Return, Trading Volume Activity,Security Return Variability

		AAR	AAR	ATVA	ATVA	ASRV	ASRV
		Before	After	Before	After	Before	After
Ν		5	5	5	5	5	5
Normal	Mean	000512	003322	.001774	.001680	486.5286	236.2906
Parameters <sup>a</sup>						0	0
,b	Std.	.001795	.004337	.000178	.000170	977.5662	374.9062
	Deviation	1	6	0	6	4	4
Most	Absolute	.228	.241	.282	.300	.460	.368
Extreme	Positive	.182	.241	.282	.300	.460	.368
Differences	Negative	228	178	164	190	319	280
Test Statistic		.228	.241	.282	.300	.460	.368
Asymp. Sig. (2-tailed)		.200 <sup>c,d</sup>	.200 <sup>c,d</sup>	.200 <sup>c,d</sup>	.161°	.001°	.025°

One-Sample Kolmogorov-Smirnov Test

Source: SPSS 26 (2021) Processed Data

Based on the normality test in table 2 above, the Asymp. Sig (2-tailed) value on abnormal return data before and after the company's ex-dividend date Jakarta Islamic Index (JII) is more significant than 0.05, equal to 0.200. Therefore anomalous return data before and after the company's ex-dividend date Jakarta Islamic Index (JII) is usually distributed.

For trading volume activity data, the Asymp. Sig (2-tailed) value on trading volume activity data before and after the ex-dividend date of the Jakarta Islamic Index (JII) company is more significant than 0.05, namely 0.200 and 0.161, it can be said that

the data trading volume activity of the Jakarta Islamic Index (JII) company normally distributed.

As for the data security return variability, the Asymp, Sig (2-tailed) value on data security return variability before and after the ex-dividend date of Jakarta Islamic Index (JII) company that distributes dividends less than 0.05, that are 0.001 and 0.025, it can be said that the data security return variability of Jakarta Islamic Index company (JII) is not normally distributed.

# Hypothesis Testing 1

The results of testing hypothesis 1 can be seen in Table 3 below:

# Table 3. Paired Sample T-Test Results of Average Abnormal Returns Before andAfter Ex-dividend Date

		Paired Differences							
			1		95% Co	nfidence			
					Interva	l of the			
			Std.	Std. Error	Differ	rence			Sig. (2-
		Mean	Deviation	Mean	Lower	Upper	t	df	tailed)
Pair	AARBefore	.0028100	.0053989	.0024144	-	.0095136	1.164	4	.309
1	- AARAfter				.0038936				

Source: SPSS 26 (2021) Processed Data

Based on table 3 above, the results of testing the difference in average abnormal returns before and after the ex-dividend date of the Jakarta Islamic Index (JII) companies that distribute dividends statistically obtain the value of Sig. (2-tailed) of 0.309 or greater than 0.05 (0.309 > 0.05). Thus, H1 is rejected, and H0 is accepted. In other words, there is no significant difference in abnormal returns before and after the ex-dividend date of the Jakarta Islamic Index (JII)

# **Hypothesis Testing 2**

The results of testing hypothesis 2 can be seen in Table 4 below:

# Table 4. Paired Sample T-Test Results of Average Trading Volume Activity Beforeand After Ex-dividend Date

-		Paired Differences				-	-		
			Std.	Std. Error	Interva	nfidence Il of the rence			Sig. (2-
		Mean	Deviation	Mean	Lower	Upper	t	df	tailed)
Pair 1	ATVABefore - ATVAAfter	.0000940	.0000934	.0000418	- .0000220	.0002100	2.250	4	.088

### Source: SPSS 26 (2021) Processed Data

Table 4 above shows the results of testing the difference in average trading volume activity before and after the ex-dividend date of the Jakarta Islamic Index (JII). Companies that distribute dividends obtain the value of Sig. (2-tailed) of 0.088 or greater than 0.05 (0.088 > 0.05). Thus, H2 is rejected, and H0 is accepted, or there is no significant difference in trading volume activity before and after the ex-dividend date of the Jakarta Islamic Index (JII).

#### **Hypothesis Testing 3**

The results of testing hypothesis 3 can be seen in Table 5 below:

# Table 5. Wilcoxon Signed Rank Test Results of Average Security ReturnVariability Before and After Ex-dividend Date

	ASRVBefore - ASRVAfter
Z	135 <sup>b</sup>
Asymp. Sig. (2-tailed)	.893

Source: SPSS 26 (2021) Processed Data

Table 5 above shows testing the difference in average security return variability before and after the ex-dividend date of the Jakarta Islamic Index (JII) company statistically obtained the Asymp. Sig. (2-tailed) value of 0.839 or greater than 0.05 (0.839 > 0.05). Thus, it can be concluded that H3 is rejected and H0 is accepted. In other words, there is no significant difference in security return variability before and after the ex-dividend date of the Jakarta Islamic Index (JII) company.

#### Analysis of Abnormal Return Differences Before and After Ex-Dividend Date

Based on the study results, there is no significant difference in average abnormal return before and after the ex-dividend date of the Jakarta Islamic Index (JII) company. Since there is no significant difference in the average abnormal return before and after the ex-dividend date of the Jakarta Islamic Index (JII) company, the company's dividend announcement does not contain information (signal) about future profits. This condition also indicates that the Islamic capital market in Indonesia is efficient because, based on the efficient market theory, the semi-strong form of the capital market is said to be efficient when no investor can obtain abnormal returns from published information.

The results of this study do not support the signaling theory, which states that the announcement of dividends will give a positive signal that the company will have good performance in the future. In this study, investors do not take dividend announcement information as a positive signal so that there is no difference in abnormal returns around dividend announcements. In addition, investors in Indonesia tend to be traders who usually trade for short-term profits in the form of capital gains compared to earnings from dividend distribution. Since capital gains generate more and faster profits than a dividend distribution, thus causing no market reaction to dividend announcements. The results of this study support research conducted by Abbas (2015), Larasati and Nuraya (2018), and Juliana and Candraningrat (2020), which show that there is no difference in abnormal returns before and after the distribution of cash dividends.

# Analysis of Trading Volume Activity Differences Before and After Ex-Dividend Date

Based on the results obtained, there is no significant difference in average trading volume activity before and after the ex-dividend date of the Jakarta Islamic Index (JII) company. These results indicate that the market does not react to dividend announcements around the ex-dividend date. Based on the efficient market theory, the results of this study suggest that the Islamic capital market in Indonesia is not efficient because information such as dividend announcements cannot affect the trading volume of the company. Therefore, there is no difference in trading volume activity around the dividend announcement.

The strength between supply and demand can be seen in the stock's trading volume. If there is an increase in trading volume, the market reacts to the dividend announcement information. The results of this study do not support the signaling theory because, in this study, dividend announcements do not have signals or information content that might change stock trading volume activities around the dividend announcement. The results of this study are in line with the research of Putra and Sujana (2014), Yusrina and Sukmaningrum (2019), and Juliana and Candraningrat (2020). The results showed no difference in abnormal returns and trading volume activity before and after the distribution of cash dividends.

#### Analysis of Security Return Variability Before and After Ex-Dividend Date

Based on the research results, there is no significant difference in average security return variability before and after the ex-dividend date of the Jakarta Islamic Index (JII) company. Descriptive statistics also show a reasonably high decrease in the average security return variability before and after the ex-dividend date. This condition indicates that the decline was caused by investors responding negatively to dividend distribution announcements.

The absence of significant differences in security return variability before and after the ex-dividend date indicates that the dividend announcement has weak

information content. Investors do not perceive a strong enough signal due to the dividend announcement. Therefore, there is no significant difference in the variability of returns obtained by investors. The results of this study do not support the signaling theory because the dividend announcement information does not show any significant return variability obtained by investors around the dividend announcement. The results of this study are in line with the research of Tastaftiani and Khoiruddin (2015), which show that there is no significant difference in security return variability in the pre-after period.

#### CONCLUSION

Based on the results of data analysis and discussion in the previous chapter, it can be concluded that there is no significant difference in abnormal returns before and after the ex-dividend date of Jakarta Islamic Index (JII) companies that distribute dividends. This condition indicates that the Indonesian Islamic capital market is efficient so that investors do not receive abnormal returns from dividend announcement information. There is no significant difference in trading volume activity before and after the ex-dividend date of Jakarta Islamic Index (JII) companies. This condition indicates that the distribution of dividends is not considered a good signal (good news). Hence there are no changes in stock trading volume. There is no significant difference in security return variability before and after the ex-dividend date of the Jakarta Islamic Index (JII). It occurs because dividends are not considered a good signal (good news), so they do not affect the variability of stock returns.

Future research is expected to be able to use the Indonesian Sharia Stock Index (ISSI) to obtain a more extensive and comprehensive sample. It is hoped that they can research market reactions to other corporate actions in Indonesia for further research. The estimation model of the market-adjusted model is used to calculate the expected stock return. Future research is expected to use the mean adjusted or market models to calculate the expected return.

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