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Original Research Article

Analysis on Ex-Dividend Phenomenon before and During COVID-19 Pandemic in Indonesia (Study on Index IDX High Dividend 20)

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Abstract: This study aims to find the difference in stock price and trading volume around the ex-dividend date before and during the COVID-19 pandemic. We used event study methods with 100 days estimation period and 11 days event period. The stock price is observed through abnormal return, and trading volume is observed through trading volume activity. The research population is the companies listed on the index IDX High Dividend 20 in the year 2021, and samples are 20 companies on the index with 85 cash dividend events. Normality test used Kolmogorov-Smirnov test, while hypotheses test used Paired T-test and Wilcoxon signed-rank test. The study result shows a significant difference in stock price before, during, and after the ex-dividend date before the pandemic but not during the pandemic. The study also shows no significant difference in trading volume before, during, and after the ex-dividend date, whether before or during the pandemic.

Keywords: Ex-dividend, abnormal return, trading volume activity, COVID-19.

1. INTRODUCTION

Stock price reflects the investor's expectation on earnings, dividends, and interest that will happen. The result of that investor's estimation on those three things will result in the appropriate stock price. Likewise, trading activity is also one of the indicators that can be used to assess the stock's performance. Based on the Mixture of Distribution Model by Chen, Firth, and Rui, stock price and trading activity should have a positive relationship that changes as new information comes out (Darmawan, 2018).

One of the information that can influence prices and the number of shares movement is a corporate action, such as right issue, distribution of bonus stock, stock split, and dividend distribution (Nuraya & Larasati, 2018). The stock market will react to the presence of corporate action information shown on the trading volume, stock prices changes, and the difference in the company's profit (Mahala *et al*., 2015). One of the corporate actions that are pretty important to be known by the investor is a dividend, which distributes the company's profit to stockholders based on the stock they owned (Andini *et al.*, 2017). There are various theories regarding market reaction to the distribution of a company's dividend. Nuraya and Larasati (2018) explained that based on signaling theory, dividend distribution could influence investors because it contains signal information regarding the company's prospects and profit in the future. Based on the agency cost model, a dividend is a tool to monitor management behavior and minimize agency costs arising from the potential of conflict of interest between shareholders and management (Hitten, 2016). distribution of cash dividends has various essential dates, namely cum-dividend date, ex-dividend date, recording date, and payment date. The ex-dividend date is when investors who purchase shares of companies that distribute dividends on that day are no longer entitled to receive dividends (Tandelilin, 2017).

The volume of stock trading activity and abnormal return can be used to see investors' reactions to information, such as dividend information on particular dates. Campbell and Beranek (1955) disclose the assumption that the stock price has decreased on the ex-dividend date by the amount of the dividends distributed. Both conducted researches to prove this assumption and found that the average share price that fell on the ex-dividend date was around 90 percent of the dividends distributed when the stock market was relatively stable. The decline in share prices generally occurs because, after the ex-dividend date, most investors take profit-taking from the difference between the stock price and the dividends they get. The investors usually hold their shares until the cum-dividend date

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(one day before the ex-dividend date) and sell the shares on the ex-dividend date (Istahargyo & Wirakusuma, 2019). Sih et al. (2019) research shows no difference in abnormal return and trading volume activity on the ex-dividend date. Still, differences in trading volume activity on the cum-dividend date are found.

The Indonesia Stock Exchange has various stock indices. The stock index is a statistical measure that reflects the price movement of a group of stocks as a whole. The stocks are selected based on specific criteria and will be evaluated periodically. One of the stock indexes owned by the Indonesia Stock Exchange is IDX High Dividend 20, which was launched on May 17, 2018. This index measures the stock price performance of 20 companies that have distributed cash dividends for the last three years and have high dividend yields. This index will be attractive to investors, especially those who expect high profits from high dividend yields. This index has also just been launched, so it is interesting to observe, especially the effect of dividend distribution events due to high yields that can trigger investors to make investment decisions. This index has also been used in research conducted by Nurfadillah and Nuzula (2019). Both consider that this index can represent the market reaction to cash dividend distribution events in the Indonesian stock market. They researched companies included in the IDX High Dividend 20 index in 2018. They found significant differences in abnormal returns before and after the ex-dividend date, which means the ex-dividend date impacts abnormal returns.

Changes in stock prices and stock trading activities also always occur before economic changes, which shows a strong relationship between stock prices and macroeconomic performance (Tandelilin, 2017). The performance of the capital market will react to macroeconomic changes, where the state of a country also influences macroeconomic conditions. As is well known, at the end of 2019, the COVID-19 virus was found in Wuhan, China. The virus has a high and fast rate of spread where the WHO (World Health Organization) has declared COVID-19 as a global health emergency (Saraswati, 2020). The COVID pandemic has had a massive impact on various sectors around the world, as well as on stock markets in different parts of the world, which experienced a drastic decline in stock prices, such as most shares in Vietnam (Anh & Gan, 2020), the S&P 500 Index which fell 34%. In the United States (Capelle-Blancard & Desroziers, 2020) and in Indonesia itself where the JCI experienced a decline of 26.43% (Saraswati, 2020). Even so, the JCI and trading volume gradually increased, especially in September, which is shown in the following figure:

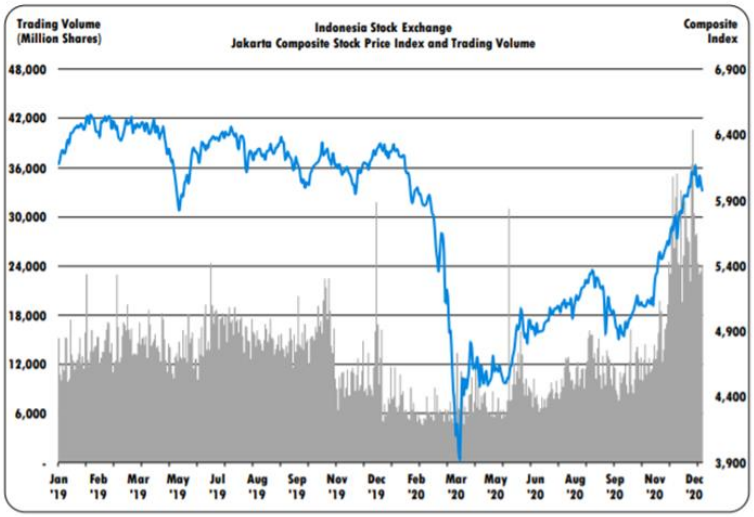

Figure 1: Graph of JCI Stock Price and Trading Volume year 2019 – 2020
(Source: IDX Statistics 2020)

In contrast to the decline in the JCI caused by the COVID-19 pandemic, the number of capital market investors experienced a high increase. Based on the investor demographic released by The Indonesia Central Securities Depository, the capital market investors increased by 56.21% in 2020, the highest growth compared to previous years. The increasing number of investors and the JCI is a gap phenomenon in this study. Even though the economic conditions are not stable during the pandemic, the stock investment activities are actually getting better with a significant increase in capital market investors.

2. LITERATURE REVIEW

Various research on this matter has been done after Campbell and Beranek researched in 1955. In line with the study conducted by Campbell and Beranek, Ngoc and Cuong (2016) found that dividend distribution announcements positively affect the announcement date, and there is an increase in stock

prices to approach the ex-dividend date and then decrease since the ex-dividend date. This research supports the dividend relevance theory where dividend policy affects firm value, which can help financial managers to determine the optimal dividend policy that will improve company performance. Agarwal (2020) and Tinashe (2015) also found that the ex-dividend date affects price changes. They found an upward trend in prices before the ex-dividend date followed by a decrease in stock prices after the ex-dividend, where the percentage decline in stock prices on the ex-dividend date. Ex-dividend date on average 90 percent of the dividends distributed. Isaksson and Islam (2013), who researched the stock market in several countries, found abnormal returns and short-term trading around ex-dividends on the Tokyo Stock Exchange and the London Stock Exchange but did not find the same thing on the New York Stock Exchange and the Shanghai Stock Exchange. In line with the findings of Isaksson and Islam (2013) on the New York Stock Exchange and Shanghai Stock Exchange, Nuraya and Larasati (2018) state that there is no significant difference in abnormal returns before and after dividend disclosures and ex-dividend dates. Octaviani *et al*., (2019), who examined stock returns before and after the ex-dividend date in the Property, Real Estate, and Construction industries, found no significant difference between the average stock returns before and after the ex-dividend date.

Research on dividend distribution conducted outside Indonesia is generally related to taxes on dividend receipts or other dividend theories. A previous study found that in the tax-free stock market, there were abnormal returns on ex-dividend days (Dupuis, 2019), and there was a decrease in the average share price by the number of dividends distributed (Kreidl, 2020). Meanwhile, there is no difference in returns on the ex-dividend date in markets that apply the same tax rate between dividends and capital gains (García Blandón *et al*., 2011). The research conducted by Chen *et al*., (2013) found that differential tax is an essential factor that affects stock prices and investor behavior around the ex-dividend day. The investors with a high tax bracket sell shares on the cum-dividend day and then buy shares on the ex-dividend day. In contrast, investors with low tax brackets trade the other way around. Research conducted in the BRIC zone (Brazil, Russia, India, China) to examine the phenomenon of ex-dividend days against various theories, found that in this zone, the phenomenon of ex-dividend days supports the dividend-capturing theory and disposition effect theory (Cherkasova & Petrukhin, 2017).

Several studies do not only focus on abnormal returns, but these studies also test the volume of stock trading activity that can be used to see investors' reactions in responding to information. Tamara *et al*., (2020) researched stock prices and trading volumes on ex-dividend days at pharmaceutical companies in various countries revealed no abnormal trading volume on the ex-dividend date or the previous day. In contrast to this research, Istahargyo and Wirakusuma (2019), who researched companies in the LQ45 index in 2017, found a significant difference between stock trading volumes before and after the ex-dividend date. Chen *et al*., (2013) also found that there was excess transaction volume around ex-dividend days.

The economic condition is highly affected by the current pandemic, which affects the performance of the capital market worldwide but shows an interesting fact that there is a very significant increase in capital market investors. Eugster et al. (2020) researched the western European market during COVID-19. They found that the pattern of stock returns on ex-dividend dates during the pandemic had doubled compared to previous years, and changes in stock prices mainly were caused by dividend-seeking investors. As the pandemic happened in 2019 and is still going on, the literature on the market reaction to ex-dividend date events is still minimal and much needed. This paper intended to contribute to the literature on the market reaction on ex-dividend date during the COVID-19 pandemic and find whether the evidence from Western Europe will also be found in Indonesia.

3. METHODOLOGY

This study was conducted to examine the impact of the ex-dividend date event during the pandemic in 2020 and before the pandemic in 2018 and 2019 on stock prices and stock trading volume on stocks listed on the Indonesia Stock Exchange that distributed dividends during these events. The research object is companies listed on the IDX High Dividend 20 index 2021, which are observed before and after the ex-dividend date before and during the pandemic. The period after the ex-dividend during the pandemic as an independent variable and stock prices observed through abnormal returns and stock trading volume observed through trading volume activity as the dependent variable.

The population is companies included in the IDX High Dividend 20 index in 2021. The sample is companies in the index that distribute dividends before and during the pandemic. The sample selection was carried out by the purposive sampling method; a sampling technique carried out based on the characteristics of the data adapted to the purpose or research problem (Saleh, 2017). The sampling criteria is the company has to be listed on the Indonesia Stock Exchange in the IDX High Dividend 20 index 2021, distributed cash dividends in a row from 2018 to 2020 and did not announce any other corporate actions during the estimation and event period. The checking results found that the samples to be studied were 19 companies with 23 interim dividend distribution events and 57 final dividend distribution events. Before starting the research, the stock price and trading volume data used are re-examined whether there are other corporate

actions around the estimation period and the event period.

The re-examination results found that the date of the corporate action other than the distribution of dividends by the sample companies did not occur on days in the estimation period and the event period. The number of final samples studied became 20 companies with 25 interim dividend distribution events and 60 cash dividend distribution events.

The research conducted is an event study undertaken to examine the impact of an event with an estimated time of 100 days. The observation period used is 11 days, namely five days before the ex-dividend date, the ex-dividend date before the pandemic, five days after the ex-dividend date for each period before and during the pandemic. The data used is secondary data obtained through the official website of the Indonesia Stock Exchange, The Indonesian Central Securities Depository, and investing.com. Based on the previous literature, The normality test of the data was carried out using the Kolmogorov-Smirnov test. The data with normal distribution was then tested using paired sample t-test. Wilcoxon signed-rank test will be used if the data is not normally distributed.

Abnormal returns were calculated using the Market Model using the following formula (Nuraya & Larasati, 2018):

$$AR_{i,t} = R_{it} - E(R_{it}) \quad \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots \quad (1)$$

Where ARi,t = Abnormal return of securities i during day t; Rit = Actual return of securities i during day t; E(Rit)= Expected return of securities i during day t.

To calculate the abnormal return, it is necessary first to know the actual return along with the expected return. The following formula calculates the actual return:

$$Rit = \frac{P_{it-}P_{it-1}}{P_{it-1}} \quad \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots \quad (2)$$

Where R_{it} = Stock return of securities i during day t; P_{it} = Stock price of securities i during day t; P_{it-1} = Stock price of securities i during day t – 1.

To be able to calculate the expected return, it is necessary first to obtain market return information which can be known by using the following calculations:

$$Rmt = \frac{IHSG_t - IHSG_{t-1}}{IHSG_{t-1}} \quad \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots \quad (3)$$

Where R_{mt} = market return during day t; $IHSG_t$ = JCI during day t; $IHSG_{t-1}$ = JCI during day t – 1.

After knowing the market return, then the expected return can be calculated using the following formula:

$$E(R_{it}) = \alpha i + \beta i\, R_{mt} \quad \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots \quad (4)$$

Where $E(R_{it})$ = Expected return of securities i during day t; αi = alfa of securities i; βi = beta estimation of securities i; R_{mt} = market return during day t.

After these calculations are made and abnormal returns are obtained for each security, it is necessary to calculate the average abnormal return, which can be calculated using the following formula:

$$AAR_t = \frac{1}{n}\sum_{t=1}^{n} 1\ \frac{AR_{it}}{n} \quad \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots \quad (5)$$

Where AAR_t = Average abnormal return on day t; AR_{it} = Abnormal return of securities i during day t.

The stock trading volume is measured by Trading Volume Activity (TVA), which is calculated using the following formula (Istahargyo & Wirakusuma, 2019):

$$TVA = \frac{Number\ of\ shares\ traded}{Outstanding\ shares} \quad \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots \quad (6)$$

4. RESULT AND DISCUSSION

The period before the pandemic uses 2018 and 2019 data and the combined data for both years and the pandemic period using 2020 data. Each observation year is grouped into three groups: before the ex-dividend date, the ex-dividend date, and after. Against this group of data, a normality test was carried out using the Kolmogorov-Smirnov test to determine the normality of the data distribution. The results of the normality test can be seen in the summary table of test results in table 1 below:

Table 1: Result of Normality Test

Description	Abnormal Return		Trading Volume Activity	
	Sig.	Distribution	Sig.	Distribution
Before Pandemic				
2018				
Before ex-date	0.190	Normal	<0.001	Abnormal
Ex-date	0.110	Normal	<0.001	Abnormal
After Ex-date	0.200	Normal	<0.001	Abnormal
2019				
Before ex-date	0.044	Abnormal	0.200	Normal
Ex-date	0.007	Abnormal	<0.001	Abnormal

After Ex-date	0.200	Normal	0.008	Abnormal
During Pandemic				
2020				
Before ex-date	0.200	Normal	<0.001	Abnormal
Ex-date	0.200	Normal	<0.001	Abnormal
After Ex-date	0.200	Normal	<0.001	Abnormal

Source: Author's test result

The table shows abnormal return data for 2018 and 2020 are distributed normally, while data for 2019 and the combined data are not distributed normally. Results for TVA data shows that the data for all observation year are not distributed normally. The observation period with all normally distributed data will be tested for hypotheses using the paired sample t-test. The hypothesis will be tested using the Wilcoxon signed-rank test for the observation period whose data are not normally distributed. Hypothesis testing for each observation period is divided into two test pairs: before the ex-dividend date with the ex-dividend date and the ex-dividend date after the ex-dividend date.

Hypothesis testing for the stock price variable was carried out with two tests: the 2018 and 2020 data tested using the paired sample t-test, while the 2019 data and the combined data for the pre-pandemic period were tested using the Wilcoxon signed-rank test. The results of the paired sample t-test tests can be seen in the following table:

Table 2: Result of Paired Sample T-test

Description	**t_{test}**	**t_{table} (0,05)**	**Sig. (2-sided)**	**Result**
Before Pandemic				
2018				
Before and after ex-date	3.710	2.056	<0.001	Significantly different
Ex-date and after	-3.097	2.056	0.005	Significantly different
During Pandemic				
2020				
Before and after ex-date	5.309	2.045	<0.01	Significantly different
Ex-date and after	-0.745	2.045	0.462	No significant difference

Source: Author's test result

Table 2 shows the results of the paired sample t-test for normally distributed data. For 2018 data, the test results for the first and second pairs show a significance value of <0.001 and 0.005; both are smaller than 0.05 (<0.05). The two testing pairs also show the significance value of the t-test > t-table, which can be concluded that there is a significant difference in stock prices before, during, and after the ex-dividend date in 2018. For 2020 data, the first test pair shows t-test 5.309 > t-table 2.045 and significance value <0.01, which is smaller than 0.05 (<0.05). The second test pair shows t-test 0.745 < t-table 2.045 and a significance value of 0.462, which is more significant than 0.05, so it can be concluded that there is a significant difference in stock price before and after the ex-dividend date, but not after the ex-dividend date.

Table 3: Result of Wilcoxon Signed Rank Test for Abnormal Return

Description	**Asymp. Sig. (2-tailed)**	**Result**
2019		
Before and after the ex-date	<0.001	Significantly different
Ex-date and after	0.003	Significantly different
Combination if 2018 & 2019		
Before and after the ex-date	<0.001	Significantly different
Ex-date and after	<0.001	Significantly different

Source: Author's calculation

Table 3 shows the Wilcoxon Signed Rank Test results for abnormal return data that is not distributed normally. The 2019 data result for the two test pairs shows significance values of <0.001 and 0.003; both are smaller than 0.05 (<0.05), which concluded that there is a significant difference in stock prices before, during,

and after the ex-dividend date in 2019. For the 2018 and 2019 combined data, the results of hypothesis testing for both test pairs show a significance value of <0.001 for both test pairs, where the value is less than 0.05 (<0.05).

The results of statistical testing on abnormal returns in this study accept hypothesis H1, which states that there are significant differences in stock prices before, during, and after the ex-date before the pandemic. The test results align with research conducted by Nurfadillah & Nuzula (2019), which found significant differences in abnormal returns before and after the ex-date. The dividend distribution announcement made by the company is proven to have information content so that it is responded to by the market and produces abnormal returns (Hartono, 2018). The results of statistical tests on abnormal returns during the pandemic show a significant difference in stock prices before and during the ex-date, but not after the ex-date, which rejects the H2 hypothesis. The test results are partially in line with the research of García Blandón *et al*., (2011), Nuraya & Larasati (2018), and Octaviani *et al*., (2019), which states that there is no significant difference in abnormal returns before, during, and after the ex-date.

The normality test that has been carried out shows that the data for TVA in all years of observation have abnormal distribution. The hypothesis test carried out for all years of observation is the Wilcoxon signed-rank test. The summary of test results can be seen in the following table:

Table 4: Result of Wilcoxon Signed Rank Test for TVA

Description	Asymp. Sig. (2-tailed)	Result
Before Pandemic		
2018		
Before and after the ex-date	0.810	No significant difference
Ex-date and after	0.501	No significant difference
2019		
Before and after the ex-date	0.755	No significant difference
Ex-date and after	0.673	No significant difference
Combination if 2018 & 2019		
Before and after the ex-date	0.837	No significant difference
Ex-date and after	0.804	No significant difference
During Pandemic		
2020		
Before and after the ex-date	0.530	No significant difference
Ex-date and after	0.349	No significant difference

Source: Author's test result

Table 4 shows a summary of the results of hypothesis testing for the stock trading volume. The significance value for all years of observation, both before and during the pandemic, is more significant than 0.05 (>0.05). These results reject both the H3 and H4 hypotheses, meaning that there is no significant difference in stock trading volume before, during, and after the ex-date before and during the pandemic. The results of this test are in line with research conducted by Sih *et al*., (2019) and Tamara *et al*., (2020), who found no difference in trading volume activity around the ex-date.

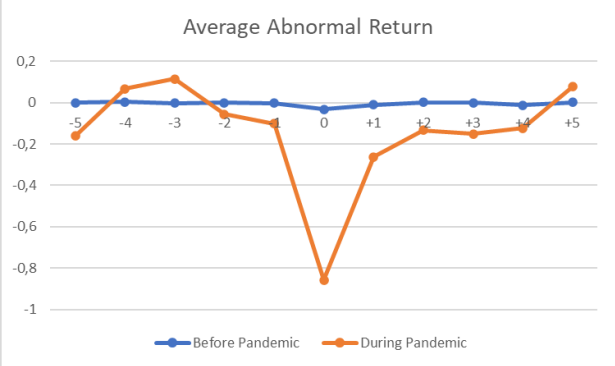

Figure 2: Average Abnormal Return Before and During Pandemic
Source: data processed by the Author

Figure 2 shows that the lowest average abnormal return (AAR) occurred on the ex-date, either before or during the pandemic. It is in line with research by Campbell & Beranek (1955), which proves the assumption that stock prices decline on the ex-date. Figure 2 also shows that either before or during the

pandemic, there was no upward trend in prices until the cum-date and then a decline starting from the ex-date. This study contrasts with Eugster *et al*., (2020), which examined price patterns around the ex-date during COVID-19. His research found that the pattern of stock returns on ex-dates doubled compared to previous years. Contrary to his research, this study found AAR gradually decreased on the cum-date to the ex-date, then rose again after the ex-date, both before and during the pandemic. Although there is a significant difference in stock prices around the ex-date, the yield on the ex-date is negative, in line with research by Tamara *et al*., (2020). Compared with stock trading activities shown in Figure 3 below, before the pandemic, TVA gradually increased from the second day before the ex-date until it reached the highest TVA on the ex-date. When observed together, on the first day before the ex-date (cum-date), AAR decreased compared to the previous day, but TVA increased, so investors were likely to release their shares on that day. On the ex-date, the high volume was most likely due to investors selling their shares so that the AAR decreased.

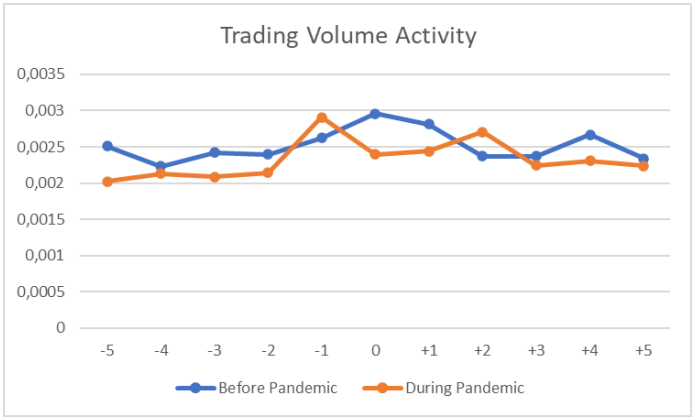

Figure 3: Trading Volume Activity Before and During Pandemic
Source: data processed by the Author

Figure 3 shows that many of the average abnormal returns are negative in the pre-pandemic period and during the pandemic, indicating that investors' actual returns are smaller than expected. Positive or negative abnormal returns indicate the direction of the market reaction to events. A negative abnormal return means an event containing bad news (Hartono, 2018), which can be seen in the following table; in 2019, several companies whose dividend nominal fell, including INDF, WSBP, and TOWR. The nominal dividend in 2020 also decreased, including CPIN, ITMG, WSBP, and UNVR.

Table 5: Dividend distributed on the observation period

Code	2018		2019		2020	
	Interim	Final	Interim	Final	Interim	Final
ADRO		65.39	33.99	56.16	65.48	44.13
ASII	60.00	130.00	57.00	154.13	27.00	157.00
BBCA	85.00	175.00	100.00	255.00	98.00	455.00
BBNI		255.56		201.29		206.24
BBRI		106.75		132.17		168.20
BMRI		199.03		241.22		353.34
CPIN		56.00		118.00		81.00
DMAS		6.50	21.00	21.00	25.00	21.00
HMSP		107.30		117.20		119.80
INDF	65.00	237.00		171.00		278.00
INTP		700.00		550.00	225.00	500.00
ITMG	1,420.00	1,840.00	705.00	2,045.00	307.00	570.00
KLBF		25.00		26.00	6.00	20.00
WSBP		30.60		22.50		8.22
PGAS		31.61		56.99		41.56
PTBA		318.52		339.63		326.46
TLKM		167.66		163.82		154.07
TOWR	6.00	87.61	6.00	17.52	6.00	17.86
UNTR	365.00	611.00	408.00	828.00	171.00	805.00
UNVR	410.00	505.00	430.00	775.00	87.00	107.00

Notes: in IDR (Indonesia Rupiah)
Source: The Indonesia Central Securities Depository, processed by the Author

As seen in Figure 3, what happened during the pandemic contrasted with before, where the highest TVA occurred on the cum-date. The high TVA coupled with a decrease in abnormal returns means that most investors who make transactions sell the company's shares that distribute the dividends. The absence of a significant effect of dividend distribution on stock trading volume shows that dividend distribution events always carried out by companies on the IDX High Dividend 20 index every year are not very attractive for investors to invest. Although it looks volatile on the graph, the transactions made around the ex-date are not excessive to not cause abnormal trading volume. When associated with dividend theory, it supports the dividend irrelevance theory, which states that dividend policy does not affect the stock market. The result of the statistic test for the pandemic period which shows that there is a significant difference in stock prices before and during the ex-date, but not after the ex-date shows that this study also supports the clientele effect, where investors have a preference to avoid dividend distributions because the dividend distribution is carried out annually with a high nominal value. It causes investors to release their shares more quickly to save taxes, which shows that this study also supports the tax effect theory.

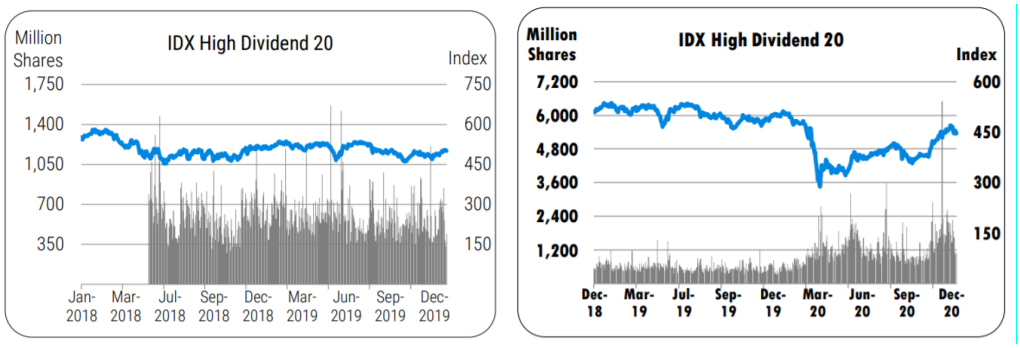

Figure 4: IDX High Dividend 20 Index Performance from issued date until 2020
Source: IDX Statistics 2019 and 2020

The results, which show significant differences in stock prices before, during, and after the ex-date before the pandemic but not during the pandemic, indicate that the COVID-19 pandemic impacts the stock market. The COVID-19 pandemic has affected various industries, where the property industry sector experienced the highest decline, where the index decreased by 33.32% (Saraswati, 2020). Figure 4 shows the performance of the IDX High Dividend 20 index before and during the pandemic, where during the pandemic, it decreased as happened in the IDX Composite. The decline in index performance can make investors more careful in investing. Investors prefer to invest in companies in specific industries that are considered to have good performance during the pandemic, such as the consumer goods, telecommunications, and health industries (Tambunan, 2020), or in blue-chip companies than taking advantage of dividends. It shows on the statistic test results on stock prices, where during the pandemic, the difference of the stock process only happens before the ex-date, but not the after. The investor prefers to take profit from the abnormal return that happens before the ex-date and sell their stocks before the ex-date to evade the dividend distribution which is why it is no significant difference in stock price after the ex-date.

The increasing number of COVID-19 cases and activity restrictions have resulted in unstable economic conditions, which investors see as a high risk in investing. The research results of the Danareksa Research Institute (2020) show that the COVID-19 pandemic affected the level of income, where 54.20% of respondents experienced a decrease in income, which resulted in their investment activities. Among the respondents who experienced a decrease in income, 66.06% did not invest during the pandemic. It causes changes in people's behavior in determining investment instruments and avoiding high liquidity risk, which means people prefer investment instruments that are easy to liquidate (Media Indonesia, 2020), such as gold, savings, or time deposits, compared to investing in the stock market. In addition, the pandemic also impacts most industries which will most likely affect the decline in company profits, which will undoubtedly affect investors' decisions to invest in the stock market.

Danareksa Research Institute research also shows that 32.14% of people with decreased income, 40,74% people with regular income, and 82.14% people with increased income choose to invest long-term rather than take short-term profits obtained from dividend distribution events. It means that dividend announcements do not affect their investment decisions and prefer to invest in companies with good fundamentals and have good, long, and stable business continuity. The significant increase in capital market investors in 2020 means that there will be many novice investors during the pandemic. Research by Ganiarto *et al*., (2021) about novice investors to look at their investment behavior before and during the COVID-19 pandemic found that the harmful impact of the pandemic on the performance of various industries such

as tourism and transportation influenced novice investors to delay investing in stocks.

This study shows that the dividend distribution event does not generate a significant difference in stock trading volume around the ex-date for both before and during the pandemic. The significant difference in the stock price around the ex-date was found before the pandemic, but not during the pandemic which is only found before the ex-date. Taking this study to note, the company's management may deliberate more on the announcement and ex-date on the dividend distribution event so the signals sent can be well responded to by the investors. The change in investment behavior and the investor preferences on the low dividend yield during the pandemic can be used by the management to reduce their dividend distribution and use their profit on the operation or investment.

6. CONCLUSION AND SUGGESTION

This study found a significant difference in the stock price before, during, and after the ex-date before the pandemic, which during the pandemic, the significant difference only found before the ex-date. The test results also show no significant difference in stock trading volume before, during, and after the ex-date, either before or during the pandemic. No significant difference found in stock trading volume accompanied by gradually decreasing average abnormal return on the cum-date to the ex-date, as well as an increase in trading volume activity on the cum-date shows that research supports the dividend irrelevance theory, which states that dividend policy does not affect the stock market. The study also supports the clientele effect theory and the tax effect theory. Many investors avoid dividends, so they sell their shares on the cum-date to avoid dividends to save taxes. During the pandemic, investors change their investment behavior and prefer to invest in instruments with low liquidity risk.

For investors who expect profits from dividend distribution events, especially during a pandemic, taking profits from dividend distribution events is more challenging because there is no significant price difference. The returns obtained may not match the expected return, so they might need to change their investment strategy. This study result may not reflect the market reaction in the Indonesian market as a whole since this research is limited only to the IDX High Dividend 20 index, but it can show a glimpse of the market reaction is specific to the dividend distribution event.

This study only observed the ex-dividend phenomenon on IDX High Dividend 20 index, so it possibly does not fully reflect the condition in Indonesia. We also limit the event to ex-date and did not group the dividend event based on the increase and decrease of dividend amount.

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