

## THE IMPACT OF COVID-19 PANDEMIC TO PALM OIL COMPANIES STOCK IN INDONESIA

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**Abstract:** The purpose of this study was to analyze the differences in the average abnormal return, the average trading volume of activity, and the average bid-ask spread on the stock of oil palm companies in Indonesia before and after the announcement of New Normal in Indonesia and the opening of lockdown in the country export destination. In this study, three countries were taken by the Netherlands, Malaysia, and Singapore. 13 companies sampled in this study are determined using purposive sampling techniques. The data used in this study are secondary data accessed by researchers through the Yahoo Finance website and the Indonesia Stock Exchange. The variables used in this study are abnormal returns, trading volume activities, and bid-ask spreads. The testing carried out in this study used a paired t-test and tested Wilcoxon test. The results of this study indicate: (1) The results of statistical testing on the average abnormal return during the event, there is a difference in the normal new event in Indonesia, the opening of lockdown in the Netherlands and Singapore. The average value of the abnormal return is positive, so it can be concluded that this event is categorized as good news. (2) The results of statistical testing on the average trading volume activity during the event show a difference in the opening of the lockdown in Malaysia. (3) The results of testing at the average bid-ask spread during the event show a difference in the opening of the lockdown in Malaysia.

**Keywords:** Covid-19, palm oil, abnormal return, trading volume activity, bid-ask spread

**Abstrak:** Tujuan dari penelitian ini adalah untuk menganalisis perbedaan pada rata-rata abnormal return, rata-rata trading volume activity, dan rata-rata bid-ask spread pada saham perusahaan kelapa sawit di Indonesia sebelum dan sesudah pengumuman new normal di Indonesia dan pembukaan lockdown di negara tujuan ekspor. Dalam penelitian ini diambil 3 negara yaitu Belanda, Malaysia dan Singapura. 13 perusahaan yang menjadi sampel dalam penelitian ini, sampel ditentukan dengan menggunakan teknik purposive sampling. Data yang digunakan dalam penelitian ini adalah data sekunder yang diakses oleh peneliti melalui website Yahoo Finance dan Bursa Efek Indonesia. Variabel yang digunakan dalam penelitian ini adalah abnormal return, aktivitas volume perdagangan dan bid-ask spread. Pengujian yang dilakukan dalam penelitian ini menggunakan uji t berpasangan dan uji bertanda Wilcoxon. Hasil dari penelitian ini menunjukkan : (1) hasil pengujian statistik pada rata-rata abnormal return selama peristiwa, terdapat perbedaan pada peristiwa new normal di Indonesia, pembukaan lockdown di Belanda dan Singapura. Nilai rata-rata dari abnormal return adalah positif sehingga dapat disimpulkan bahwa event ini dikategorikan berita baik. (2) hasil pengujian statistik pada rata-rata trading volume activity selama peristiwa, terdapat perbedaan pada pembukaan lockdown di Malaysia. (3) hasil pengujian pada rata-rata bid-ask spread selama peristiwa, terdapat perbedaan pada pembukaan lockdown di Malaysia.

**Kata kunci:** Covid-19, kelapa sawit, abnormal return, trading volume activity, bid-ask spread

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## INTRODUCTION

The palm oil industry in Indonesia has a major impact on the national economy. This can be seen from the number of palm oil exports in Indonesia which has reached 30.3 million tons in 2019 (Direktorat Jenderal Perkebunan, 2021). The development of oil palm plantations can be used as an effort by local governments to generate foreign exchange and job opportunities that have implications for people's welfare (Pahan et al., 2011). In addition, oil palm can increase the household income of smallholders because it is a commodity that has several uses (Suroso and Ramadhan, 2014). The Indonesian government is committed to developing the industry through strategic programs such as expanding oil palm land and downstream development (Nasution & Rachmat, 2016). This is done in order to create a much larger income in the future.

Stocks as one of the instruments traded in the capital market carry considerable risk. In other words, this instrument is an instrument that is vulnerable to external and internal conditions of the company (Yuliyanti, 2014). Capital market activities have a stock price index that contains information about the movement of economic activity that is up or down. The stock price index measures the performance of the capital market or an imaginary portfolio to see changes in the price of a market to determine its performance (Widodo et al. 2020). Investors in the capital market must understand the full range of economic and non-economic events that can disrupt the stability of stock price fluctuations and have repercussions for the national economy.

The volatility of stock prices and the total shares traded are important factors that determine the sustainability of the company's business. The company's condition is not only seen from the total income it earns but can also be seen from its share price (Nurmasari, 2020). An important factor that determines business continuity is the fluctuations in the company's stock price that occur on the stock exchange. Stock price fluctuations are influenced by several factors such as the large number of shares requested or offered, information or news that occurs on the stock exchange, the condition or situation of the company and the country's economy, as well as current issues that occur in a country (Bodie, Kane and Marcus, 2014). The Covid-19 pandemic as a condition that attacks various economic sectors in the country will more or less affect stock prices, considering the current

conditions can certainly be considered less favorable for companies and investors.

Nowadays, the capital market is getting more and more attention from investors, potential investors, issuers, and researchers in the financial sector. This is because the capital market is increasingly playing a role in supporting a country's economy. The capital market is a means of meeting those who need funds with those who have funds where the funds are needed to fulfill or finance the company's operational activities. In addition, a capital market is a place for stock trading where investors carry out stock trading activities to obtain profits in the form of returns.

The high total shares traded are also an indicator that the company has a good performance. The higher the number of shares traded indicates that investors have high confidence in transacting shares in the company. High total shares traded will move stock prices (Sumiyana, 2007). The higher the number of shares traded on the stock market, it indicates that investors believe in the company's performance, and the end, the stock price will increase (Indarti and Purba, 2011). The current Covid-19 pandemic has made the economic movement sluggish, which resulted in a decline in people's income. This does not rule out the possibility that investors will be more selective in choosing a company as a place to invest, which will reduce the number of shares of the company traded.

The bid-ask spread is also an instrument that can be used to see the market reaction. The bid-ask spread is a parameter of the difference or difference between the highest price asked to buy, and the lowest price offered to sell. The bid-ask spread is often used to measure the liquidity of a stock. Stocks that are actively traded tend to have lower bid-ask spreads than stocks that are not actively traded. Thus, if the bid-ask spread is smaller than before, it will be more likely to reach the transaction price, so the shares will be easier to trade. The smaller the bid-ask spread, the more

Today's challenge, which is felt by many, especially the economic sector, is the 2019 Coronavirus disease (Covid-19) pandemic which has hit the whole world, including Indonesia. The first case in the world occurred in Wuhan in 2019 until March 2, 2020, the first case in Indonesia had occurred with two victims, and on August 31, 174,796 cases had passed (Worldometer,

2020). The pandemic hampers the mobility and activity of humans as a whole because, in principle, humans are carriers of the virus (Kraemer et al., 2020). The spread of the Covid-19

The virus was so fast that it was detected in 188 countries affected by the pandemic. The incident became one of the problems in Indonesia, especially in the economic field in terms of trade, investment, and tourism (Hanoatubun, 2020).

Figure 1 showed a sharp decline when the first case of Covid-19 occurred in Indonesia. JCI has reached 6300 at the end of 2019 but at the beginning of the trading period, the JCI tended to fall at 4539 in March 2020. This is because stock investors obtain related information from certain events and create an overreaction in the market (Fama, 1998; Al-Khazali and Mirzaei, 2017). Limited mobility due to Covid-19 has resulted in the economy not running optimally, affecting the company's financial performance (Atkeson, 2020). Therefore, investors then behave to get their initial investment capital back by selling their shares. So how is the condition of strategic industries in Indonesia, especially oil palm plantations, due to the impact of Covid-19 that occurred in 2020?

Investors need investors' information available in the market to determine their investment decisions. The market reacts quickly and accurately to reach a new equilibrium price that reflects the available information fully. Hence this market condition is called an efficient market. The information used to assess an efficient

market is information published as a study to study the market reaction to an event or an event study (Hartono, 2017). Information content testing is intended to see the reaction of an announcement. This reaction can be measured using return as the value of price changes using abnormal returns (Hartono, 2017). However, investors also judge from the information on the level of stock liquidity. Stock liquidity can be seen from the stock's trading volume measured by trading volume activity. The level of stock liquidity can also be seen from the difference between the lowest selling price (ask price) and the highest purchase price (bid price) or the bid-ask price. The bid-ask spread can be used to see the market reaction to an event by looking at the size of the bid-ask spread. The smaller the bid-ask spread, the more liquid the stock is (Husnan, 2005).

So this research wants to find the difference of abnormal return, trading volume activity, and bid ask-spread Indonesia palm oil companies stock before and after new normal in Indonesia and the opening of lockdown at the export destination country. in the era of the covid-19 pandemic. The novelty of this research is that it was studied in the era of the covid-19 pandemic.

## METHODS

This research was conducted on palm oil companies listed on the Indonesia Stock Exchange for three years. Using secondary data, the event window period is 15 days before the announcement or t-15 and 15 days after the announcement or t+15.

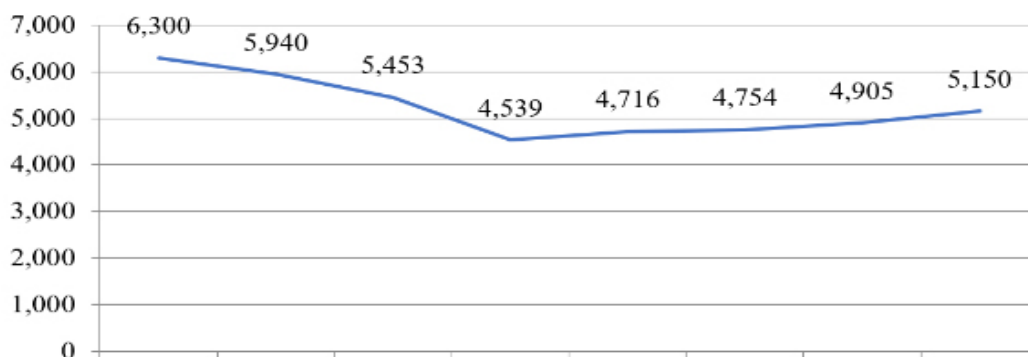


Figure 1. Composite Stock Price Index (JCI) on the Indonesia Stock Exchange December 2019 - July 2020 (Yahoo Finance, 2020)

According to Hartono (2017), there is no benchmark for the length of the estimation period. The window period is also chosen so that the observations made are not too long and not too short. This prevents the Confounding Effect from occurring so that the research is not biased (Hartono, 2017). This window period was also chosen because several previous studies also used a window period of 15 days before and 15 days after. The population in this study is 19 palm oil companies that go public in Indonesia, whose information is obtained from the Indonesia Stock Exchange website (Figure 2).

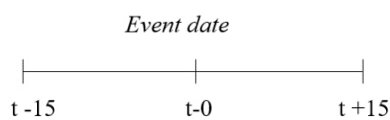


Figure 2. Event date and event window

The sampling technique in this study was taken using the purposive sampling method. The purposive sampling method is a sampling technique with certain considerations (Sugiyono, 2016). In this study, the criteria for the sample data to be used are as follows:

- a) Is a company listed on the Indonesia Stock Exchange for at least three years
- b) Have daily stock price and JCI data information for each sample company during observation.
- c) Have stock price data information that is not stagnant
- d) Have data information on the number of daily shares traded for each sample company during observation.

- e) Have data information on the number of outstanding shares for each sample company during observation.

The following details of the sampling procedure with purposive sampling are presented according to predetermined criteria, which can be seen in Table 1.

A total of 13 companies were eliminated because they did not meet the criteria specified in this study. The following is a list of palm oil companies that have met the criteria as a sample of 13 companies.

The date used in this study refers to the date of the event in Indonesia and the destination country for Indonesian palm oil exports. The following dates are used in this study (Table 2).

This research is an event study research (Table 3). An event study (event study) is a study that studies the market reaction to an event (event) whose information is published as an announcement. Event studies can be used to test the information content of an announcement and can also be used to test the efficiency of the semi-strong form of the market (Hartono, 2017).

The events tested in this study are announcements or policies related to Covid-19 carried out by Indonesia and export destination countries. Information from this announcement will be tested whether there are differences in abnormal returns, trading volume activity, and stock bid-ask spreads before and after. The following table presents variable definitions used in this study (Table 4).

Table 1. Sampling details

Sample Selection Criteria	Amount
Oil palm plantation issuers	19
Issuers Have Non-Stagnant Information	(3)
Issuer less than 3 years	(3)
Issuers that meet the criteria	13

Table 2. Sample list of oil palm plantation companies in Indonesia

Event	Date	Source
Announcement of new normal in Indonesia	1 June 2020	(Idris, 2020)
Announcement of the opening of the lockdown in Netherlands	1 June 2020	(Tifada and Mahabarata, 2020)
Announcement of the opening of the lockdown in Malaysia	10 June 2020	(Dea, 2020)
Announcement of the opening of the lockdown in Singapore	1 June 2020	(Ericssen and Iswara, 2020)

Table 3. Event date

Issuer Name & Stock code	IPO
Astra Agro Lestari Tbk. (AALI)	09 December 1997
Austindo Nusantara Jaya Tbk. (ANJT)	10 May 2013
Eagle High Plantation Tbk. (BWPT)	27 October 2009
Dharma Satya Nusantara Tbk. (DSNG)	14 June 2013
Jaya Agra Wattie Tbk. (JAWA)	30 May 2011
PP London Sumatera Indonesia Tbk. (LSIP)	5 July 1996
Provident Agro Tbk. (PALM)	18 October 2012
Sampoerna Agro Tbk. (SGRO)	18 June 2007
Salim Ivomas Pratama Tbk. (SIMP)	9 June 2011
Sinar Mas Agro Resources and Technology Tbk. (SMAR)	20 November 1992
Sawit Sumbermas Sarana Tbk. (SSMS)	12 December 2013
Tunas Baru Lampung Tbk. (TBLA)	14 February 2000
Bakrie Sumatera Plantation Tbk (UNSP)	6 March 1990

Table 4. Operation definition of each variable and indicator

Variable	Definition	Scale Measurement Formula	Source
Abnormal Return	The difference between expected return and actual return.	$ART_{i,t} = A(R_{i,t}) - E(R_{i,t})$	(Hartono, 2017)
Trading Volume Activity	The number of company shares traded divided by the number of shares outstanding.	$\Sigma \text{ company share traded} / \Sigma \text{ outstanding company shares}$	(Hartono, 2017)
Bid-ask Spread	The Bid-Ask Spread is the difference between the bid price for a security and the ask (or bid) price.	$BAS = \text{Aski},t / [(\text{Aski},t + \text{Bidi},t)]$	(Febrianti, 2018)

This type of research is a quantitative research with the determination of research results through the hypothesis proposed by the researcher. The data analysis technique in this study uses the Microsoft Office Excel 2019 application and Statistical Product and Service Solution (SPSS) 26. The data analysis technique used to analyze abnormal returns, trading volume activity, and bid-ask spread around the announcement. Descriptive statistics are statistics used to analyze data by describing the data that has been collected as it is without the intention of making conclusions (Sugiyono, 2016). Descriptive statistical tests in this study are used to provide an overview or descriptive of data seen from the average value (mean), median, standard deviation, maximum value regarding abnormal return movements, trading volume activity and bid-ask spreads during the study period. To detect the normality of the data in this study, the Kolmogorov-Smirnov test was used. This test aims to determine whether the sample used in this

study is normally distributed or not. If the analysis uses the parametric method, the normality requirements must be met, namely the data comes from a normal distribution. If the data is not normally distributed, then the method used is non-parametric statistics. Difference test (parametric test : Paired Sample T-Test and non-parametric test : Wilcoxon Signed Test).

The hypothesis (Table 5) is a temporary answer to the research problem formulation, where the research problem formulation has been stated in the form of a statement sentence (Sugiyono, 2016). To understand the effect of covid-19 on abnormal returns, trading volume activity and bid-ask spread in palm oil companies listed on the Indonesia Stock Exchange based on the literature review above, the following are the effects of covid-19 on the variables in this study. Research framework in Figure 3.



Table 5. Research hypothesis

No	Hypothesis
H1	There are differences in abnormal returns of palm oil companies' shares before and after the announcement of the new normal in Indonesia
H2	There are differences in the abnormal returns of palm oil companies' shares before and after the announcement of the opening of the lockdown in the Netherlands
H3	There are differences in the abnormal returns of palm oil companies' shares before and after the announcement of the opening of the lockdown in Malaysia
H4	There are differences in the abnormal returns of palm oil companies' shares before and after the announcement of the lockdown opening in Singapore
H5	There are differences in trading volume activity of palm oil companies' shares before and after the announcement of the new normal in Indonesia
H6	There is a difference in trading volume activity of palm oil companies' shares before and after the announcement of the opening of the lockdown in the Netherlands
H7	There is a difference in trading volume activity of palm oil companies' shares before and after the announcement of the opening of the lockdown in Malaysia
H8	There is a difference in trading volume activity of palm oil companies' shares before and after the announcement of the opening of the lockdown in Singapore
H9	There is a difference in the bid-ask spread of palm oil companies' shares before and after the announcement of the new normal in Indonesia
H10	There is a difference in the bid-ask spread of palm oil companies' shares before and after the announcement of the opening of the lockdown in the Netherlands
H11	There is a difference in the bid-ask spread of palm oil companies' shares before and after the announcement of the opening of the lockdown in Malaysia
H12	There is a difference in the bid-ask spread of palm oil companies' shares before and after the announcement of the opening of the lockdown in Singapore

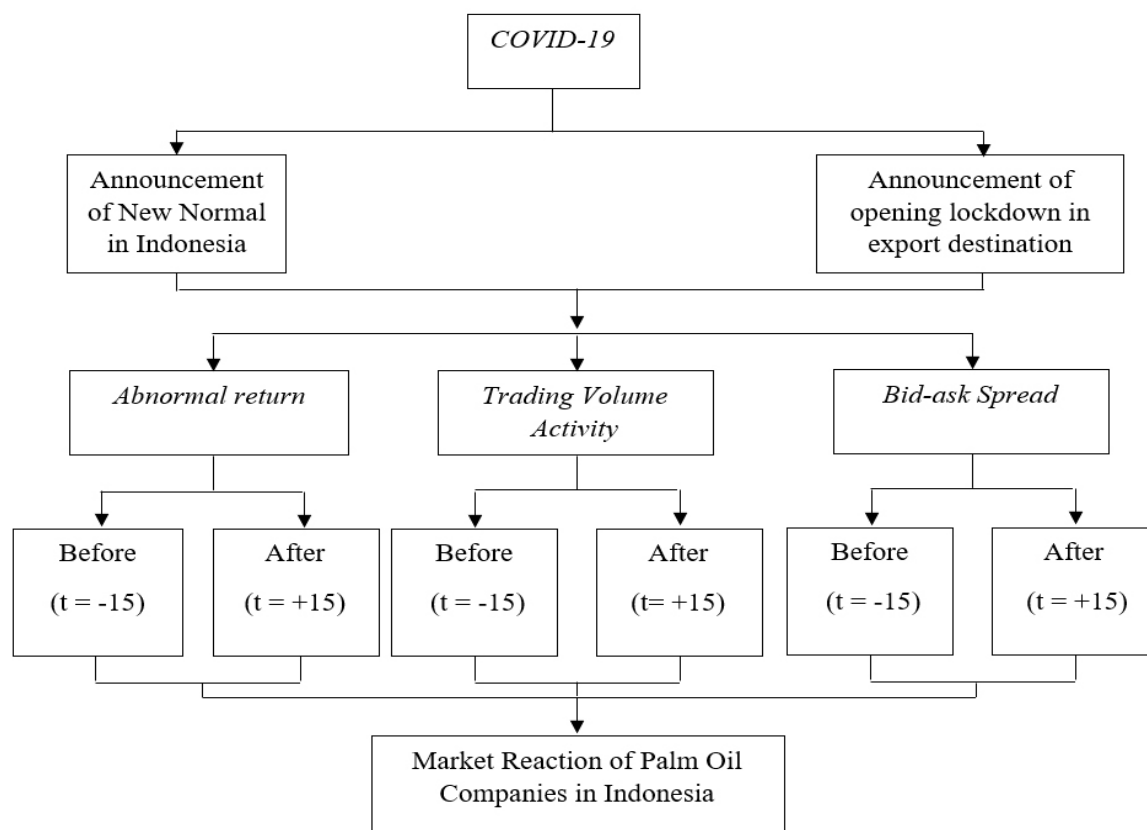


Figure 3. Research framework

## RESULTS

Descriptive statistics are carried out to provide and find out a description or description of the variables studied. The output of the descriptive statistics table shows the minimum, maximum, average, and standard deviation of the abnormal return variable as seen from

the Average Abnormal return (AAR) (Table 6), Trading Volume Activity (Table 7) and Bid-ask Spread (Table 8) before and after the Covid-19 incident. The average value is used to determine the fluctuation of a variable being tested. The maximum and minimum data show a normal range of data to avoid bias in the results of the study.

Table 6. Descriptive statistics Average Abnormal Return (AAR) announcement of new normal and opening of lockdown

Event	N	Range	Minimum	Maximum	Mean	Standard Deviation
AAR Indonesia Before	13	0.02	-0.01	0.01	-0,0019	0.00653
AAR Indonesia After	13	0.02	0.00	0.02	0.0083	0.00750
AAR Netherlands Before	13	0.02	-0.01	0.01	-0.0019	0.00653
AAR Netherlands After	13	0.02	0.00	0.02	0.0083	0.00750
AAR Malaysia Before	13	0.03	-0.02	0.02	0.0011	0.00834
AAR Malaysia After	13	0.01	0.00	0.01	0.0047	0.00373
AAR Singapura Before	13	0.02	-0.01	0.01	-0.0019	0.00653
AAR Singapura After	13	0.02	0.00	0.02	0.0047	0.00750

Table 7. Descriptive statistics Trading Volume Activity (TVA) announcement of new normal and opening of lockdown

Event	N	Range	Minimum	Maximum	Mean	Standard Deviation
TVA Indonesia Before	13	0.00	0.00	0.00	0.0006	0.00096
TVA Indonesia After	13	0.01	0.00	0.01	0.0010	0.00168
TVA Netherlands Before	13	0.00	0.00	0.00	0.0006	0.00096
TVA Netherlands After	13	0.01	0.00	0.01	0.0010	0.00168
TVA Malaysia Before	13	0.01	0.00	0.01	0.0008	0.00168
TVA Malaysia After	13	0.01	0.00	0.01	0.0008	0.00157
TVA Singapura Before	13	0.00	0.00	0.00	0.0006	0.00096
TVA Singapura After	13	0.01	0.00	0.01	0.0010	0.00168

Table 8. Descriptive statistics of Bid-ask Spread (BAS) announcement of new normal and opening lockdown

Event	N	Range	Minimum	Maximum	Mean	Standard Deviation
BAS Indonesia Before	13	0.33	0.00	0.33	0.0789	0.11382
BAS Indonesia After	13	0.03	0.01	0.04	0.0259	0.00995
BAS Netherlands Before	13	0.33	0.00	0.33	0.0789	0.11382
BAS Netherlands After	13	0.03	0.01	0.04	0.0259	0.00995
BAS Malaysia Before	13	0.34	0.00	0.34	0.0884	0.11850
BAS Malaysia After	13	0.03	0.01	0.04	0.0209	0.00917
BAS Singapura Before	13	0.33	0.00	0.33	0.0789	0.11382
BAS Singapura After	13	0.03	0.01	0.04	0.0259	0.00995

Then processed descriptive statistical data for the average abnormal return, trading volume activity and bid-ask spread on the 13 companies that were used as samples. Before testing the hypothesis using a different test, the normality test of the data used was first carried out, namely Kolmogorov-Smirnov and Shapiro-Wilk. The data in the study must be tested first whether the data is normally distributed or not. The data is normally distributed if the p-value obtained at 0.05 significance is greater ( $p > 0.05$ ). While the data is not normally distributed if  $p < 0.05$ . If the data is normally distributed, the parametric statistical test used is Paired Sample T-Test. In contrast, if the data is not normally distributed, the test used is a non-parametric statistic, namely the Wilcoxon Signed Rank Test. The following are the results of the normality test in this study (Table 9).

Then the analysis is continued at the hypothesis testing stage, where the results of the normality test are normal and abnormal data, therefore there will be parametric and non-parametric analysis testing. Testing the 1st, 2nd, and 4th hypotheses shows (Table 10) a difference before and after announcing the new normal in Indonesia and opening the lockdown in the Netherlands and Singapore on the same date. There

is a difference after the opening of the lockdown in the Netherlands because the Netherlands is the main market for Indonesian CPO and RPO exports (Tandra et al., 2021). The value of the average abnormal return is positive after the announcement. It can be concluded that this announcement is good news. This research does not align with Muthaharia and Yunita (2021), which stated no difference in abnormal returns before and after the new normal in Indonesia.

Testing the 3rd hypothesis is no different before and after the announcement of the opening of the lockdown in Malaysia. This can happen because the information has not affected the market, or the market reacts slowly and prolonged to absorb the information. This result is also in line with Lailatul's research, where the incidence of lockdown in Malaysia has no significant results (Fauziah and Venusita, 2021).

In testing the 5th, 6th, and 8th hypotheses (Table 11), namely the announcement of the new normal in Indonesia and the opening of the lockdown in the Netherlands and Singapore, there are differences in trading volume activity. An increase in the average trading volume activity occurred after the announcement.

Table 9. Normality Test

No	Result	Data Analysis
H1	Normal	Paired Sample T-Test
H2	Normal	Paired Sample T-Test
H3	Normal	Paired Sample T-Test
H4	Normal	Paired Sample T-Test
H5	Abnormal	Wilcoxon Sign Test
H6	Abnormal	Wilcoxon Sign Test
H7	Abnormal	Wilcoxon Sign Test
H8	Abnormal	Wilcoxon Sign Test
H9	Abnormal	Wilcoxon Sign Test
H10	Abnormal	Wilcoxon Sign Test
H11	Abnormal	Wilcoxon Sign Test
H12	Abnormal	Wilcoxon Sign Test

Table 10. Hypothesis testing abnormal returns announcement of Indonesia's new normal and the opening of lockdowns in export destination countries

Event	Sig	Result
Announcement of New Normal in Indonesia	0.003	There is a difference
Announcement of the Opening of Lock Down in the Netherlands	0.003	There is a difference
Announcement of the Opening of Lock Down in Malaysia	0.185	There is no difference
Announcement of the Opening of Lock Down in Singapore	0.003	There is a difference



Testing the 7th hypothesis, namely the announcement opening of the lockdown in Malaysia, there is no difference before and after the announcement. Investors' reaction to the announcement related to covid-19 can be said that investors are waiting and watching every incident related to covid-19. Covid-19 is a non-economic event, but it is very important to pay attention to it because it directly becomes a consideration to influence decisions in investing and conducting transactions in the capital market (Susanti et al., 2021).

Hypothesis testing 9th, 10th, and 12th occurred on the same date, namely the new normal event in Indonesia and the opening of the lockdown in the Netherlands and Singapore. There is no difference in BAS before and after the event (Table 12).

11th Hypothesis there is a difference in the bid-ask spread in the event of the announcement opening lockdown in Malaysia. This happens because when the lockdown is opened, palm oil companies' operations in Malaysia begin to run again. Malaysia is one of the palm oil industry countries that compete with Indonesia. This affects the liquidity of palm oil companies in Indonesia, especially the company's ability to meet short-term debt through company activities. Therefore the difference in the bid-ask spread is based on the start of competition from these two countries.

This result is reinforced in Kamala and Fajar (2020) stating that there are differences before and after the

announcement of COVID-19 where this incident increased interest and demand for shares, thus making the shares liquid.

### Managerial Implications

Investors must increase their search for information to be able to trade stocks so that the return that is the goal for investors can be realized. Not rushing to sell is also important for investors and wiser decisions. For stock exchange authorities, it is necessary to supervise the stock exchange activities, especially when economic and non-economic events occur, so that trade can occur orderly, fair, and efficient. Policies to protect investors can be issued by the government to increase investor confidence to have an increasing impact on trading volume activity.

## CONCLUSIONS AND RECOMMENDATIONS

### Conclusions

This study examines whether there are differences in abnormal stock returns, trading volume activity, and bid-ask spreads of palm oil companies' shares in Indonesia before and after the Covid-19 incident in Indonesia and the destination countries for Indonesian palm oil exports. The difference is seen from the average abnormal return, the average trading volume activity, and the average bid-ask spread. Tests using paired t-test and Wilcoxon signed-rank test for hypothesis testing.

Table 11. Hypothesis trading volume activity announcement of Indonesia's new normal and the opening of lockdowns in export destination countries

Event	Z	Sig	Result
Announcement of New Normal in Indonesia	-2.481	0.013	There is a difference
Announcement of the Opening of Lock Down in the Netherlands	-2.481	0.013	There is a difference
Announcement of the Opening of Lock Down in Malaysia	-0.734	0.463	There is no difference
Announcement of the Opening of Lock Down in Singapore	-2.481	0.013	There is a difference

Table 12. Hypothesis bid-ask spread announcement of Indonesia's new normal and the opening of lockdowns in export destination countries

Event	Z	Sig	Result
Announcement of New Normal in Indonesia	-1.223	0.221	There is no difference
Announcement of the Opening of Lock Down in the Netherlands	-1.223	0.221	There is no difference
Announcement of the Opening of Lock Down in Malaysia	-1.992	0.046	There is a difference
Announcement of the Opening of Lock Down in Singapore	-1.223	0.221	There is no difference

The results of the study found that not all Covid-19 events made a difference to the variables studied the events that made a difference in this study were the events of the announcement of New normal Indonesia and the opening of the lockdown in the Netherlands and Singapore, which gave differences in abnormal returns and trading volume activity. The announcement of the opening of the lockdown in Malaysia made a difference in the bid-ask spread.

## Recommendations

Future research requires further observations related to COVID-19 events because these events are still ongoing today.

For investors, themselves, the shares of palm oil companies are one of the stocks that are resistant to the covid event where there are many found that there are no differences before and after the Indonesian new normal event and the opening of the Dutch and Singapore lockdowns.

For companies, it is better to adjust to changes in investor transactions related to trading activities where there are many differences in trading volume activity before and after Covid-19.

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