Dwi Fitrizal Salim¹, Landung Tri Sugiarto² and Deannes Isynuwardhana³

Abstract

This study tries to analyze the differences in abnormal returns of IDX Energy sector in Indonesia during the Covid-19 Pandemic and after. This study examines the significance of the announcement of the revocation of the Covid-19 Pandemic status in Indonesia by the government on abnormal stock returns using event study techniques and market adjusted models. The results of the analysis found that there was an increase in the abnormal return of issuers in the energy sector after the government announced the end of the Covid-19 status in Indonesia. This research is important for investors and practitioners in the field of financial management and portfolio investment, especially in reading carefully the influence of information that appears especially during difficult periods such as the Covid-19 pandemic.

Keywords: Pandemic Covid-19, IDX Energy, Abnormal Return, Event Study

INTRODUCTION

The Stock Exchange as an official institution established by the government, allows the buying and selling of securities in the capital market. The Stock Exchange brings together buyers and sellers of securities, either directly or indirectly. The government established the Indonesia Stock Exchange (IDX) on December 1, 2007 as a merger of the Jakarta Stock Exchange (BEJ) and Surabaya Stock Exchange (BES). The IDX established twelve sector classifications in 2021 and added new classifications for industries and sectors of listed companies, called the Indonesia Stock Exchange Industrial Classification (IDX-IC).



Figure 1. Indonesia Stock Exchange Industrial Classification

Source: Indonesia Stock Exchange (2024)

The Energy Sector (IDX Energy) is one of the sectors on the IDX that includes companies that sell goods and services related to the extraction of energy, including non-renewable energy (natural gas, coal, and oil), so its revenues are directly influenced by worldwide energy commodity prices. In addition, this sector also includes companies that provide services that support these industries. In 2023, there were 78 listed companies in this

¹ School of Economics and Business, Telkom University, Bandung, Indonesia, Email: dwifitrizalslm@telkomuniversity.ac.id

² School of Economics and Business, Telkom University, Bandung, Indonesia, Email: landungtris1@gmail.com

³ School of Economics and Business, Telkom University, Bandung, Indonesia, Email: deannes@telkomuniversity.ac.id

sector. However, 15 companies in this sector are on the special monitoring list and 26 other issuers are still on the development board. Therefore, the number of issuers listed on the main board and not under special monitoring is 37 companies.

After the government set the status of the end of Covid-19 in Indonesia, on June 21, 2023 the government officially announced that the status of the Covid-19 Pandemic conditions ended, the author is interested in examining the differences in abnormal returns of issuers engaged in the energy sector during the Covid-19 and post Covid-19 periods with a time span of June to July 2023. Where in previous research, Lukman et al (2023) found a difference in the abnormal return of the JCI in the period before and after the government announced new normal conditions.

Emerging stock markets are increasingly important in global investment. There is a significant relationship between return and volatility among BRIC countries (Brazil, Russia, India and China). This can be interpreted as an investment instrument that is quite attractive, but has a higher risk (Yavas et al, 2018). Pandemic conditions have had an adverse impact on the global economy and have also disrupted the smooth functioning of financial and commodity markets. In particular, Umar et al (2021) explained that the Covid-19 global pandemic conditions had a severe impact on world financial markets.

The Covid-19 pandemic is a serious crisis, Alexasis (2020) found evidence of direct and indirect negative effects on stock market indices in the initial period of lockdown. O'Donnel et al (2021) also found a significant negative impact on stock indices in Spain, Italy, UK, and USA. In India, volatility spillovers reached 69% during Covid-19, with the Oil and Gas sector as the main contributor and FMCG as the main recipient (Guru & Das, 2020).

Ball & Brown (1968) explained the relationship of numbers on financial statements and circulating information. Chundakkadan (2021) found that the search volume for Covid-19 keywords was negatively related to daily stock returns; this effect was stronger especially in the week when WHO declared a pandemic. As the information on the first announcement of the Covid-19 Pandemic by WHO and followed by every government in the world is bad news for investors and affects the return of capital market investors, it is expected that good news on the completion of the pandemic can also have a positive impact on stock returns in the capital market. In line with the results of research by Hikmah et al. (2018) which states that investors make investment decisions based on their reactions to the information they receive about events.

One of the methods that can be used to evaluate the reaction of investors in the capital market to an event is event study. According to Tandelilin (2001), this event study is usually related to how quickly information entering the market can have an impact on stock prices. Abnormal return is one indicator that can be used to see the current market situation. Cheng & Christiawan (2017) explain that abnormal return is positive if the investor's return is greater than the expected return or calculated return. Conversely, if the investor's return is lower than the expected or calculated return, the abnormal return will be negative. Important information that can cause a market reaction is the Indonesian government's announcement on June 21, 2023 regarding the end of the Covid-19 Pandemic. The research is intended to determine the effect of the revocation of the Covid-19 Pandemic status by the government on stock prices in the energy sector, whether there are differences in abnormal returns before and after the information is officially conveyed by the Government of Indonesia.

LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

Fama et al (1969) created the efficient market theory, which states that stock prices in the capital market reflect all available information. The efficient market theory provides an explanation of how stock prices are affected by new information. When new information becomes available, the market quickly incorporates it and it is reflected in stock prices. This is in line with the idea of a strong form efficient market. However, there is discussion about the speed and accuracy with which the market absorbs information. In reality, markets may not be fully efficient due to the costs associated with acquiring information and the inherent uncertainty (Grossman & Stiglitz, 1980). Return according to Horne (2007), is the amount of money generated from an investment over a certain period of time. While abnormal return, or also referred to as excess return, is the excess of the actual return over the normal return. It is calculated using the following formula:

$$R_{t} = \frac{P_{t} - P_{t-1}}{P_{t-1}};$$

$$AR_{i,t} = R_{i,t} - E(R_{i,t})$$

Where R_t is stoct return at time *t*; P_t is the stock price at time *t*; AR is the Abnormal Return; Ri is the factual return; and $E(R_{i,t})$ is the expected return. As for the expected return using the market adjusted model which assumes that the best way to estimate the return is through the Stock Index return.

Event study, which is also called event study, is a study of how the market responds to an announced event. Fama et al (1969) mentioned event study or residual analysis is done in testing abnormal performance index or market reaction testing. Hartono (2010) states that event studies can be used to assess market efficiency and announcement information content. According to MacKinlay (1997), event studies usually focus on abnormal returns around the event announcement date. Armitage (1995) outlines methods that are widely used to estimate abnormal returns and test their significance. Accumulative Abnormal Return (CAR) is observed in this event study approach. As mentioned by Kritzman (1994), the process is as follows:

- a) Determine the event (event) that will be the object of research.
- b) Determine the research period into an event window
- c) Determine the criteria required in the event study
- d) Design the testing framework
- e) Make the necessary measurements to assess the effect of the event
- f) Analyzing the effect of the event under study

Fama et al (1970) offer efficient market theory which states that efficient markets must be able to receive new information quickly. The occurrence of the Covid-19 pandemic has significantly changed the behavior of global capital markets, increasing stock market volatility which reflects investor uncertainty about the economic impact during the crisis (Baker et al., 2020). Unfortunately, during the Covid-19 pandemic there is a time lag between the receipt of information and changes in stock prices, which shows the limitations of the market in reflecting information in real-time.

Rehman & Karimullah (2023) stated that the impact of black swan events on the stock market in the Gulf Cooperation Council (GCC) region is quite varied. While Pandey et al (2023) found that not all company announcements impact stock returns in the same way. Khan et al (2023) found high levels of volatility across all financial markets during the Covid-19 pandemic. Furthermore, Ismail Olaleke Fasanya (2022) found that uncertainty over the Covid-19 pandemic had a negative and statistically significant effect on stock returns across different sectors in South Africa. The financial sector was significantly affected more than other sectors.

Singh et al (2020) found in their research that the negative effect of Covid-19 was seen in the stock markets of both developing and developed countries in the G20 member countries. Likewise in China, Sun et al (2021) found the Covid-19 pandemic had an overall negative effect on the stock market. There is a strong positive correlation between individual investor sentiment and stock returns than usual. Ding et al (2021) examined the link between firm characteristics and stock price reactions to Covid-19 cases using data from more than 6,700 companies in 61 countries. He found that companies that have stronger financial conditions before 2020, will have lower exposure to Covid-19.

Yong & Laing (2020) examined the reaction of the US stock market to the Covid-19 pandemic, the results showed that international exposure was significantly and negatively related to short-term cumulative abnormal returns. Likewise, the Australian market reacted negatively to the pandemic announcement (Rahman et al., 2021). A.T.M Adnan (2022) conducted research related to the short-term reaction of the capital market to the

announcement of the detection of the first local Covid-19 case in 12 major Asian capital markets. He stated that the discovery of the first local Covid-19 case had a significant impact on all 12 Asian markets on the day of the event, as indicated by a significant negative Average Abnormal Return (AAR) and Cumulative Average Abnormal Return (CAAR)..

Good handling of the Covid-19 outbreak by the government can create stability in the stock market (Roziq et al, 2024). In Indonesia, the impact of the Covid-19 pandemic on stock market returns has been widely studied. Among them Nurcahyono et al (2021) found that the Covid-19 pandemic had a negative impact on stock market returns in Indonesia. The existence of positive cases to death in patients has an effect on decreasing market returns. Wijayanti & Kadir (2022) also analyzed the effect of Covid-19 on the JCI and the sectoral stock price index during the period March-September 2020. The findings show that the Google Search Volume (GSV) variable has a significant negative effect on the JCI and the sectoral stock price index at the 5% significance level. A 1% increase in GSV decreases the JCI change by 0.04% and negatively affects the sectoral stock price index ranging from -0.016% to -0.039% for certain sectors.

'In addition, Lukman et al (2023) analyzed the effect of new normal announcement on abnormal return and trading volume activity in manufacturing sector companies. The results show that there are differences in abnormal returns before and after the new normal announcement by the government. Vania & Yunita (2021) also found a decrease in the average abnormal return of issuers in the telecommunications sub-sector during the announcement of the discovery of the first case of Covid-19 by President Joko Widodo.

After the government announced the end of the Covid-19 pandemic in Indonesia on June 21, 2023, this study aims to determine the effect of the announcement on the abnormal return of energy sector stocks in Indonesia. The research framework includes object selection, sample data collection, data analysis by comparing abnormal returns before and after the announcement of the end of the Covid-19 pandemic can be described in the following chart:



Figure 2. Research Framework

Source: Data Processed (2024)

Based on the literature review and the description in the framework above, the hypothesis in this study is determined as follows *Ha: There is a significant difference between the Abnormal Return on the event before and after the announcement of the end of the Covid-19 pandemic by the Indonesian government.*

METHODOLOGY

This research design adopts a quantitative approach with a descriptive analytical method. This approach was chosen because it allows statistical analysis of numerical data to test hypotheses relating to the effect of abnormal stock returns before and after the announcement of the end of the Covid-19 pandemic in Indonesia. This study uses time series data, given the dynamic and continuous characteristics of financial data. Quantitative method is a research method based on the philosophy of positivism and data from research in the form of numbers and analysis using statistics. Meanwhile, descriptive research is research conducted to determine the value of each variable, either one or more (Sujarweni, 2019).

This study uses a quantitative approach to analyze and describe the differences in abnormal returns on energy sector stocks during the period before and after the announcement of the end of the Covid-19 pandemic in Indonesia. Variables as a representation of an event, action, characteristic, trait, or property that can be measured and has a value that can be clearly measured (Schindler, 2008) in this study are:

Variabel	Concept	Indicator	Scale
Abnormal Return	Difference between actual return and expected return	ARi,t = Ri,t - E(Ri,t)	Ratio
Cummulative Abnormal Return	Accumulated abnormal return during the observation period	$CAR_{i,t} = \sum_{t}^{n} AR_{i}$	Ratio

Table 1. Operational Variable

Population refers to the entire group of people, events or interesting things that the researcher wants to study. While the sample is part of the population. The sample consists of some selected members. In other words, some, but not all, population elements of the sample (Sekaran & Bougie, 2017). The population in this study were companies in the Energy sector (IDX Energy) listed on the Indonesia Stock Exchange (IDX), namely 78 companies. In this study, purposive sampling technique was used, namely taking samples based on certain criteria, namely only issuers on the main board and not included in the special monitoring list during the research time span. Of the 78 issuers in the energy sector, 37 issuers were obtained that met the criteria as research samples.

The data used is secondary data from issuers in the IDX Energy sector. Historical stock price data is taken from daily stock sales data on the Indonesia Stock Exchange website and yahoo finance. The event date for the announcement of the end of the Covid-19 pandemic in Indonesia is June 21, 2023. The research period (event window) is for 10 days. Namely the 5-day period before (pre event) between June 14-20 and the 5-day period after (post event) between June 22 - July 3, 2023. The daily closing price of shares is used to measure actual return, while the expected return data, using the market adjusted model method so that it is taken from the daily closing data of the energy index (JKEnergy) during the study period. Data processing uses Microsoft Excel 2016 and SPSS v25 statistical applications to ensure the accuracy and effectiveness of the analysis process.

In analyzing the data, researchers used descriptive statistical methods. Explains that descriptive statistics use sample or population data to describe or give an overview of the subject under study. In descriptive statistical analysis, mean, median, maximum value, minimum value, and standard deviation are displayed. The data normality test is carried out to determine whether the data distribution follows a normal distribution or not. The normality test was carried out using the Kolmogorov Smirnov test. This test aims to determine whether the abnormal return data follows a normal distribution or not. The test criteria used is to use a significance level of 0.05. If the sample has a significance value> 0.05 then the data distribution is declared normally distributed.

The paired sample t-test is used to explain whether or not there is a significant difference in the abnormal returns of energy sector issuers in the time period before and after the announcement of the end of the Covid-19 pandemic in Indonesia. As for data that is not normally distributed, testing is done using the Wilcoxon test (Wilcoxon signed rank test) as an alternative to the t test which is a non-parametric test method used to analyze paired data due to two different treatments (Pramana, 2012). The Wilcoxon Signed Ranks Test testing standard uses a significance level of 0.05 as a reference standard. If the significance value is <0.05 then the hypothesis (Ha) is accepted.

RESULTS

During the event window of the research period, the price data movement of the Energy Sector Index (JKSE Energy) is known as follows:



Figure 3. Price Movement of Energy Sector Index (JKSE Energy)

Source: Adapted from www.investing.com (2024)

During the event window period t-5 to t+5, the results of the calculation of abnormal returns on 37 issuers that became the object of research were as follows:

Stock Code	t-5	t-4	t-3	t-2	t-1	t-0	t+1	t+2	t+3	t+4	t+5
AKRA	0,024	(0,011)	(0,007)	(0,001)	0,040	(0,009)	0,011	(0,006)	0,011	(0,031)	(0,027)
ENRG	0,038	(0,034)	(0,024)	0,012	(0,047)	0,042	(0,026)	0,007	0,005	0,016	(0,016)
HITS	(0,004)	0,001	0,011	(0,056)	(0,073)	(0,034)	0,105	0,025	0,041	0,063	(0,028)
MEDC	0,015	(0,007)	0,019	(0,008)	(0,001)	0,022	(0,010)	(0,009)	0,009	0,004	(0,010)
PGAS	(0,008)	0,000	(0,001)	0,007	(0,001)	(0,013)	0,005	0,003	0,015	0,016	(0,012)
RAJA	(0,008)	(0,048)	(0,147)	0,140	(0,030)	0,005	0,050	(0,082)	0,025	0,005	(0,011)
SHIP	(0,008)	(0,051)	0,035	0,034	0,067	0,007	0,021	0,011	(0,039)	0,003	0,042
SOCI	(0,013)	(0,002)	(0,003)	0,003	0,004	(0,011)	0,001	0,002	0,015	0,010	(0,005)
BUMI	0,001	0,010	(0,032)	0,021	(0,001)	0,030	(0,033)	(0,002)	0,024	0,033	0,010
PTRO	0,013	(0,002)	(0,041)	(0,005)	(0,012)	(0,008)	(0,002)	0,002	0,009	0,021	(0,008)
KKGI	(0,004)	(0,003)	0,023	0,023	(0,033)	(0,066)	0,023	(0,010)	0,015	0,028	(0,016)
MYOH	(0,011)	(0,014)	(0,004)	0,033	(0,008)	0,014	(0,005)	0,010	0,008	0,012	(0,016)
DOID	0,010	(0,007)	0,037	(0,008)	(0,013)	0,040	(0,010)	(0,031)	0,049	0,016	0,006

Table 2. Abnormal Return (AR) during the event window

РТВА	(0,011)	0,036	0,055	(0,005)	0,014	(0,005)	(0,017)	(0,014)	(0,134)	(0,134)	(0,001)
DEWA	0,212	(0,089)	(0,033)	0,021	(0,001)	(0,005)	0,001	(0,029)	(0,004)	0,016	0,003
ITMG	(0,007)	0,023	0,002	(0,006)	(0,005)	(0,002)	0,002	0,002	0,019	0,021	0,007
ADRO	0,010	0,015	0,011	(0,023)	0,003	(0,010)	0,001	(0,006)	0,006	0,025	0,029
BYAN	(0,033)	0,002	(0,030)	(0,002)	(0,010)	(0,000)	0,003	0,019	0,054	(0,016)	(0,006)
ELSA	(0,008)	(0,071)	0,003	0,009	0,005	(0,011)	0,020	(0,005)	0,045	0,010	(0,004)
INDY	0,045	0,005	(0,015)	(0,015)	(0,009)	(0,003)	0,004	(0,001)	0,004	0,021	0,002
DSSA	(0,008)	(0,007)	0,003	0,003	(0,001)	(0,005)	0,020	0,007	0,015	0,037	0,041
HRUM	(0,031)	(0,014)	0,003	(0,018)	(0,015)	(0,012)	0,026	0,014	(0,006)	0,019	0,037
WINS	(0,028)	0,006	(0,004)	(0,025)	(0,001)	0,002	(0,013)	0,000	0,015	0,037	0,062
ABMM	0,002	(0,017)	(0,010)	(0,014)	0,005	(0,005)	0,011	0,007	0,005	0,039	0,007
GEMS	(0,012)	(0,007)	0,014	0,003	(0,017)	0,002	(0,069)	(0,014)	0,002	0,020	0,023
MBSS	0,009	(0,007)	(0,005)	0,007	0,015	(0,013)	(0,023)	0,016	0,039	0,020	0,024
TOBA	0,007	(0,012)	(0,002)	(0,017)	0,014	0,010	(0,004)	(0,003)	(0,001)	0,031	(0,006)
TPMA	(0,012)	(0,030)	0,007	0,003	(0,006)	(0,015)	0,006	(0,012)	0,039	0,016	(0,002)
PSSI	(0,031)	(0,086)	(0,014)	0,003	(0,001)	(0,014)	0,010	0,016	0,023	(0,019)	(0,051)
TEBE	0,012	(0,007)	(0,004)	0,003	(0,001)	(0,005)	0,001	0,001	0,015	0,022	0,061
MCOL	(0,030)	(0,007)	(0,006)	0,001	(0,008)	(0,005)	(0,006)	0,009	(0,013)	0,001	(0,028)
RMKE	(0,024)	(0,030)	(0,003)	(0,003)	(0,048)	0,007	(0,011)	0,007	0,033	0,016	(0,016)
UNIQ	(0,103)	(0,046)	0,042	0,231	(0,001)	(0,005)	0,110	0,014	0,056	0,022	0,077
ADMR	0,011	(0,020)	(0,009)	0,009	(0,014)	0,038	0,114	0,029	(0,011)	0,010	(0,005)
CUAN	(0,008)	0,004	0,096	(0,047)	(0,028)	(0,027)	0,007	(0,031)	(0,066)	0,072	(0,016)
HILL	0,003	0,003	0,061	(0,007)	(0,024)	(0,012)	(0,062)	(0,071)	0,046	0,027	0,003
SUNI	(0,001)	(0,007)	0,003	(0,004)	(0,001)	(0,005)	0,001	(0,007)	(0,028)	0,008	(0,016)
Average (AAR)	0,000	(0,014)	0,001	0,008	(0,007)	(0,002)	0,007	(0,004)	0,009	0,014	0,004

Source: Data Proceed (2024)

Furthermore, descriptive statistics provide an overview of the data through the average value, standard deviation, maximum and minimum values of the abnormal return variable during the event window period t-5 to t + 5. More clearly can be seen in the table below:

Table 3. Descriptive Statistics of Abnormal Return

Period	Ν	Minimum	Maximum	Mean	Std. Deviation
t-5	37	(0,102620)	0,212207	0,000310	0,043131
t-4	37	(0,089460)	0,035611	(0,014494)	0,027249
t-3	37	(0,146779)	0,096161	0,000817	0,037038
t-2	37	(0,055743)	0,231405	0,008110	0,047921
t-1	37	(0,072571)	0,066916	(0,006663)	0,023369
t-0	37	(0,066048)	0,042299	(0,002266)	0,020068
t+1	37	(0,068644)	0,114219	0,007076	0,037768
t+2	37	(0,081998)	0,028594	(0,003524)	0,022515

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t+3	37	(0,133969)	0,056346	0,009159	0,034982
t+4	37	(0,133697)	0,071760	0,013891	0,031284
t+5	37	(0,051457)	0,076656	0,003522	0,027386

Source: Data Proceed SPSS (2024)

In the table above, we obtained the smallest abnormal return value in period t-3 recorded by RAJA, which amounted to -14.67%. While the largest abnormal return value occurred in the t-2 period recorded by UNIQ, which amounted to 23.14%. Furthermore, we obtain the largest average throughout the event window on t+4 at 1.38%; while the lowest average occurs on t-4 (1.44%). For standard deviation, the lowest level is found on t+2, amounting to 0.022 points. This means that the data distribution is close to the average value at 0.022 points. While the highest level of deviation is in the t-2 period of 0.047 where in this period the data distribution occurs farthest from the average value compared to other day periods.

In this study, the event time (t_0) is June 21, 2023, which is the day of the announcement of the end of the Covid-19 pandemic in Indonesia. We can observe the average abnormal return during the event window to determine the effect of the event in the following chart:





Source: Data Proceed (2024)

There are various movements of the average abnormal return around the event window. During the period before the announcement of the Covid-19 pandemic ended, there were two days where the average abnormal return was positive, namely on t-5 by 0.03%, on t-3 by 0.08% and on t-2 by 0.81%. While on t-4 and t-1 the average abnormal return is negative with values of -1.44% and -0.66% respectively. After the announcement made on June 21, 2023, the average abnormal return is positive except in the t+2 period. Since t+1, it experienced a positive trend of 0.70%, then it was negative at t+2 of -0.35%. Furthermore, it increased again at t+3 by 0.91%, continued until t+4 at 1.38% and fell slightly at the end of the t+5 period by 0.35%

Furthermore, we calculate the Cumulative Abnormal Return (CAR) as the accumulated abnormal return of each stock for us to compare in the period before and after the announcement event of the revocation of the Covid-19 pandemic status. We get the following calculation results.

Stock Code	CAR_before	CAR_after	Stock Code	CAR_before	CAR_after
AKRA	0,0449	-0,0416	INDY	0,0116	0,0305
ENRG	-0,0549	-0,0142	DSSA	-0,0112	0,1190
HITS	-0,1196	0,2048	HRUM	-0,0757	0,0900
MEDC	0,0173	-0,0156	WINS	-0,0524	0,1008
PGAS	-0,0035	0,0263	ABMM	-0,0339	0,0687
RAJA	-0,0927	-0,0122	GEMS	-0,0187	-0,0380
SHIP	0,0764	0,0376	MBSS	0,0177	0,0752
SOCI	-0,0111	0,0226	TOBA	-0,0107	0,0178
BUMI	-0,0013	0,0321	TPMA	-0,0386	0,0465
PTRO	-0,0474	0,0225	PSSI	-0,1301	-0,0210
KKGI	0,0061	0,0400	TEBE	0,0020	0,0999
МУОН	-0,0041	0,0097	MCOL	-0,0508	-0,0352
DOID	0,0183	0,0295	RMKE	-0,1077	0,0287
РТВА	0,0894	-0,2998	UNIQ	0,1241	0,2790
DEWA	0,1097	-0,0135	ADMR	-0,0231	0,1362
ITMG	0,0073	0,0505	CUAN	0,0167	-0,0349
ADRO	0,0164	0,0541	HILL	0,0350	-0,0588
BYAN	-0,0727	0,0530	SUNI	-0,0111	-0,0410
ELSA	-0,0627	0,0656			

Table 4. Accumulative Abnormal Return (CAR)

Source: Data Proceed (2024)

Next, we enter the normality test stage and hypothesis testing of cumulative abnormal returns before and after the announcement to determine whether or not there is an event effect through differences in abnormal returns. For data that is not normally distributed, a non-parametric test is performed. Wilcoxon Signed Ranks Test is used as an alternative to the t-test. In this test, we hypothesize as follows: Ha: There is a significant difference between Abnormal Return before and after the announcement event of the end of the Covid-19 pandemic by the Indonesian government.

The Wilcoxon Signed Ranks Test testing standard uses a significance level of 0.05 as a standard reference. So, if the significance value <0.05 then the hypothesis (Ha) is accepted. This means that there is a significant difference between Abnormal Return before and after the announcement event of the end of the Covid-19 pandemic by the Indonesian government. Conversely, if the significance value > 0.05 then the hypothesis (Ha) is rejected, meaning that there is no significant difference between Abnormal Return before and after the announcement event of the end of the Covid-19 pandemic by the Indonesian government.

With the help of SPSS 25 software, we conducted the test and obtained the following results:

Table 5. Wilcoxon Signed Ranks Test Output

	Ν	Mean Rank	Sum of Ranks
Negative Ranks	9	18,00	162,00

Analysis of IDX Energy Performance During the Revocation of Covid-19 Pandemic Status in Indonesia

CAR after -	Positive Ranks	28	19,32	541,00
CAR before	Ties	0		
Gritt_beloie	Total	37		

Source: Data Proceed SPSS (2024)

In the output generated by SPSS 25, there are negative ranks (negative difference) between the Cumulative Abnormal Return before and after the event occurs. There are 9 negative data, which means that there are 9 issuers that experience a decrease in value from pre- to post-event. The mean rank or average decrease is 18 points with a sum of negative ranks (sum of ranks) of 162 points. Positive ranks (positive difference) from the output results it is known that there are 28 issuers that experienced an increase after the event occurred with an average increase of 19.32 points and the number of positive ranks (sum of ranks) amounted to 541 points. Ties indicate the similarity of the average abnormal return value of issuers before and after the event date. In the output results, the ties value is 0, meaning that there is no similar value from the issuer between before and after the event.

Next, we interpret the results of the Wilcoxon signed ranks test through the following SPSS 25 output statistical table:

Table 6. Wilcoxon Sig	ned Ranks Test Result
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	CAR_after - CAR_before	Note
Z	-2.859	
Asymp. Sig. (2-tailed)	0,004	Significantly Different

Source: Data Proceed SPSS (2024)

From the Wilcoxon Signed Ranks Test results above, the significance value shows the Asyp. Sig (2-tailed) value is 0.004. Because the significance value is <0.05, it can be concluded that Ha accepts. So, we can say that there is a significant difference between the Cummulative Abnormal Return before and after the event. This means that there is an influence on the information on the announcement of the end of the Covid-19 pandemic made by the Indonesian government on investor reactions, resulting in differences in abnormal returns before and after the announcement.

DISCUSSION

The entry of the Covid-19 virus into Indonesia is one of the events that can affect capital market activities in Indonesia. Likewise, the end of the Covid-19 pandemic. Therefore, these events have information content that can be used by investors as a signal in determining decisions to invest. Information received by investors will be responded directly as good news or bad news signals. For investors, it is important to manage investment assets during a crisis because it is very useful for minimizing the level of risk that will occur (Kristanti et al, 2022, Salim et al 2022).

The results of hypothesis testing (Ha) which suspect that there is a significant difference between the Average Abnormal Return before and after the event according to the test results are accepted because the significance value is <0.05. So, we can say that the information released by the government regarding the end of the Covid-19 pandemic in Indonesia was responded positively by investors in the energy sector. This information may be considered as a good signal by stock investors so that they are more active in buying shares of issuers in the energy sector.

This is in line with the results of previous studies which found that the announcement of a policy related to the Covid-19 pandemic affects capital markets almost all over the world, namely affecting stock prices, returns, liquidity and volatility (Al Awadhi et al., 2020), (Nguyen et al., 2021) and (Nurcahyono et al., 2021). This research is also in line with the results of other studies in Indonesia, which state that there is an effect of the announcement of the revocation of the Covid-19 pandemic status issued by the Government on JII stock

returns (Listyaningsih, 2023). This means that not only the energy sector found differences in abnormal returns but also this influence was also felt by other indices such as the Jakarta Islamic Index (JII).

The results showed that there were differences in abnormal returns before and after the announcement of the end of the Covid-19 pandemic. This is corroborated by the results of the Wilcoxon test which states that the difference is significant as evidenced by the sig value <0.05. Furthermore, of the 37 issuers in the energy sector, we obtained the largest cumulative abnormal return (CAR) generated by PT Ulima Nitra Tbk (UNIQ) with a positive value of 0.4031. Or there is a gain of 40.31% on the abnormal return obtained by investors due to the event of the determination of the end of the Covid-19 pandemic by the government. Conversely, the smallest negative abnormal return was given by PT Bukit Asam Tbk (PTBA) with a value of minus -0.2104. You could say, PTBA investors experienced an accumulated abnormal return difference of -21.04% during the event window of the determination of the end of the Covid-19 pandemic by the government. The results of this study can be a benchmark in selecting stocks that can be included in the portfolio, for portfolio formation, see research (Salim, Aulia, Beshr, and Riyadh, 2024, Salim, Muhammad A, Kristanti, 2024).

CONCLUSION

This study examines the differences in abnormal returns on Indonesian energy sector issuers during the Covid-19 Pandemic and post Covid-19. This is to find out whether there is an influence on the announcement of the end of the Covid-19 pandemic issued by the Indonesian government on June 21, 2023. From the results of the Wilcoxon test, it is known that there are differences in abnormal returns in the energy sector (IDX Energy) between the periods before and after the event of the announcement of the end of the Covid-19 pandemic. This can be used by investors as a consideration in making investment decisions in the capital market. More specifically in determining the issuer in which sector he will invest.

The results also showed that in the event window period, the issuer PT Ulima Nitra Tbk (UNIQ) gave the highest abnormal return compared to other issuers in the energy sector (IDX Energy). This can also be used by investors as a consideration in choosing issuers, besides that these findings can be used as material for researchers to be able to further analyze what makes UNIQ able to provide higher abnormal returns than other issuers in similar sectors.

The results of this study are expected to provide advice for relevant stakeholders, including investors, academics and practitioners. For investors, it should be noted that there are differences in abnormal returns in the energy sector before and after the announcement of the end of the Covid-19 pandemic. This needs to be a concern for investors to be more aware and observant of moments, especially special events that have the potential to affect the abnormal return on their investment, both positively and negatively. Academics can use these findings as a basis for conducting further research on the factors that influence abnormal returns in the energy sector. For example, examining managerial aspects, technological innovation, or government policies that may play a role in UNIQ's superior performance. Meanwhile, capital market practitioners, such as investment managers and financial analysts, can use the results of this study as a consideration in designing investment strategies. They need to pay attention to the news and must be observant of other important announcements that have the potential to affect the market, and use the right analytical tools to anticipate stock price movements.

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