UNRAVELING MARKET SHIFTS: A STUDY OF ABNORMAL RETURNS, TRADING ACTIVITY, AND VOLUME DYNAMICS AROUND THE COVID-19 PANDEMIC

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Abstract

This study (case study on LQ-45 stocks on the Indonesia Stock Exchange) will examine the differences between these times to evaluate abnormal returns, trading frequency activity, and volume activity before and after the Covid-19 pandemic. In the approach, quantitative methodology is used. A purposive sampling strategy is used to collect the data with a population of 60 enterprises from 2018 to 2021, and a sample of 28 companies is obtained. The results of the investigation showed that the abnormal returns before and after the COVID-19 epidemic did not differ significantly. However, a study on trading volume activity and trading frequency activity revealed that there were notable variations between the COVID-19 pandemic and other times. Investors will compete with one another to sell their shares as a result of their worries that the COVID-19 case may spread and become challenging to handle. Investors prefer to sell these shares rather than hold onto businesses that carry a significant chance of financial loss as a result.

Keywords: Abnormal Return, Frequency Activity, Volume Activity, Trading

INTRODUCTION

The role of the capital market in a nation's economy is crucial for business financing and the provision of means for society to make investments in the form of stocks, debentures, mutual funds, etc (Houston et al., 1997; Roychowdhury & Srinivasan, 2019). It is one of the means that is beneficial to shift the excess funds to the company in need in order that the company can invest, not only take from operational outcome (Holtslag et al., 2021; Masulis et al., 2020). Stock can be explained as a participation sign or someone's ownership or organization in a company; it can also be defined as securities that provide proof of participation or someone's ownership or organization in an enterprise (Darmadji, 2012; Irham, 2015).

A market reaction is the result of information on an occurrence that affects company value, causing the emergence of signals in the capital market. It can be known from the volume of share trading and the price change. Market reaction usually reacts to information such as social, political, and economic (Au Yong & Laing, 2021; Schell et al., 2020). At the end of 2019, in Wuhan city, China, stricken by the COVID-19 virus, it became external information that affected the capital market indirectly through the LQ-45 share (Amin et al., 2022; Baker et al., 2020). Before the phenomenon of the COVID-19 virus, the index of LQ-45 had grown steadily, but in the 2020 index of LQ-45, it had decreased. According to the financial report for 2020, as many as 31 issuers had declined (Ashraf, 2020; Xiong et al., 2020).

The emergence of abnormal returns can be used to assess how the capital market has reacted to events that have already occurred. An abnormal return is defined as the discrepancy between the actual return and the predicted return (Hadiwidjaja et al., 2021; Hartono, 2017; Nawangsari & Iswajuni, 2019). According to a study by Febriyanti (2020), when investors hear about the first COVID-19 case in Indonesia, the stock market reacts negatively. This finding is corroborated by other research by Teguh et al. (2022) and Wicaksono & Adyaksana (2020). Inclement signal to investors is caused by the instability of the company's condition, affecting a significant decline in the stock price (Fahlenbrach et al., 2021). Continually selling stock causes the stock price to decrease; this is due to the decrease of the global economy in order for investors to panic (Aggarwal et al., 2021; Yang et al., 2020).

Before making investment decisions, investors need comprehensive information related to the company to reduce the risk and loss to be received (Salbiyanti & Priyadi, 2018). However, in crisis conditions, investors prefer some financial instruments that are easy to convert. In addition to the recognition of reasonable interest income, the investment value will be recognized at cost with periodic adjustments. The volume of stock trading can be considered by investors (Basri et al., 2019; Suryanto, 2019). Trading volume activity (TVA) is a tool used to gauge the liquidity of shares on the capital market and serves as a gauge for how information about the stock market is received (Tandelilin, 2016).

According to data from the case study research, when news about the first COVID-19 patient in Indonesia broke, there was no information that could significantly influence the stock market to effect transactions. Because of this, there was no obvious variation in trading activity between before and after the news about the first patient. But it is in contrast to research that had been conducted by Febriyanti (2020), who found that trading volume activity has a significant difference between before and after the news of pandemic COVID-19 in Indonesia. This research was strengthened by Wicaksono & Adyaksana (Wicaksono & Adyaksana, 2020), who explained that trading volume activity has increased on average after the news of the determination of the global pandemic COVID-19. It happens because several investors were afraid, they would suffer a big loss, so that investor sold their stock. Furthermore, investors made purchases using the stock

price of a company that tends to be at a low price in order to get profit at a normal price (Aggarwal et al., 2021; Yang et al., 2020). This leads to a high volume of stock transactions.

Trading frequency activity is the number of purchase and selling transactions that occur over a period of time (Bouveret et al., 2014). Stocks that investors are interested in can be known from the period or number of frequencies (Verousis et al., 2018). Trading frequency influences the trading volume; the greater the trading frequency, the greater the trading volume and investor interest in the stock (Silviyani et al., 2014). Some researchers used abnormal return or share trading volume in comparing research before the pandemic and during the pandemic of COVID-19. Therefore, the author is interested in adding the stock trading frequency variable to the research because trading frequency can support and affect the trading volume maximally. Researchers are interested in seeing how the major difference between the studies conducted before the pandemic and during COVID-19 affected abnormal returns and stock trading volume because of the added variable of stock trading frequency.

The findings of this study have both theoretical and practical applications. Theoretically, this study can contribute to the advancement of subsequent research in relevant domains and expand knowledge and insight into the impact of stock trading volume on abnormal returns and trading frequency during the lead-up to and during the Indonesian crisis. It can be used practically in investor decision-making when it comes to investing during the pandemic (Mnif & Jarboui, 2021). It can also be a useful tool for the author to put his or her understanding of the idea of abnormal returns, stock trading volume, and trading frequency both before and during the pandemic.

REVIEW OF LITERATURE

Background Theory

Signaling theory analyzes the traffic of stock prices in the capital market that is needed by investors in determining and making decisions (Ilham, 2012). This theory relates to volume and trading activities carried out by investors in andemic. Covid-19. Signals are received through information, showing that companies run better than others, because signaling theory is an encouragement from companies to provide information to the external side to reduce asymmetry (Connelly et al., 2011; Yasar et al., 2020). Accurate, complete, and relevant information is needed by the investor as a tool to analyze in making timely decisions (Suwardjono, 2016).

It is crucial to conduct studies on trading volume, trading frequency, and abnormal returns. Trading volume activity educates investors about the outcomes and hazards that must be acknowledged. This study also contrasts the volume, frequency, and abnormal returns of trading before and after the COVID-19 pandemic. The findings will help practitioners, investors, and regulators evaluate the efficiency of the capital markets in order to deliver better information moving forward. Previous studies have been done on abnormal returns, trading volume, and trading frequency activities.

Some researchers used abnormal returns; one of them is Febriansyah, Ranidiah, and Mustika (2021). An abnormal return is the deviation of the actual return from the expected return (Akbar et al., 2019; Hartono, 2017). Abnormal return phenomenon often occurs at market on close BEI; abnormal return emerged as a result of a significant increase in trading activity (Basri et al., 2019; Nawangsari & Iswajuni, 2019). All activities in the financial sector can usually be defined as information or events that influence the previous price or after price on the finance market (Akhadiyah & Isbanah, 2021).

Trading volume activity can become a determination tool for investors to make decisions because it is one of the stock parameters that is used as liquidity measurement (Akbar et al., 2019). It can be assumed that there will be an improvement in liquidity if there is a rise in share price in stock trading following the incident compared to the previous few days before the occurrence. Whereas TVA is the number of transactions of sale in a period (G et al., 2021). The circulation of the number of stocks is influenced by stock frequency trading; if the frequency is high, the stock is highest because investors are interested in the stock (Elta & Kamal, 2016). Trading frequency activity has become one of the crucial components because it allows traders to observe how the market reacts to information on the capital market.

Hypothesis Development

Whatever information occurs from a company's stock condition always affects the investor's decision, as the party that catches the signal is complete, relevant, and accurate. Investors in the capital market require current information as a decision-supporting analytical tool. Investors will receive a signal to make investment decisions based on information that is published as an announcement. A disparity (negative or positive) between the actual return and the anticipated return around the event window is referred to as an abnormal return. Empirically, the usefulness of the semi-strong market in analyzing events is tested using this abnormal return. The market may be more effective if one or more participants experience abnormal returns over an extended period of time (Alam et al., 2020). The following formula can be used to represent an abnormal return (Smith et al., 1982). The actual return typically does not differ from the expected return in the absence of events. However, the market will react to the announcement if an event is anticipated to result in future adjustments to cash flow, and as a result, the actual return frequently differs from the predicted return. Events that produce abnormal returns, therefore, frequently deviate significantly from zero (Dang & Tran, 2019; Liu & Lee, 2020; Tandelilin, 2016). Thus, the hypothesis proposed is:

H_1: There are difference of abnormal return before and during pandemic Covid-19 on company LQ-45

By means of the discussion, the second hypothesis is developed. It is common practice to study stock movement using trade volume, which captures the intersection of supply and demand for stock transactions. Another factor considered to predict a trend's future is trading volume. The healthy state of the market is evident from the significant amount of exchange activity. A positive tendency is demonstrated by the fact that rising stock prices frequently accompany increases in trading volume. High trading activity also indicates that investors are in high demand for the stock. Demand for stocks among investors presumes that the stock will offer the investor large profits (Azis et al., 2015). By dividing the total number of outstanding shares during a certain period by the number of shares that were exchanged during that same period, Azis et al. claim that trading volume activity may be determined. While analyzing the capital market, trading volume activity detects capital market reactions through differences in trading volume (Mahendra & Rasmini, 2019; Sinniah et al., 2022).

The market's response to an incident may be revealed by the shift in trade volume activity. The market is deemed to have responded to the event if there is a large change in trade volume activity between the pre-event and post-event periods. Based on the research of Khoiriah, Amin, and Kartikasari (2020), they explained that there was a deviation in TVA both before and during the COVID-19 pandemic. Whereas according to Febriyanti (2020), there are differences in TVA both before and after the announcement of COVID-19 in Indonesia. This result describes that investors received less positive signals from the capital market both before and after the news of

the first COVID patient in Indonesia. It causes shareholders to sell their stock of LQ-45, causing a decline in the stock price. Thus, the hypothesis proposed is:
H_2: There are difference of trading volume activity before and during pandemic Covid-19 on company LQ-45

The third hypothesis is supported by the claim that the trading frequency typically reveals market conditions in stock trading. When equities are trading in a difficult environment or when there is a significant volume of trading, people frequently use the phrase "bullish market." When the trade frequency is low, on the other hand, individuals will describe this condition as weak or bearish. Of course, there is a middle ground for the stock market, which is when the trading frequency is stable. One aspect of capital market activity that can be used to predict how the market will respond to information is stock trading frequency activity. The volume of stock trades that took place during that time period serves as a gauge of trading frequency activity. According to Cai & Lu (2019), trading frequency activity has a significantly positive effect on stock profit. So, the higher trading frequency will influence stock returns. Thus, the hypothesis proposed is:
H_3: There is difference of trading frequency activity before and during pandemic Covid-19 on company LQ-45

RESEARCH METHOD

Based on research by Akbar et al. (2019), an event study methodology was employed in this investigation. An empirical testtin method known as an event study is used to determine how the market will react to certain events that are part of a public announcement. Conventional event studies, group or cluster event studies, unexpected event studies, and sequential event studies are examples of event studies that fall within the category of research focus (Hartono, 2017; Tandelilin, 2016). This study used a quantitative approach, and the data collection method was secondary data. Thus, data tabulation was applied with a difference test analysis to compare the dissimilarity between two average values by using SPSS 25 as software to manage data. Research time is carried out in two periods, namely before and during the COVID-19 pandemic in the years 2018–2021. This research was conducted on issuers listed on the Indonesia Stock Exchange (IDX), particularly the stock index LQ-45, because the stocks are classified as securities with the most active trading frequency and the highest in the capital market. The population used in this research is all companies with index LQ-45 recorded on the Indonesia Stock Exchange (IDX) in 2018–2021, for about 60 companies. Purposive sampling, which is a strategy to get samples using specific calculations or depending on the criteria set by the researcher (Aristantia et al., 2022), is therefore the sample method employed in this research.

Table 1.
The Characteristics of Stocks Used as a Sample

Information	Total
The company with index LQ-45, which is listed on the Indonesia Stock Exchange (IDX) for the period of 2018–2021, both in February and August	60
Delisted companies from the index LQ-45 during the research process for the period of 2018–2021.	(18)
Companies that do not publish financial statements on the *website* of the Indonesia Stock Exchange (IDX) and companies were on an observation period for the years 2018–2021.	(14)
The number of companies that become samples	28

This study used a sample of companies listed on index LQ-45 on the Indonesia Stock Exchange. It was consistent in the years 2018–2021 (seven quarters) for as many as 28 companies. For a hypothesis-paired test, a t-test sample is usually used to assess the dissimilarity between two observations. This type of test is used on the subjects that are tested in situations before and during the process in order to analyze the difference before and during the process, the similarity, or paired subjects.

The study's factors were abnormal return (AR), trading frequency activity (TFA), and trading volume activity (TVA). AR is the difference from the expected profit by shareholders (Hartono, 2017). Abnormal return can be measured with $\mathbf{AAR_t} = \frac{\sum_{i=1}^{n} \mathbf{AR_t}}{n}$ which AAR_t average abnormal return, AR_t abnormal return, and n is the number of securities.

Trading volume activity is a tool for measuring stock liquidity. Trading volume activity presupposes that stock trading volume will grow in comparison to the days prior to an event, allowing it to be said that stock trading liquidity has increased following the event (Akbar et al., 2019). Trading volume activity can be measured with $\mathbf{XTV}\boldsymbol{A_t} = \frac{\boldsymbol{\Sigma TVA_{it}}}{n}$, where $XTVA_t$ is the average TVA, and ΣTVA_{it} is the total trading volume activity.

The volume of shares of a corporation that are exchanged at any given moment is known as trading frequency activity. The volume of trading has a significant impact on the number of outstanding shares. The stock is deemed the most actively traded stock on the capital market, and it may be said that investor interest in the stock has increased if there is a significant degree of trading frequency activity (Elta & Kamal, 2016). Trading frequency activity can be measured with $FP = \sum_{i}^{m} FP_i$, which FP is trading frequency, and M trading frequency in 1 year.

The paired sample T-test and paired sample t-test were employed in this study's parametric testing to evaluate the difference between the two observations. The paired sample t-test is used to analyze whether differences exist before and throughout the process for participants who are similar or have a partner. It is used when the data is usually dispersed before and during the procedure. The next testing step is non-parametric testing using a test rank marked Wilcoxon. The Wilcoxon testing step is done if the data distribution is not normal at the time of the normality test. A Wilcoxon test was conducted to analyze paired samples using a significance level of 5%.

RESULTS AND DISCUSSION

Based on the research variables data, the following analysis conclusions were reached.

Table 2.
Descriptive Statistics

Variable	Minimum	Maximum	Mean	Std. Deviation
Abnormal return (AR) before pandemic	-1,21975	,35073	-,0087834	,33891275
AR during pandemic	-1,79321	8,85796	,3554990	1,80187541
Trading volume activity (TVA) before pandemic	,07084	1,26877	,5255486	,33926390
TVA during pandemic	,26504	6,90713	1,1592610	1,32883331
Trading frequency activity (TFA) before pandemic	35741	178381	79322,86	36696,761
TFA during pandemic	59955	370615	154956,43	81951,526

Based on Table 1, it can be shown that the AR prior to the pandemic had a negative average value, whereas the abnormal return during the epidemic had a positive average value. When compared to trading volume activity prior to the pandemic, the average value of trading volume activity during the epidemic shows a larger value. Despite the fact that the average value of trading frequency activity before the epidemic was higher than the average value during the pandemic.

Table 3.
Normality Test Result of Kolmogorov-Smirnov

Variable	Sig. (>0,05)	Information
AR before pandemic	,001[c]	Abnormal distribution
AR during pandemic	,000[c]	Abnormal distribution
TVA before pandemic	,017[c]	Abnormal distribution
TVA during pandemic	,000[c]	Abnormal distribution
TFA before pandemic	,126[c]	Normal distribution
TFA during pandemic	,019[c]	Abnormal distribution

The average abnormal return before the pandemic has a significance Kolmogorov Smirnov of 0.001 0.05, but the average abnormal return during the epidemic has a significance Kolmogorov Smirnov of 0.000 0.05, resulting in an abnormal distribution of the data. The data obtained has an abnormal distribution because the average TVA before the pandemic has a significance Kolmogorov Smirnov of 0.017 0.05, while the average TVA during the pandemic has a significance Kolmogorov Smirnov of 0.000 0.05. Because the average trade frequency activity prior to the pandemic has a significance Kolmogorov-Smirnov of 0.126 > 0.05, the data retrieved have a normal distribution. The collected data shows an abnormal distribution because, in contrast, the average trading frequency activity during the pandemic has a significance Kolmogorov-Smirnov of 0.019 0.05.

The result of the normality test shows that, of six variables, there is only one that has a normal distribution with an asymptote value. Sig. > 0,05. So the hypothesis is then carried out with the Wilcoxon, a non-parametric signed rank test.

Table 4.
Wilcoxon Signed Ranks Test

Variabel	Before Pandemic	Mean	During pandemic	Sig.	Decision
AR	-0,0087834	<	0,3554990	0,350	There is no significant difference
TVA	0,5255486	<	1,1592610	0,000	There is a big difference
TFA	79322,86	<	154956,43	0,000	There is a big difference
N : 28; α : 5%					

The first result, which is based on Table 4, indicates that the AR has a probability value greater than 5% (0.350 > 0.050). This value indicates that the average AR was the same before and during the outbreak. This outcome also suggests that there will be no response to unusual returns during a pandemic. The following result (0.000 0.050) demonstrates that trade volume activity has a probability value less than 5%. The difference between the average trade volume

activity before and during the epidemic is indicated by this value. These findings also suggest that the capital market's TVA of shares of the LQ-45 Company changed both before and after the epidemic. Additionally, the third result (0.000 0.050) demonstrates that trading frequency activity has a probability value lower than 5%. The difference between the average trading frequency activity before and during the epidemic is indicated by this value. These results also imply that there were variations in the volume of shares of the LQ-45 Company traded before and after COVID-19.

The result of the Wilcoxon signed rank test can be known from three variables and revealed that only a variable has no significant difference because it shows that significant levels were bigger than 0.05, so statistically the effect was quite small.

Discussion

The initial hyphotesis is disregarded based on the test results, which show that Sig. (2-tailed) up to 0,350, or significant value, is bigger than 0,05 (0,350 > 0,05). Before and during the COVID-19 pandemic, there was no variation in the rate of abnormal returns. Based on the study and testing, it was determined that COVID-19 is a global pandemic that has afflicted many countries. According to a WHO release made on March 11, 2020, it has also caused abnormal returns that have been favorably received by the market. Because there was a lot of information about COVID-19 before the WHO officially declared it to be a global pandemic, the market reacted favorably. This was demonstrated by the rise in the average value of abnormal returns that investors received before and during COVID-19. The research's findings concur with those of Aditha & Adiputra (2020), who found that over the period 2019–2024, there was no discernible variation in abnormal returns before and after Indonesia's Advanced Cabinet's announcement.

The study by Akhadiyah and Isbanah (2021) also claimed that there was no difference between the ARR before and after the announcement of the first COVID-19 patient in Indonesia. Furthermore, it suggested that the statement was not educational for mining sector investors, which may have contributed to the absence of a capital market response to the occurrence in the mining industry. This outcome also demonstrates the falsity of the signaling theory's claim that Indonesia's experience with the COVID-19 epidemic has an impact on atypical returns (Junjunan et al., 2021). It is possible that the study's findings will show no difference between abnormal returns before and during Indonesia's pandemic. Additionally, this study can serve as a guide for investors when making investments and a chance to purchase LQ-45 stock at a discount in the hopes that it will climb in value when the pandemic is over.

While the event study took a certain period before and during the pandemic, the same period was carried out to compare the object of research and determine the event's effect on the observed variables. However, in the abnormal return variable, no differences occurred in the period before and during the COVID-19 pandemic. The presence of abnormal returns indicates a market reaction to news events that change investor expectations about a company's credibility. One of the market reactions can be reflected in a rise or fall in the price of a stock as a result of the phenomenon. Investors do not consider the news or events of the COVID-19 pandemic to be an opportunity to invest in the capital market. Investors do not want their investments to be different from what they expected because, in this pandemic period, it can be said that many unexpected things happen. Even with stocks, they want to avoid taking risks.

Based on the test result shown, Sig. (2-tailed) for about 0,000 means that the significance is less than 0,05 (0,000 > 0,05), so the second hypothesis is accepted. Before the determination of COVID-19 and during the pandemic, there were differences in trading volume activity. It proved that the first announcement related to COVID-19 in March 2020 contained information that can

be used as a benchmark for making decisions about investment in LQ-45 stock, and it also influenced investors in trading activities in the capital market. Trading volume activity is affected by the number of stocks traded. The result presented in this study provides evidence of signaling theory. Investors received signals from incidents or news that caused reactions in the capital market. The signal received through information showed a company ran well compared to others. The results of this study are in line with G et al.'s (2021) argument that there were variations in pharmaceutical businesses' trading volume activities before and after the disclosure of the first COVID-19 case in Indonesia. According to a different study by Febriyanti (2020), trading volume activity before and after the release of the first instance of COVID-19 varied dramatically. It was observed that there was a risk that when the first COVID-19 instance in Indonesia was reported, investors would have gotten the wrong idea and shown a propensity to sell LQ-45 stocks.

Since the COVID-19 pandemic in Indonesia was initially identified in early March 2020, trading in the stock market has varied, and the JCI has fluctuated consistently throughout the pandemic. Not just in Indonesia, but in all other nations as well, the stock market changes. Additionally, this circumstance made investors less optimistic about purchasing shares of the LQ-45 Company. Following the disclosure of the first instance of COVID-19, trading volume activity also reduced as a result of the decline in stock prices. The lower the trading volume traded, the lower the stock price, and vice versa.

Investors are concerned that the COVID-19 virus's expansion will be challenging to control; hence, the fact that COVID-19 is a global pandemic is bad news. Because investors sell in large quantities, stock prices and trading volume fall as a result. The trading volume also decreased as a result of the impact of COVID-19 on stock prices.

Companies in LQ-45 experience the same effect where panic and fear occur in declining stock prices and trading volumes, so investors prefer to sell their shares rather than maintain them, which will risk harming them. The goal of investors is to make as much profit as possible. However, some investors are competing to buy stocks that are declining as much as possible in the hope that when the COVID-19 pandemic can be overcome, they will experience an increase in stock prices so that they can benefit.

Based on the test results, which revealed that Sig. (2-tailed) = 0,000 is a significant value that is smaller than 0,05 (0,000 > 0,05), the third hypothesis is accepted. The trading frequency activity varied both before and during the COVID-19 incident. Trading activity shows that market players have access to information that has been made public or secret. The fluctuations of stock affect the strength of stock trading because the difference in interpretation from every market's participation about trading preferences is influenced by discrepancies in information such as purchase, selling, and holding. This research found that signaling theory has been proven. The reaction of capital modal occurred because the existing signal from information contains news. Signals received through information indicate that a company has better performance than others. However, the signal received can have a negative impact on the situation, particularly for investors and the capital market.

Through collaborative testing, differences between trade frequency before and during the COVID-19 epidemic were found. Investors were concerned that their shares in a company would face a deficit untill they went out of business; therefore, they sought out insufficient information. Following the growing number of positive COVID-19 victims, there is a sentiment that causes investors to panic that is getting worse by the day. Both domestic and foreign investors sell shares and choose to invest in gold, which can be seen from rising world gold prices and Antam experiencing a surge in precious metals. After the panic continued, OJK immediately decided to

issue a repurchase policy without going through the GMS, which aims to correct the JCI decline and minimize the impact of ARB (auto-reject below). FSA hopes to reduce the level of trading frequency. Investors are also expected to no longer panic sell and can again rely on stocks in LQ-45.

According to research backed by numerous academics and based on G et al. (2021), there was a difference in the average of pharmacy stock trading frequency activity both before and after the first case of COVID-19 emerged in Indonesia. This was evident from an increase in pharmacy stock trading frequency both before and after the first case of COVID-19 was announced. The research of Cai & Lu (Cai & Lu, 2019), which found that stock trading frequency significantly increases stock return, also supports this. It is evident that trading frequency and stock return are comparable. The frequency of trading increases along with stock returns.

CONCLUSION

The results of the investigation provide credence to the claim that the average aberrant return was the same before and after the COVID-19 epidemic. Since news regarding the first COVID-19 patient in Indonesia did not include information for investors in LQ-45, it shows that the capital market for companies with activities in LQ-45 did not respond to this incident. Investors' sensitivity to unforeseen events has increased with COVID-19. In the future (during times of crisis), investors do not expect much, and the difference between the actual and expected profits stays mostly the same. It indicates that investors are developing strategies to deal with COVID-19 (Yani et al., 2023). Thus, a small abnormal return will not affect stock investments because the careful preparation of investors allows them to cope with the pandemic.

The following finding demonstrates that the trade volume activity before and during the pandemic had statistically significant average differences. It follows that the COVID-19 global pandemic is a bad indication for the capital market since it caused a drop in stock price and trading volume, which prompted investors to race to sell their stocks out of fear that COVID-19 would spread and be hard to contain. As a result of COVID-19's influence, the stock price would decline, and trading volume would as well. These findings support the signaling theory, according to which information that moves the stock market sends signals to investors. Signals received from this information assume that a company can run better than others.

The findings of the subsequent analysis revealed a considerable average difference between trading frequency activity before and after the pandemic. This indicates that investors are panic selling as a result of information about COVID-19 being bad news for them and a sentiment that makes them fearful in light of the growing number of positive COVID-19 victims. Trading frequency activity achieves the most meaningful difference, despite both variable trading volume activity and trading frequency activity having varying values. It indicates that stock fluctuations affect the strength of stock trading due to the different interpretations of each market participant regarding trading preferences influenced by different information such as purchases, sales, and retained earnings.

Recommendation

This research has implications for additional useful information for investor decision-making during times of crisis. In addition, the movement of stock trading during the crisis caused various speculations from investors about the decisions to be made in the future. The limitation of this study lies in the relatively small number of samples with a total observation period of two years. Meanwhile, the condition of the COVID-19 pandemic, which took place in the middle of the year, gave instability to the average financial performance of companies with the LQ-45 index.

Thus, future research can add a current year observation period on financial performance to obtain more stable results than using only a two year current period. Furthermore, the following study can be expected to consider other factors that can trigger stock price movements arising from various things, such as economic recession, political uproar, and social inequality potential in society.

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