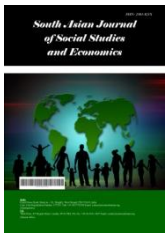

South Asian Journal of Social Studies and Economics

13(4): 51-61, 2022; Article no.SAJSSE.86775
ISSN: 2581-821X

Abnormal Stock Returns, the Effect of COVID-19 Pandemic in Indonesia

I. Made Laut Mertha Jaya [a], Hikmatul Maulidah [b*] and I. Nyoman Adi Buana [c]

[a] Department of Accounting, Faculty of Economics and Business, Mahakarya Asia University, Yogyakarta, Indonesia.
[b] Department of Accounting, Politeknik Harapan Bersama, Tegal, Indonesia.
[c] Master of Accounting Student Department, Perbanas Institute, Jakarta, Indonesia.

Authors' contributions

This work was carried out in collaboration among all authors. All authors read and approved the final manuscript.

Article Information

DOI: 10.9734/SAJSSE/2022/v13i430365

Open Peer Review History:
This journal follows the Advanced Open Peer Review policy. Identity of the Reviewers, Editor(s) and additional Reviewers, peer review comments, different versions of the manuscript, comments of the editors, etc are available here: https://www.sdiarticle5.com/review-history/86775

Short Research Article

Received 14 March 2022
Accepted 27 April 2022
Published 28 April 2022

ABSTRACT

Indonesia has been struck by the Covid-19 outbreak, which has affected a variety of industries. This study provides decision-makers with up-to-date findings on the reaction to abnormal stock returns before and during the covid-19 pandemic. This study was carried out using a quantitative-comparative approach. Because it has the most liquid liquidity level on the Indonesia Stock Exchange, the LQ 45 business was chosen. Data observations were conducted from the end of February 2020 (Normal Conditions) on February 26, 27, and 28 to early March 2020 on March 3, 4, and 5 (Pandemic Covid-19). According to the findings of the data test, there are disparities in anomalous returns at LQ 45 enterprises in Indonesia before and after the Covid-19 pandemic. This conclusion offers a different investment strategy, which involves selecting investment items that are often chosen by individual investors. This suggestion is because the values of these items are consistent over a long period. Investments in property are also a fantastic strategy to use during the current global economic recovery.

Keywords: Investing analysis; stock market; event study; efficient market.

JEL Clasification Code: G1, G11, M41, O16

**Corresponding author: Email: hikmatul.maulidah@poltektegal.ac.id;*

1. INTRODUCTION

If a stock exchange market that trades securities can reflect all conceivable information promptly and accurately, the market is deemed efficient [1]. The idea behind an efficient market is that investors will always consider all available information while deciding [2]. As a result, the same price they trade reflects it. As a result, the information factor is already factored into market prices [3]. The efficient market theory is still a topic of discussion among financial practitioners and academics [4].

The efficient market hypothesis was first proposed by Fama in 1970, and it divides market efficiency into three types: weak form, powerful form, and potent form [5]. In 1991, however, he developed the efficiency notion into a more broad classification to evaluate return predictability, semi-strong form efficiency or event studies, and market efficiency testing in the strong form, known as private information testing [5,4,6]. According to this concept, a market is efficient if no one (individual or institutional investors) can get abnormal profits using existing trading tactics after risk has been considered [6]. No one can get abnormal returns with the use of private information if the market is efficient and robust [7,8].

The increasing number of potential investors in the stock market makes research or observations on stock returns attractive to investors or academics in Indonesia [9,10,8,11]. Various events, such as political conditions, natural disasters, wars, legal issues, also often affect the activity on the stock market in Indonesia [9,11]. One event that can allegedly cause changes in prices and trading volume in 2020 is the condition of the Covid-19 pandemic in Indonesia.

The Covid-19 pandemic in Indonesia has resulted in a shift in trading hours on the Indonesia Stock Exchange, which is a negative signal (bad news) that encourages investors to sell their stock [8, 11]. The Covid-19 outbreak has wreaked havoc on Indonesia's economy, affecting a variety of industries. Recessions and economic crises because of an economic downturn are the hazards that investors and stock market analysts are concerned about [12]. Various enterprises in the real sector were affected by the Covid-19 pandemic, causing significant disruptions in business and production activities, with some even deciding to close or go out of business [13,14,15]. Of course, this has the effect of forcing many employees to resign, so lowering the community's purchasing power [16]. Because it affects the management of public finances, the economic instability caused by Covid-19 is one of the historic occasions [17,18]. This event must be experimentally shown to have a greater impact on the state of the Indonesian stock market; an event study must test the information content of the event [8].

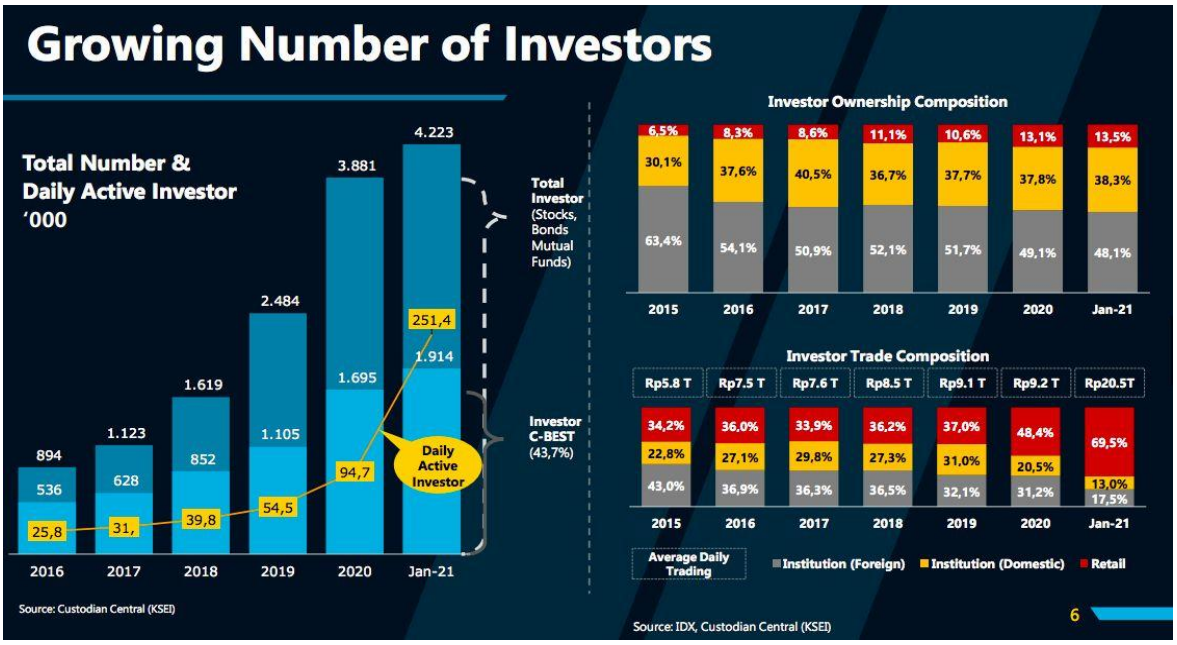

Fig. 1. Growing Number of Investor in stock market Indonesia

Anomalies in occurrences that these investors did not expect can cause abnormal returns [19,20]. Several models, including the market model/single-index model and the capital asset pricing model, can determine abnormal returns. Several people's research on the pattern of changes in stock returns in the stock market has concluded that some deviations can affect stock prices [21,4,22,11,23], but little research has been done on the impact of Covid-19 on stock prices with the highest level of liquidity. There are a lot of stocks in Indonesia that are classified as LQ45 and have a lot of liquidity. This stock is unique because it is the most sought after by both domestic and international investors. The anomalous return was employed as a standard in this investigation.

This study, based on this description, gives up-to-date COVID-19 data that are valuable to decision makers. Of course, in terms of science, this conclusion is also more fair and accountable. In the following session, we'll go over the big theory that was applied in this study. The study methodologies employed, as well as the test findings and discussion, are also explained. The conclusion, innovation, and limits of this study's execution are described in the last section of this article, so that future researchers might overcome them.

2. LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

2.1 Random Walk Theory

The term "random walk" refers to price changes that do not follow any sort of pattern. There is no correlation between many of change and earlier changes [5]. Price swings in the stock market are usually independent and random [5]. The random component arises because of fresh knowledge about the price of specific shares. The expected value of the random magnitude can be zero and can be positive or negative [17]. Market efficiency theories are only tangentially related to the random walk theory, which asserts that past data is unrelated to present value. If the market is inefficient, historical prices cannot be used to forecast present prices [5]. This suggests that in a weekly efficient market, investors cannot profit from previous information, which is unusual (abnormal returns).

2.4 Abnormal Return

Abnormal returns occur when the return got by investors differs from the results of the analysis [21,24, 3]. Abnormal return is also got from the difference between the expected return and the return got (Khanthavit, 2020; Phuong, 2021; Trisanti, 2020). The difference in return will be positive if the return got is greater than the expected return or calculated return. While the return will be negative, if the return got is smaller than the expected return or the calculated return.

The variable in this research is the abnormal return. Abnormal *return* is the difference between the actual return and the expected return that occurs during the end of February 2020 (Normal Conditions) on 26,27, and 28 February 2020 until the beginning of March 2020 on 3,4, and 5 March 2020 (Pandemic covid-19). We apply this daily stock data observation referring to the literature [25]. This calculation and test are carried out with the following data analysis procedure sequence [26].

$$ARit = Rit - (E)Rit$$

Information:

- ARit = Abnormal return of company LQ 45
- Rit = Return of shares of each company LQ 45
- (E)Rit = Expected Return of company LQ 45

There are three (3) models used to estimate abnormal returns [9] that are:

1) Mean Adjusted Model

The mean adjusted model assumes the expected return is the constant equal to the average of the previously realized returns during the estimation period.

$$E(Rit) = \frac{\Sigma Rit}{t}$$

Information:

- E(Rit) = expected return of the i-yr security at time t
- Rit = actual return of the i-yr security at time t
- t = estimation period

Actual return (Rit) **was** used to analyze the data got from the investment. This value is got by calculating the difference in individual share prices during the current period with the previous period by ignoring dividends, which is planned:

$$Pi,t - Pi,t\text{-}1$$
$$Ri,t = Pi,t\text{-}1$$

Information:

- Ri,t = Stock Return i at time t
- Pi,t = Share Price i in period t
- Pit-1 = Share Price in i period t-1

2) Market Model

Market models are used to calculate the expected return in two stages, namely forming an expectation model using realization data during the estimation period and using an expectation model to estimate the expected return in the window period [25,9,10]. The expectation model can be formed using the OLS (Ordinary Least Square) regression technique with the equation [9]:

$$E(Rit) = \alpha i + \beta i\ Rmt + \varepsilon it$$

Information:

- E(Rit) = expected return of the i-th security in the estimation period t
- αi = intercept, independent of Rmt
- βi = slope, systematic risk, dependent on Rmt
- εit = residual error of security i in the estimation period t
- Rmt = market return, calculated by the formula:

$$Rmt = \frac{(ICIt - ICIt\text{-}1)}{ICIt\text{-}1} \rightarrow \text{ICI (Indonesia Composite Index/IHSG)}$$

3) Market Adjusted Model

Market Adjusted Model the current market index return is the correct estimator for estimating a security's return, according to the principle [8]. Because the predicted security return is the same as the market index return, it is not essential to use the estimation period to build the estimation model when employing this model. The formula for calculating the Market Adjusted Model [8]:

$$ARit = Rit - Rmt$$

Information:

- ARit = abnormal return of stock i on day t
- Rit = actual return of stock i on day t

This paper tests the weak efficient market hypothesis in the Indonesian stock market during the COVID-19 pandemic. We detected abnormal returns using the single factor market model.

2.5 Impact Covid Effect Against Abnormal Company Stock Returns in Indonesia

The COVID-19 epidemic has affected public health and the economy in Indonesia, since many businesses had to halt operations to prevent the virus from spreading further [4]. The price of corporate shares on the Indonesia Stock Exchange is one of those affected by the pandemic. On March 13, 2020, the World Health Organization (WHO) proclaimed Covid-19 a pandemic. An incidence of pneumonia in Wuhan, China, prompted the creation of Covid-19. Pneumonia is a wet lung illness in which the air sacs in one or both lungs become inflamed [8].

The Covid-19 epidemic is currently affecting people all over the world. The stock market was initially unaffected, but as more victims were confirmed, the stock market responded badly (MN) (Phuong, 2021). This has led stock market prices to fall, especially when the WHO declared Covid-19 a pandemic, and has resulted in negative abnormal returns. The Covid-19 epidemic also affects stock market dynamics, causing stock exchanges all over the world to decrease. And increase inefficiencies in the stock market [22,20]. In Indonesia, this also has a negative impact on the stock market and affects investors in making investment decisions [8]. Based on several descriptions of the findings of previous researchers conducted in Asia, Europe, and America, the hypothesis proposed in this study is as follows.

Ho: *there is no difference between abnormal returns Stocks before and after the Covid Effect hit Indonesia*

Ha: *there is a difference between abnormal returns Stocks before and after the Covid Effect hit Indonesia*

3. RESEARCH METHOD

This research was conducted by a quantitative-comparative method by comparing one or more variables in one or more different samples at different times [27]. The event that was tested in this study was to see whether there was an abnormal return got by the shareholders of the LQ 45 company because of the Covid effect in Indonesia. This covid-19 pandemic occurred in March 2020, so the test uses a comparison between February 2020 (Normal Conditions) and March 2020 (Covid-19 Pandemic). The LQ 45 company was chosen because this stock is known for the most liquid liquidity level and is well rated on the Indonesia Stock Exchange. The company sectors used as samples are all industrial companies listed in LQ 45 in February 2020 (Normal Conditions) and March 2020 (Covid-19 Pandemic). Using the entire industry on LQ 45 stocks gives more optimism to the assumption that the occurrence of abnormal returns will be greater on the stock market in Indonesia.

Several stages were carried out in the analytical test of this study: descriptive statistical tests, normality tests, paired sample t-tests, and wilcoxon signed-rank test [14,26,21]. The basis for the decision to accept or reject the hypothesis in the Wilcoxon sign rank test is:

a) If the probability (Asymp. Sig) < 0.05 means that Ho is rejected, it means that there is a difference.

b) If the probability (Asymp.Sig) > 0.05 means that Ho is accepted, it means that there is no difference. 4.

4. RESULTS AND DISCUSSIONS

The first test is a descriptive statistical test of the abnormal return value of the company's LQ 45 stock. The description is as follows (Table 1).

According to the findings of descriptive statistical analyses, abnormal returns before and after the Covid-19 pandemic are extremely volatile, with an average abnormal return of -55.2, -76.2, and -77.8 on February 26-28, 2020. The abnormal return value decreases because the return received by investors is less than the expected return. Many investors believe that the Covid-19 virus will not spread to Indonesia, but once it did and became a pandemic, it has returned abnormally high values of 137.2, 118.1, and -34.1 since March 03-06 2020. On March 3, 2020, the anomalous return value is still positive, indicating that investors received a higher return than expected. This is likely due to investors' continued confidence in the Indonesian government's ability to contain the COVID-19 pandemic. However, until March 6, 2020, abnormal returns are getting lower or declining, indicating that market optimism is beginning to wane as a result of the COVID-19 pandemic. and further suppressing stock market activity because company productivity has also begun to be restricted. This situation resulted in losses for many investors in several industrial sector stocks that were affected by the first effects of the COVID-19 pandemic. As a result of the COVID-19 pandemic, market optimism became unstable, and stock market activity was further repressed since firm productivity was beginning to be curtailed. Many investors in various industrial sector stocks that were affected by the first symptoms of the COVID-19 epidemic suffered losses as a result of this situation. As a result of the covid-19 epidemic, market optimism began to wane, significantly suppressing stock market activity because firm productivity had also begun to be limited. Many investors in various industrial sector stocks that were affected by the first symptoms of the COVID-19 epidemic suffered losses as a result of this situation.

Based on Table 2, it can be stated that the data used has a normally distributed distribution because the Kolmogorov Smirnoff test yielded a significant value (p) for all observation variables > 0.05. As a result, the paired sample t-test is the next test.

The abnormal return test is between February 26, 2020, and March 3, 2020; 27 February 2020 to 04 March 2020; and 28 February 2020 to 05 March 2020, as shown in Table 3, with significant values of 0.000, 0.000, and 0.029 or 0.05, respectively. This indicates that abnormal returns in LQ 45 enterprises in Indonesia differed before and after the covid-19 epidemic. The t table values were -4.612; -4.262; and -2.260, respectively, which means that the direction of the relationship for each test is negative, so it can be concluded that if there is no Covid-19 pandemic event, then the abnormal return condition of LQ 45 shares in Indonesia tends to be more stable, given that there were no political or legal events that interfered with the economic condition of the stock market in February and March.

Table 1. 2020 Abnormal Return Value

No.	LQ Stock Code 45	26 February 2020	27 February 2020	February 28, 2020	Covid-19 pandemic	03 March 2020	04 March 2020	05 March 2020
		-3	-2	-1	0	+1	+2	+3
1.	ACES	-12.5	-12.5	7.5	0	10	46.7	-33.3
2.	ADRO	-17.5	-42.5	-5	0	16.7	43.3	-20
3.	AKRA	-40	-70	-50	0	0	-6.7	0
4.	ANTM	-15	-15	-12.5	0	20	10	0
5.	ASII	-87.5	-50	-212.5	0	133.3	50	50
6.	BBCA	-275	-325	0	0	800	400	-16.7
7.	BBNI	-100	-112.5	-25	0	33.3	100	-83.3
8.	BBRI	-10	-175	30	0	80	80	-46.7
9.	BBTN	-12.5	-22.5	-25	0	26.7	40	-20
10.	BMRI	-75	-150	-37.5	0	166.7	183.3	83.3
11.	BRPT	-30	-27.5	2.5	0	13.3	36.7	-3.3
12.	BSDE	-12.5	-15	-15	0	56.7	43.3	-10
13.	BTPS	25	-80	-140	0	140	86.7	66.7
14.	CPIN	-212.5	-25	-100	0	283.3	266.7	50
15.	CTRA	-12.5	-10	10	0	6.7	20	-16.7
16.	ERAA	-27.5	-32.5	-10	0	100	30	3.3
17.	EXCL	-20	-40	65	0	-13.3	26.7	-40
18.	GGRM	-100	-912.5	-1087.50	0	850	666.7	-550
19.	HMSP	-37.5	-27.5	-15	0	50	23.3	0
20.	ICBP	-75	-137.5	-137.5	0	533.3	0	0
21.	INCO	-65	-125	-85	0	146.7	-6.7	-26.7
22.	INDF	-100	-62.5	-200	0	300	33.3	16.7
23.	INKP	-100	-62.5	-175	0	383.3	183.3	-66.7
24.	INTP	-187.5	-37.5	-162.5	0	-366.7	983.3	-350
25.	ITMG	75	-62.5	137.5	0	116.7	-66.7	-33.3
26.	JPFA	-20	-15	-12.5	0	23.3	16.7	0
27.	JSMR	-115	15	-60	0	93.3	40	46.7
28.	KLBF	-5	-17.5	-15	0	10	43.3	36.7
29.	LPPF	-30	-35	30	0	66.7	13.3	-153.3
30.	MNCN	-40	10	-2.5	0	6.7	60	-36.7

No.	LQ Stock Code 45	26 February 2020	27 February 2020	February 28, 2020	Covid-19 pandemic	03 March 2020	04 March 2020	05 March 2020
		-3	-2	-1	0	+1	+2	+3
31.	PGAS	-2.5	-55	-52.5	0	36.7	53.3	0
32.	PTBA	-25	-35	-25	0	113.3	66.7	-6.7
33.	PTPP	-40	-27.5	5	0	3.3	30	-6.7
34.	PWON	-2.5	-5	-5	0	13.3	10	-10
35.	SCMA	-30	-7.5	-15	0	13.3	26.7	-16.7
36.	SMGR	-100	-62.5	-200	0	350	183.3	-66.7
37.	SRIL	-4	-5	4	0	-1.3	1.3	1.3
38.	TBIG	0	-17.5	-27.5	0	16.7	16.7	0
39.	TKIM	-325	-187.5	-200	0	583.3	483.3	100
40.	TLKM	-40	-20	10	0	120	140	0
41.	TOWR	7.5	-25	-15	0	20	13.3	3.3
42.	UNTR	-137.5	-212.5	-487.5	0	650	566.7	-316.7
43.	UNVR	0	-75	-162.5	0	150	200	-16.7
44.	WIKA	-27.5	0	-15	0	6.7	43.3	-30
45.	WSKT	-22.5	-17.5	-12.5	0	10	33.3	-16.7

Source: Indonesia stock exchange, 2021

Table 2. Normality test results

		Unstandardized Residual
N		**45**
Normal Parameters, b	mean	0E-7
	Std. Deviation	,55844846
Most Extreme Differences	Absolute	,116
	Positive	,116
	negative	-,072
Kolmogorov-Smirnov Z		,775
asymp. Sig. (2-tailed)		.585
a. Test distribution is Normal.		
b. Calculated from data.		

Table 3. Paired sample t-test results

		Paired Differences					t	Sig. (2-tailed)
		mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference			
					Lower	Upper		
Pair 1	26 Feb 2020 - 03 March 2020	-192,333	279,771	41,706	-276,386	-108,281	-4,612	,000
Pair 2	27 Feb 2020 - 04 March 2020	-194,200	305,679	45.568	-286,036	-102,364	-4,262	,000
Pair 3	28 Feb2020 - 05 March 2020	-43.578	129,365	19,285	-82.443	-4.712	-2,260	0.029

Table 4. Wilcoxon singned rank test results

	26 Feb 2020-03 March 2020	27 Feb 2020-04 March 2020	28 Feb 2020-05 March 2020
Z	**-5.481b**	**-5,830b**	**-1.981b**
asymp. Sig. (2-tailed)	,000	,000	0.048
a. Wilcoxon Signed Ranks Test			
b. Based on negative ranks.			

Table 4 shows that the Wilcoxon singned rank test confirms the prior findings from the paired sample t-test that there is a difference in anomalous returns at LQ 45 enterprises in Indonesia before and after the covid-19 epidemic. This finding supports the hypothesis that Ho is rejected and Ha is accepted. LQ 45 businesses are well-known equities with high liquidity levels and a high share price ranking on the Indonesia Stock Exchange. Of course, this stock has a larger national economic impact than the 638 other Indonesian company shares.

5. CONCLUSIONS

The LQ 45 stock was chosen based on the value of the stock market index listed on the Indonesia Stock Exchange, as well as other factors, including the firm with the biggest market capitalization in the previous 12 months. Stock investment trading on LQ 45 has many benefits for investors, as investors can hedge their actual shares and speculators by transacting on LQ 45 Futures. The difference between a stock index and a futures contract is in the contract that uses the underlying. For futures, the underlying sale and purchase reference will take the value of the indexed stock price with a contract agreement with a certain contract value agreed upon by the company and the customer.

The LQ45 stock index is also one of the most prominent and well-known indices on the Indonesia Stock Exchange (IDX), as the 45 stocks that make up the index have the most liquid liquidity in the stock market, as well as strong and positive fundamental performance. It is referred to as superior and prestigious since the standard provisions and standards for issuers wishing to take part are limited to only 45 shares, and it already has the best track record in terms of oversight over the previous year. LQ45 and its index have become a standard for market participants (retail and institutional investors) in the management of crowdfunding, pension funds, and insurance. Stocks that will become members of LQ45 will be subject to a rigorous selection procedure by the selection team, which will include proof of consistent performance (rather than being chosen at random or arbitrarily).

However, the Covid-19 pandemic has affected all Indonesian stocks, no matter how good or better they are. The stock price index fell in March 2020, according to the Indonesia Stock Exchange (IDX). This is because many companies and investors are selling their stock. The occurrence of an unexpected pandemic or crisis, such as this one, also encourages investors to maintain focus on their assets, regardless of their size. However, certain investors consider solutions that will allow them to invest even if their income is decreased because of the pandemic. This is accomplished by selecting investment products that are usually chosen by individual investors [28].

According to the results of the data analysis, there are disparities in abnormal returns in LQ 45 companies in Indonesia before and after the COVID-19 pandemic. The assessment of investment returns for the current year should be the first step towards stabilizing post-pandemic economic conditions. It is recommended that investors who fall into the moderate risk category and have an adequate emergency fund invest in hazardous stocks with a company that has a superior fundamental value or an investment value with a higher rate of return. As a result, investors' current analytical point of view must be capable of changing their risk profile from risk-averse to risk seeker while being cautious.

Given the present state of things, Indonesia is well on its way to recovery. The best course of action for investors in this New Normal period is to be cautious with their money because future economic prospects are still unclear. The major goal is to keep the value of return on investment constant so that the risk of a pandemic is kept to a minimum. This can be accomplished by investing in products such as Corporate Bonds, which can yield profits although not as big as stocks. This step is one effort to avoid abnormal stock returns that are too high and can reduce the portion of investment in medium-risk instruments. This advice is given because the essence of investing is to get a high rate of return and that investment is idle money outside of an emergency fund, so you should still be smart in choosing the risk.

However, to maximize financial gains from shares sold or purchased, investors should stay aim and use the correct analysis, both technical and fundamental, as the basis for making investment decisions. This statement is a research limitation. Future researchers should continue researching phenomena that occur over the course of a year in various stock markets to strengthen the trend of finding monthly abnormal returns for decision making, and these findings will be useful for the development of efficiency theory, and the present state of the stock market.

ACKNOWLEDGEMENT

The results of this study we contribute to the development of knowledge of capital market efficiency theory.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

REFERENCES

1. Liu H, Manzoor A, Wang C, Zhang L, Manzoor Z. The COVID-19 outbreak and affected countries stock markets response. International Journal of Environmental Research and Public Health. 2020;17(8):1–19. Available:https://doi.org/10.3390/ijerph17082800
2. Kinateder H, Weber K, Wagner NF. Revisiting calendar anomalies in BRICS countries. Buletin Ekonomi Moneter Dan Perbankan. 2019;22(2):213–236. Available:https://doi.org/10.21098/bemp.v22i2.1092
3. Trisanti T. Stock Split and Stock Market Reaction: the Evidence of Indonesian Public Company. Humanities & Social Sciences Reviews. 2020;8(2):01–07. Available:https://doi.org/10.18510/hssr.2020.821
4. Phuong LCM. The Impact of COVID-19 on Stock Price: An Application of Event Study Method in Vietnam. Journal of Asian Finance Economics and Business. 2021;8(5):523–531. Available:https://doi.org/10.13106/jafeb.2021.vol8.no5.0523
5. Lim TC, Lim XY, Zhai R. History of the Efficient Market Hypothesis. International Journal of Management Sciences and Business Research. 2012;1(11):26–33.
6. Škrinjarić T. Profiting on the stock market in pandemic times: Study of COVID-19 effects on CESEE stock markets. Mathematics. 2021;9(17). Available:https://doi.org/10.3390/math9172077
7. Ali SEA, Lai FW, Dominic PDD, Brown NJ, Lowry PBB, Ali RF. Stock market reactions to favorable and unfavorable information security events: A systematic literature review. Computers and Security. 2021;110:102451. Available:https://doi.org/10.1016/j.cose.2021.102451
8. Ryandono MNH, Muafi M, Guritno A. Sharia Stock Reaction Against COVID-19 Pandemic: Evidence from Indonesian Capital Markets. Journal of Asian Finance, Economics and Business. 2021;8(2):697–710. Available:https://doi.org/10.13106/jafeb.2021.vol8.no2.0697
9. Herwany A, Febrian E, Anwar M, Gunardi A. The Influence of the COVID-19

Pandemic on Stock Market Returns in Indonesia Stock Exchange. Journal of Asian Finance, Economics and Business. 2021;8(3):39–47.
Available:https://doi.org/10.13106/jafeb.2021.vol8.no3.0039

10. PRATAMA I. Analisis Perbandingan Abnormal Return Saham Sebelum Dan Sesudah Pengumuman Right Issue. E-Jurnal Manajemen Universitas Udayana. 2014;3(1):254888.
11. Widyarti ET, Wahyudi S, Hersugondo H. Map of Changes in Abnormal Return and Trading Volume Activity: Reviewing the Effect of Ramadhan in Indonesia. Universal Journal of Accounting and Finance. 2021;9(5):1093–1102.
Available:https://doi.org/10.13189/ujaf.2021.090519
12. Baker SR, Bloom N, Davis SJ, Kost K, Sammon M, Viratyosin T. The unprecedented stock market reaction to COVID-19. Review of Asset Pricing Studies. 2020;10(4):742–758.
Available:https://doi.org/10.1093/rapstu/raaa008
13. Bai C, Quayson M, Sarkis J. COVID-19 pandemic digitization lessons for sustainable development of micro-and small- enterprises. Sustainable Production and Consumption. 2021;27:1989–2001.
Available:https://doi.org/10.1016/j.spc.2021.04.035
14. Clark J, Mauck N, Pruitt SW. The financial impact of COVID-19: Evidence from an event study of global hospitality firms. Research in International Business and Finance. 2021;58(March), 101452.
Available:https://doi.org/10.1016/j.ribaf.2021.101452
15. Rakshit S, Islam N, Mondal S, Paul T. Mobile apps for SME business sustainability during COVID-19 and onwards. Journal of Business Research. 2021;135(January):28–39.
Available:https://doi.org/10.1016/j.jbusres.2021.06.005
16. Contractor FJ. The world economy will need even more globalization in the post-pandemic 2021 decade. Journal of International Business Studies. 2022;53(1):156–171.
Available:https://doi.org/10.1057/s41267-020-00394-y
17. Alam MN, Alam MS, Chavali K. Stock market response during COVID-19 lockdown period in India: An event study. Journal of Asian Finance, Economics and Business. 2020;7(7):131–137.
Available:https://doi.org/10.13106/jafeb.2020.vol7.no7.131
18. Magno F, Cassia F. Effects of agritourism businesses' strategies to cope with the COVID-19 crisis: The key role of corporate social responsibility (CSR) behaviours. Journal of Cleaner Production. 2021;325(October), 129292.
Available:https://doi.org/10.1016/j.jclepro.2021.129292
19. Serrano-Cinca C, Gutiérrez-Nieto B, Bernate-Valbuena M. The use of accounting anomalies indicators to predict business failure. European Management Journal. 2019;37(3):353–375.
Available:https://doi.org/10.1016/j.emj.2018.10.006
20. Wu W, Lee CC, Xing W, Ho SJ. The impact of the COVID-19 outbreak on Chinese-listed tourism stocks. Financial Innovation. 2021;7(1).
Available:https://doi.org/10.1186/s40854-021-00240-6
21. Khanthavit A. Foreign investors' abnormal trading behavior in the time of COVID-19. Journal of Asian Finance, Economics and Business. 2020;7(9):63–74.
Available:https://doi.org/10.13106/JAFEB.2020.VOL7.NO9.063
22. Shen D, Zhang W. Stay-at-Home Stocks Versus Go-Outside Stocks: The Impacts of COVID-19 on the Chinese Stock Market. Asia-Pacific Financial Markets. 2021;28(2):305–318.
Available:https://doi.org/10.1007/s10690-020-09322-4
23. Xiong Y, Lam HKS, Kumar A, Ngai EWT, Xiu C, Wang X. The mitigating role of blockchain-enabled supply chains during the COVID-19 pandemic. International Journal of Operations and Production Management. 2021;41(9):1495–1521.
Available:https://doi.org/10.1108/IJOPM-12-2020-0901
24. Suryanto. Analysis of abnormal return before and after the announcement of investment GRADE indonesia suryanto. Department of Business Administration, University of Padjadjaran. International Journal of Business and Management Review. 2015;3(1):11–23.
www.eajournals.org
25. Brown SJ, Warner JB. Using daily stock returns. The case of event studies. Journal

of Financial Economics. 1985;14(1):3–31. Available:https://doi.org/10.1016/0304-405X(85)90042-X
26. Hartono J. Teori Portofolio dan Analisis Investasi. BPFE;2016.
27. Jaya IMLM. Metode Penelitian Kuantitatif Dan Kualitatif: Teori, Penerapan, dan Riset Nyata (V. Wiratna Sujarweni (ed.); 1st ed.);2020. Available:http://www.anakhebatindonesia.com/author-i-made-laut-mertha-jaya-606.html. Available:http://www.anakhebatindonesia.com/author-i-made-laut-mertha-jaya-606.html
28. Brown SJ, Warner JB. Measuring security price performance. Topics in Catalysis. 1980;8(3):205–258. Available:https://doi.org/10.1016/0304-405X(80)90002-1

Peer-review history:
The peer review history for this paper can be accessed here:
https://www.sdiarticle5.com/review-history/86775