P-ISSN : 2252-844X
E-ISSN : 2615-1316
JURNAL MANAJEMEN DAN KEUANGAN, VOL.12, NO.1, MEI 2023

Impact of The Covid 19 Pandemic: Is There Overreaction in LQ 45 Stock?

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ABSTRACT

The Covid-19 pandemic has had an impact on various aspects of life, including the capital market which has caused a negative response on most stock exchanges around the world, including the Indonesia Stock Exchange. The Effecieny Market Hypothesis (EMH) explains that the price of a stock will always be reflected from the information available in the market or investors tend to be rational. However, dramatic events such as COVID-19 allow investors to overreact. The results showed that there was an overreaction in both winner and loser stocks in the LQ 45 group on the IDX in 3 months of observation since covid was announced as a pandemic. This overreaction is then followed by a price reversal even though it has not given a significant return after t+13 for both winner and losser stocks. The speed of price recovery (magnitude effect) after the price reversal on the loser stock is higher (faster) than the winner stock. The speed of this price recovery is significantly affected by the company's capital structure and share ownership of individual investors (local and foreign).

Keyword: Efficient Market Hypotesis, Covid Effect, Overreaction, Price Reversal, abnormal return.

INTRODUCTION

In the current global era where the mobility of people and goods between people is very high, the spread of this virus is very high and fast along with the mobility and interactions that occur between humans, it was recorded that in early March 2020, the outbreak from Wuhan China had spread to at least 114 countries. There are as many as eight countries that which reported cases of infection of more than 1,000. These countries include Italy, Iran, South Korea, France, Spain, Germany, and the United States (US), so then WHO on March 11, 2020, announced that the outbreak was officially a coronavirus (COVID-19) pandemic(Rehia Sebayang, 2020).

To reduce or inhibit the spread of this pandemic, many countries have implemented national lockdowns such as Italy on March 10, Spain on March 14, the Philippines on March 15, Malaysia on March 18, and many other countries did the same. (Nur Rohmi Aida, 2020). It is different from Indonesia, which prefers the so-called Large-Scale Social Restrictions (PSBB) which is a looser version of the lockdown. The implication of this lockdown or PSBB is a reduction in economic activity because factories, trade/shopping centers, and offices are closed or their activities are limited to reduce the risk of spreading. So it is not surprising that many businesses were forced to close and lay off their employees. According to the Ministry of

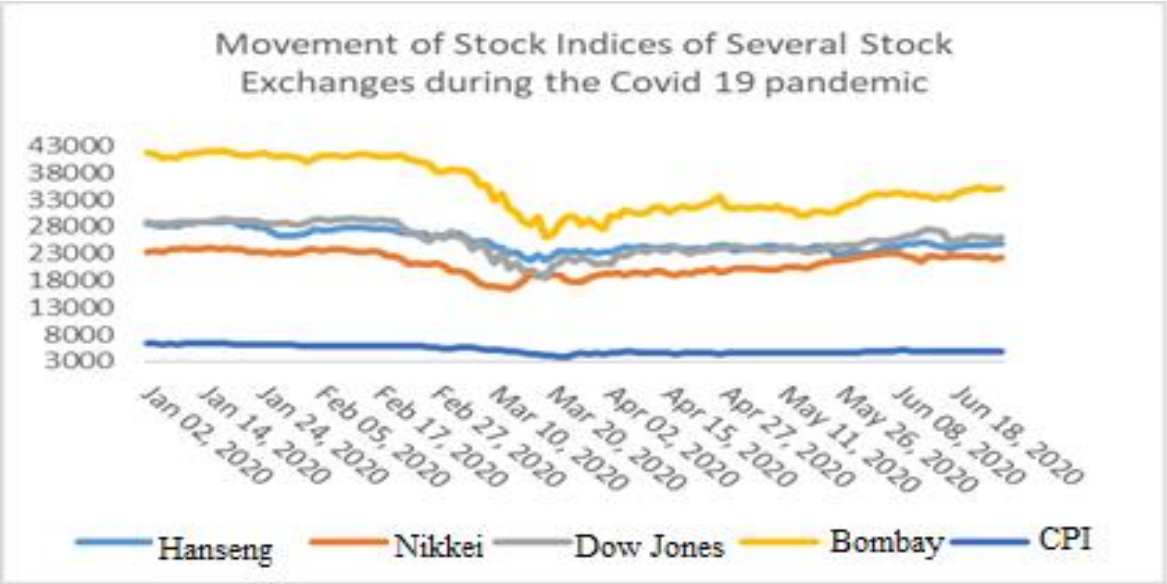


Figure 1. Index movement of several exchanges during the pandemic

Manpower data as of May 27, 2020, the formal sector laid off reached 1,058,284 workers and 380,221 workers were laid off, while informal workers affected, laid off, and laid off reached 318,959 people, bringing the total to 1,757,464 people laid off and laid off.(Ferry Sandi, 2020).

Although stock trading is currently carried out online so it does not require physical contact activity, basically stock trading activities as revealed by the fundamental approach are referring to the company's prospects. The reduced activity of economic actors due to weak or negative economic growth conditions will have an impact on the company's profits in the future so that its prospects decline and encourage stock price movements in general towards a decline (negative return). The negative response of the stock market during the Covid-19 pandemic occurred in many countries as illustrated in the movement of stock price indexes of several stock exchanges in the world during the pandemic (figure 1).

In January, the world community in general still seemed to think that the Covid-19 outbreak only occurred in China so that the public's response was still normal, as well as in the capital market there was no significant stock price movement, even though it had shown a decline in stock prices or values, although still small except for Hangseng China, in the country where the outbreak occurred, the price decline was quite large (table 1). Entering February when it was detected that the virus had spread to various countries and positive cases and deaths due to Covid-19 were increasing, the negative response of the stock market in various countries was increasing. The peak of the price decline was in March when positive cases and deaths

Table 1. Changes in The Index of The Beginning and End of The Month of Several Stock Exchanges During The Pandemic.

	CPI	Hanseng	Dow Jones	nikkei	Bombay
January	-5.47%	-7.82%	-2.21%	0.00%	-2.17%
February	-7.33%	-0.86%	-10.53%	-7.96%	-3.95%
March	-15.34%	-10.22%	-17.92%	-11.37%	-22.74%
April	5.61%	6.75%	16.24%	11.78%	19.29%
May	3.22%	-2.76%	6.99%	11.51%	2.23%
June	1.12%	3.44%	0.47%	1.02%	4.98%

from Covid-19 increased again and were declared a pandemic by WHO. After a period of price correction in April.

The Indonesian Capital Market experienced the same thing as other countries, namely experiencing a weakening of stock prices due to the increasing number of Covid-19 cases, which illustrates the higher investment risk due to economic activity that is not running normally. Companies with good performance fundamentally tend to have good stock price prospects(Tim Edusaham, 2019), but psychological conditions also influence most of the financial decisions taken. In decision-making, human logic only contributes as much as 12% - 45%. Temporary psychological factors contribute much more about 55%-88%. trading consultant, Dr. Van K. Tharp says that success in trading involves 60% mastery of psychological factors ((Pratama;Ubaidillah, 2020).

The Effecieny Market Hypothesis (EMH) explains that the price of a stock will always be reflected in the information available in the market. About the Efficient Market Hypothesis (EMH) as stated by Fama (1970), one of the most debated principles is that the price of financial assets reacts instantly and is not biased by new information. (Stefanescu et al., 2012). So that in the last decade there have been pro and contra arguments for this statement(Grossman & Stiglitz, 1980),(Rubinstein, 2000), and research results reveal various anomalies that cast doubt on EMH. Some of this relates to the market's reaction to shocks. Two main hypotheses oppose the efficiency hypothesis looking at reactions to shocks, namely the overreaction, and underreaction hypotheses. Overreaction assumes that investors overreact to positive shocks (the unexpected and extremely good news) and negative shocks (unexpected things and extremely bad news) thereby correcting investor behavior.(De Bondt & Thaler, 1985),(Fama, 1997). Overreaction also occurs when a positive surprise is followed by a significant negative abnormal return or when a negative surprise is followed by a significant positive abnormal

return(Stefanescu et al., 2012). So, based on this reaction, a contrarian strategy is generated in which the past loser's shares are bought and the past winner's shares are sold (Jegadeesh & Titman, 1995).

Due to the effects of shocking bad news such as COVID-19, there is a significant negative effect on stock returns across all companies including the Hang Seng Index and the Shanghai Stock Exchange Composite Index during the period 10 January to 16 March 2020. However, some sectors performed better than others during the COVID-19 outbreak, in particular, the information technology and pharmaceutical manufacturing sectors. Stock returns are significantly negatively related to the daily growth in total confirmed cases and daily growth in the total number of deaths caused by COVID-19. stocks traded by foreign investors face a higher and significant negative effect on returns compared to stocks traded primarily by Chinese nationals(Al-Awadhi et al., 2020).

Although the number of infected in Japan is lower than in other countries, the Japanese stock market experienced a decline almost as severe as that experienced by the US stock market. Foreign-owned shares are negatively correlated with abnormal returns, while ownership by traditional business groups (keiretsu) is positively associated with abnormal returns. This shows that the existence of long-term investors such as keiretsu is positively related to stock returns during periods of a financial crisis(Takahashi & Yamada, 2020). An evaluation of the short-term impact of the coronavirus outbreak on 21 of the leading stock market indexes in the main affected countries including Japan, Korea, Singapore, United States, Germany, Italy, the United Kingdom, etc., shows that the consequences of infectious diseases are enormous and immediate. Using the event study method, the results show that the capital markets in the main affected countries and regions fell rapidly after the virus outbreak. Asian countries experience more negative abnormal returns than other countries(Liu et al., 2020)

However due to these psychological factors, information on an increase in COVID-19 cases which of course gives negative sentiment. Investors can overreact so that investors will set prices too low as a reaction to this negative COVID-19 information. This investor overreaction causes abnormal price movements and then the market will correct them through price reversals until a new equilibrium level occurs. A significant increase/decrease in price is followed by a significant decrease/increase in response to an overreaction. This shows that market conditions are not efficient.

Price reversal to technical analysis can be explained by the support–resistance approach. The stock moves down at one time and the point will reach what is called the point **Support** namely a certain price level or area that can be believed to be the lowest point at a time, where

it is as if this price level keeps prices from falling deeper. When it hits the support, the price is considered to be in a low position so that the price tends to bounce back up (rebound). The opposite of the support point is the resistance point, which is a certain price level or area that is believed to be the highest point or area at a time, where the selling action is large enough to prevent prices from moving up. Usually, the price will go down after touching the resistance price(Haris Darmawan, 2017).

The overreaction factor causes a price reversal as the findings of De Bondt and Thaler(De Bondt & Thaler, 1985)that showsmarket participants tend to set prices too high in reaction to the news that is considered "good" (good news). On the other hand, they will charge too low a price in reaction to bad news. Then this phenomenon reverses when the market realizes it has overreacted. This reversal is indicated by a (drastic) decline in stock prices that were previously predicated as winners and/or an increase in stock prices previously predicated as losers. The lower the investor's knowledge of the effects of new information, the greater the tendency for overreaction to occur this phenomenon is also known as the Winner – Losser Effect. Price reversal can also be influenced by firm size, where on average the size of the loser company is smaller than the winner company(Zarowin, 1990) so overreaction is manifested especially in small firms(Clare & Thomas, 1995). Although there are also research results that conclude that there is no evidence showing that effect size explains the difference in performance between winners and losers in the stock market (Dissanaike, 2002).

The phenomenon of overreaction does not only occur in the long term, as revealed on the New York Stocks Exchange(De Bondt & Thaler, 1985), at the Mexican Stock Market (González Maiz Jiménez & Ortiz Calisto, 2020), but it can also occur in the short term, where the "winner" and "losser" portfolios formed in one week indicate a reversal of returns next week allowing a short-term contrarian strategy to be realized(Lehmann, 1990), On event windows of up to 30 days, evidence of price reversal for losser stocks is statistically significant on the Taiwan Stock Exchange(Lin, n.d.). Based on the behavior of each stock in the USA for 21 trading days after the event of extreme movement in the market index, stocks tend to overreact after positive and negative events which is more pronounced in negative events.(Chaudhury & Piccoli, 2015).

This study tries to analyze investor responses stocks in LQ 45 that are included in LQ 45 to information on cases of covid 19 whether it causes overreaction, whether shows the differences in responses between stocks that are included in the winner and loser (groups before the covid 19 pandemic / normal) and look for factors that influence the difference in these reactions. The results of this study are expected to provide an overview and analysis model of

stock price or value behavior that can be a guide for stock investment in the event of certain events such as the COVID-19 pandemic. Investors overreact or not, can be detected through a reversal of the direction of stock prices after the emergence of new information. The sharper the decline/increase in the share price, the greater the price reversal will be so that the average abnormal return of the winning company will be negative and vice versa the losser company will be positive.(De Bondt & Thaler, 1985). So that the first hypothesis to prove the existence of overreaction is if the presence of ACAR winner <0, ACARlosser>0 and ACARwinner <0 - ACARlosser>0 is proven significantly.

It is logical if due to price declines, investors then want to quickly reverse their share prices to cover the losses they have earned, so that the more extreme the price changes at first, the more extreme the adjustment (magnitude effect) but during this pandemic the change in stock prices as an investor response is mainly based on Concerns about the investment risk and of course, companies with larger debts will be considered riskies in the eyes of investors because their declining income must prioritize paying their debts rather than dividing profits for shareholders. It is logical if due to price declines, investors then want to quickly reverse their share prices to cover the losses they have earned, so that the more extreme the price changes at first, the more extreme the adjustment (magnitude effect) but during this pandemic the change in stock prices as an investor response is mainly based on Concerns about the investment risk and of course, companies with larger debts will be considered riskies in the eyes of investors because their declining income must prioritize paying their debts rather than dividing profits for their shareholders. It is logical if due to price declines, investors then want to quickly reverse their share prices to cover the losses they have earned, so that the more extreme the price changes at first, the more extreme the adjustment (magnitude effect) but during this pandemic the change in stock prices as an investor response is mainly based on Concerns about the investment risk and of course, companies with larger debts will be considered riskies in the eyes of investors because their declining income must prioritize paying their debts rather than dividing profits for their shareholders. Therefore, the capital structure is considered to affect the rate of return on shares.

Based on considerations, different industries will have different impacts from this pandemic. At first glance, it can be seen that telecommunications and food retailers are benefiting from this pandemic, Therefore, the industry is used as a control variable.

There is a pandemic that has a different psychological effect on each individual, as well as investors. Then the individual share ownership variables, both local and foreign, are factors that are considered to influence stock volatility which has an effect on stock returns. This is

what distinguishes or contributes to this study from other studies that place more emphasis on institutional investors.

RESEARCH METHODOLOGY

This analysis of stock behavior during the COVID-19 pandemic uses LQ 45 stock data, which is 45 of the most liquid stocks last semester and is grouped into a group of winner companies based on the highest 30% abnormal return average (15 stocks) as winner stocks and the lowest 30% stocks as losser stocks. Abnormal returns are calculated based on the difference between normal returns in the LQ45 group and the average market return (IHSG) in the September – November 2019 period as normal windows. December 2019 was not included in the normal windows to avoid a return bias due to year-end corporate actions. Meanwhile, the observation period is one day after March 2, when the government announced Covid 19 cases as a pandemic for 1 and 2 months of observation.

The abnormal return of winner and losser stocks at LQ 45 in the observation period is calculated by the following formula (Pamela P, 1989):

$$AR_{i,t} = R_{i,t} - R_m$$

Where:

Sickle = Abnormal Return of stock i, at time t

$R_{i,t}$ = Real Stock Return i, at time t

R_m = Market Return (JCI) at time t

After getting the abnormal return value, the next step is to calculate the Cumulative Abnormal Return (CAR). Cumulative abnormal return is the amount of abnormal return of a stock during the estimated research period with the following formula (Soares & Serra, 2005):

$$CAR_{i,t} = \sum_{t=1}^{t} AR_{i,t}$$

the next step is to evaluate the winner and losser stock portfolios, then the average CAR for each portfolio is calculated as follows (Soares & Serra, 2005):

$$ACAR_{P,T} = \sum_{t=1}^{T} (\frac{1}{N}) \sum_{I=1}^{N} AR_{i,t}$$

Where:

P = Winner (W) or Losser (L) stock portfolio

T = Length of observation to test the stock hypothesis of the overreaction phenomenon.

The Losser Portfolio will produce ACAR>0 , while the Winner Portfolio will produce ACAR<0 which is significant in the test using the t-test with the following formula (Soares & Serra, 2005):

$$t_{P,T} = \frac{ACAR_{P,T}}{S_P / \sqrt{N}}$$

Where Sp is the standard deviation of the CAR and N is the number of test periods (days).

The next analysis is to look for factors that influence the magtitude effect, namely sthe more extreme the initial price change, the more extreme the adjustment (magnitude effect)(De Bondt & Thaler, 1985), which is congruent with the equation in physics known as Newton's third law, namely Action = - reaction. For every action, there is an equal and opposite reaction, according to Newton's third law. In stocks, can see that corrections in prices hold opportunities. Smaller corrections often see smaller bounces back, while steeper corrections tend to precede powerful moves to the upside (Nasdaq, 2017).

The more extreme the initial price change, the more extreme the price adjustment will be which will result in a faster return to the initial price before a certain event. The magnitude of this adjustment is of course inseparable from whether the company's fundamentals are good or not, which is reflected in the risk factors faced by the company. It is suspected that there are risk factors that affect the level of magnitude effect. In the perspective of behavioral finance investors are normal investors who always try to think and act rationally, but because of the human psychological side, they are influenced by market psychology and the internal psychological aspects of the individual investors themselves which are not fully rational. Therefore the factors that influence the rate of return on investment (ACAR) are thought to consist of rational and individual factors which are formulated as follows:

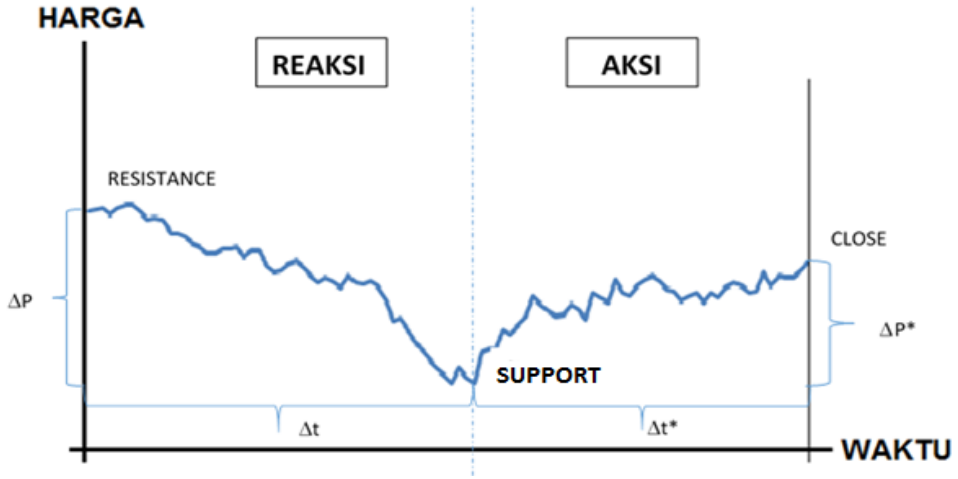


Figure 2. The Relationship of Price Movements During Action - Reaction

$$ACAR = constanta + \beta_1 DER + \beta_2 Industry + \beta_3 local_inv + \beta_4 foreign_inv + Error$$

RESULT AND DISCUSSION

Analysis Description

The observation period is starting on March 2, when Covid 19 cases began to be detected and announced by the government as a pandemic and the end of observation was at the end of April when the increase in Covid 19 cases was seen to have decreased. Until the end of May, although Covid 19 still showed an increasing trend, the LQ 45 index had also shown an increasing trend, there was already a correction from the decline in stock prices that began in early March.

The comparison of abnormal returns between the normal period (September - November) 2019 and the observation period (March - May) 2020 shows that on average, winner stocks that in normal times have positive abnormal returns have an average negative abnormal return during the observation period and vice versa. Loser stocks that have an average negative abnormal return during normal times have a positive average return during the period of observation.

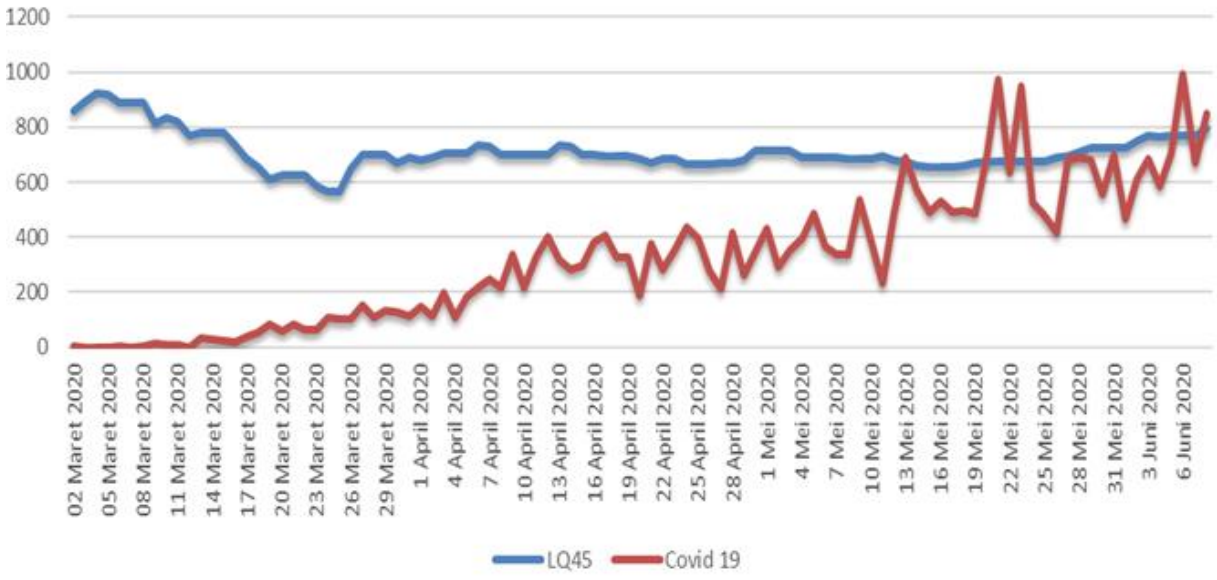


Figure 3. Comparison of The Movement of Index LQ 45 and Covid 19

Table 2. Summary of Analysis Description

	Normal Windows		Event Windows	
	Winner	Losser	Winner	Losser
Jumlah Saham	15	15	15	15
Waktu Analisis (hari perdagangan)	64 hari (3 bulan)	64 hari (3 bulan)	57 hari (3 bulan)	57 hari (3 bulan)
Rata-rata	0,005690	-0,002508	-0,000179	0,000462
Stdev	0,015871	0,003666	0,005124	0,003704
Terbesar	0,066865	-0,000008	0,010147	0,005772
Terkecil	0,000017	-0,019797	-0,010617	-0,005136

Source: Analysis Results (2022)

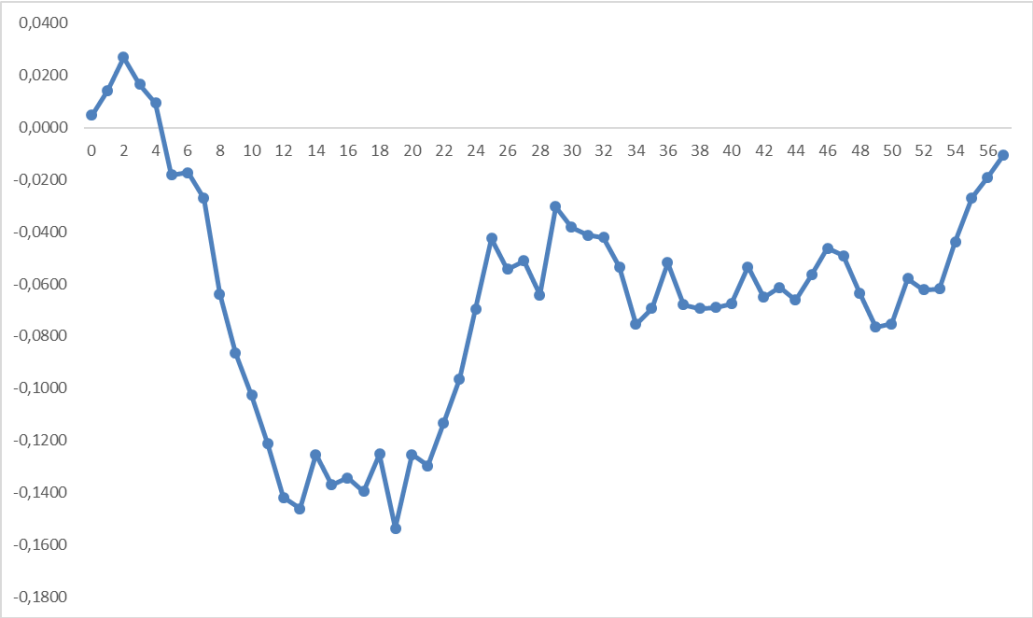


Figure 4. CAAR Winner LQ 45

After the announcement of the COVID-19 pandemic as of March 2nd, the Cumulative Average Abnormal Return (CAAR) of the winner's stock rose for 2 days, but after that, it continued to decline to a CAAR of -0.1463 on day 13 and then rose a few days before correcting. thus reaching the lowest CAAR of -0.1537 on the 19th day, before then showing an increasing trend (figure 4). However, until the end of May 2022 (day 57), the CAAR value is still negative at -0.0104. Have not returned to the initial CAAR analysis (March 2) of 0.0048.

The CAAR of losser stocks, as well as winner stocks, experienced an increase in 2 days before falling freely until CAAR reached its lowest point on day 13 to -0.2077 and was able to reach a positive CAAR of 0.0033 which continued from day 43. Days 25 and 29 had recorded a positive CAAR, but then it was corrected so that it became negative again. On day 44, the CAAR had reached 0.0145 exceeding the initial CAAR of the analysis (March 2) of 0.0006

(figure 5).

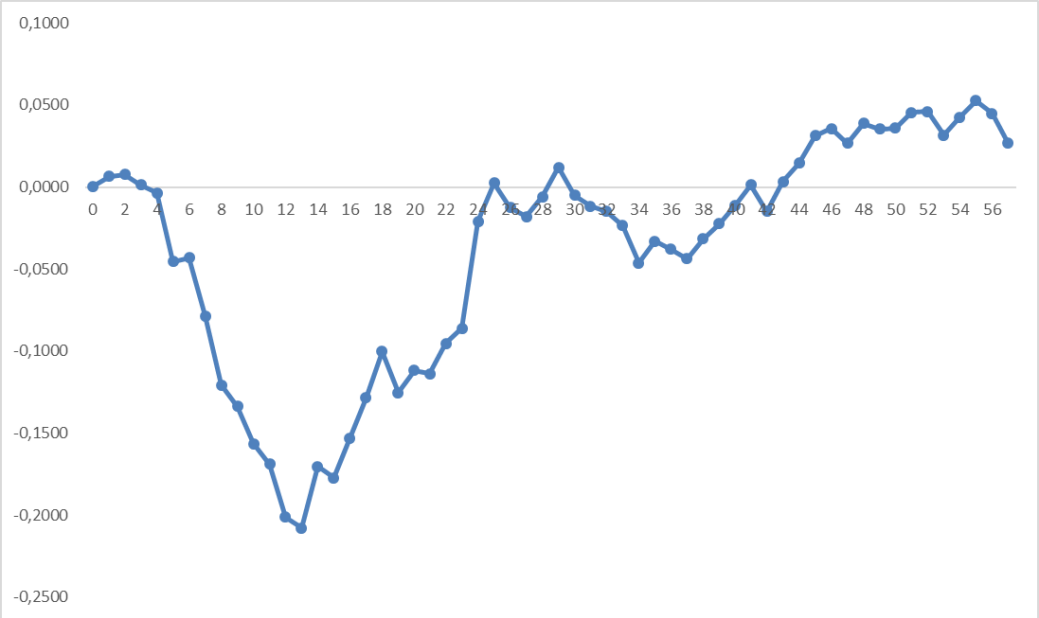


Figure 5. CAAR Stock Losser LQ 45

The comparison shows the support point for loser stocks at CAAR of -0.2077 is lower than winner stocks with a CAAR of -0.1537 with loser stock trading days to reach a shorter support point of 13 days compared to 19 days for winner stocks as of the announcement of the pandemic. March 2nd. This is because the average decrease in returns seen in the Average Cumulative Abnormal Return (ACAR) on loser stocks is-0.2041 is bigger than the winner stock which is -0.15368.

Overreaction Analysis

Two days after the announcement of the pandemic on March 2, winner stocks showed a significant downward and downward trend, consecutively occurring on day 8 to day 22, with a peak on day 19 where CAAR was at the highest negative return, namely -0. 1537 (see table 3 and figure 4). The decline in the average cumulative return (ACAR) reached 15.37% per 1 trading day. This very rapid decline in return, which in early March still recorded a positive return for winner stocks and then turned into a negative return with ACAR < 0 and proved significant, it can be concluded that there was an overreaction in winner stocks.

Table 3. Indicator of Winner Stock Overreaction

Hari	AAR	ACAR	t- hit	sig
8	-0,0367	-0,0639	-1,9199	*
9	-0,0227	-0,0866	-2,3785	*
10	-0,0161	-0,1027	-2,8663	**
11	-0,0184	-0,1211	-3,5623	**
12	-0,0207	-0,1418	-3,9387	**
13	-0,0044	-0,1463	-4,2329	**
14	0,0208	-0,1254	-2,9986	**
15	-0,0117	-0,1372	-3,3562	**
16	0,0028	-0,1344	-2,7639	**
17	-0,0053	-0,1396	-2,7005	**
18	0,0144	-0,1252	-2,5764	**
19	-0,0285	-0,1537	-3,1958	**
20	0,0282	-0,1255	-2,3328	*
21	-0,0043	-0,1297	-2,3687	*
22	0,0164	-0,1133	-1,9659	*
34	-0,0221	-0,0755	-1,8038	*
49	-0,0130	-0,0766	-1,9733	*
50	0,0013	-0,0753	-1,8712	*
52	-0,0042	-0,0622	-1,6937	*
53	0,000419	-0,0618	-1,6788	*

Even though both of them had positive returns at the beginning of the pandemic, a significant decrease in returns for losser stocks occurred consecutively as well as for 15-day winner stocks. The fall of return on losser stocks was faster and deeper, causing a higher negative ACAR, namely -0.2077 compared to -0.1537 on winner stocks at its lowest point (support point). The fall from positive returns to negative returns on losser stocks resulted in ACAR < 0 which is significant illustrates an overreaction due to the bad news of the COVID-19 pandemic. According to behavioral finance theory, there is overreaction related to information about the Covid-19 pandemic, indicating that there is overcovidence in the presence of information. It is feared that Covid 19 will have a large and long-lasting negative impact on the economy.

Table 4. Indicators of Stock Loss Overreaction

Hari	AAR	ACAR	t- hit	sig
7	-0,0355	-0,0785	-2,0988	*
8	-0,0423	-0,1208	-2,5344	*
9	-0,0129	-0,1337	-2,7649	**
10	-0,0227	-0,1564	-3,4101	**
11	-0,0126	-0,1690	-3,9601	**
12	-0,0321	-0,2011	-4,8229	**
13	-0,0066	-0,2077	-5,1811	**
14	0,0373	-0,1704	-3,2068	**
15	-0,0067	-0,1772	-3,4531	**
16	0,0240	-0,1532	-2,7103	**
17	0,0247	-0,1284	-2,1504	*
18	0,0283	-0,1002	-1,7939	*
19	-0,0250	-0,1252	-2,2031	*
20	0,0136	-0,1117	-1,9592	*
21	-0,0021	-0,1138	-1,9752	*
55	0,009884	0,0526	1,7011	*

Price Reversal

After day t+13, the ACAR of winner stocks showed a reversal trend although then it was corrected so that it touched a lower ACAR at t+19, the average CAR decline was significant at t+13. After t+19 the average abnormal return was positive except for a few trading days, which pushed ACAR up significantly. The existence of a price reversal is evidenced by the correlation between the abnormal return of winner shares at the time of a significant decline in the average CAR (ACAR) and Cumulative abnormal returns of winner shares when the average abnormal return is positive and significant after the price reversal. Where the correlation between the winner's stock AR at t+13 with CAR t+36, CAR t+39, and so on until t+57 is negative but not significant (table 5), except that t+50 is positively correlated.

Table 5. correlation of Pearson AR and CAR of winner stocks

	CAR t+36	CAR t+39	CAR t+40	CAR t+41	CAR t+43	CAR t+45	CAR t+46
AR t+13	-.049	-0.072	-0.056	-0.079	-0.109	-0.136	-0.199
Sig. (1-tailed)	0.431	0.399	0.420	0.389	0.349	0.134	0.237

(advanced)

	CAR t+51	CAR t+53	CAR t+54	CAR t+55	CAR t+56	CAR t+57
AR t+13	-.058	-115	-.152	-.102	-159	-.191
Sig. (1-tailed)	0.417	0.342	0.294	0.359	0.285	0.248

Table 6. Kendall's tofu correlation coefficient

	CAR t+14	CAR t+22	CAR t+25	CAR t+26	CAR t+29	CAR t+30
AR t+13	-0.089	-0.026	-0.055	-0.091	-0.103	-0.132
Sig. (1-tailed)	0.376	0.463	0.423	0.373	0.357	0.320

The trend reversed ACAR loser stocks occur the same as winner stocks, namely after the 13th day where the average abnormal return on the majority of trading days shows a positive return so that ACAR increases significantly giving a faster positive return so that on day 55 it gives an average an increase in return (ACAR) of 5.26%, exceeding the initial ACAR of the announcement of the pandemic (March 2) which was 0.06% (figure 5).

The existence of a price reversal in losser stocks is also evidenced by the correlation between abnormal stock returns when the ACAR negative is significant and cumulative abnormal returns when the ACAR is positive and significant after the reversal. The negative correlation between abnormal return (AR) of losser stocks at t+13 and CAR t+14 in March, with CAR t+22, t+25 , t+26, t+29, and t+30 in April indicates that there is some negative and significant correlations (Table 6). The correlation value indicates a fairly strong price reversal.

Factors influencing price recovery

Of course there are factors that influence why there is overaction and then followed by a price reversal that occurs as illustrated above where loser stocks experience a more extreme price drop than winner stocks, then they also experience a bigger price reversal.

The results of the regression analysis show that factors that have a significant effect on changes in ACAR are debt to equity ratio (DER) and individual investor factors, both foreign and local. As shown the following equation:

$$\begin{array}{lllllll} ACAR = 0.031 - & 0.069\ DER + & 0.019\ Ind + & 0.68\ loc_investor - & 61.2\ forg_investor - & 0.010\ win_los \\ & (0.230) \quad (-3.846)^{*} & (1.059) & (2.009)^{***} & (-2.102)^{**} & (-1.111) \end{array}$$

*significant at α=1% , ** significant at α=5%, and *** significant at α=10%

The results show that there is no significant effect on the condition of the stock at that time, whether the stock is in the winner or loser position, both of which indicate overaction behavior. Winner and loser stock investors face uncertainty in the future related to the risk of the Covid 19 pandemic.

Conditions of uncertainty during a pandemic for investment decisions can make decisions taken wrong, biased or irrational. Time and cost limitations are the reasons that direct

the use of heuristics, namely using the "rule of thumbs" to solve complex problems with alternatives that are quickly available (Barberis & Thaler, 2003). People don't evaluate all available information because they want quick results. They make decisions based on past experiences, recent trends, and some reference points (Kengatharan & Kengatharan, 2014). That is normal investors namely investors who always try to think and act rationally, but because of the human psychological side, they are influenced by market psychology and internal psychological aspects of individual investors themselves who are not entirely rational. Unlike the assumptions of conventional theory which assumes that investors are always rational, behavioral finance assumes that investors are normal.

Normal investors, as seen in the equation above, are not only rational, as reflected in the influence of debt to equity to avoid choosing stocks that have defaulted due to the influence of the pandemic, making them less profitable. There is also an influential individual psychological aspect, where there are differences in the direction of influence between local and foreign individual investors. There are differences in seeing the impact of this pandemic between local and foreign investors.

Tversky & Kahneman (1974), concluded that investors have an inconsistent view of risk. Risk averse behavior tends to be practiced when it involves profits and risk seeking is involved when it involves investment losses. This is what makes both winner and loser stocks experience overaction. This is what makes both winner and loser stocks experience overaction because tend Loss aversion. Loss aversion shows the reluctance of investors to suffer losses. An investor tends Avoid losses rather than gain. Risk is no longer viewed linearly, where the higher the risk, the higher the potential rate of return. There is a limit where someone is able to bear the risk, even if it brings the consequence of reducing the rate of return on investment. There is an urge to avoid losses together, which ultimately pushes stock prices to fall to the psychological price limit.

CONCLUSIONS AND RECOMMENDATIONS

Investors are very excited and pushing for the price to recover soon after the start of the pandemic and if possible continue to grow. This strong desire is also seen in the average trading volume during the recovery period which is greater than during the correction period. Factors driving price recovery aside from rational factors, namely the debt ratio, are also influenced by individual factors. Stocks that have a positive ACAR at the end of the observation period have a lower debt ratio than stocks with a negative ACAR. So the higher the debt to equity, the average change in return is lower than the shares of companies with

low debt to equity. Industry does not seem to have a significant influence. Individual investors have different preferences for the risks that exist between local and foreign investors and both have a significant influence.

The results above show that there is a tendency for companies that experience large price declines/returns to experience larger price increases, especially companies with lower debt risk.

Acknowledgment

We thank the Ministry of Education, Culture, Research, and Technology of the Republic of Indonesia for funding this research. We would also like to thank the University Sangga Buana for allowing the use of campus facilities. We also thank the colleagues in the faculty of economics who encouraged us to write this work

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