

# PANDEMIC COVID-19, STOCK TRADE VOLUME, AND MARKET CAPITALIZATION ON SHARE RETURN

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## ABSTRACT

*Instruments in the capital market consist of stocks, mutual funds, bonds, derivative instruments, Exchange Traded Funds (ETF) and other securities. In investing, investors and potential investors must first understand the risk profile so that they can then decide which instruments are suitable for investing. Starting at the end of 2019 the world was shocked by a global epidemic. This outbreak is called Coronavirus Disease (Covid-19). Due to the significant increase in positive cases, Large-Scale Social Restrictions (PSBB) were implemented starting from April 10 2020 until April 23 2020. This condition has had an impact on the investment world, especially in the capital market. This impact is reflected in the fluctuations in the share price of the investment instrument. Other factors that can affect stock prices in the capital market, namely stock trading volume and market capitalization. This study was conducted with the aim of knowing and proving whether there is an influence of daily growth in positive Covid-19 confirmed cases, stock trading volume and market capitalization on stock returns contained in the LQ-45 index on the Indonesia Stock Exchange (IDX) starting from February 3, 2020 to January 31, 2022. In this study, it used a non-probability sampling method to determine the sample to be used. This study used 35 samples of companies that had been selected through the criteria specified in this study. In this study, collecting secondary data and the data that has been obtained will be processed using Microsoft Excel and also Eviews software version 10. The results of this study show that the growth of positive daily cases of Covid-19, trading volume and market capitalization negatively affects stock returns.*

**Keywords:** Covid-19 Positive Daily Case Growth, Trading Volume, Market Capitalization, Stock Returns

## 1. INTRODUCTION

Stock is one of the instruments contained in the capital market and is the most popular investment instrument. Instruments in the capital market consist of stocks, mutual funds, bonds, derivative instruments, Exchange Traded Funds (ETF) and other securities. In investing, investors and potential investors must first understand the risk profile so that they can then decide which instruments are suitable for investing. Starting at the end of 2019 the world was shocked by a global epidemic. This outbreak is called Coronavirus Disease (Covid-19). The President of the Republic of Indonesia, namely Joko Widodo, announced that two Indonesian citizens had tested positive for the Covid-19 virus on March 2, 2020. Due to the significant increase in positive cases, Large-Scale Social Restrictions (PSBB) were implemented starting from April 10 2020 until April 23 2020. This condition has had an impact on the investment world, especially in the capital market. This impact is reflected in the fluctuations in the share price of the investment instrument. Other factors that can affect stock prices in the capital market, namely stock trading volume and market capitalization. The value of trading volume activity is obtained from the total shares traded divided by the total shares outstanding so that it can be concluded that the value of trading volume activity is high so that investors can easily buy or sell their assets Yusra, M. (2019). In addition, there are other factors that investors must pay attention to when investing in stocks, namely the market capitalization factor. Market capitalization is calculated by multiplying the number of shares outstanding in the company by the company's current share price. Investors usually look at how much the market capitalization

value has increased, because this is one measure of the success or failure of a company's performance. In addition, market capitalization also measures stock price fluctuations. The LQ-45 index is a stock market index listed on the Indonesia Stock Exchange (IDX), usually consisting of 45 company shares listed and listed on the stock exchange. In general, stocks included in the LQ-45 index are stocks that perform well, are highly liquid and meet certain criteria.

### **The Black Swan Theory**

Taleb (2007) Black Swan theory is an almost unpredictable event because it is beyond conventional forecasts. According to Taleb, the Black Swan phenomenon occurs accidentally and unexpectedly. According to the Black Swan theory, the stock market is among those affected by the Covid-19 pandemic and is experiencing a drastic change. This theory explains that similar events in the past do not always have the same effect in the present.

### **Signaling Theory**

This research was conducted because it found asymmetric information in the labor market. According to Spence (1973), as a party that understands more important information about the company, the company must share this information with stakeholders. The company sends another signal, namely in the form of dividends to increase investor interest in investing.

### **Market Efficiency Theory**

According to market efficiency theory, it usually contains the information needed by the market. According to market efficiency theory, stock prices reflect all available information, including fundamental and even inside information which is the most important element. The information presented must be effective, if the data is not effective then the information has irregularities. To make a decision to buy or sell stocks, get used to the information factor. On the other hand, insider information is prohibited in the capital market.

### **Daily Growth of Positive Confirmed Cases of Covid-19**

Since the first announcement that Covid-19 entered Indonesia, it is certain that Covid-19 has experienced a significant increase. The PSBB can be enforced if there is an increase in the Covid-19 case curve in every region in Indonesia. In Regulation of the Minister of Health Number 9 of 2020, PSBB will be enforced during the incubation period, the longest being 14 days. If after 14 days there is still an increase in new cases, the PSBB will be extended for the next 14 days until the Covid-19 cases decrease.

### **Stock Trading Volume**

Market participants or investors tend to prefer to transact in liquid stocks because they are easy to trade. Meanwhile, when trading in illiquid stocks, it usually tends to be more difficult to trade. According to Sutrisno (in research by Liwe et al., 2018), trading volume is the result of an investor's activities in selling and buying shares of a company. The higher the value of the daily trading volume, it shows an investor's interest in selling and buying shares (Nurmasari, 2020). Stock trading volume is one of the negatives in the analysis of determining a stock price. The market is considered to have a positive reaction and there is potential for the company's growth in the future, as seen from the large trading volume.

### **Market Capitalization**

Market capitalization is very important because it is usually influenced by the value of the stock and the value of the company. According to Yusra's research market capitalization is obtained by multiplying the closing price by the number of outstanding shares of a company (listed

shares). The closing price is the closing price of a stock on that day. High capitalization will be obtained if the closing price or closing price will result in high capitalization, and vice versa. If a stock has a high market capitalization value, it will show that the company has high growth. Usually investors will also prefer companies that have a large market capitalization value. According to investors, companies that have large market capitalization will usually distribute dividends and investors will also obtain maximum profits. Investors will usually get capital gains if they invest in companies that have large capitalization values. Companies that have large capitalization will usually find it easier to get funding from investors.

### **Stock Returns**

Ang (1997, in Firmansyah & Hadijono, 2016) argues that stock returns are a level of profit that investors can enjoy from their investment. Stock returns will usually be obtained from the difference between the selling price and the purchase price of the shares. On the other hand, there are two possibilities, namely it is very possible for an investor to experience Capital Gains and Capital Loss. There is one aspect that makes investors want to invest in the capital market, namely getting returns from the shares they invest (Rahmawati, 2019). According to Hartono (2013: 109 in Kusnandar and Bintari, 2020) stock returns have two categories, namely realized returns and expected returns. Realized return is a return that has been obtained by an investor, usually by realizing the profits that have been obtained by selling the shares they hold. While return expectations or what is usually often referred to as the level of expected profit. Expected return is a return that has not been realized and proven because it is still in the form of an expectation or projection. This return is usually based on the value of future expectations, historical returns (realization), and existing expectations. Expected returns can usually be realized or not.

### **The effect of the daily increase in positive confirmed cases of Covid-19 on stock returns**

Wuhan is the city in China where cases of the corona virus were found. The name Covid-19 was given by WHO. Symptoms of Covid-19 itself are like flu, sore throat, cough and fever. Besides that, it can infect the respiratory tract, so it is quite fatal for some patients with a history of lung disease Ludwig, S. a. (2020). Based on data provided by WHO, Indonesia has recorded the most cases and ranks second in ASEAN. The pandemic that has hit Indonesia and several other countries has created many difficulties and challenges because the Covid-19 case continues to increase every day. As more and more Indonesian people are exposed to Covid-19, the government implemented a lockdown policy. The lower the company's stock price, the lower the additional capital that can be received by investors, causing the company's stock price to fall. (Mujib and Candraningrat, (2020) also argue that this infectious disease outbreak is a non-economic event that can affect the movement of shares in the capital market.

### **The Effect of Stock Trading Volume on Stock Return**

Stock trading volume is the most important thing for an investor because it shows the status of liquid or illiquid shares. High-volume stocks tend to be large companies and have good fundamentals that attract investors to invest in these companies. Investors are generally attracted to stocks with high yields, even if they are risky. Growth in stock prices and trading volume is an indicator that really needs attention, because it shows the behavior of investors in the capital market.

Investors or what are often called market participants, usually prefer liquid stocks because they are easy to trade. Trading volume is the result of investor activity in buying and selling companies. A high stock trading volume indicates that the stock is included in a good stock class and is favored by investors. Investors who invest in companies tend to invest for the

long term, thus expecting higher returns Hartono, Jogiyanto (2008).

### **The Effect of Market Capitalization on Stock Returns**

Market capitalization results from multiplying the closing price by the number of shares outstanding or issued. Market capitalization is considered very effective when the value is high and less effective when the value is low. In addition, stocks with high market value attract investors to invest and companies have the potential to grow quickly and with relatively little risk. Market capitalization is the most important factor in a company because it contains elements of share value and company value. Market capitalization is obtained by multiplying the closing price by the number of shares outstanding in the company (listed shares). The closing price is the closing price of the stock on that day. When a company's stock has a high market capitalization, it shows that the company has high growth.

The research model of this study as presented in Figure 1:

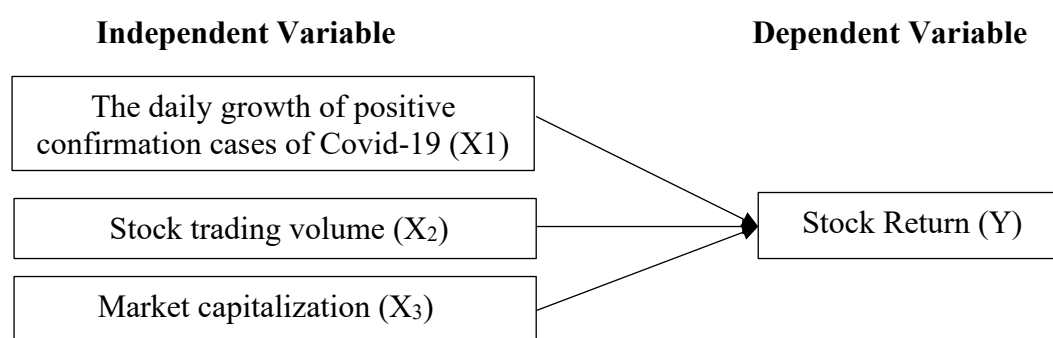


Figure 1. The Research Model

The hypotheses in this research were formulated as follows:

- H1: The daily growth of positive confirmation cases of Covid-19 has a negative effect on stock returns.
- H2: Stock trading volume has a positive effect on stock returns.
- H3: Market capitalization has a positive effect on stock returns.

## **2. RESEARCH METHOD**

### **Population and Sample**

This study uses secondary data from companies listed on the LQ-45 Index on the Indonesia Stock Exchange (IDX) from 3 February 2020 to 31 January 2022. most traded companies. So usually, these liquid stocks will be affected by the current economic conditions in Indonesia. The sample used in this research is 35 companies. The criteria used in selecting this sample include: 1). Companies listed in a row on the LQ45 index for the period February 2020 - January 2022. 2). Companies that do not do stock splits during the observation period.

### **Data Analysis Technique**

In this study using descriptive statistical tests, classical assumption test and t-Test using E-Views analysis 10.

Table 1. Variables and Measurements

No	Variables	Measurements	Scale
1	Daily Growth of Positive Confirmed Cases of Covid-19	$Covid = Total\ kasus\ positif_t - Total\ kasus\ positif_{t-1}$	Ratio
2	Stock Trading Volume	$Volume = Ln (Volume_t)$	Ratio
3	Market Capitalization	$MarCap = Ln (CP \times Outstanding\ Share)$	Ratio
4	Stock Return	$\frac{Pt - Pt-1}{Pt-1}$	Ratio

## Analysis Model

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \epsilon$$

Information:

Y: Stock Returns

$\alpha$ : Constant Value

$\beta_1$ -  $\beta_3$ : Regression Coefficient

X1: Covid-19 (Growth in the number of positive cases of Covid-19 on day t-1)

X2: Trading Volume (Natural Logarithm Value of trading volume of stock i on day t)

X3: Market Capitalization (Natural logarithm value of capitalization Stock market i on day t-1)

$\epsilon$ : Error / Epsilon

## 3. RESULTS AND DISCUSSIONS

Table 2. Descriptive Statistic

	Y	X1	X2	X3
Mean	1.873030	1648431.	46274365	82958949
Median	0.644439	1134854.	22850300	43904638
Maksimum	4.078674	4353370.	2.37E+09	6.67E+08
Minimum	0.000000	0.000000	131500.0	2679600.
Std. Dev.	1.831442	1662091.	72786895	1.09E+08
Observations	15611	15611	15611	15611

Source: Results of data processing Eviews version 10

The results of descriptive statistical analysis, the dependent variable, namely stock returns, shows an average variable value of 1.873030; median 0.644439; standard deviation 1.831442. Stock returns show a maximum value of 4.078674, a minimum value of -0.000000. The maximum value indicates that this company has a high stock return and vice versa with a minimum value. The independent variable daily growth of positive confirmed cases of Covid-19 has an average value of 1648431; median (middle value) 1134854; maximum value 4353370; the minimum value is 0.000000 and the standard deviation is 1662091.

The independent variable of stock trading volume has an average value of 46274365.mid value 22850300; maximum value 2.37E+09; minimum value of 131500.0 and standard deviation of 72786895. Market capitalization independent variable has an average value of 82958949; mid value 43904638; maximum value 6.67E+08; the minimum value is 2679600. The result of this test is the standard deviation value for stock market capitalization, which is 1.09E+08.

Classical assumption test Multicollinearity value of the partial correlation between independent variables none of which has a coefficient of more than 0.8. This shows that in this regression

model there are no symptoms of multicollinearity. The heteroscedasticity test shows that the overall probability value is  $> 0.05$ , so it can be concluded that in this study there is no heteroscedasticity problem.

Table 3. Test Results t

Variable	Coefficient	Std. Error	t-Statistic	Probabilitas
X1	<b>-2.41E-08</b>	1.06E-07	-0.227328	<b>0.8202</b>
X2	<b>-1.51E-09</b>	4.01E-10	-3.765040	<b>0.0002</b>
X3	<b>-1.29E-08</b>	2.24E-09	-5.759713	<b>0.0000</b>
C	<b>3.052535</b>	0.246352	12.39097	<b>0.0000</b>

Source: Results of Eviews data processing version 10

The results of the t-test can be seen in table 3 for the daily growth variable of Covid-19 cases which has a negative coefficient value of  $-2.41E-08$  and the significant test results show a probability value of  $0.8202 > 0.05$ . then *Ha1 is rejected*, based on these results it can be explained that the Covid-19 growth variable has a negative but not significant effect on stock returns. The results of this study are in line with the research of Herwany et al. (2021). However, this turned out to be contrary to research which stated that examining the effect of Covid-19 on stock returns, namely the research of Apergis and Apergi (2020), Mujib and Candraningrat (2021), Anh and Gan (2020) and Liu et al. (2020). At first the Covid-19 pandemic had no impact on the stock market, but as more and more victims were confirmed, the stock market reacted negatively. If confirmed cases increase, stock returns will decrease, this is due to the large number of victims affected by the Covid-19 virus, declining company performance, and possibly also due to external and internal policies.

The results of the t-test can be seen in table 3 for the variable stock trading volume which has a negative coefficient value of  $-1.51E-09$  and the significant t-test results show a probability value of  $0.0002 < 0.05$ . then *Ha2 is accepted*, based on these results it can be explained that the variable stock trading volume has a negative and significant effect on stock returns. The results of this study are in line with the Market Efficiency Theory and Signaling Theory because investors make investment decisions based on available information and can also use signal considerations. These results support research from Ameici (2021) who argues that trading volume information can be used as a reference, because it will increase together with returns. The higher the demand for shares, the impact on stock prices, namely prices will increase (Darwis, 2013).

The results of the t-test can be seen in table 3 for the market capitalization variable which has a negative coefficient value of  $-1.29E-08$  and the significant t-test results show a probability value of  $0.0000 < 0.05$ . then *Ha3 is accepted*, based on these results it can be explained that the market capitalization variable has a negative and significant effect on stock returns. These results are in line with the research of Kurniawan (2014) and Wibowo saying that there is a significant positive effect between market capitalization and stock returns. The results of this study are also supported by research by Se and Mm (2019) and research by Tahir, Sabir, Alam and Ismail (2013). However, contrary to the results of research from Fitriyana (2014) and Nonik, Silviani, Sujana and Adiputra (2014) research results are in contrast to previous research because there is no significant effect between market capitalization and stock returns. Likewise, the research by Ardiyansyah (2012) and Marito and Sjarif (2020) obtained contradictory results because market capitalization has no significant effect on stock returns.

### Multiple Linear Regression test

Based on the results of the Multiple Linear Regression test that has been obtained above, the following equation is obtained:

$$Y = 3.052535 - 2.41E-08 - 1.51E-09 - 1.29E-08 + e$$

Information:

Y: Stock Returns

$\alpha$ : Constant Value

$\beta_1$ -  $\beta_3$ : Regression Coefficient

X1: Covid-19 (Growth in the number of positive cases of Covid-19 on day t-1)

X2: Trading Volume (Natural Logarithm Value of trading volume of stock i on day t)

X3: Market Capitalization (Natural logarithm value of capitalization Stock market i on day t-1)

$\epsilon$ : Error / Epsilon

Based on the multiple linear regression equation test, it can be seen that at the constant value ( $\alpha$ ) of the model, it is known that the coefficient value is 3.052535 with positive value. This means that the stock return increases by 3.052535. and if the value of the constant is negative then this will certainly make the company's value decrease. So that the dependent variable, namely stock returns, will be worth 3.052535.

Based on the test results in table 4.8, the independent variable covid-19 has a regression coefficient value of -0.00000109, which means that in this study there is a negative relationship between covid-19 and stock returns. Based on the coefficient value on the variable test, if COVID-19 increases by 1 unit and the other independent variables are 0 (constant), the stock return will decrease by 0.00000109 units. Furthermore, if Covid-19 has decreased by 1 unit and the other independent variables have a value of 0 (constant), the stock return value will increase by 0.00000109 units.

Based on the test results above, the coefficient value for the Covid Case Growth variable (X1) is -2.41E-08 which is negative. So that in this study there is a negative relationship between the daily growth in the number of positive cases of Covid-19 and stock returns. This shows that if there is an increase in the variable X1, it will reduce the dependent variable Y by -2.41E-08.

Based on the test results above for the coefficient value of the stock trading volume variable is -1.51E-09 which is negative. So in this study there is a negative relationship between stock trading volume on stock returns. This shows that if there is an increase in the variable X2 it will decrease the dependent variable Y by -1.51E-09.

Based on the test results above, the coefficient value for the market capitalization variable is -1.29E-08 which is negative. So that in this study there is a negative relationship between market capitalization on stock returns. This shows that if there is an increase in the variable x2, it will decrease the dependent variable Y by -1.29E-08.

### Coefficient of Determination ( $R^2$ )

The test results of the value of the coefficient of determination (adjusted R-Squared) is 0.149911. This shows that all of the independent variables (daily growth of positive Covid-19 confirmation cases, stock trading volume, and market capitalization) have an effect of 14.9%, which means that the remaining 85.1% is explained by other variables not included in this study.

### 3. RESULTS AND DISCUSSIONS

#### **The daily growth of positive confirmation cases of Covid-19 has a negative effect on stock returns**

Based on the results obtained, the daily growth variable for Covid-19 positive confirmation cases shows a probability value of  $0.8202 > 0.05$ . So that H1 is accepted, which means that the daily increase in positive confirmed cases of Covid-19 from 3 February 2020 to 31 January 2021 has a negative and insignificant effect on the performance of shares of LQ-45 index companies listed on the Indonesia Stock Exchange (IDX).

Covid-19 is a virus that originated in the city of Wuhan and entered Indonesia starting in early 2020 and since it was first announced that Covid-19 had entered Indonesia, the growth rate for positive confirmation of Covid-19 has continued to increase quite significantly. So it can be concluded that the daily growth of positive confirmation cases of Covid-19 affects the increase in stock returns, and vice versa. In the daily growth of positive confirmed cases of Covid-19, it can be seen from the growth in the number of people who have been exposed to Covid-19 on a daily basis in Indonesia, or it can be obtained by calculating the difference between the total positive confirmed cases on day  $t$  and the total positive confirmed cases on day  $t-1$ . It can be said that there is a positive influence from the daily growth of positive confirmation cases of Covid-19 on stock returns, which is caused by the imposition of activity restrictions which have an impact on the economy. It is clear that the level of public consumption tends to decrease. But on the other hand the number of investors has increased quite dramatically since the Covid-19 pandemic occurred in Indonesia.

Because many people are required to work from home, investment is expected to be an alternative for additional income while they work from home, because they have more time to work at home. Investment is a topic that is often discussed by millennials. The increase in investment is dominated by millennials, namely those aged 26-40 years. So that over time, if investor interest continues to increase, it can have an impact on increasing stock returns.

It can be said, these results are in line with the Black Swan theory, because the Covid-19 pandemic is a large and unpredictable phenomenon and has a significant impact on the global economy. The Covid-19 pandemic has not only had an impact on public health but has had a huge impact on the economy. This can be seen clearly because many employees had to be laid off, because many companies were unable to operate normally and the company's performance was declining. So it can be concluded that due to the Covid-19 pandemic, the returns obtained by investors in the stock market can increase or decrease.

Signaling theory is one of the important things in the world of investment, therefore we must be able to understand it. From signal theory, information can be obtained in the form of positive and negative signals. This research is not in line with the signal theory, namely where this theory says that stock returns have increased along with an increase in the growth of daily cases of positive confirmation of Covid-19. The interest of investors to enter the capital market and invest is very high because they want to increase their income through investment. Because they had free time since they were allowed to work from home, they started learning all things related to investing in the capital market. Interest in buying stocks tends to increase so that stock returns will also increase.



### **Stock trading volume has a negative effect on stock returns**

Based on the results obtained, the stock trading volume variable shows a probability value of  $0.0002 < 0.05$ . So that H2 is accepted, which means that stock trading volume has a negative and significant effect on stock returns at LQ-45 index companies listed on the Indonesia Stock Exchange (IDX) from 3 February 2020 to 31 January 2022.

Share trading volume can be obtained from the total shares traded divided by the total shares outstanding. If the trading volume of a stock is high, it is certain that investors will find it easy to sell and buy these shares. Trading volume is usually easily influenced by existing information. If there is negative information on a stock, then usually the stock will have a low volume. A stock may have low volume because the stock has just taken the floor on the stock exchange and has not yet proven its performance that the company's fundamentals tend to be good or bad. The results of this study are in line with Market Efficiency Theory and Signaling Theory because investors make investment decisions based on existing information and can also use signal considerations.

### **Market capitalization has a negative effect on stock returns**

Based on the results obtained, the market capitalization variable shows a probability value of  $0.0000 < 0.05$ . So that H3 is accepted, which means that the market capitalization variable has a negative and significant effect on stock returns at LQ-45 index companies listed on the Indonesia Stock Exchange (IDX) from 3 February 2020 to 31 January 2022.

Stock capitalization is a very important part, because it is usually influenced by the stock value factor and company value. To find out market capitalization, we can use the method, namely multiplying the closing price (closing price) by the listed share (number of outstanding shares). According to the investor side, a stock will be attractive if it has a large market capitalization because it will provide a fairly high return and will pay dividends regularly. Companies with large market capitalization values will get easier funding opportunities from investors.

This result is in line with the Market Efficiency Theory. The condition of the capital market in Indonesia is in accordance with the efficient market hypothesis, namely a semi-strong form where stock prices follow the information that is currently circulating. One of them can be seen from the side of the company's financial statements. Financial reports can provide an overview for investors regarding the performance of the company's performance which will usually affect the value of market capitalization. Companies that show good performance tend to have a high market capitalization. During the Covid-19 pandemic, the government implemented various policies that tended to make companies experience a decline in performance. If the financial statements show unfavorable results, investors tend not to be interested in buying the company's shares. This is in line with signaling theory which usually gives a negative signal and stock prices will decrease which will also affect stock returns.

## **4. CONCLUSIONS AND SUGGESTIONS**

This study aims to determine the effect of covid-19, trading volume and market capitalization on stock returns for companies listed on the LQ-45 index on the Indonesia Stock Exchange from the period 3 February 2020 - 31 January 2022. The results of the tests carried out are the daily growth of positive confirmation cases Covid-19, trading volume, and market capitalization have a negative effect on stock returns.

This research has limitations in terms of the research period, only using companies that are on the LQ-45 index, and the variables used are also limited. In the LQ-45 index there are various industrial sectors and in this study they are not categorized by industrial sector so that they cannot provide an overview of the influence of the independent variables on the dependent variable in each industrial sector in the LQ-45 index. For further research, it can update and increase the number of independent variables that can affect stock return variables. Subsequent research can also add to the research period, namely a minimum of three years since the outbreak of the Covid-19 pandemic so that it can provide a more accurate and more relevant picture for investors. This research is expected to be useful for company managers so that they can improve company performance to obtain high stock prices so that the returns obtained by investors will also increase. For investors to make it easier and become additional information in considering investment decisions. For further research so that it can be used as a reference for conducting research related to stock returns.

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