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Comparison of Microeconomics and Stock Returns Relationships in Financial Sector in 2019 and 2020

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Abstract

Stock return is crucial to analyze before making investment since gaining return is the main objective. The analyzing can implement fundamental analysis which involves microeconomics variables of company. According to IDX, financial sector generates the highest return, unfortunately it is still volatile. Moreover, since COVID-19 pandemic, economic situation becomes unstable. This research aims to analyze and compare partial and simultaneous relationship of microeconomics variables (Book Value Per Share, Price to Book Value, Price Earning Ratio, Debt to Equity Ratio, Net Profit Margin and Debt Ratio) with stock return in financial sector main board companies in 2019 (before COVID-19 pandemic) and 2020 (during COVID-19 pandemic). Multiple linear regression is implemented and resulting that in 2019, only Price to Book Value, Price Earning Ratio and Net Profit Margin have significant relationship with stock return. In 2020, only Price Earning Ratio and Debt to Equity Ratio have significant relationship with stock return. For both years, simultaneous relationship between all microeconomics variables and stock return are found. The result can be used for investor and main board financial sector companies.

Keywords: COVID-19 Pandemic, Financial Sector, Microeconomics Variables,Stock Return.: G11, C12, C30

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1. INTRODUCTION

The interest in the stock market in Indonesia keeps increasing as time goes by, indeed rapidly the for past few years. Every person who wants to participate in the Indonesia stock market is obligated to have a Single Investor Identification (SID) (Akbar, 2021), which means that the growth of a number of investors can be seen by the numbers of SID.

According to KSEI, at the end of 2020, the percentage of SID increased by 56.21% compared to its previous year. To take a further comparison, the number of SID at the end of 2020 is 13.79 times higher than in 2012. This increase keeps continuing even though the COVID-19 pandemic has afflicted almost every single country, including Indonesia, since

March 2020. Until August 2021, the number of SID has already increased by 50.04% compared to 2020.

Stock is one of the most popular financial instruments that numbers of investors have chosen since historically stock can generate an interesting amount of profit. Due to the main objective of a person making investment is to gain profit or return, the stock return becomes one of the most important aspects that must be observed well before making an investment decision (Ningsih *et al.*, 2016). According to the IDX report, the financial sector generated the highest return compared to other industries for the last 1, 5, and 10 years from 2009 to 2019. In addition, the financial sector generated higher returns compared to the eldest stock market indices, IDX Composite and LQ45, as it can be seen below.

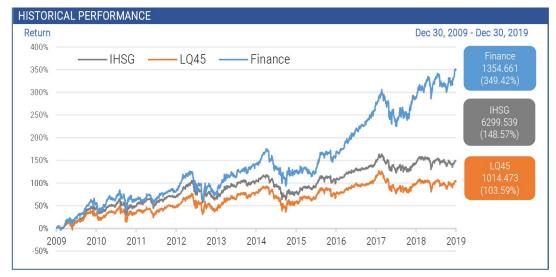


Figure 1. Historical Performance of the Financial Sector Source: IDX.co.id Finance Sector Fact Sheet Index Year of 2020

Although the financial sector generated the highest return, it still has the risk since there is volatility according to historical data. This illustrates that in investing in stock, the investors also have the risk of facing loss. In line with the reasons mentioned, aside from historical data (Muhammad *et al.*, 2018), commonly, investors are analyzing before making a stock investment (Herawati *et al.*, 2018). One of the analysis types that is commonly done is fundamental analysis, which it involves microeconomics factors of a company to project the stock price by emphasizing on company's performance (Andyani *et al.*, 2018). In addition, there were quite many studies that show that there is the relationship between microeconomics factors with stock return in Indonesia, such as studies conducted by Ningsih *et al.* (2016), Dewanti *et al.* (2019), Rohpika *et al.* (2020), Intariani *et al.* (2020), Saputro (2019), Putro (2019), Astuty (2017) and Aldiena *et al.* (2019).

In determining the period of study, the researcher is highly considering about COVID-19 pandemic condition, which this pandemic also affects the economy, including stock (Saragih *et al.*, 2021). IDX Composite hit the lowest point on 24th March 2020 at 3.937, the weakest since June 2012 (Aldin, 2020). One evidence on the economic situation was that Indonesia faced a recession from the third quarter of 2020 until the first quarter of 2021 due to the COVID-19 pandemic (Kompas, 2020 and 2021).

Due to the explained reason above, this research will find the relationship of yearly stock return with microeconomics variables in the financial sector, and then

compare the result of the year 2019 (before the COVID-19 pandemic) and 2020 (during the COVID-19 pandemic). According to Indonesia Stock Exchange, as of 15th July 2021, there are 105 listed companies, divided into 52 companies from the development board and 53 companies from the main board. This research will use purposive sampling, with total of 33 companies that fulfill the requirements of financial sector main board companies listed before 2009.

Although this study has a similar topic to other previous studies, there are several differences from the previous studies that this research emphasizes. Firstly, there is barely any research that uses the whole financial sector listed on the Indonesia Stock Exchange as the subject of study. It can be seen that there is scarcely conducted study that involved the financial sector, mostly only involving the banking sub-industry as the subject of study.

Regarding the independent variables, all of the previous studies mentioned before from Ningsih *et al.* (2016), Dewanti *et al.* (2019), Rohpika *et al.* (2020), Intariani *et al.* (2020), Saputro (2019), Putro (2019), Astuty (2017) and Aldiena *et al.* (2019) only had 3 to 5 independent variables in total for each study. In this research, the researcher aims to use more independent variables, which are six independent variables. Last but not least, the combination of independent variables in this research differs from previous studies, in which the simultaneous relationship of those six independent variables with stock return has not been found yet.

Aside from that, the research period chosen is mostly more than five years ago. In addition, there is scarcely a study analyzes the relationship of microeconomics variables on stock return before the pandemic and compares it to during the COVID-19 pandemic.

2. HYPOTHESES DEVELOPMENT

Several studies have been conducted to investigate the relationships between microeconomics factors with stock returns, as below. The factors which have been demonstrated in previous studies and which are also used for this study are BVPS, PBV, PER, DER, NPM, and DR.

- 1. Ningsih *et al.* (2016) conducted a study aiming to determine the effect of PER on stock returns of 35 banking companies listed on the Indonesia Stock Exchange from 2013 until 2014. By using multiple linear regression analysis, the authors obtained that the result of the partial test showed that PER has a positive significant effect on banking companies stock return.
- 2. Dewanti *et al.* (2019) have conducted a study to establish the effect of PBV and DER on stock returns of 130 banks listed on the Indonesia Stock Exchange from 2014 to 2017. By using multiple linear regression analysis, the authors obtained that both PBV and DER have no significant relationship with bank stock return.
- 3. Rohpika *et al.* (2020) have implemented multiple linear regression in a study to understand the relationship of DR, DER, and PBV on the stock price on 16 plantation companies for the period 2008 to 2011. The authors obtained that simultaneously all of the tested variables affect stock prices, but partially only DER negatively affects stock return for plantation companies.
- 4. Intariani *et al.* (2020) have conducted a study to establish the effect of NPM on 15 bank's stock returns for the period 2014 to 2018. Using multiple linear regression analysis, the authors obtained that NPM has a positive significant relationship with bank stock return.

- 5. Saputro (2019) has conducted a study to establish the effect of BVPS on 45 LQ45 companies stock returns on the Indonesia Stock Exchange for 2017. Using multiple linear regression analysis, the authors obtained that BVPS has a positive significant relationship with the stock returns.
- 6. Putro (2019) has conducted a study to establish the effect of DR on nine construction and building subsector companies stock returns listed on the Indonesia Stock Exchange from 2014 to 2018. By using multiple linear regression analysis, the authors obtained that DR has Using multiple linear regression analysis, the authors obtained that DR has a positive significant relationship with the stock returns.
- 7. Astuty (2017) has conducted a study to establish the effect of PER, NPM, and PBV on 15 LQ45 companies stock returns listed on the Indonesia Stock Exchange from 2011 to 2015. Using panel data regression, the authors obtained that partially PER, NPM, and PBV has a positive significant relationship with the stock returns.
- 8. Aldiena *et al.* (2019) have conducted a study to establish the effect of DER, NPM, and PBV on 15 LQ45 companies stock returns listed on the Jakarta Islamic Index from 2014 to 2016. Using panel data regression, the authors found that partially DER, NPM, and PBV has a positive significant relationship on the stock returns.

From 8 previous studies mentioned above, it can be seen that each of the independent microeconomics variables used in this research illustrated a significant relationship with stock returns. It can be summarized that the hypotheses for each year of 2019 and 2020 for this research are:

 $\mathbf{H}_{a.1}$: BVPS has a significant relationship on stock return in the financial sector.

H_{a.2}: PBV has a significant relationship on stock return in the financial sector.

H_{a.3}: PER has a significant relationship on stock return in the financial sector.

 $\mathbf{H}_{a.4}$: DER has a significant relationship on stock return in the financial sector.

 $H_{a.5}$: NPM has a significant relationship on stock return in the financial sector.

H_{a.6}: DR has a significant relationship on stock return in the financial sector.

 $H_{a.7}$: BVPS, PBV, PER, DER, NPM, and DR have a simultaneous relationship on stock return in the financial sector.

3. METHODS

Method

This research is categorized as quantitative research, which adopts multiple linear regression analysis, along with classical assumption test and hypothesis test, as used by several previous studies mentioned. Multiple linear regression is used since previous studies also chose this as the suitable analysis method. This method is not complicated to be implied and can fulfill this study's objectives. Multiple linear regression is a statistical technique used to analyze the relationship between a dependent variable and several independent variables, which can fulfill this study's objective (Jr. *et al.*; 2010).

Data

This research has 105 companies in financial sector listed on Indonesia Stock Exchange for 15th July 2021 as its population. This research implements purposive sampling. This research has 33 sample sizes by implementing purposive sampling with criteria as below.

a) They are categorized as main board company according to Indonesia Stock Exchange.

b) It was listed on Indonesia Stock Exchange no later than 2008. The year 2008 is determined due to the assumption that the economic crisis in Indonesia ever happened in 1998 and 2008, so if the company could maintain the main board regarding at least one time economic crisis, this means that the company is stable enough. Aside from that, data from Indonesia Stock Exchange shows that from 2009 until 2019, the financial sector's performance was the best compared to the other sectors.

Regarding data collection, this research uses secondary data from Yahoo Finance (finance.yahoo.com) to obtain stock returns data and Indonesia Stock Exchange (IDX.co.id) to obtain BVPS, PBV, PER, DER, NPM, and DR data.

Analysis

Below are the analysis steps using the significance level or p-value of 0.05.

- 1. Input all the observed data obtained.
- 2. I am modeling yearly stock return data as dependent variable and data of 6 mentioned microeconomics variables as independent variables.
- 3. Perform a classical assumption test, in which the model must pass all of the classical assumption tests to be qualified to proceed into the next step (Mardiatmoko, 2017). The tests are:
 - a. Normality test implements Lilliefors test since, according to Oktaviani and Notobroto (2014), it is the best normality test for sample size 30.
 - b. Multicollinearity test, which implements VIF and Tolerance.
 - c. Autocorrelation test implements Breusch-Godfrey test since it is the best autocorrelation test according to Uyanto (2020).
 - d. The heteroscedasticity test, which implements Harrison McCabe test since according to Uyanto (2019), it is the best.
- 4. After the model passes all classical assumption tests, the next step is analyzing the multiple linear regression model.
- 5. The last step is hypothesis testing by using:
 - a. Partial test (t-test) to test the partial relationship between stock return and each independent variable.
 - b. Concurrent test (F-test) to test the overall and simultaneous relationship of stock return with all independent variables.
 - c. Coefficient of determination (R²) to understand how well the model is implemented.
 - d. The adjusted coefficient of determination (adjusted R^2), which is a modification from R^2 where the number of independent variables is also considered.

4. **RESULTS**

- 1. Classical Assumption Test
- a) Normality Test

Table **1**.Normality Test.

Year —	Lil	liefors
Tear –	L ₀	p-value
2019	0.14497	0.07602
2020	0.14087	0.09475
	0.11007	5.67 1.0

Source: Processed data

On Table 1, it can be seen that in 2019 and 2020, Lilliefors test obtained the p-value that are higher than 0.05. On the other hand, from Lilliefors critical value table, it is obtained that for sample data of 33 and 6 independent variables, the L critical value is 0.154232803, in which it is bigger than the value of L_0 for both 2019 and 2020. This proved that for both 2019 and 2020, the models passed normality test.

b) Multicollinearity Test

Table 2. Multicollinearity Test.

Variable _	2019		2020	
	Tolerance	VIF	Tolerance	VIF
BVPS	0.8096886	1.235043	0.8180401	1.222434
PBV	0.6604080	1.514216	0.4626173	2.161614
PER	0.8126063	1.230608	0.5234892	1.910259
DER	0.3073948	3.253146	0.2903352	3.444294
NPM	0.4342969	2.302572	0.8324357	1.201294
DR	0.2084533	4.797238	0.2836632	3.525308

Source: Processed data

From Table 2, it can be seen that for both the year of 2019 and 2020, each tolerance value for every independent variable is higher than 0.1, as well as each VIF value for every independent variable is lower than 10. This indicates that there are no multicollinearity found in both 2019 and 2020.

c) Autocorrelation Test

It is obtained that p-value in 2019 is 0.8441 and in 2020 is 0.4875, so p-value for both years are >0.05. It can be proved that both regression model for 2019 and 2020 did not have any autocorrelation and passed the autocorrelation test.

d) Heteroscedasticity Test

The p-value in 2019 is 0.992 and in 2020 is 0.292, and sop-values for both years are higher than 0.05. It can be concluded that the regression model of 2019 and 2020 does not have any heteroscedasticity and passed the heteroscedasticity test.

e) Multiple Linear Regression

After both models pass all classical assumption tests, multiple linear regression will be implemented. This part of numerous linear regression obtains the values of coefficient regression (β_k) of each independent variable. Below are the results for 2019.

Variable	Estimate	p-value
Intercept	0.4238	0.202464
BVPS	-1.483e-05	0.524251
PBV	0.1914	0.000182
PER	-3.247e-03	0.028545
DER	-0.03784	0.312961
NPM	-0.9739	0.005829
DR	-0.2118	0.677769

Table 3. Multiple Linear Regression for 2019.

Source: Processed data

From Table 3, the multiple linear regression model of 2019 can be written as equation:

$Y = 0.4238 - 0.00001483X_1 + 0.1914X_2 - 0.003247X_3 - 0.03784X_4 - 0.9739X_5 - 0.2118X_6$

The equation above can be understood that:

- a. If all independent variables are 0, the value of the stock return is 0.4238.
- b. The coefficient regression value of BVPS on -0.00001483 illustrates that BVPS has a contrary relationship with stock return. When the value of X₂, X₃, X₄, X₅, and X₆ are constant, if the value of BVPS increases by 1%, the value of the stock return will decrease by 0.00001483%, and vice versa.
- c. The coefficient regression value of PBV on 0.1914 illustrates that PBV has a parallel relationship with stock return. When the value of X_1 , X_3 , X_4 , X_5 , and X_6 are constant, if the value of PBV increases by 1%, the value of sthe tock return will also increase by 0.1914%, and vice versa.
- d. The coefficient regression value of PER on -0.003247 illustrates that PER has a contrary relationship with stock return when the value of X1, X2, X4, X5 and X6 are constant. If the value of PER increases by 1%, the value of the stock return will decrease by 0.003247%, and vice versa.
- e. The coefficient regression value of DER on -0.03784 illustrates that DER has a contrary relationship with stock return. When the value of X1, X2, X3, X5, and X6 are constant, if the value of DER increases by 1%, the value of the stock return will decrease by 0.03784%, and vice versa.
- f. The coefficient regression value of NPM on -0.9739 illustrates that NPM has a contrary relationship with stock return when the value of X_{1} , X_{2} , X_{3} , X_{4} , and X_{6} are constant, if the value of NPM increases by 1%, the value of the stock return will decrease by 0.9739%, vice versa.
- g. The coefficient regression value of DR on -0.2118 illustrates that DR has a contrary relationship with stock return. When the value of X₁, X₂, X₃, X₄, and X₅ are constant, if the value of DR increases by 1%, the value of the stock return will decrease by 0.2118%, and vice versa.

<i>Table 4.</i> Multiple Linear Regression for 2020.			
Variable	Estimate	p-value	
Intercept	0.3351	0.416261	
BVPS	-5.797e-05	0.205246	
PBV	0.1306	0.219261	
PER	4.129e-03	0.000548	
DER	0.1723	0.039472	
NPM	-3.038e-02	0.641032	
DR	-1.520	0.081616	

Then, below are the results of multiple linear regression for 2020.

Source: Processed data

From Table 4, the multiple linear regression model of 2020 can be written as equation below.

 $Y = 0.3351 - 0.00005797X_1 + 0.1306X_2 + 0.004129X_3 + 0.1723X_4 - 0.03038X_5 - 1.520X_6$

The equation above can be understood that:

- a. If all independent variables are 0, the value of stock return is 0.3351.
- b. Coefficient regression value of BVPS of -0.00005797 illustrates that BVPS has a contrary relationship with stock return. When the value of X_2 , X_3 , X_4 , X_5 and X_6 are constant, if the value of BVPS increases by 1%, the value of stock return will decrease by 0.00005797%, vice versa.
- c. Coefficient regression value of PBV of 0.1306 illustrates that PBV has a parallel relationship with stock return. When the value of X_1 , X_3 , X_4 , X_5 and X_6 are constant, if the value of PBV increases by 1%, the value of stock return will increase by 0.1306%,vice versa.
- d. Coefficient regression value of PER of 0.004129 illustrates that PER has a parallel relationship with stock return. When the value of X_1 , X_2 , X_4 , X_5 and X_6 are constant, if the value of PER increases by 1%, the value of stock return will increase by 0.004129%, vice versa.
- e. Coefficient regression value of DER of 0.1723 illustrates that DER has a parallel relationship with stock return. When the value of X_1 , X_2 , X_3 , X_5 and X_6 are constant, if the value of DER increases by 1%, the value of stock return will increase by 0.1723%, vice versa.
- f. Coefficient regression value of NPM of -0.03038 illustrates that NPM has a contrary relationship with stock return. When the value of X_1 , X_2 , X_3 , X_4 and X_6 are constant, if the value of NPM increases by 1%, the value of stock return will decrease by 0.03038%, vice versa.
- g. Coefficient regression value of DR of -1.520 illustrates that DR has a contrary relationship with stock return. When the value of X_1 , X_2 , X_3 , X_4 and X_5 are constant, if the value of DR increases by 1%, the value of stock return will decrease by 1.520%, vice versa.
- 4. Hypothesis Testing

a) Partial Test (t-test)

Variable -	2019		2020	
	t-statistic	p-value	t-statistic	p-value
Intercept	1.308	0.202464	0.826	0.416261
BVPS	-0.646	0.524251	-1.299	0.205246
PBV	4.359	0.000182	1.259	0.219261
PER	-2.319	0.028545	3.939	0.000548
DER	-1.029	0.312961	2.168	0.039472
NPM	-3.004	0.005829	-0.472	0.641032
DR	-0.420	0.677769	-1.812	0.081616

Table 5.t-test for 2019.

Source: Processed data

From Table 5, it can be understood that for the year of 2019:

a. BVPS has p-value of 0.524251 in which the value is higher than 0.05 and the absolute tstatistic of 0.646 is lower than t-table which is 2.056. Because of that, H_0 is accepted and it can be concluded that BVPS does not have significant relationship with stock return.

- b. PBV has p-value of 0.000182 in which the value is lower than 0.05 and the absolute tstatistic of 4.359 is higher than t-table which is 2.056. Because of that, H_0 is rejected and it can be concluded that PBV has significant relationship with stock return.
- c. PER has p-value of 0.028545 in which the value is lower than 0.05 and the absolute tstatistic of 2.319 is higher than t-table which is 2.056. Because of that, H_0 is rejected and it can be concluded that PER has significant relationship with stock return.
- d. DER has p-value of 0.312961 in which the value is higher than 0.05 and the absolute tstatistic of 1.029 is lower than t-table which is 2.056. Because of that, H₀ is accepted and it can be concluded that DER does not have significant relationship with stock return.
- e. NPM has p-value of 0.005829 in which the value is lower than 0.05 and the absolute tstatistic of 3.004 is higher than t-table which is 2.056. Because of that, H_0 is rejected and it can be concluded that NPM has significant relationship with stock return.
- f. DR has p-value of 0.677769 in which the value is higher than 0.05 and the absolute tstatistic of 0.420 is lower than t-table which is 2.056. Because of that, H_0 is accepted and it can be concluded that DR does not have significant relationship with stock return.

For the year of 2020:

- a. BVPS has p-value of 0.205246 in which the value is higher than 0.05 and the absolute tstatistic of 1.299 is lower than t-table which is 2.056. Because of that, H_0 is accepted and it can be concluded that BVPS does not have significant relationship with stock return.
- b. PBV has p-value of 0.219261 in which the value is higher than 0.05 and the absolute tstatistic of 1.259 is lower than t-table which is 2.056. Because of that, H_0 is accepted and it can be concluded that PBV does not have significant relationship with stock return.
- c. PER has p-value of 0.000548 in which the value is lower than 0.05 and the absolute tstatistic of 3.939 is higher than t-table which is 2.056. Because of that, H_0 is rejected and it can be concluded that PER has significant relationship with stock return.
- d. DER has p-value of 0.039472 in which the value is lower than 0.05 and the absolute tstatistic of 2.168 is higher than t-table which is 2.056. Because of that, H_0 is rejected and it can be concluded that DER has significant relationship with stock return.
- e. NPM has p-value of 0.641032 in which the value is higher than 0.05 and the absolute tstatistic of 0.472 is lower than t-table which is 2.056. Because of that, H_0 is accepted and it can be concluded that NPM does not have significant relationship with stock return.
- f. DR has p-value of 0.081616 in which the value is higher than 0.05 and the absolute tstatistic of 1.812 is lower than t-table which is 2.056. Because of that, H₀ is accepted and it can be concluded that DR does not have significant relationship with stock return.

b) Concurrent Test (F-Test)

The year of 2019 has p-value of 0.002973, in which the value is lower than 0.05 and it can be understood that H_0 is rejected. In conclusion, the 6 microeconomics variables have simultaneous relationship with stock return for the year of 2019. Besides, the year of 2020 has p-value of 1.797e-05 or 0.00001797. In which the value is lower than 0.05 and it can be understood that H_0 is rejected. In conclusion, the 6 microeconomics variables have simultaneous relationship with stock return for 2020.

c) Adjusted Coefficient of Determination (Adjusted R²)

It can be obtained that the 6 microeconomics independent variables have influenced stock return by the portion of 39.63% in 2019 since the result obtained is 0.3963, while the rest of 60.37% is influenced by other factors outside those 6 microeconomics variables. Besides, in 2020, the 6 microeconomics independent variables have influenced stock

return by the portion of 60.82% since the result obtained is 0.6082, while the rest of 39.18% is influenced by other factors outside.

Overall, the results of t-test for the year of 2019 and 2020 can be compared by the table below.

Variable —	2019		2020	
	Significant relationship?	Regression coefficient	Significant relationship?	Regression coefficient
BVPS	No	-1.483e-05	No	-5.797e-05
PBV	Yes	0.1914	No	0.1306
PER	Yes	-3.247e-03	Yes	4.129e-03
DER	No	-0.03784	Yes	0.1723
NPM	Yes	-0.9739	No	-3.038e-02
DR	No	-0.2118	No	-1.520

Table 6. Comparison of Partial Relationship of Each Independent Variable.

(Source: Constructed by researcher)

5. DISCUSSION

In 2019, only PBV, PER and NPM which have significant relationship with stock return. Among the 3 variables, NPM has the most dominant significant relationship since it has the highest absolute value of regression coefficient. Thus, in 2020, only PER and DER which have significant relationship with stock return. Among the 2 variables, DER has the most dominant significant relationship since it has the highest absolute value of regression coefficient.

It can be seen that the year of 2019 and 2020 have different variables that significantly related to stock return. Aside from the variables, it can also be understood that the relationship might differ, for example is PER which has negative significant relationship in 2019 but positive significant relationship in 2020. In 2019 the economic situation was still stable but in 2020 the economic situation was highly affected due to Covid-19 Pandemic. All of these might occur due to the extreme changes in economic situation, not only in Indonesia but in global. Which, this changes also highly affect the stock market.

6. CONCLUSION, LIMITATIONS, AND SUGGESTIONS

Conclusion

In this section, the author presents brief conclusions from the research results with suggestions for advanced researchers or general readers. A decision may cover the paper's main points, but not replicate the abstract in the conclusion. Authors should explain the practical and theoretical benefits, the economic benefits, and the existence of any new findings.

Limitation and suggestions

This study is limited to financial leading board companies listed on Indonesia Stock Exchange before 2008 and 6 microeconomics variables for 2019 and 2020. Future research can be developed in the way mentioned below but is not limited to:

- 1. Research on relationship between the used six microeconomics variables with the financial sector company's stock return in the period after the COVID-19 pandemic ends.
- 2. I was comparing the result of this research with the research where the period after COVID-19 pandemic ended.
- 3. I am using other microeconomics variables, such as Return on Asset (ROA), Return on Equity (ROE), Current Ratio (CR), and many more.
- 4. I am using other sectors or industries than the financial sector, such as energy, primary material, industrials, healthcare, and many more.
- 5. Using sample data that focuses on other stock boards than main board, such as the development board and acceleration board.

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