The Effect of Profitability Ratio and Market Value Ratio on Companies Stock Prices Listed in Indonesia Stock Exchange (Study on IDX30 2018-2020 Period)

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Abstract:- According to signaling theory, information published by the company could give a positive or negative signal to the investors. These signals could influence an investor's decision whether to buy or sell a company's stock, which can affect the stock price in the capital market. One of the information that can be received by investors is the company's financial performance which is represented by financial ratios. This research aims to analyze and determine the effect of profitability ratio (proxied by Return On Equity) and market value ratio (proxied by Price-to-Earning Ratio) on a company's stock prices that are listed on the IDX30 Index for the 2018 to 2020 period. The method in this research uses a quantitative approach by using multiple linear regression analysis. With the purposive sampling method, there are twenty companies selected to be the research samples with sixty observations. The results of the research concluded that the Return on Equity (ROE) and Price-to-Earning Ratio (PER) have a positive and significant effect on the stock price.

***Keywords: -** Stock Price, ROE, PER, IDX30*

I. INTRODUCTION

In the capital market, company's stock actively traded on the secondary market. The value of a company's stock can be reflected through the stock price which is formed based on the forces of demand and supply between buyers and sellers. In general, investors decisions whether to buying or selling a company's stock are based on the information, conditions, and prospects of the company that issued the shares. Based on signaling theory, the information published by the company would give a positive or negative signal, based on the information that investor receive (Jogiyanto, 2015). These signals become the basis for investors to make decisions to buy or sell stock. One of the sources of information that's published periodically by the company is the financial statement.

The information from the financial statement can provide the information that determine the rise or fall of stock prices. Companies with good financial condition would give positive signal to investor to accumulate the company's stock due to investors expectation of the company's performance in the future, and eventually would increase the company's stock prices. On the contrary, companies that have unfavorable financial condition would give negative signal to investors, thus making investors not interested owning the company's stock and in the end make stock price fall. Therefore, the company's financial performance is one of the important factors that affect stock price movements. In analyzing the company's financial performance, one of the methods is through financial ratio analysis. Financial ratio analysis is an analysis that connects various estimates contained in financial statement to reveal important relationships between financial statement estimates (Hery, 2018). There are several types of financial ratios, namely liquidity ratios, solveny ratios, activity ratio, profitability ratios, and market value ratios. However, this research focused on analyzing the effect of profitability ratio (proxied by ROE) and market value ratio (proxied by PER) on stock price.

There are various groupings of stocks represented through an index. One of the indices on the Indonesia Stock Exchange is the IDX30 Index, an index that contains thirty companies with large market capitalization, high liquidity, and good fundamental conditions. With the stock portfolio of well-performing companies, IDX30 could become an attractive investment option for retail investors and fund managers who need long-term investment options. Although IDX30 has screened the best-performing stocks, this does not comply with the IDX30 stock index price movements. throughout the 2018-2020 period, the movements of IDX30 stock index prices tend to be stagnant. Furthermore, in early 2020, there was a significant decline in IDX30 stock index price due to the impact of the Covid-19 pandemic.

There have been several previous researches that analyzing the effect of ROE on stock price. The result of research conducted by E. D. Astutik, Surachman, and A. Djazuli. (2014), mentions that ROE have significant and positive effect on stock price. However, other researches that has been conducted by M. R. Utami and A. Darmawan (2019) and A. Yusena, R. Rahayu, and D. Yohana (2019) indicate that ROE does not significant effect on stock price.

Contradicting research results were also found on the effect of PER on stock price. Based on research by K. Y. D. Safitri, I. M. Mertha, N. G. P. Wirawati, and A. A. Dewi. (2020), concluded that PER has a positive and significant effect on stock price. Conversely, research conducted by

Y. Anwar and L. Rahmalia. (2019) concluded that PER does not affect stock price.

Based on the phenomenon of the IDX30 index movement throughout the 2018 to 2020 period and several differences in the previous researches, this research aims to analyze and examine the effect of the profitability ratio and market value ratio on a company's stock price listed on the IDX30 index through 2018-2020 period.

II. LITERATURE REVIEW

A. *Signaling Theory*

Signaling theory is a theory that connects the information contained in the financial statements with the response that investors will take (Sulistiyanto, 2008). The response given by investors will be based on the information obtained in the financial statements. This form of response will manifest in the form of investor actions in buying or selling a stock. This theory emphasizes the importance of information released by the company in influencing investment decisions made by investor.

B. *Stock Price*

According to Jogiyanto (2015), the stock price is the price of a stock that occurs on the stock market at a certain time that is determined by market participants as well as the demand and supply of the shares in the capital market. In this research, the stock price is proxied by the closing price of stock companies.

C. *IDX30-Index*

The IDX30 index is an index on the Indonesia Stock Exchange which is based on the thirty best company stocks that have been selected from the LQ45 index with the criteria that the shares in IDX30 have high liquidity, large capitalization, and are supported by good company fundamentals. Every six months, Indonesia Stock Exchange makes a readjustment on the IDX30 index to evaluate a company's stock that is eligible listed on the IDX30 index.

D. *Financial Statements*

Financial statements are the end product of a series of processes for recording and summarizing business transactions (Hery, 2018). The existence of a financial report aims to provide important information related to the financial position, performance, and changes in the financial position of a company that could be useful as a basis for decision making.

E. *Financial Ratio*

Financial ratio is a ratio calculation using financial statements as a basis and serves as a tool in assessing the financial condition and performance of the company (Hery, 2018). Financial ratios are classified into several types, namely liquidity ratios, solvency ratios, activity ratios, profitability ratios, and market ratios.

F. *Market Value Ratio*

Market value ratios are financial ratios used to assess the company's intrinsic value (Hery, 2018). In this research, the Price Earning Ratio is used to measure the market value ratio.

G. *Price-to-Earning Ratio (PER)*

PER is a ratio that describes the number of dollars that must be paid by an investor for every dollar of company earnings obtained by the investor (E. Tandelilin, 2010). PER is estimated by dividing the stock price per share by earnings per share. The higher PER means the expected earning growth will also increase.

H. *Profitability Ratio*

Profitability ratios are financial ratios that describe the company's ability to generate profits (Hery, 2018). There are several types of profitability ratios, but in this research, Return On Equity is used to measure the profitability ratios.

I. *Return On Equity (ROE)*

ROE is a ratio that describes the contribution of company equity in creating net income (Hery, 2018). This ratio shows how much net profit the company can generate for every dollar of funds contained in the company's equity. ROE is calculated by dividing net income by shareholder's equity. The higher the ROE, the greater amount of net profit generated for every dollar of funds embedded in equity.

J. *Framework*

The conceptual framework for this research can be described as the figure below:

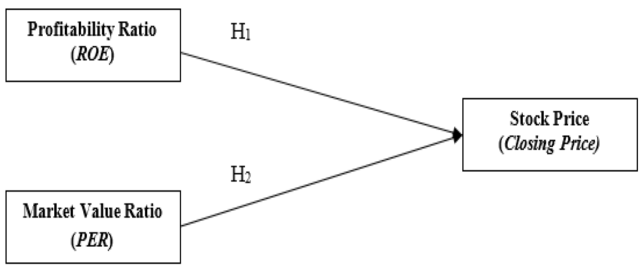

Fig. 1. Conceptual Framework

K. *Hypothesis*

Based on the findings of previous research, the following hypothesis can be developed:
H_1: Profitability Ratio has a positive and significant effect on Stock Prices
H_2: Market Value Ratio has a positive and significant effect on Stock Prices

III. RESEARCH METHOD

A. *Type of Research*

This research uses a quantitative approach, by utilizing secondary data sources derived from financial statements, annual reports, and historical stock prices of companies listed on the IDX-30 Index that have already been published from 2018 to 2020.

B. *Population and Sample*

The research population is thirty companies listed on the IDX30 index, based on Indonesia Stock Exchange Announcement Letter number: No. Peng-00015/BEI.POP/01-2020 regarding Major Evaluation on IDX30 Index. Research sample determined by purposive sampling method with certain criteria, as stated on the table below:

Table 1: Sampling Criteria

No.	Criteria	Samples
1	Companies listed in the IDX30 index based on the Announcement Letter number: No. Peng-00015/BEI.POP/01-2020	30
2	Companies that are not consistently listed in the IDX30 index during 2018-2020	(8)
3	Companies in the IDX30 index that does not generate sustainable profits during 2018-2020	(2)
	Total sample studied during 2018-2020	20
	Total observations 20 x 3 years	60

C. *Data Collection Methods*

Data collection conduct with the documentation method. Data and information related to historical financial information are sourced from financial statements and annual reports, which are sourced from websites of companies and Indonesia stock exchange. Information regarding stock prices of all companies that are sampled on this research is sourced from the yahoo finance website, which is data that have been gathered is historical stock price data on closing price during 2018-2020.

D. *Data Analysis Method*

The analysis method uses multiple regression analysis with the analysis process is done through EViews 9.0. The purpose of the analysis is to determine the effect of the independent variables (ROE and PER) on the dependent variable (stock prices). Before testing the hypothesis in the regression model, the classical assumption tested on the regression model, which consists of the Normality Test through the Jarque-Bera test, The Autocorrelation Test through the Durbin Watson Test, the Heteroscedasticity Test through the Glejser Test, and Multicollinearity Test through correlation test between independent variables. Hypothesis testing consists of t-test, F-test, and Coefficient of Determination Test (R^2).

IV. RESULTS AND DISCUSSION

A. *Classical Assumption Tests Results*

1) *Normality Test*

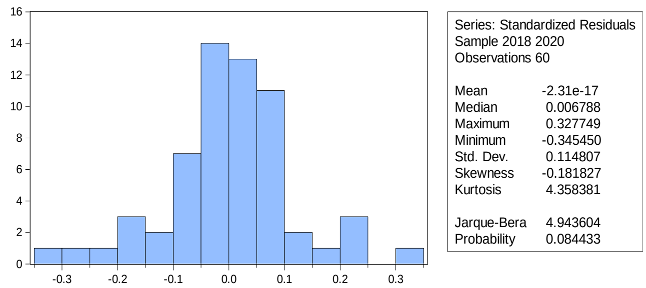

Fig. 2. Jarque-Berra Test Results

The normality test is used to determine whether the data is normally distributed or not. The data are normally distributed if the probability value of Jarque-Bera > the level of significance ($\alpha = 0.05$). Based on the results of the Jarque-Bera Test, it can be concluded that the data are normally distributed (0.084 > 0.05).

2) *Autocorrelation Test*

Table 2: Durbin-Watson Test Results

dl	dU	Durbin-Watson (dw)
1.5144	1.6518	2.1232

It can be stated that there is no autocorrelation in the regression model if there is no correlation between error (residuals) in t period with t-1 period. According to Durbin-Watson decision rule, there is no autocorrelation if dU < dw < 4-dU. With the result of 1.6518 < 2.1232 < 2.3482, it can be concluded that there is no autocorrelation in the regression model.

3) *Heteroscedasticity Test*

Table 3: Glejser Test Results
Dependent variable: RESABS

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.065189	0.055021	1.184790	0.2435
LN_ROE	0.028840	0.038840	0.742531	0.4623
LN_PER	0.024829	0.034479	0.720118	0.4759

The heteroscedasticity test is used to assess whether there is an inequality of residual variance between one observation and another. Heteroscedasticity does not occur if the regression model has a constant residual variance (homoscedasticity). Based on table 3 above, the probability value of ROE and PER is higher than the level of significance ($\alpha = 0.05$), thus giving the conclusion that the regression model is homoscedastic (no symptoms of heteroscedasticity).

4) *Multicollinearity Test*

Table 4: Correlation Test Between Independent Variable Results

	LN_ROE	LN_PER
LN_ROE	1.000000	-0.335740
LN_PER	-0.335740	1.000000

There is no multicollinearity in the regression model if there is no linear connection between independent variables. According to Widarjono (2018), if the correlation coefficient value between independent variables is higher than 0.85, it can be stated that there is multicollinearity in the regression model. Based on table 4 above, it can conclude that there is no multicollinearity in the regression model.

B. *Hypothesis Test Results*

1) *t-test*

Table 5: t-test results
Dependent variable: LN_StockPrice

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	7.981072	0.116455	68.53349	0.0000
LN_ROE	0.656783	0.082206	7.989479	0.0000
LN_PER	0.642030	0.072975	8.797902	0.0000

The t-test is used to identify how each independent variable partially affects the dependent variable. If probability value of t < α, then it concludes that independent variables partially have a significant effect on the dependent variables.

Based on t-test results (table 5), the results of the t-test can be explained as follows:

- ROE variable has a coefficient of 0.656 and a probability value of t < α (0.000 < 0.05), thus the decision is to reject H_0 and accept H_1. So it concludes that the ROE variable has a positive and significant effect on the stock price.
- PER variable has a coefficient of 0.642 and a probability value of t < α (0.000 < 0.05), thus the decision is to reject H_0 and accept H_2. So it concludes that the PER variable has a positive and significant effect on the stock price.

2) *F-test*

Table 6: F-test results

Cross-section fixed (dummy variables)	
F-statistic	185.9972
Prob(F-statistic)	0.000000

The F-test is used to determine whether the independent variable can simultaneously explain the dependent variable or not. Based on table 6 above, the probability value of F-statistics < α (0.000 < 0.05), meaning that the independent variable can simultaneously explain the dependent variable or ROE and PER can simultaneously explain stock prices.

3) *Coefficient of Determination Test (R^2)*

Table 7: Coefficient of Determination Test Results

Cross-section fixed (dummy variables)	
R-squared	0.990365
Adjusted R-squared	0.985040
S.E. of regression	0.143055
Sum squared resid	0.777661
Log likelihood	45.23798

The Coefficient of Determination measures the percentage of variability within the dependent variable that can be explained by the independent variable. For simple linear regression, the Coefficient of Determination can be measured by R^2. However, if the regression model using multiple linear regression, then adjusted R^2 is used as the Coefficient of Determination. Based on table 7 above, the Adjusted R^2 value of 0.985040, this value illustrates that the stock price can be explained by the ROE and PER variables of 98.5%, while the remaining 1.5% is explained by other variables that are not included in this research.

C. *Discussion of Research Results*

1) *Effect of Profitability Ratio on Stock Price*

Based on hypothesis test results, the profitability ratio (proxied by ROE) has a significant and positive effect on the company's stock price listed on the IDX30 index through the 2018-2020 period. ROE describes how every rupiah of company equity can generate profit. Higher Return on Equity indicates that the company's management can optimize equity to create the company's profits. These will be reflected in the form of information contained in the company's financial statements and will provide a good signal to investors who receive the information. Following signaling theory, a good signal from the information will make the value of the company increase in the eyes of investors, which will be reflected in the increases in the company's stock price. The results of the research are in line with the research by E. D. Astutik, Surachman, and A. Djazuli (2014) and H. Lusiana (2020) which concludes that Return On Equity has a positive and significant effect on stock price.

2) *Effect of Market Value Ratio on Stock Price*

Based on hypothesis test results, the market value ratio (proxied by PER) has a significant and positive effect on the company's stock price listed on the IDX30 index through the 2018-2020 period. PER is measured by comparing stock price per share by earning per share. Higher PER indicates that investors are willing to pay higher for the company's stock, based on how the company can generate profits. The willingness of the investor to pay higher for stock price, based on investor confidence that the company has good performance and growth prospect in the future. The confidence in company value would continue to appreciate, then eventually would reflect on increases in the company's stock price. The results of this research are also supported by the research result by K. Y. D. Safitri, I. M. Mertha, N. G. P. Wirawati, and A. A. Dewi (2020), concluding that PER has a positive and significant effect on stock prices. The results of those studies also stated that the higher PER indicates that investors have more confidence in the company's performance and the demand for shares will increase, which will increase the company's stock price.

V. CONLUSION

In summary, the purpose of this research is to investigate the effect of the profitability ratio and market value ratio on a company's stock price that's listed on the IDX30 index through 2018-2020 period. The main results in this research reveal that Profitability Ratio (proxied by ROE) and Market Value Ratio (proxied by PER) have a significant and positive effect on company's stock price that's listed on the IDX30 index in 2018-2020 period.

Based on the results and conclusions obtained from this research, retail investors and fund managers could observe the company's ROE and PER condition before making investment decisions on the company's stock that is listed in the IDX30 index. For the companies, this research can provide insight regarding factors that need to focus on in terms of increasing the company's value for shareholders.

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