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EFFECT OF NPM, EPS, ROE, AND PBV ON STOCK PRICES

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## ARTICLE INFORMATION

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#### Abstract

This study aims to analyze the effect of Net Profit Margin, Earning Per Share, Return on Equity, and Price to Book Value on stock prices. The population of this study are all companies that have been listed on the Indonesia Stock Exchange LQ-45 in the 2015-2018 research period. LQ45 index as one of the stock index indicators on the IDX can be used as a reference as a material to assess the performance of stock trading. This research is to determine the phenomenon that stock prices are one of the measurement tools used to provide information about the success of managing a company. This study uses secondary data in the form of annual financial reports obtained from the Indonesia Stock Exchange. The sampling technique was taken by using purposive sampling as many as 28 companies. Analysis of the data used is multiple linear regression. From these results it can be concluded that earnings earnings have a significant positive effect on stock prices, Return on equity has a significant negative effect, Price to book value has a significant positive effect on stock prices, net profit margins have a negative and no significant effect on stock prices


Keywords: Stocks, Share Prices, Net Profit Margins, Earning Per Share, Return on Equity, Price to Book Value.

## INTRODUCTION

The capital market as one of the financial investment media has various types of products called securities or securities. The capital market is a business in trading securities such as stocks, certificates of shares and bonds. Stock is a sign of ownership or ownership of
a person or business entity in a company (Ariyanti ett all 2016). One type of investment instrument that is often in demand by investors is stocks. When compared to bonds, stocks have a higher expected return (Harwaningrum, M. 2016).

One form of investment that is quite much in demand by investors is stocks. Citing data from the Indonesia Stock Exchange (IDX), the number of stock investors per October 2018 reached 820,000 investors based on Single Investor Identification (SID). This achievement rose significantly compared to the number of stock investors in the 2017 period of 628,000 stock investors. The more investors who want to buy shares, while the number of investors who want to sell fixed stock prices will tend to rise (Endri, 2012).

Growing financial sector growth has made investors chasing corporate shares in the financial sector. Investors will see the company's financial performance report before making a decision to invest or not. According to Harahap, I.M. (2015) Financial reports also produce information that can be used for economic decision making both companies and governments. Information in financial statements is related to changes in stock prices that result in capital gains / losses. Numbers in financial statements can affect investor confidence in the financial markets. Investors look for opportunities to invest by paying special attention to "stock prices". Stock price is one of the measurement tools used to provide information about the success of managing a company. However, the problem is the uncertainty of stock prices. Analysis of stock prices is a fundamental step that must be done by investors before making a decision to invest.

During 2018, the majority of LQ45 index members showed a decline in share prices. This liquid index also fell $4.55 \%$ year-to-date (ytd). However, in the midst of this downward trend, there were 18 stocks that showed price increases. In fact, as many as six shares rose more than $30 \%$ per trade. These shares were PT Bank Tabungan Pensiunan Nasional Syariah Tbk (BTPS) shares, which rose $117.27 \%$ to Rp 3,900, PT Barito Pacific Tbk (BRPT) $95.61 \%$ to Rp 935, PT Media Nusantara Citra Tbk (MNCN) $279.71 \%$ to Rp 1,249, PT XL Axiata Tbk (EXCL) $74.24 \%$ to Rp 3,450, PT Chandra Asri Petrochemical Tbk (TPIA) $37.55 \%$ to Rp 8,150, and PT Jasa Marga Tbk (JSMR) 31.43 \% to IDR 5,625. Based on these data investors will see the company's financial statements before they make an investment. The role of financial statements becomes very important in the decision making process that will be taken by investors. The indicators used in this study use ratios in financial statements, namely Net Profit Margin, Earning Per Share, Return on Equity and Price to Book value.

## LITERATURE REVIEW

According to Capital Market Law No. 8 of 1995 "The capital market is an activity concerned with public offering and trading of securities, public companies relating to the issued securities and institutions and professions related to securities". The capital market can be interpreted as a market for trading or trading in securities which generally have a life of more than one year, such as stocks and bonds (Darmaji and Fakhruddin, 2006). Whereas Husnan (2004) defines the capital market as a market with a variety of financial instruments (securities) in the long term that can be traded in securities, both in the form of debt or in the form of own capital issued by public governments, or private companies.

According to Riyanto (2013: 336) Net Profit Margin is a ratio that measures net profit per dollar of sales. This ratio shows the company's ability to generate profits from sales made
and a reflection of the company's effectiveness in managing its resources. Net Profit Margin is obtained by dividing net income after tax with net sales and made in the form of a percentage. Net Profit Margin is one of the parameters to measure the company's financial performance. The higher the ratio of Net Profit Margin means that the company's performance is also getting better, this shows the company's ability to generate profits based on sales results that have an impact on increasing dividends and investor interest so that it is expected to influence the stock price.

H1: Net Profit Margin has a positive effect on Stock Prices

EPS is a ratio that shows how much profit (return) obtained by investors or shareholders per share. The higher value of EPS certainly encourages shareholders because the greater the profit provided to shareholders (Mayfi, F. and Rudianto, D. (2014). The EPS ratio shows the company's ability to generate profits from sales. This ratio shows the profit generated from each share. The greater EPS can be concluded that the company's performance is more effective / better. Earnings Per Share is obtained by dividing net profit after tax with the number of shares outstanding. Earning Per Share Ratio can be used as one parameter to measure the company's financial performance. The higher EPS shows that the company's performance is good because the company can generate high sales revenue and can provide large profits for investors. This will have an impact on investor interest in investing in companies.

H2: Earning Per Share has a positive effect on stock prices
According to Syamsuddin (2011: 64) Return on equity is a measure that describes the income available to ordinary shareholders and preferred shareholders for the capital invested by shareholdersThis ratio is a ratio that provides information about the company's ability to generate profits from its capital. Return on Equity is one of the ratios that can be used as a parameter to show management's performance, which is shown by generating returns to shareholders from the company's capital management. If the company benefits from the use of capital effectiveness, the value of the company indicated through the share price will rise.

Investors will certainly pay attention to Return on Equity before they make an investment decision because high Return on Equity can foster investor confidence in the company. The situation will turn around if a small Return on Equity can indicate the company is not able to manage capital so investors hesitate to give trust in the company.

H3: Return on Equity has a Positive effect on Stock Prices

Price to Book Value (PBV) ratio is the ratio used to measure the performance of the stock market price to the book value (Najmiyah et.al., 2014). PBV ratio is a ratio that can be used by investors to make a comparison of a stock with other shares. A stock can be said to be expensive or cheap can be reflected from this ratio. Price to Book Value is one of the parameters to measure the company's performance so that it gets a good market recognition so that investors can trust to invest in the company. Companies with good performance will certainly get more market recognition than companies with poor performance. A stock can be concluded expensive if the Price to Book Value is above the number one or the stock is
overvalued, while the stock that is said to be cheap is a stock whose Price to Book Value is under one or undervalued.

H4: Price to Book Value has a positive effect on Stock Prices


Figure 1. Conceptual framework

## RESEARCH METHODS

## Population and Sample

Population peThis research is a LQ-45 company listed on the Indonesia Stock Exchange. The sample used in this study is a manufacturing company listed on the Indonesia Stock Exchange in 2015-2018.The sampling method used was purposive sampling, which is sampling based on the following criteria:

1) LQ-45 companies listed on the Indonesia Stock Exchange before 2015
2) Annual financial reports are available both on IDX and on the company's website
3) The unit of currency used is the rupiah

While the data collection procedures performed by researchers are:

1) Establish the variables measured in this study
2) Finding and downloading raw data needed
3) Make data tabulations using the 2007 Microsoft Office program so that it is ready to be processed by researchers using the Eviews 10 program.

Operationalization of Variables
Table-1 Variable Operationalization

| Variable | Indicator | Scale |
| :---: | :---: | :---: |
| Stock price <br> (Y) | The measurement of this stock price variable is the closing price of the shares of each company obtained from the share price at the end of the year period | Ratio |
| Net Profit Margin <br> (NPM) <br> (X1) | Net Profit Margin $=\frac{\text { Laba bersih setelah pajak }}{\text { Penjualan bersih }} \times 100 \%$ | Ratio |
| $\begin{gathered} \text { Earning Per Share } \\ \text { (X2) } \\ \hline \end{gathered}$ | $\text { Earning per Share }=\frac{\text { Laba bersih setelah pajak }}{\text { Jumlah saham beredar }}$ | Ratio |
| $\begin{gathered} \hline \text { Return on Equity } \\ \text { (X3) } \end{gathered}$ | $\text { Retum on Equity }=\frac{\text { Laba bersih setelah pajak }}{\text { Total ekuitas }} \times 100 \%$ | Ratio |
| Price to Book Value (X4) | $\text { Price to Book Value Ratio }=\frac{\text { Harga per lembar saham }}{\text { nilai buku per lembar saham }}$ | Ratio |

## Data Collection and Testing Methods

Data collection methods are carried out by conducting a literature review and documentation. This technique is also called secondary data collection technique. The literature used is the data needed to conduct this research. After all data has been collected, testing is carried out through 3 stages:

1. Descriptive Statistics Test
2. Classical Assumption Test (Test for Normality, Multicollinearity, Heteroscedasticity, and Autocorrelation)
3. Multiple Linear Regression Test

## FINDINGS AND DISCUSSION

Descriptive Statistics
Table-2. Descriptive Statistics Test Results

|  | X1 | X2 | X3 | X4 | Y |
| :--- | :---: | :---: | :---: | :---: | :---: |
| The mean | 0.159347 | 274.4741 | 0.153472 | 2,678178 | 3787,868 |
| Median | 0.119920 | 233,391 | 0.136603 | 1,940719 | 2640,000 |
| Maximum | 0.499328 | 1063,189 | 0.445732 | 12.95113 | 11675.00 |
| Minimum | 0.023383 | 9.109813 | 0.021324 | 0.685896 | 690,0000 |

From the test results it is known that the mean, median, maximum and minimum values of the variablenet profit marginwhich is represented by X1 respectively $0.159347,0.119920$, 0.499328 and 0.023383 . The mean, median, maximum and minimum values of the variableearning persharewhich is denoted by X2 respectively 274.4741, 233.3951, 1063.189 and 9.109813. The mean, median, maximum and minimum values of the variablereturn on equitywhich is represented by X 3 respectively $0.153472,0.136603,0.445732$ and 0.021324 . The mean, median, maximum and minimum values of the variableprice to book valuewhich is represented by X 4 respectively $2.678178,1.940719,12.95113$ and 0.685896 . The mean, median, maximum and minimum values of the stock price variable are denoted by Y respectively $3787,868,2640,000,11675.00$ and 690.0000 .

## Normality test



Figure 1 Normality Test Results
From the results of normality testing it is known that the probability value of 0.457295 where the value is greater than the significance level of 0.05 . Based on these results it can be concluded that there is no normality problem.

## Multicollinearity Test

Table-2. Multicollinearity Test Results

| Variable | Coefficient <br> Variance | Uncentered <br> VIF | Centered <br> VIF |
| :---: | :---: | :---: | :---: |
| C | 95392.71 | 7.314195 | NA |
| X1 | 1800775. | 5,040832 | 1.534952 |
| X2 | 0.336742 | 3.255483 | 1.310341 |
| X3 | 11145419 | 24.54671 | 4.418482 |
| X4 | 10664.32 | 9.796965 | 3.932027 |

From the multicollinearity test results presented above, it is known that the value of Centered VIF is below 10. From these results it can be concluded that there are no symptoms of multicollinearity in this study

## Heteroscedasticity Test

Table-3 Heteroscedasticity Test Results

| F-statistics | 1.823622Prob. F (4.63) | 0.1354 |
| :--- | :--- | :--- |
| Obs * R-squared | 7,056389Prob. Chi-Square (4) | 0.1329 |
| Scaled explained SS | 6.698434Prob. Chi-Square (4) | 0.1527 |

From the results of heteroscedasticity testing it is known that the probability value of Obs * R-squared is above 0.05 , from these results it can be concluded that there are no symptoms of heteroscedasticity.

## Auto Correlation Test

Table-4 Autocorrelation Test Results

From the test results it is known that the probability value of Obs * R-squared is above 0.05 . From the results of these tests it can be concluded that there are no symptoms of autocorrelation in this study.

## Regression Test

Table-5. Regression Test Results

| Variable | Coefficient | Std. Error | t-Statistics | Prob. |
| :--- | ---: | ---: | ---: | ---: |
| C | 940.7970 | 308.8571 | 3.046059 | 0.0034 |
| X1 | $-2093,396$ | 1341,930 | -1.559990 | 0.1238 |
| X2 | 12,44690 | 0.580295 | 21.44927 | 0.0000 |
| X3 | -12504.25 | 3338,476 | -3.745498 | 0.0004 |
| X4 | 628.5422 | 103,2682 | 6,086503 | 0.0000 |
| R-squared | 0.884043 Mean dependent var |  | 3787,868 |  |
| Adjusted R-squared | 0.876680 SD dependent var | 2681,716 |  |  |
| SE of regression | 941.7352 Akaike info criterion | 16.60401 |  |  |
| Sum squared resid | 55872504 Schwarz criterion | 16,76721 |  |  |
| Log likelihood | -559.5364 Hannan-Quinn criter. | 16,66868 |  |  |
| F-statistics | 120.0760 Durbin-Watson stat | 1.239548 |  |  |
| Prob (F-statistic) | 0.000000 |  |  |  |

From the test results it is known that the constant value of 940.7970 , the coefficient value of the variablenet profit margin of -2093,396, the coefficient value of the variable earning pershare amounted to 12,44690 , the coefficient value of the variable return on equity equal to -12504.25 and the coefficient value of the variable price to book valueamounting to 628.5422. Based on these results the linear regression can be described as follows

$$
\text { Stock Price }=940.7970-2093.396 \times 1+12.44690 \times 2-12504.25 \times 3+628.5422 \times 4 \ldots \text { (1) }
$$

In this study it is also known that the coefficient of determination is 0.884043 which has a variable meaningnet profit margin, earnings earnings, return on equity and price to book value has an influence of $88.40 \%$ on the variable stock price.

## Partial and Simultaneous Test

From the test results presented in table 4, it is known that the probability value of the variable net profit margin equal to 0.1238 , the probability value of the variablepreshare earning equal to 0.0000 , the probability value of the variable return on equity of 0.0004 and the probability value of the variableprice to book value amounting to 0.0000 . From these
results it is known that the probability value of three variables, i.e.earning pershare, return on equity and price to book value has a probability value below the significance level of 0.05

From these results it can be concluded that the earning per share significant positive effect, the results of this study are consistent with the results of previous studies by F.F.G.Ginsu., I.S.Saerang., F.Roring (2017) where in his research Earning per share has a positive effect on stock prices.

Return on equity has a significant negative effect. The results of this study are consistent with the results of previous studies by Ludiyah, Indri (2017) where in his research stated ROE has a negative effect on stock prices.

Price to book value has a significant positive effect on stock prices. The results of this study are consistent with the results of previous studies by Fajri (2011), which in his research stated partially Price to Book Value (PBV) had a significant effect on stock prices.

Net Profit Margins had no significant negative effect on stock prices. The results of this study are consistent with the results of previous studies by Itabillah (2013), which in his research stated partially Net Profit Margin (NPM) had no significant effect on stock prices.

From the results of table 4 presented above it is known that the probability value of $f$ is 0.00000 . where it is below the level of significance that is equal to 0.05 . from these results it can be concluded that the variablenet profit margin, earning pershare, return on equity and price to book value significant simultaneous effect on the legal price of companies listed on the 2015-2018 LQ45 index.

## CONCLUSION AND SUGESTION

## Conclusion

From the results of the study, it can be concluded

1. Net profit margin no significant effect on stock prices of companies listed on the 2015-2018 LQ45 index.
2. Earning pershare significant positive effect on stock prices on companies listed on the LQ45 index 2015-2018.
3. Return on equity significant negative effect on stock prices on companies listed on the LQ45 index 2015-2018.
4. Price to book value significant positive effect on stock prices on companies listed on the LQ45 index 2015-2018.
5. Net profit margin, earnings per share, return on equity and price to book value have a significant simultaneous effect on stock prices in companies listed on the 2015-2018 LQ45 index.

## Suggestion

1. For further researchers to be able to conduct research in other sectors in order to obtain better information about stock prices.
2. Update research period for future periods.
3. Add other variables related to stock prices.

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