Factors That Affect Stock Prices in LQ 45 Indexed Companies

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Abstract. The increase and decrease in stock prices on the Indonesia Stock Exchange (IDX) was caused in addition to the fluctuating demand or purchases and offers and sales, also influenced by several other financial variables. The purpose of this study is to determine and test the influence of independent variables proxied on net profit margin, common size, price book value, price earning ratio, and debt to equity ratio on the dependent variable, namely stock price. This quantitative research uses secondary data (financial statements) on LQ45 companies for the 2017-2020 period with purposive sampling techniques of 140 data and processed using SPSS software. The result of this study is that only the PBV variable has a significant effect on the stock price. Meanwhile, the variables of net profit margin, common size, price earning ratio, and debt to equity ratio have an insignificant effect on stock prices. All independent variables simultaneously have a significant effect on stock prices. This research model states that 66.1% of dependent variables affect stock prices.

Keywords: net profit margin; common size, PBV, PER, DER; stock prices

1 Introduction

In the 2020 was a challenging year where the global pandemic Covid-19 hit the whole world. The capital market was not spared from being affected by this pandemic so that several issuers were forced to collapse due to economic uncertainty. The Indonesian capital market had experienced the lowest point of the JCI (Composite Stock Price Index) which fell 37.9% at the beginning of 2020 but began to crawl slowly and last until early October 2020 (Putra, 2020). The turmoil in the capital market was also experienced by the flagship stock index of the Indonesia Stock Exchange (IDX), namely the LQ45 index which consists of 45 constituents with high liquidity, market capitalization, compliance level and high fundamentals (Rahmawati, 2021). However, as many as 23 issuers of LQ45 companies have managed to recover from the impact of the pandemic which can be seen by the increase in stock prices as they were before the pandemic occurred (Putra, 2020).

Stocks are an investment option that is in demand by many people in various countries both in Indonesia and in other countries. In general, shares are a piece of paper belonging to an individual or group as a sign of proof of ownership of the company, the shares are used as
individuals or groups as investments by expecting to make a profit. Thus, shares are used by investors as a goal to increase income from investments made.

Stock prices change every day due to market volatility; these changes are due to demand or buying and selling or selling. If the purchase of shares is more than the sale of shares, then the price moves up and vice versa if there are more sales of shares than the purchase of shares, it will make the price fall. According to Wijaya & Yustina (2016) in addition to changes due to demand and supply of shares also changed influenced by Net Profit Margin (NPM), Price Earnings Ratio (PER), Return on Asset (ROA), Dividend Per Share (DPS) and Earning Per Share (EPS).

Before buying the company’s shares, of course, investors will analyze how the company’s share price is issued by the IDX is doing, so that if the company wants to attract many investors, the company must maximize and improve the company's values. The increase or increase in value in the company is seen from the company's performance which ideally changes in a positive direction by knowing the good and bad performance of the company, thus the company is expected to be able to improve and increase the effectiveness of its performance. The assessment of financial performance in the company is not only assessed using its financial statements but can also be measured by common size analysis (Shinta & Hidayati, 2013).

From some of the studies mentioned above, it produces diverse findings on the basics that affect the stock price of an issuer. Researchers are therefore interested in re-analyzing the factors affecting stock prices. The novelty of this study is the addition of PER as a continuation of EPS and common size on independent variables. The addition of PER is used to predict the company's ability to generate profit (earning power) in the future. PER becomes valueless if the company's profit is low or incurs losses. Addition of common size to provide information on investment composition (assets) and capital structure (composition of liabilities and equity) in analyzing financial statements. The difference in the period used is using the 2017-2020 period report and the LQ45 indexed company population for the August 2020-January 2021 period. The selection of the research period in 2017 considering that in that year there were 9 (nine) important economic events in Indonesia. Some of these events that affect the capital market include the lowest point of retail business, the all-time JCI record high of breaking the level of 6.025, and the inauguration of the Director General of Taxes by the Minister of Finance (Yanuar, 2017).

2 Literature Review

The first research, Mayasari et al., (2018) with the title "The Effect of Return On Equity, Net Profit Margin and Company Size on Underpricing." In his research, it was explained that ROE affects Underpricing and can be used as one of the key ingredients for investors to consider in predicting underpricing. NPM is described as categorized as a profitability ratio that can affect underpricing so that it cannot be considered by investors to detect underpricing. Company Size in the research of Mayasari et al. (2018) has an influence on Underpricing.

Satryo et al., (2017) conducted an assessment using purposive sampling with a sample of data of 15 issuers listed on the IDX for the 2010-2014 period. Multiple regression analysis and statistical tests were used to process the data and showed that ROA, ROE, DER, and Debt to
Asset Ratio (DAR) did not affect the stock price. In this study, the stock price was only affected by EPS and PBV.

Pangestu & Wijayanto (2017) conducted a study using as many as 13 data from metal sub-sector companies during the 2013-2017 period used as samples. Linear regression was processed using the SPSS v21 application with the results of the analysis showing that all dependent variables are affected by independent variables either partially or simultaneously.

Gursida (2019) conducted a study using the Purposive sampling method as a sampling method and there were 11 companies as samples with the mining sector on the IDX for the 2011-2015 period. Hypothesis testing in this study uses Structural Equation Modelling. This research shows that the ratio of Cash, DAR, and exchange rate does not directly affect the stock price, whereas ROA has a direct effect on the stock price. The ratio of Cash, DAR, and exchange rate has a significant effect on stock prices through ROA as a moderate variable.

Saputra & Martha (2019) conducted a study with the results of the analysis of 28 financial sector companies listed on the IDX for the 2013-2017 period which were determined as samples using purposive sampling techniques. Regression of panel data as an analysis method used in research with the help of the E-Views 8 application. The company's share price during the research period was only affected by PBVs while ROA had no influence and was insignificant.

Wijaya & Yustina (2016) conducted research to produce equations, multiple analysis was used in research as an analyzer and coefficient (R2) tests and t tests as hypothesis testers. The results of this study present dividend policy using dividend payout ratios and profitability ratios have a significant relationship with stock prices and present the value of solvency and profitability ratios that have a significant relationship with stock prices.

Aminah & Hidayat (2016) conducted research using quantitative techniques and documentary data in the form of secondary data. The research is included in the case study so there is no testing on the hypothesis. The period of analysis of financial statements and research profit and loss is from 2009 to 2014. This research shows that the company's performance is good only on the trend ratio, while the current cash ratio does not show good conditions, this is because the company's high activity makes the company's debt increase and procurement that must be reserved with a large amount using KMK funds (Working Capital Krredit).

Prihastuti et al. (2019) conducted a study with quantitative descriptive research. Data collection using documentation methods. There are 2 (two) common size reviews, the first in terms of balance sheet results in an analysis that the allocation of asset funds from the company’s capital can increase the margin of safety for creditors compared to the allocation of asset funds from debt. And the second in terms of income statement produces an analysis that the company's financial performance is good due to the increase in the company's net profit.

3 Research Methods

3.1 Operational Variables and Their Measurements

Dependent Variables (Y)
The stock price in this research uses the first half stock price of the following year since the research year, which is the stock price on June 30 of the following year. Financial reporting on
the IDX will be uploaded by each issuer no later than after the GMS (General Meeting of Shareholders) in April of the following year. So with the upload of the issuer's financial statements to the public in April, the assumption will affect the share price in June. Underpricing is measured based on the profit earned by investors by dividing the closing price against the offering price.

**Independent Variables (X)**

**Net Profit Margin**

NPM to measure the company's profit in each sale which can be calculated by comparing profit with sales (Darminto, 2019).

\[
Net Profit Margin (NPM) = \frac{Net Profit (NP)}{Net Sales (NS)}
\]  
(1)

**Common Size**

According to Darminto (2019) the calculation of the common size percentage analysis by distributing the value of the cash balance to total assets.

**Price Book Value**

Shareholders often compare the share price in the stock market with the total shares outstanding to obtain PBV value

\[
Price Book Value (PBV) = \frac{Stock Price Per Share}{Book Value Per Share}
\]  
(2)

**Price Earning Ratio**

Price-to-earnings ratio shows the relationship between the market price of ordinary shares and earnings per share.

\[
Price Earning Ratio = \frac{Stock Price Per Share}{Earning Per Share}
\]  
(3)

**Debt to Equity Ratio**

DER is calculated to see the level of risk of uncollectible arrears of the company on the capital owned by the company.

\[
Debt to Equity Ratio = \frac{Total Liability}{Shareholders’ Equity}
\]  
(4)

**4 Result and Discussion**

4.1 Respondent Characteristics

The calculation of sampling and determination is found in table 1 below:
Table 1. Total Research Sample.

<table>
<thead>
<tr>
<th>Company Criteria</th>
<th>Sum</th>
</tr>
</thead>
<tbody>
<tr>
<td>List of companies indexed by LQ 45 for the period 2017 to 2020</td>
<td>45</td>
</tr>
<tr>
<td>Companies that do not meet the criteria</td>
<td>10</td>
</tr>
<tr>
<td>Companies that meet the criteria</td>
<td>35</td>
</tr>
<tr>
<td>Total sample period 2017 to 2020 (4 years)</td>
<td>140</td>
</tr>
</tbody>
</table>

Source: Data processed SPSS (2022)

4.2 Descriptive Statistics

Table 2. Descriptive Statistics.

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Min</th>
<th>Max</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>NPM</td>
<td>140</td>
<td>0.30</td>
<td>58.14</td>
<td>16.7128</td>
<td>11.90784</td>
</tr>
<tr>
<td>CS</td>
<td>140</td>
<td>0.0039</td>
<td>0.73</td>
<td>0.1111</td>
<td>0.09801</td>
</tr>
<tr>
<td>PBV</td>
<td>140</td>
<td>0.57</td>
<td>412.22</td>
<td>19.4077</td>
<td>60.46068</td>
</tr>
<tr>
<td>PER</td>
<td>140</td>
<td>3.13</td>
<td>110.04</td>
<td>26.0816</td>
<td>21.07138</td>
</tr>
<tr>
<td>DER</td>
<td>140</td>
<td>0.14</td>
<td>16.08</td>
<td>1.9834</td>
<td>2.51515</td>
</tr>
<tr>
<td>SP</td>
<td>140</td>
<td>362</td>
<td>78.300</td>
<td>7.87021</td>
<td>13.595.274</td>
</tr>
</tbody>
</table>

Valid N (listwise) 140

Source: Data processed SPSS (2022).

In table 2, you can see the results of the discussion of descriptive statistics below:

a. The NPM variable is calculated by comparing the value of the profit over the value of sales. The lowest value in the NPM variable of 0.30 is owned by PT Jasa Marga. The highest number was achieved by PT Jasa Marga with a value of 58.14. The average value of 140 samples was 16.7128 with a standard deviation of 11.90784.

b. The common size variable of 0.0039 is owned by PT Bank Tabungan Negara. The highest score was achieved by PT Charoen pokphand Indonesia of 0.73. The mean value of 140 samples is 0.1111 with a standard deviation of 0.09801.

c. Variable price book value is calculated by comparing the price of shares in the stock market over the number of shares outstanding. The lowest nominal in the variable price book value of 0.57 was obtained by PT Pembangunan Perumahan. The highest score was achieved by PT Unilever Indonesia of 412.22. The average value of the 140 samples was 19.4077 with a standard deviation of 60.46068.

d. The PER variable is calculated by comparing the share price with the EPS value. The lowest value in the variable price earning ratio of 3.13 is owned by PT Tower Bersama Infrastructure. The highest score was achieved by PT Aneka Tambang of 110.04. The average value of the 140 samples was 26.0816 with a standard deviation of 21.07138.

e. The DER variable is calculated by dividing the value of the debt over the amount of equity. The lowest number in the DER variable is 0.14 by PT Mitra Keluarga Karyasehat. The
highest figure was achieved by PT Bank Tabungan Negara with a value of 16.08. The mean value of 140 samples is 1.9834 with a standard deviation of 2.51515.

f. The share price of the LQ 45 company was obtained by the author from www.idx.co.id. The lowest value in the dependent variable of 362 is owned by PT Pakuwon Jati. The highest score was achieved by PT Gudang Garam of 78,300. The average value of 140 samples was 7,870.21 with a standard deviation of 13,595,274.

4.3 Result of Testing Classical Assumption

Normality Test

This test is performed to detect whether the dependent and independent variable tests have a normal distribution or not. The test used by the author is the probability plot test or known as the P-P Plot test. The results of the probability plot test study are said to be normal if the plotting point is near the diagonal line or follows the diagonal line. Based on the resulting chart output, it can be known that the P-P Plot is normally distributed because the plotting points are unidirectional and follow diagonal lines.

![Normal P-P Plot of Regression Standardized Residual](image)

**Fig. 1. Normality Test.**

Multicollinearity Test

This test is intended to test independent and dependent variables whether they have a correlation affecting each other. Reasonable multicollinearity test results should not have correlations between bound and free variables. Based on the results of the multicollinearity test in this case, it is known that all free variables have no symptoms of multicollinearity with a tolerance value of more than 0.10 and a VIF number of more than 10.
Table 3. Multicollinearity Test.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Tolerance</th>
<th>VIF</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Constant)</td>
<td>0.525</td>
<td>1.906</td>
</tr>
<tr>
<td>NPM</td>
<td>0.762</td>
<td>1.312</td>
</tr>
<tr>
<td>CS</td>
<td>0.924</td>
<td>1.082</td>
</tr>
<tr>
<td>PBV</td>
<td>0.891</td>
<td>1.123</td>
</tr>
<tr>
<td>PER</td>
<td>0.507</td>
<td>1.973</td>
</tr>
</tbody>
</table>

a. Dependent Variable: Stock Price

Source: Data processed SPSS (2022).

Autocorrelation Test

This test is performed to examine the relationship between the error of the initial period (t0) to the previous period (t-1) in the linear regression model. The test used was the Dw Test with a result of 0.581. The value is between -2 and 2, so it can be concluded that the variables in the results of this study did not have autocorrelation problems.

Table 4. Autocorrelation Test.

<table>
<thead>
<tr>
<th>Model Summaryb</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model</td>
</tr>
<tr>
<td>-------</td>
</tr>
<tr>
<td>1</td>
</tr>
</tbody>
</table>

a. Predictors: (Constant), DER, PBV, PER, CS, NPM
b. Dependent Variable: Stock Price

Source: Data processed SPSS (2020)

Heteroskedasticity Test

The heteroskedasticity test is useful for testing whether there is a difference between the variance over the residual value in the examination period and the other observation periods. In this study, the authors chose scatter plots to find the presence or absence of signs of heteroskedasticity. Testing the use of scatter plots can be said to be free from heteroskedasticity if the plot points spread around the number 0 (zero), do not merge above or below alone, and the plot points do not show a directional pattern. The results of the analysis of researchers who were free from heteroskedasticity tests using scatter plots.
Hypothesis Testing

The value of R Square of 0.661 or 66.1% indicates that this multiple linear regression equation is only influenced by 66.1% of the free variables, the remaining 33.9% is influenced by variables outside this study. Based on the output of SPSS, multiple linear regression equation model are:

\[
\text{Stock Price} = 10.278,991 + 48,721\text{NPM} - 23.189,453\text{CS} + 58,393\text{PBV} - 4,316\text{PER} - 1.110\text{DER} \quad (5)
\]

Table 5. Result Hypothesis Testing.

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td></td>
</tr>
<tr>
<td>(Constant)</td>
<td>10.278,991</td>
<td>2,000,880</td>
<td>3.548</td>
<td>0.001</td>
</tr>
<tr>
<td>Net profit margin</td>
<td>48,721</td>
<td>41,004</td>
<td>0.134</td>
<td>1.088</td>
</tr>
<tr>
<td>Common size</td>
<td>-23.189,453</td>
<td>12,905,822</td>
<td>-0.167</td>
<td>-1.788</td>
</tr>
<tr>
<td>Price book value</td>
<td>58,393</td>
<td>19,081</td>
<td>0.280</td>
<td>3.090</td>
</tr>
<tr>
<td>Price earning ratio</td>
<td>-4,316</td>
<td>55,795</td>
<td>0.097</td>
<td>-0.072</td>
</tr>
<tr>
<td>Debt to equity ratio</td>
<td>-1,110,224</td>
<td>620,473</td>
<td>-0.208</td>
<td>-1.782</td>
</tr>
</tbody>
</table>

a. Dependent Variable: Harga Saham

<table>
<thead>
<tr>
<th>ANOVA(^a)</th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Model</td>
<td>Sum of Squares</td>
<td>df</td>
<td>Mean Square</td>
<td>F</td>
</tr>
<tr>
<td>Regression</td>
<td>27734483545.561</td>
<td>5</td>
<td>554689698.112</td>
<td>3.243</td>
</tr>
<tr>
<td>Residual</td>
<td>22918126988.011</td>
<td>134</td>
<td>171030813.343</td>
<td>1.46</td>
</tr>
<tr>
<td>Total</td>
<td>25695177333.571</td>
<td>139</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a. Dependent Variable: Harga Saham

\(^a\) Predictors: (Constant), Debt to Equity Ratio, Price Book Value, Price Earning Ratio, Common Size, Net Profit Margin.
The regression equation above shows the magnitude of the influence between independent variables consisting of NPM, common size, PBV, PER, and DER on the dependent variable, namely stock price. The definition of the regression equation is the average share price value of 10,278,991 and increases by 48,721 if the NPM variable rises by 1 unit, decreases by 23,189,453 if the common size variable increases by 1 unit, increases by 58,393 if the PBV variable rises by 1 unit, decreases by 4,316 if the PER variable rises by 1 unit, and decreases by 1,110,356 if the DER variable rises by 1 unit. This is the assumption that if there is an increase or decrease, then other variables have a fixed value. The regression equation above can be concluded that the npm, PBV and PER variables have a positive influence direction on the stock price while the common size and DER variables have a negative influence direction on the bound variable.

4.4 Comprehensive Data Analysis

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>Sig.</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>H₁</td>
<td>0.237</td>
<td>Insignificant</td>
</tr>
<tr>
<td>NPM has a partial significant influence on stock prices</td>
<td></td>
<td></td>
</tr>
<tr>
<td>H₂</td>
<td>0.076</td>
<td>Insignificant</td>
</tr>
<tr>
<td>Common size has a partial significant influence on stock prices</td>
<td></td>
<td></td>
</tr>
<tr>
<td>H₃</td>
<td>0.003</td>
<td>Significant</td>
</tr>
<tr>
<td>PBVs have a partial influence on stock prices</td>
<td></td>
<td></td>
</tr>
<tr>
<td>H₄</td>
<td>0.938</td>
<td>Insignificant</td>
</tr>
<tr>
<td>PER has a partial significant influence on stock prices</td>
<td></td>
<td></td>
</tr>
<tr>
<td>H₅</td>
<td>0.075</td>
<td>Insignificant</td>
</tr>
<tr>
<td>DER has a partial significant influence on stock prices</td>
<td></td>
<td></td>
</tr>
<tr>
<td>H₆</td>
<td>0.009</td>
<td>Significant</td>
</tr>
<tr>
<td>NPM, common size, PBV, PER and DER have a simultaneous significant influence on stock prices</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Data processed SPSS (2022).

Effect of Net Profit Margin on Share Price Partially

In general, if the value of NPM increases, the value of shares also increases and vice versa because the value of NPM is one of the values that proves the company's ability to generate net profit. Based on table 6 above, hypothesis testing 1 NPM with a nominal value of 0.237 > 0.05. The results of the analysis explained that the influence of NPM on stock prices has insignificant positive results, this means that there is an equal relationship between NPM and stock prices.

The results showed that the interest of investors in choosing a company did not look at the magnitude of the small value of NPM because the value proved not to affect the stock price.
significantly. This result is evidenced by previous research, namely Khoir et al. (2015) revealed insignificant testing of npm values over price shares. Meanwhile, Rahmani (2020) revealed that NPM testing of stock prices is inversely proportional to this study. This can happen because the net profit of an issuer is not absolutely can be used as an excuse for a company to have sufficient performance during a certain year.

**Effect of Common Size on Partial Share Price**

In table 6 above, hypothesis testing 2 common size with a value of 0.076 > 0.05 so that the common size has an insignificant effect on the stock price. In line with the previous study by Aminah & Hidayat (2016). This result shows that the company requires a high enough cost to invest in non-current assets because long-term finances tend to rise against the company's total pasiva.

**Effect of Price Book Value on Partial Stock Price**

Based on table 6 above, hypothesis testing 3, namely PBV with a signification value of 0.003 over the stock price < 0.05 means that the hypothesis is accepted. The results of this study are in accordance with the research of Satryo et al. (2017) which states that PBV also affects stock prices. It is proven that before buying shares, investors will calculate the pbv value of the company whether the PBV has an expensive or cheap share price because the value of PBV is an important measure in purchasing stock price.

This assessment is also supported by previous research by Saputra & Martha (2019) which explained that the increasing PBV value of a company should provide a desire for shareholders to receive greater profits.

**Effect of Price Equity Ratio on Partial Share Price**

Based on table 6 above, hypothesis testing 4 is PER to the stock price with a signification number of 0.938 > 0.05 although in this deepening PER is not significant by the stock price but PER has a positive value because in general the higher the per value, the investor has good high hopes for the development of the issuer so that the stock price certainly increases but this is not good for investors to invest in the long term because stocks have volatility values which is high and has a high risk as well. This case is in line with previous research by Hermawanti & Hidayat (2015) and Indra Widjaja (2019) concluding that PER cannot be used as a definite benchmark in the state of the stock market because of the different objects of research and the period used. Even so, it does not mean that investors can ignore the value of PER in the selection of the company's stock price because PER has a positive regression value to the stock price.

**Effect of Debt to Equity Ratio on Partial Share Price**

Based on table 6 above, hypothesis testing of 5 DER with a value of 0.075 > 0.05, then DER has an insignificant effect on the stock price this event means that the increase in the value of DER is not followed by an increase in the share price in the capital market of the LQ45 company. In fact, investors not only prioritize only in the sense of DER which is the company's ability when completing its obligations in resolving debts but also sees how the company can take advantage of its debts in financing its operational activities. This statement in line with the assessments of Satryo et al. (2017) and Indra Widjaja (2019) revealed that some investors are aware of weaknesses in DER so that there are investors who in determining their share prices do not take into account the value of DER.
Effect of Net Profit Margin, Common Size, Price Book Value, Price Equity Ratio, and Debt to Equity Ratio on Stock Price Simultaneously

Based on hypothesis 6 testing in table 6 of the simultaneous probability numbers of 0.009 < 0.05, it can be concluded that independent variables simultaneously have a significant influence on stock prices. The results of this study are strengthened by the existence of DER's financial ratio which is considered capable of fulfilling obligations in the use of its assets and can take advantage of its obligations in financing its operational activities and shows that the company's responsibility is lower than the total ownership of the company owned to increase profits for shareholders.

5.5. Conclusions

Based on the explanation above, the following conclusions can be drawn:
1) NPM has an insignificant effect on stock prices
2) CS has no significant effect on the stock price
3) PBV has a significant effect on stock prices
4) PER has an insignificant effect on stock prices
5) DER has an insignificant effect on the stock price
6) Dependent variables simultaneously have a significant effect on stock prices.
References


