# Analysis of Factors Affecting Stock Price with Capital Structure as a Moderation Variable in Food and Beverage Companies Listed on The IDX for 2015-2021 

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#### Abstract

The research examines the effect of Return on Equity (ROE) and Price to Book. Value (PBV), Earning per Share (EPS), Dividend Payout Ratio (DPR), and Trading Volume on Stock Prices with Debt to Asset Ratio (DAR) as a moderating variable. The object of this research contains 12 Food and Beverage Companies that are listed on BEI in the years 2015-2021. The sample of this research was chosen by using a purposive sampling method, which are nine companies with ten trillion rupiahs and consistently pay their dividend in 2015-2021. The analysis method involves panel data regression, statistic descriptive, multiple linear regression, and moderating test. The result of this study indicates that the variable Return on Equity, Price to Book Value, Dividend Payout Ratio, and Trading Volume have positive and significant effect on stock prices. Meanwhile, Earnings per Share have a negative and insignificant on stock prices. Capital structure as a moderating variable is capable to moderate ROE, PBV, EPS, DPR, and trading volume on stock prices.


Keywords: Return on Equity, Price to Book Value, Earning per Share, Dividend Payout Ratio, Trading Volume, Capital Structure, Stock Prices

## INTRODUCTION

The capital market has a strategic role in national development as a source of financing for the business world and a
vehicle for investment for the community. The capital market concerns public offerings, securities trading, public companies related to the securities they issue, and institutions and professions related to securities. The development of the capital market in Indonesia has experienced relatively rapid growth, both in the form of shares and debt instruments. Investors investing their funds in the capital market does not only aim in the short term but aim to earn income in the long term. Investors who invest their funds in the capital market must be able to use all the information to analyse the market and their investments to make a profit (Tandelilin, 2014).
Companies experiencing a period of development in their operational activities will need a strong capital structure to increase profits and maintain their business continuity (going concerned). It is due to the growing industry in Indonesia, which impacts intense competition among companies. One of the company's steps to obtain sufficient capital is conducting an Initial Public Offering (IPO) or selling its shares to the public. If the company has entered the capital market, it must convey information to its shareholders because it has become a public company.
ROE (Return on Equity) affects changes in stock prices. In other words, the greater the ROE value generated, the greater the stock
price because the significant ROE indicates that the return to be received by investors will be high, so investors will be interested in buying these shares, which causes stock market prices to tend to increase. This statement is supported by research conducted by Chalik (2019) and Diyani (2018) that ROE and DER significantly affect stock prices.
PBV (Price to Book Value) is the ratio between stock price and book value. Suppose a company has a PBV above 1 (>1). In that case, the company's stock price is considered higher than its book value, illustrating that its performance is improving in investors' eyes. Companies doing well generally have a PBV ratio above one, indicating that the shares' market value exceeds the book value. The greater the PBV ratio, the higher the company is valued by investors (investors) relative to the funds invested. Thus, the higher the PBV, the stock return will increase.
Research gap between the results of domestic research conducted by Siddharta Utama and Anto Yulianto BS (2018) and the results of a study by Claude et al. (2016) and Ferson \& Harvey (2016) regarding PBV, where Siddharta Utama and Anto Yulianto BS (2018) showed that PBV is negatively related to stock returns, while Claude et al. and Ferson \& Harvey (2016) show that PBV is positively related to stock returns.
EPS (Earning per Share) is a ratio that shows how much profit a shareholder gets per share (Sinaga, 2017). EPS is used to measure the success of management in achieving earnings for shareholders. A low ratio means that management has yet to succeed in satisfying shareholders. On the contrary, with a high percentage, shareholder welfare increases" (Kasmir, 2016).

EPS affects changes in stock prices, which means that the greater the EPS, the higher the company's ability to distribute income to its shareholders. An increase in EPS implies that the company is in a growth stage or its
financial condition is experiencing an increase in sales and profits. In other words, the greater the EPS, the higher the company's ability to generate net profits per share. The greater the EPS value, the greater the profit/return shareholders receive. In other words, the greater the business's success, the higher the returns investors will receive. Investors will be interested in buying these shares, which causes the stock market price statement to be supported by a study conducted by Kartika Dewi's research (2020) proving that EPS significantly affects construction and property sector companies on the Indonesia Stock Exchange. This statement is also supported by Chalik's research (2019) which proves that EPS had a positive and significant effect on stock prices on the LQ45 stock index in 2015-2019.
The DPR (Dividend Payout Ratio) affects changes in stock prices based on the theory of the share of profits received by shareholders, even though it will slightly increase the issuer's existence in the capital market. Consistent dividend distribution by a company will positively affect the price of shares circulating on the stock exchange (Syahrizal, 2019).
Capital structure is one factor that moderates share prices. The capital structure is an essential issue for the company because a good or lousy capital structure will directly affect the company's financial position, which will ultimately affect the value of the company. Errors in determining the capital structure will have a broad impact, especially if the company is too large in using debt. The fixed burden that the company must bear is even more significant. It also means an increase in financial risk when the company cannot pay the interest expense or installments of its debts. The optimal capital structure is a capital structure that can minimize the average cost of capital and maximize firm value (Riyanto, 2016).
The company used in this research is a food and beverage company. A food and beverage company are engaged in the food
and beverage sector. This company is one of the industrial sector categories on the Indonesia Stock Exchange (IDX), which can overgrow. As the number of Indonesians grows, the demand for food and beverage also increases. The tendency of the Indonesian people to enjoy ready-to-eat food has led to the emergence of many new companies in the food and beverage sector. This can be seen from Indonesia's increasing number of food and beverage industries, especially since entering a prolonged crisis and creating conditions that make competition increasingly stringent (Rosita \& Gantino, 2017).
Consumer goods are an essential industry for developing the nation's economy. This is inseparable from companies engaged in the Indonesian consumer goods industry. The consumer goods industry has a role in increasing income in a country (Fitri \& Yahya, 2016).
The main reason for analyzing the effect of ROE, PBV, EPS, DPR, and trading volume on stock prices is that several previous studies have shown a gap in research results, where there is research that proves that ROE, PBV, EPS, and DPR have a significant effect on company stock prices. However, previous research also proves that ROE, PBV, EPS, and DPR do not significantly impact stock prices.
The following are empirical facts about the influence of fundamental and technical factors on the stock prices of food and beverage companies for the 2015-2021 period.

Table 1. Empirical Relationship ROE, PBV, EPS, DER, and Trading Volume on Stock Prices

| Year | ROE | PBV | EPS | DER | Trading <br> Volnme | Stork <br> Price |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| 2015 | 1.62 | 228 | 288.50 | 0.25 | 63513075 | 1124 |
| 2016 | 2.09 | 2.80 | 423.75 | 0.37 | 38501792 | 1325 |
| 2017 | 2.41 | 3.45 | 395.75 | 1.91 | 50217667 | 1318 |
| 2018 | 228 | 2.44 | 474.25 | 2.32 | 46253915 | 1796 |
| 2019 | 2.43 | 2.57 | 491.37 | 229 | 52374941 | 1683 |
| 2020 | 2.15 | 2.38 | 487.29 | 2.31 | 51629368 | 1659 |
| 2021 | 2.24 | 2.19 | 481.37 | 2.15 | 50492751 | 1647 |

Source: Indonesian Capital Market Directory (ICMD), 2021

Table 1. shows that in 2016 the increase in ROE, PBV, EPS, and DER values and trading volume was accompanied by the rise in share prices by 1325. However, an increase in ROE, PBV, EPS, and DER values and trading volume in 2017 was followed by a decrease in price shares of 1318 from 1325 in 2016. Whereas in 2018, there were fluctuations, namely a decrease in ROE value to 2.28 from 2.41 in 2017, a decrease in PBV value to 2.44 in 2018 from 3.45 in 2017, an increase in EPS to 474.25 in 2018 from 395.73 in 2017, an increase in DER became 2.32 in 2018 from 1.91 in 2017, a decrease in trading volume to 46253915 but was accompanied by an increase in share prices to 1796 from the previous year 1318 in 2017. PBV value to 2.57 in 2019 from 2.44 in 2018, increase in EPS to 491.37 in 2019 from 3474.25 in 2018, decreased DER to 2.29 in 2019 from 2.32 in 2018, increased trading volume to 52374941 but accompanied by a decrease in share prices to 1683 in 2019 from 1796 in 2018. Meanwhile, ROE, PBV, EPS, DER, and trading volume values have declined in the last two years, with a decline in share prices from 1659 in 2020 to 1647 in 2021.
The phenomenon of this research is the inconsistency of stock prices which tend to fluctuate, which is interesting to study. On the one hand, increases in ROE, PBV, EPS, and DER, as well as trading volume, are accompanied by increases in stock prices. However, on the other hand, increases in ROE, PBV, EPS, DER, and trading volume were followed by a decline in stock prices.

## LITERATURE REVIEW <br> Stock Price

The share price is the value of shares in the capital market expressed in the currency when buying and selling occurs on the stock exchange. According to Jogiyanto (2016), stock prices are prices that occur on the stock market at specific times determined by market participants and determined by the demand and supply of shares in the capital market.
The share price is formed during the
interaction between sellers and buyers of shares based on each party's desire to profit. In that case, the importance of information relating to the formation of share prices for deciding or purchasing a share.
According to Darmadji \& Fakhruddin (2016), fundamental analysis is one way to conduct stock valuation by studying or observing various indicators related to a company's macroeconomic and industrial conditions to various financial indicators and company management. According to
Amanda (2016) says that technical analysis analyzes past stock movement patterns through a chart to predict future stock price movements. Types of Share Prices Share price is the price in the stock. The demand and supply of a share in the capital market usually determine the share price. Share prices, according to Widiatmojo (2016), can be divided into several types, namely:
a) Nominal price is the share price the issuer determines to evaluate each issued share.
b) The market price is the selling price from one investor to another. This price occurs after the shares are listed on the stock exchange.
c) Opening Price is the price demanded by the seller from the buyer during the exchange's opening hours.
d) Closing Price is the price sellers and buyers ask at the opening day's end.
e) The Highest Price is the share price not only once or twice in one day but can occur many times and does not occur at the old share price. From the price that occurs, of course, there is the highest price on that one exchange day. That price is called the highest price.
f) The lowest price is the opposite of the highest price, namely the lowest price on one trading day.
g) Average Price is the average of the highest and lowest prices. This price can be recorded for daily, monthly, or yearly transactions.
The share price is the market price recorded daily at a share's closing (closing price). According to Halim (2003), stock prices
reflect the value of a stock. In this study, the stock price in question is the average for five days after the publication of the financial statements during the observation period. Stock prices that occur in the capital market always fluctuate from time to time. The forces of supply and demand will determine a stock's price fluctuations. If the demand for a stock increases, the stock price tends to rise. Conversely, the stock price tends to fall if there is an excess supply. Many factors influence stock price formation in the capital market, including company performance, risk, dividends, interest rates, supply and demand, inflation rates, government policies, and economic conditions.

## Return On Equity

Return On Equity (ROE) is a tool that investors and company leaders often use to measure how much profit is obtained from the company's capital. For companies, ROE analysis helps attract investors to invest.
ROE measures the income (income) available to company owners (both common and preferred stockholders) for the capital they invest in the company. In general, of course, the higher the return or income earned, the better the position of the company owner (Syamsuddin, 2009).
According to Hery (2016), Return on Equity (ROE) is a ratio showing the result of using the company's capital to create net profit. The Return on Equity (ROE) ratio measures how much net profit is generated from every rupiah of funds invested in the company's total capital. According to Untung (2016), Return on Equity (ROE) measures the rate of return on all capital used. So it can be interpreted that Return on Equity (ROE) measures the contribution of capital in generating net income.

## Price to Book Value

Price to book value (PBV) is a valuation ratio to assess how expensive or cheap a stock is by comparing the stock price to the company's book value.
According to Tryfino (2016), Price to Book

Value (PBV) is a calculation or comparison between a stock's market value and book value. This ratio serves to complete the book value analysis. Suppose in book value analysis, and investors only know the capacity per share of the value of the shares in the PBV ratio. In that case, investors can find out directly how many times the market value of a stock has been valued from its book value.
Sihombing (2015) argues that Price to Book Value ( PBV ) is a value that can be used to compare whether a stock is more expensive or cheaper than other stocks. The two companies must be from the same business group with the exact business nature to compare.

## Earning per Share

Earnings per Share (EPS) is the ratio used to calculate the net profit/profit obtained from a share. The usefulness of this method is to measure the company's performance in generating profits. By calculating the EPS ratio, investors can determine the profit generated from each share. The greater the EPS, the more it can be concluded that the company's performance is more effective/better (Tryfino, 2016).
According to Darmadji (2012), the Earning per Share (EPS) ratio is a ratio that reflects the company's ability to generate profits for each outstanding share. The higher the Earning per Share (EPS) ratio indicates, the better the company can generate net profit per each outstanding share. This will give an excellent signal to potential investors so that the number of investment shares invested in the company increases the demand for these shares, which increases share prices.

## Dividend Payout Ratio (DPR)

The Dividend Payout Ratio (DPR) is the ratio used to show the share of income paid as dividends to investors. At the same time, the other part that is not distributed will be reinvested into the company. The high dividend payments to shareholders can reflect an increase in market share prices, so the company's value will also increase. If
dividends are paid low, the company's stock price is also low (Hanafi, 2013).

## Trading Volume

This study will only focus on sales volume and the composite stock price index in determining the effect of technical information on stock prices. The inconsistent research results regarding the impact of sales volume on stock prices conducted by Abidin (2016) stated that sales volume did not affect stock prices, while Dwi Wulandari (2009) stated the same.
This study will only focus on sales volume in determining the effect of technical information on stock prices. Trading volume is a crucial element in predicting stock price movements. Trading volume is essential information that signals the next price movement (Mahajan \& calculation of trading volume activity is carried out by comparing the number of company shares traded in a certain period with the total number of outstanding shares of the company in the same period.

## Capital Structure

According to Fahmi (2016), the capital structure is the composition of ordinary shares, preferred shares, and various classes, like retained earnings and longterm debt, maintained by a business entity in financing assets.
A company's capital structure consists of long-term debt and shareholder's equity consisting of preferred stock and common equity. The common stock itself consists of common stock and retained earnings. Thus, it can be concluded that the capital structure is an illustration of the form of a company's financial proportions, namely between owned capital originating from long-term debt (long-term liabilities) and equity (shareholder's equity) which is a source of financing for a company.
The solvency ratio instrument used for this research is the Debt Asset Ratio (DAR). The ratio of debt to assets can be investor information. This is because the higher the business activity that requires debt as
financing, the higher the obligations that are borne and must be paid (Meilinda, 2012). Agency theory explains that management's responsibility to stakeholders through the disclosure of financial performance on the annual report is a tool that can be used for decision-making for the use of liabilities by companies that affect risks \& profits. The use of high debt will increase risk and the possibility of experiencing higher financial difficulties (Fitriyah \& Hariyati, 2013).

## Framework



Figure 1. Framework
H1: Return on Equity positively and significantly affects Stock Prices.
H2: Price to Book Value positively and significantly affects Stock Prices.
H3: Earning Per Share positively and significantly affects Stock Prices.
H4: Dividend Payout Ratio positively and significantly affects Stock Prices.
H5: Trading Volume positively and significantly affects Stock Prices.
H6: The capital structure can moderate the effect of ROE on stock prices.
H7: The capital structure can moderate the effect of PBV on stock prices.
H8: The capital structure can moderate the effect of EPS on stock prices.

H9: The capital structure can moderate the effect of the DPR on stock prices.
H10: The capital structure can moderate the effect of trading volume on stock prices.

## MATERIALS \& METHODS

The type of research used is quantitative, "research that aims to test certain theories by examining the relationships between variables" (Juliansyah, 2016). This study aims to examine the effect of fundamental and technical factors on stock prices of food and beverage companies listed on the IDX for the 2015-2021 period, where the data obtained is realized in the form of secondary data obtained from the company's financial reports.
The population in this study are food and beverage companies listed on the Indonesia Stock Exchange for the 20152020 period. The method used in selecting the sample is the purposive sampling method, which is part of the sampling technique using a population to be chosen as a research sample with specific criteria. These criteria are as follows:

1. The company has been listed on the IDX for 2015-2021.
2. The company publishes complete financial report data for 2015-2021.
The number of companies that meet the criteria is 9 , each of which publishes financial reports in the 2015-2021 year, so the number of samples is $9 \times 7=63$. The data in this study is sourced from the official IDX website via www.idx.co.id.

## RESULT

## A. Descriptive statistics

Descriptive statistics describe or describe data into information that is easier to understand. Descriptive statistics describe the data in terms of the average (mean), standard deviation (standard deviation), and maximum-minimum. The following are the results of the descriptive statistical analysis in this study.

Table 2. Descriptive Statistics Test Results

|  | $Y$ Price | X1-ROE | X2,PBV | X3-EPS | XIJPR | $\begin{aligned} & \text { X5- } \\ & \text { Volume } \end{aligned}$ | 2. <br> Stucture |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Nean | 0.1224 | 0.705 | 0.5315 | 0.7663 | 0.352 | 1.097 | 0.372 |
| Medan | 9.1388 | 0920 | 0.350 | 0.080 | 02000 | 06000 | 0.1456 |
| Maxium | 11.509 | 29800 | 23000 | 32400 | 1.9400 | 33000 | 5.648 |
| Mrinum | 72757 | 0.170 | 0.000 | 0.200 | $0 \times 000$ | 02000 | 0.004 |
| Stider. | 11416 | 06036 | 0.484 | 0.5163 | 0.3787 | 11088 | 0.8488 |
| Obserafion | 63 | 63 | 63 | 63 | 63 | 63 | 63 |

Source: Results of data processing with EViews

## 1. Return on Earning (ROE)

Table 2 shows the mean value and standard deviation of variable X1 (Return on Earning (ROE)) are $0.976 \pm 0.663$. The minimum value of X 1 is 0.14 , and the maximum is 0.296 . The mean value of $\mathrm{X} 1(0.976)$ is greater than the standard deviation (0.1663). Overall, food and beverage companies listed on the IDX for 2015-2021 have a good Return on Earning (ROE) value.

## 2. Price to Book Value (PBV)

Table 2 shows the mean value and standard deviation of the variable X2 (Price to Book Value (PBV) are $0.531 \pm 0.493$. The minimum value of X 2 is -0.02 , and the maximum is 0.23 . The mean value of X 2 (0.531) is greater than the standard deviation (0.493). This means that food and beverage companies listed on the IDX for 2015-2021 have an excellent Price to Book Value (PBV).

## 3. Earning per Share (EPS)

Table 2 shows the mean and standard deviation of the variable X3 (Earning per Share (EPS) are $0.706 \pm 0.516$. The minimum value of X 3 is -0.20 , and the maximum value is 3.24 . The mean value of X 3 (0.706) is greater than the standard deviation (0.516). This means that food and beverage companies listed on the IDX for 2015-2021 have an excellent Earning per Share (EPS) value.

## 4. Dividend Payout Ratio (DPR)

Table 2 shows that the mean and standard deviation of the X4 Dividend Payout Ratio (DPR) variable are $0.335 \pm 0.378$. The minimum value of X 4 is 0.02 , and the maximum is 1.94 . The mean value of X 4 (0.335) is smaller than the standard deviation (0.378). This means that food and beverage companies listed on the IDX for 2015-2021 have a poor Dividend Payout Ratio (DPR).

## 5. Trading Volume

Table 2 shows that the mean and standard deviation of the variable X5 Trading Volume is $1.097 \pm 1.106$. The minimum value of X 5 is 0.20 , and the maximum is 3.30. The mean value of X 5 (1.109) is smaller than the standard deviation (1.106). This means that food and beverage companies listed on the IDX for 2015-2021 have a poor trade volume value.

## 6. Share price

Table 2 shows that the mean and standard deviation of the variable Y (stock price) is $9,122 \pm 1,141$. The minimum value of $Y$ is 7.275 , and the maximum is 11.509 . The mean value of Y (99.122) is greater than the standard deviation (1.141). Overall, food and beverage companies listed on the IDX for 2015-2021 have a good stock price value.

## 7. Capital Structure

Table 2 shows that variable Z's mean and standard deviation (capital structure) is $0.372 \pm 0.848$. The minimum value of Z is 0.004 , and the maximum value is 5.644 . The mean Z value ( 0.373 ) is smaller than the standard deviation (0.848). Property companies listed on the IDX for 2015-2021 have negative capital structure values.

## Classical Assumption Test Results Normality test

The normality test in this study was carried out using the Jarque Bera method with the following results:


Figure 2 shows that the probability value, $\mathrm{JB}=0.24$, is greater than the significance level of 0.05 , so it can be concluded that the data is normally distributed.

## Multicollinearity Test Results

The multicollinearity test in this study was carried out using the diagnostic coefficient using the Variance Inflation Factors (VIF) values with the following results:

Table 3. Multicollinearity Test Results

| Variable | Coefficient <br> Variance | Uncentered <br> VIF | Centered <br> VIF |
| :---: | :---: | :---: | :---: |
| C | 0.060662 | 6.235667 | NA |
| X1 | 0.023668 | 3.374347 | 1.054375 |
| X2 | 0.065766 | 3.141194 | 1.344314 |
| X3 | 0.081656 | 6.389917 | 2.202042 |
| X4 | 0.134556 | 3.506678 | 1.952222 |
| X5 | 0.009177 | 2.273106 | 1.136568 |
| Z | 0.292506 | 3.476961 | 2.061295 |
| Source: Results of data processing with EViews |  |  |  |

Source: Results of data processing with EViews
Table 3 shows that the VIF value of all independent variables is less than 10 , so it can be concluded that the research data is free of multicollinearity symptoms.

## Heteroscedasticity Test

Breusch-Pagan-Godfrey carried out the heteroscedasticity test in this study with the following results:

Table 4. Heteroscedasticity Test Results

| F-stalistic | 3284390 | Prob.F(6.56) | 0.0077 |
| :---: | :---: | :---: | :---: |
| Obs'R-squared | 16.35888 | Prob. ChiSquare(0) | 0.1118 |
| Scaed eppanes SS | 17.85080 | Prob. ChiSquar(6) | 0.0088 |

Table 4 shows the prob. Chi-square $=0.11>$ 0.05 , so it can be concluded that the research data is free or does not contain symptoms of heteroscedasticity.

## Autocorrelation Test

The autocorrelation test in this study was carried out using the serial correlation LM test with the following results:

Table 5. Autocorrelation Test Results
Bresch-Godfey Serial Corelation LM Test:

| F-stastic | 0.04141 Prob. F(254) | 0.9594 |
| :--- | :--- | :--- |
| Obs'R-squared | 0.096548 Prob.ChiSquare(2) | 0.9529 |

Source: Results of data processing with EViews
Table 5 shows that the probability value of chi-square $=0.952$ is greater than 0.05 , so it can be concluded that the research data does not contain autocorrelation symptoms.

## Best Model Test Results

Three methods can be used for panel data in research, namely the Common Effect Model (CEM), Fixed Effect Model (FEM), and Random Effect Model (REM). The Chow Test, Hausman Test, and Lagrange Multiplier Test were carried out to determine the best estimation model in this study.

## Chow Test

The Chow test was conducted to choose the best between the Fixed Effect Model (FEM) and the Common Effect Model (CEM).

## Table 6. Chow Test Results

| ETrucs Teat | flatube | 42 | Hote. |
| :---: | :---: | :---: | :---: |
| Petote | \#stises | ( 50 | \$7000 |
| Prod Chapuat | 4.271000 | 6 | 1.6401 |

Source: Results of data processing with EViews
Table 6 shows that the Chi-square probability value $=0.64$, greater than 0.05 , so the FEM model is rejected or the Common Effect Model (CEM) is correct.

## Hausman Test

The Hausman test is a test to choose a Fixed Effect Model (FEM) or Random Effect Model (REM).

Table 7. Hausman Test Results


Source: Results of data processing with EViews
Table 7 shows that the probability value of $\mathrm{F}=0.74$ is greater than 0.05 , so the suitable model is the Random Effect Model (REM).

## Lagrange Test Results

The Lagrange test is a statistical test to select the Common Effect Model (CEM) or Random Effect Model (REM).

| Table 8. Lagrange Test Result |  |  |  |
| :---: | :---: | :---: | :---: |
| Lagrange Multiplier Tests for Random Effects |  |  |  |
| Null hypotheses: No effects |  |  |  |
| Alternative hypotheses: Two-sided (Breusch-Pagan) and one-sided (all others) alternatives |  |  |  |
|  |  | est Hypothes |  |
|  | Cross-section |  | Both |
| Breusch-Pagan | $\begin{aligned} & 5.829458 \\ & (0.0158) \end{aligned}$ | $\begin{aligned} & 1.799819 \\ & (0.1797) \end{aligned}$ | $\begin{aligned} & 7.629277 \\ & (0.0057) \end{aligned}$ |
| Honda | $\begin{aligned} & 2.414427 \\ & (0.0079) \end{aligned}$ | $-1.341573$ | $\begin{aligned} & 0.758622 \\ & (0.2240) \end{aligned}$ |
| King-Wu | $\begin{aligned} & 2.414427 \\ & (0.0079) \end{aligned}$ | $-1.341573$ | $\begin{aligned} & 0.566479 \\ & (0.2855) \end{aligned}$ |
| Standardized Honda | $\begin{aligned} & 2.840662 \\ & (0.0023) \end{aligned}$ | $-1.159738$ | $\begin{gathered} -2.174571 \\ -- \end{gathered}$ |
| Standardized King-Wu | 2.840662 | -1.159738 | -2.367388 |
|  | (0.0023) | -- | -- |
| Gourierioux, et al.* | -- | -- | $\begin{aligned} & 5.829458 \\ & (<0.05) \end{aligned}$ |

Source: Results of data processing with EViews
Table 8 shows that the BP t-count value is 7,629 with a probability value $=0.0057$, less than 0.05 , so the best model is the Random Effect Model (REM).

## Hypothesis Test Results

By the results of the model test, where the best test is the REM model, the regression and moderation hypothesis testing in this study was carried out using the REM method (Random Effect Model) with the following results:

Table 9. Multiple Linear Regression Test Results with the REM model


Source: Results of data processing with EViews

## Partial t-test results

Based on the results of the Multiple Linear Regression Test in Table 10 above, partial ttest results can be obtained as follows:

| Variable | Table 10. Partial t-test results |  |  | Prob. |
| :---: | :---: | :---: | :---: | :---: |
|  | Coefficient | Stad Eror | t-Statstic |  |
| c | 7396463 | 0270914 | 27.30190 | 00000 |
| X1_ROE | 0.522287 | 0.168854 | 3.95120 | 0.0031 |
| $\mathrm{X}_{2} \mathrm{P}$ PSV | 0.837428 | 0282092 | 2968634 | 0.004 |
| X3_EPS | -0056068 | 0283681 | -0.197646 | 0.840 |
| $\chi_{4}$ _ DPR $^{\text {d }}$ | 0.398272 | 037337 | 2512801 | 0.0148 |
| X 5 Volume | 0.463955 | 0105069 | 4416132 | 0.0000 |

Source: Results of data processing with EViews
Based on the data above, it can be seen that:

1) X 1 t-count value $(\mathrm{ROE})=3.09$ with a significance value $(p)=0.0031$. When compared with the value of $t$-table $=$ 2.00 (for $\mathrm{N}=63$ or $\mathrm{df}=57$ ), and sig-p $=$ 0.05 , it can be seen that $t$-count $\mathrm{X} 1(3.09)>\mathrm{t}$-table (2.00) and sig-p $(0.0031)<0.05$, so it can be concluded that the variable X1 (ROE) has a significant influence on the dependent variable Y (stock price).
2) The $t$-value of $X 2(P B V)=2.96$ with a significance value $(p)=0.0044$. When compared with the value of $t$-table $=$ 2.00 (for $\mathrm{N}=63$ or $\mathrm{df}=57$ ), and sig-p $=$ 0.05 , it can be seen that $t$-count X2 (2.96) > t-table (2.00) and sig-p $(0.0044)<0.05$, so it can be concluded that the variable X2 (PBV) has a significant influence on the dependent variable Y (stock price).
3) The t-count X3 (EPS) $=0.197$ with a significance value $(p)=0.844$. When compared with the value of t -table $=$ 2.00 (for $\mathrm{N}=63$ or $\mathrm{df}=57$ ), and sig-p $=$ 0.05 , t-count X3(0.197) < t-table (2.00) and sig-p $(0.844)>0.05$, so it can be concluded that the variable X3 (EPS) has no significant effect on the dependent variable Y (stock price).
4) The t-count $\mathrm{X} 4(\mathrm{DPR})=2.51$ with a significance value $(p)=0.014$. When compared with the value of t -table $=$ 2.00 (for $\mathrm{N}=63$ or $\mathrm{df}=57$ ), and sig-p $=$ 0.05 , t-count X4 (2.51) > t-table (2.00) and sig-p $(0.014)<0.05$, so it can be concluded that the variable X4 (DPR) has a significant influence on the dependent variable Y (stock price).
5) The t-count value of X 5 (Volume) $=$ 4.41 with a significance value (p) = 0.000 . When compared with the value of t -table $=2.00($ for $\mathrm{N}=63$ or $\mathrm{df}=57)$, and sig-p $=0.05$, t -count X5 (4.416) > t-table (2.00) and sig-p ( 0.000 ) < 0.05 , so it can be concluded that the variable X5 (Volume) has a significant influence on the dependent variable Y (stock price).

## Test Results for the Coefficient of Determination (R2)

Table 11. R Determination Test Results

| Table 11. R Determination Test Results |  |  |
| :--- | :--- | :--- |
| R-squared Adjusted R-square <br> SE of Regression  <br> $\mathbf{0 . 5 1 2}$ $\mathbf{0 . 4 7 0}$ <br> $\mathbf{y y y}$ $\mathbf{0 . 8 3 1}$ <br> Source:  <br> Results of data processing with EViews  |  |  |

Source: Results of data processing with EViews
The results of the R2 determination test in Table 11 show that the adjusted R -square value $=0.470$. This means that the influence of the five independent variables on the dependent variable Y (stock price) is 0.470 $x 100 \%=47.07 \%$. This means that the five independent variables can explain $47.0 \%$ of the stock price variable, while the rest ( $53.03 \%$ ) is explained by defined tors not examined.

## Panel Data Regression Equation

Based on the coefficient value of each independent variable, the panel data
regression equation can be explained as follows:

Table 12. Panel Data Regression Equation

| Variable | Coefficient |
| :--- | :--- |
| C | 7.396463 |
| X1_ROE | 0.522287 |
| X2_PBV | 0.837428 |
| X3_EPS | -0.056068 |
| X4_DPR | 0.938222 |
| X5_Volume | 0.463955 |

Source: Results of data processing with EViews
$Y=a+b 1 X_{1}+b_{2} X_{2}+b_{3} X_{3}+b_{4} X_{4}+b_{5} X_{5}$ +e
$\mathrm{HS}=7.39+0.52_{\text {ROE }}+0.83$ PBV $-0.05_{\text {EPS }}+$ 0.93 DPR $\mathbf{+ 0 . 4 6}$ volume $+\mathbf{e}$

The above equation can be explained as follows:

1) Constant (a) $=7.39$ shows a constant value, where if the value of all independent variables is equal to zero, then the company's financial performance variable is equal to 7.39 .
2) Return on Equity (ROE) $=0.52$, meaning that based on this study if the other variables have a fixed value and ROE increases by 1 unit, the stock price will increase by 0.52 ( $52 \%$ ). The Unstandardized Coefficients B value is positive. It indicates that there is a positive relationship between ROE and stock prices. This means that if ROE increases, the stock price will also increase.
3) Price to Book Value $(\mathrm{PBV})=0.83$, meaning that based on this study if the other variables have a fixed value and PBV increases by 1 unit, the stock price will increase by 0.83 ( $83 \%$ ). The value of Unstandardized Coefficients B is positive. It indicates that there is a positive relationship between PBV and stock prices. This means that if PBV increases, the share price will also increase.
4) Earnings per Share $($ EPS $)=-0.05$, meaning that based on this study, if the other variables have a fixed value and EPS decreases by 1 unit, the stock price will decrease by 0.05 (5\%). The Unstandardized Coefficients B value is
negative. It indicates that there is a negative relationship between EPS and stock prices. This means that if EPS increases, the stock price will also decrease.
5) Dividend Payout Ratio (DPR) $=0.93$, meaning that based on this study if the other variables have a fixed value and the DPR increases by 1 unit, the stock price will increase by 0.93 ( $93 \%$ ). The Unstandardized Coefficients B value is positive. It indicates a positive relationship between the DPR and stock prices. This means that if PBV increases, the stock price will also increase.
6) Trading Volume $=0.46$, meaning that based on this study if the other variables have a fixed value and trading volume increases by 1 unit, the stock price will increase by 0.46 ( $46 \%$ ). The Unstandardized Coefficients B value is positive. It indicates a positive relationship between trading volume and stock prices. This means that if PBV increases, the stock price will also increase.
7) The standard error (e) indicates the level of confounding error in this study, namely $5 \%$ (0.05).

## Moderation Effects Analysis

## Simultaneous Moderation Test Results

In this study, simultaneous moderating tests using variable Z (capital structure) and partially carried out showed the following results:

Table 13. Simultaneous Moderating Test Results

| Vantio | Conficent | Sad Enor | Hemite | P.cb |
| :---: | :---: | :---: | :---: | :---: |
| c | 738480 | 0255954 | 23 ams | 00000 |
| $x 1$ | 058328 | 0150627 | 345685 | 0.0010 |
| $x$ | 03trem | 020600e | 31 Setr4 | 0.000 |
| $x)$ | -0400515 | 020646 | 4.301180 | 0172 |
| $\times 4$ | 0538780 | $0.30 v e c e s$ | 1415002 | 0.1624 |
| $\times 5$ | 0 043648 | 000350 | 4 4 3 S619 | 0800 |
| $z$ | 156354! | 0.58170 | 2 2eeer 5 | aser! |
| R-qquand | 057827 | Man Sependertvar |  | 8122390 |
| Adfuted R-squared | 0.52977 | SD dipendert va |  | 1141645 |
| SE of regession | $078 \times 85$ | Som roamed rend |  | 343004 |
| F-statice | 120415 | Dutis Wetuen stry |  | 172009 |
| Proberstatitic) | 0000000 |  |  |  |

Source: Results of data processing with EViews

Table 14. R Determination Test Results Before and After
Moderation

| R-square <br> Before Moderation | R-square <br> After Moderation | Conclusion |
| :--- | :--- | :--- |
| $\mathbf{0 . 4 7 0}$ | $\mathbf{0 . 5 2 9}$ | Increase |

Source: Results of data processing with EViews
Table 14 shows that before moderation, the r-square value $=0.470$, while after moderation, the r -square value $=0.529$, meaning there is an increase in the r -square value after moderation. This proves that simultaneously, the moderating variable ( Z ) succeeds in moderating the simultaneous effect of X1 (ROE), X2 (PBV), X3 (EPS), X4 (DPR), and X5 (trading volume) on the dependent variable Y (stock price).

## Partial Moderation Test Results Ability Z (Capital Structure) Moderates the Effect of X1 (ROE) on (Share Price) Y

The ability of Z (capital structure) to moderate the effect of X1 (ROE) on Y (stock price) shows the following results:

Table 15. Ability Z (Structure) Moderates the Influence of X1 (ROE) on Y

| R-square <br> Before Moderation | R-square After <br> Moderation | Conclusion |
| :--- | :--- | :--- |
| $\mathbf{0 . 0 8}$ | 0.29 | Increase |
| Source: Results of data processing with EViews |  |  |

Table 15 shows that variable $Z$ (capital structure) manages to moderate the effect of X1 (ROE) on variable Y (stock prices). This is indicated by an increase in the r-square value from 0.08 (before) to 0.29 (after moderation).

## Ability Z (Capital Structure) Moderates the Influence of $\mathbf{X 2}(\mathbf{P B V})$ on $Y$ (Share Price)

The ability of Z (Structure) to Moderate the Effect of X2 (PBV) on $Y$ shows the following results:

Table 16. Ability $Z$ (Structure) Moderates the Influence of $X 2$ (PBV) on Y

| R-square <br> Before Moderation | R-square <br> After Moderation | Conclusion |
| :--- | :--- | :--- |
| $\mathbf{0 . 1 8}$ | $\mathbf{0 . 2 7}$ | Increase |
| Source: Results of data processing with EViews |  |  |

Table 16 shows that variable Z (capital structure) manages to moderate the effect of

X2 (PBV) on variable Y (stock prices). This is indicated by an increase in the r -square value from 0.18 (before moderation) to 0.27 (after moderation).

## Ability Z (Capital Structure) Moderates the Influence of X3 (EPS) on Y (Share Price)

The ability of Z (Structure) to Moderate the Effect of X3 (EPS) on Y shows the following results:

Table 17. Ability $\mathbf{Z}$ (Structure) Moderates the Influence of X3 (EPS) on Y

| R-square <br> Before Moderation | R-square <br> After Moderation | Conclusion |
| :--- | :--- | :--- |
| $\mathbf{0 . 1 5}$ | $\mathbf{0 . 2 0}$ | Increase |
| Source: Results of data processing with EViews |  |  |

Table 17 shows that variable Z (capital structure) manages to moderate the effect of X3 (EPS) on variable Y (stock prices). This is indicated by an increase in the r -square value from 0.15 (before moderation) to 0.20 (after moderation).

## Ability Z (Capital Structure) Moderates the Influence of X4 (DPR) on Y (Share Price)

The ability of Z (Structure) to Moderate the Influence of X 4 (DPR) on Y shows the following results:

Table 18. Ability $Z$ (Structure) Moderates the Influence of X4 (DPR) on Y

| R-square <br> Before Moderation | R-square <br> After Moderation | Conclusion |
| :--- | :--- | :--- |
| $\mathbf{0 . 1 1}$ | $\mathbf{0 . 1 9}$ | Increase |
| Source: Results of data processing with EViews |  |  |

Table 18 shows that variable Z (capital structure) manages to moderate the effect of X4 (DPR) on variable Y (stock price). This is indicated by an increase in the r -square value from 0.11 (before moderation) to 0.19 (after moderation).

## Ability Z (Capital Structure) Moderates Effect (Volume) on $\mathbf{Y}$ (Share Price)

The ability of Z (Structure) to Moderate the Effect of X5 (Volume) on Y shows the following results:

Table 19. Ability Z (Structure) Moderates Influence X5
(Volume) on Y


Source: Results of data processing with EViews
Table 19 shows that variable Z (capital structure) manages to moderate the effect of X5 (volume) on variable Y (stock price). This is indicated by an increase in the rsquare value from 0.17 (before moderation) to 0.36 (after moderation).

## CONCLUSION

The results of this study provide several conclusions that can be drawn based on the discussion of the problems that have been carried out. The following are the conclusions that the author has summarized in this study:

1) ROE (Return on Earning) positively and significantly affects stock prices, so hypothesis 1 is accepted.
2) PBV (Price to Book Value) positively and significantly affects stock prices, so hypothesis 2 is accepted.
3) EPS (Earning per Share) has a negative and insignificant effect on stock prices, so hypothesis 3 is rejected.
4) DPR (Dividend Payout Ratio) positively and significantly affects stock prices, so hypothesis 4 is accepted.
5) Trading volume positively and significantly affects stock prices, so hypothesis 5 is accepted.
6) The capital structure manages to moderate the effect of X1 (ROE) on variable Y (stock price) so that hypothesis 6 is accepted.
7) Capital structure succeeds in moderating the effect of X 2 (PBV) on variable Y (stock price) so that hypothesis 7 is accepted.
8) Capital structure succeeds in moderating the effect of X3 (EPS) on variable Y (stock price) so that hypothesis 8 is accepted.
9) The capital structure succeeds in moderating the effect of X 4 (DPR) on variable Y (stock price) so that
hypothesis 9 is accepted.
10) Capital structure manages to moderate the effect of X5 (Volume) on variable Y (stock price) so that hypothesis 10 is accepted.

## SUGGESTION

The suggestions that can be recommended based on the results of research and discussion that have been described previously include the following:

1) For Investors.

Before investing in stocks in specific companies, investors should carry out fundamental analysis, namely looking at the ratios in the company's financial statements such as Return on Equity (ROE), Price to Book Value (PBV), Earning Per Share (EPS), Dividend Payout Ratio (DPR), and Stock Trading Volume.
2) For further research.

Future researchers are expected to increase the research period and add research samples by taking the research population of companies on the Jakarta Composite Index (IHSG) on the Indonesia Stock Exchange as a research sample to obtain more accurate research results. The dependent variable in this study, in the form of stock prices, is expected to use the annual average stock price to reflect stock prices in one (1) year.

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## REFERENCES

1. A, Gabriel Hawawini., Viallet, Claude.2016. Finance for Executives: Managing for Value Creation: Managing for Value Creation. Cengage Learning.
2. Abdul, Halim. 2003. Analisis Investas. Edisi Pertama. Jakarta: Salemba Empat.
3. Abidin S., Suhadak dan Hidayat Raden R. 2016. Pengaruh Faktor-Faktor Teknikal Terhadap Harga Saham (Studi Pada Harga Saham IDX30 di Bursa Efek Indonesia Periode Tahun 2012-2015).

Jurnal Administrasi Bisnis (JAB) 37 (1): 21-27.
4. Afriyanti, Meilinda. 2012." Analisis Pengaruh Current Ratio, Total Asset Turnover, Debt to Equity Ratio, Sales dan Size Terhadap ROA (Return On Asset". Skripsi. Universitas Diponegoro.
5. Amanda dan Wahyu. 2013. "Analisis Fundamental dan Resiko Sistematik Terhadap Harga Saham Perbankan yang Terdaftar Pada Indeks LQ45". Jurnal Ekonomi dan Keuangan, Vol. 1, No. 3, Februari 2013.
6. Arief Sugiono dan Edy Untung. 2016. Panduan Praktis Dasar Analisa Laporan Keuangan Edisi Revisi. Jakarta : Grasindo.
7. Bambang Riyanto. 2016. Dasar-dasar Pembelanjaan Perusahaan. BPFE. Yogyakarta.
8. Chalik, Ilham. 2018. Analisis FaktorFaktor Yang Mempengaruhi Harga Saham (Studi Kasus Indeks Saham LQ45 Tahun 2015-2018). Universitas Sumatera Utara.
9. Darmadji, T dan H. M. Fakhruddin. 2012. Pasar Modal di Indonesia, Edisi 3, Salemba Empat. Jakarta.
10. Darmadji, Tjiptono dan Hendy M. Fakhruddin. (2016). Pasar Modal di Indonesia (Edisi 3). Jakarta: Salemba Empat.
11. Diyani (2018)Pengaruh Roe Dan Der Terhadap Harga Saham Pada Sektor Perdagangan Eceran.
12. Fahmi, Irham. 2016. Pengantar Manajemen Keuangan. Alfabeta : Bandung.
13. Ferson dan Harvey. 2016. Fundamental determinants of national equity market returns: A perspective on conditional asset pricing. Journal of Banking \& Finance 21 (1998) 1625-1665.
14. Fitriyah, Ida dan Hariyati. 2013. "Pengaruh Rasio Keuangan Terhadap Financial Distress Pada Perusahaan Properti dan Real Estate". Jurnal Ilmu Manajemen Fakultas Ekonomi Universitas Negeri Surabaya.Vol.1,No.3.
15. Hanafi, M. Abdul Halim, 2013, Analisis Laporan Keuangan.edisi keempat, Yogyakarta, Sekolah Tinggi Ilmu Manajemen YKPN.
16. Hery. (2016). Mengenal dan Memahami dasar dasar laporan keuangan. Jakarta: PT

Grasindo.
17. Jogiyanto. (2016). Teori Portofolio dan Analisis Investasi. Edisi Kedua BPFE UGM, Yogyakarta.
18. Kartika Dewi (2020) Analisis Pengaruh Earnings Per Share (Eps), Price Earning Ratio (Per), Price to Book Value (Pbv) Terhadap Return Saham Pada Perusahaan Sektor Konstruksi Dan Properti Di Bursa Efek Indonesia, Jurnal Akuntansi Dan Keuangan Syariah Vol 4 No 2202166
19. Kasmir. 2016. Analisis Laporan Keuangan. Jakarta: PT. Raja Grafindo Persada.
20. Mahajan, Mrunal and Singh, Manvinder Kaur Sarjit. 2016. Importance and Benefits of Learning Outcomes. IOSR Journal Of Humanities And Social Science.Vol 22, Issue 3
21. Sidharta Utama dan Anto Yulianto Budhi Santoso. 2018. Kaitan Antara Rasio Price/Book Value dan Imbal Balik Hasil Saham Pada Bursa Efek Jakarta. Jurnal Riset Akuntansi Indonesia Vol. 1 No.1.
22. Sihombing, Pardomuan. 2015. Corporate Financial Management. PT. Penerbit IPB Pres: Bogor
23. Sinaga, Micahel. 2017. Pengaruh Earning Per Share, Struktural Modal Dan Return On Equity Terhadap Harga Saham Pada Perusahaan Sektor Pertambangan Yang Terdaftar Di BEI. Jurnal Riset Akuntansi Multiparadigma Vol 8 No 2.
24. Sofi Alfia Fitri \& Yahya . 2016. Pengaruh Kinerja Keuangan Terhadap Harga Saham Perusahaan Food \& Beverages Di BEI. Jurnal Ilmu dan Riset Manajemen: Volume 5, Nomor 4.

Sekolah Tinggi Ilmu Ekonomi Indonesia (STIESIA) Surabaya.
25. Syahrizal. 2019. Analisis Pengaruh Dividend Payout Ratio (DPR) dan Struktur Modal Terhadap Perubahan Harga Saham Pada PerusahaanPerusahaan yang Terdaftar di Bursa Efek Indonesia (BEI). Politeknik Negeri Batam. Batam.
26. Syamsuddin, Lukman. 2009. Manajemen Keuangan Perusahaan. Jakarta: PT Raja Grafindo Persada.s
27. Tandelilin, Eduardus. 2014. Portofolio dan Investasi Teori dan Aplikasi. Edisi pertama. Yogyakarta : Kanisius.
28. Tryfino. (2016). Cara Cerdas Berinvestasi Saham, Edisi 3, Transmedia Pustaka, Jakarta.
29. Widoatmodjo, Sawidji. 2016. PENGETAHUAN PASAR MODAL: Untuk Konteks Indonesia. Jakarta: Gramedia.
30. Wulandari, Dwi. 2009. Analisis Pengaruh Variabel-Variabel Fundamental dan Teknikal Terhadap Harga Saham Industri Tekstil. Jurnal Bisnis dan Manajemen 12 (2): 245-260.

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