# THE ANALYSIS OF STOCK PRICE AT INDONESIA STOCK EXCHANGE 

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#### Abstract

The existence of the capital market in Indonesia is in demand as a source of financing for businesses and places of interest to investors. One of the investment alternatives that investors are interested in is investment in stocks. Stocks are known to have high risk-high return characteristics. This means that stocks are a high risk investment type despite promising a relatively large profit. Therefore it takes research that can find the factors that affect the stock price. In this research factors that will be tested influence stock price are earnings per share and dividend payout ratio. This research was conducted on the company listed in Indonesia Stock Exchage (IDX) with the category of industrial company of basic and chemical materials. The study was conducted in 2013 to 2015, so that 10 companies are consistently listed on IDX. Data analysis using ordinary least square (OLS). Through this model can be obtained $F$ test shows significant that the model has good and can be used partial regression test. The results showed that earnings per share has a positive effect on stock prices and dividend payout ratio also positively affects the stock prices of basic and chemical industy companies listed on the IDX.


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## INTRODUCTION

The existence of capital markets in Indonesia began to demand as one source of financing for the business and a vehicle that appeals to investors. Through the capital market capitalists obtain various investment alternatives in investing their capital and entrepreneurs can obtain additional capital by selling their company's long-term financial instruments, either in the form of debt or own capital. These financial instruments may be stocks, bonds, warrants, rights, and so on.

One of the investment alternatives that investors are interested in is investment in stocks. Stocks are known to have high riskhigh return characteristics. This means that stocks are a high risk investment type despite promising a relatively large profit. This is because stock investments in capital markets are very sensitive to changes that occur, both domestic and foreign changes, changes in the political, economic, monetary, legal or regulatory fields, as well as changes occurring within the company itself (leadership, personnel management, production process, distribution, etc.). These changes can have a positive or negative impact on stock prices.
Tandelilin (2010: 2) defined investment as the commitment of a number of funds in the future. An investor buys a stock at the moment of gaining profit from rising stock prices or some dividends in the future, as a reward for the time and risk
associated with these investments. Stock exchange is a form of exchange that provides services for stock brokers and traders to buy or sell stocks, bonds, and other securities. Stock exchanges also provide facilities for the issue and redemption of securities and other financial instruments, and capital events including the payment of income and dividends.
Stock valuation can accurately minimize risk while helping investors make a profit. There are two kinds of analysis that is widely used to determine the value of stocks namely fundamental security analysis and technical analysis. Fundamental analysis uses fundamental data, ie data derived from corporate finances such as profits, dividends paid, sales and so forth (Jogiyanto, 2007: 88)
The researchers found that there are several factors that determine stock prices among others are Seetharaman \& Raj (2011), Kumar (2017), Talamati \& Pangemanan (2015), Malakar \& Gupta (2002), Bhatt \& Sumangala (2012), Majanga (2015 ), Sharif et al (2015), and Dauglas \& Frank (2013) concluding that dividends are among the factors that positively affect stock prices.
Based on the above description, the authors conducted research on the influence of Earning Per Share and Dividend Payout Ratio to Stock Price. This research will be conducted on

[^0]companies listed on Indonesia Stock Exchange (IDX) category Basic and Chemical Industry Company.

## LITERATURE REVIEW

Stock price is the price formed in the stock market. In general, stock prices obtained to calculate the value of its shares. The further the difference, then this reflects too little information flowing into the stock exchange. Then the stock price tends to be influenced by the psychological pressure of the buyer or seller. To prevent this, the company should at any time provide sufficient information to the stock exchange, as long as the information affects the market price of its shares. Attempts to include how to calculate the actual share price have been made by each analysis in order to obtain a satisfactory rate of return. Nevertheless it is difficult for investors to continue to beat the market and gain above normal levels of profit. This is because of the variables that affect the stock price, actually these variables into a calculation model that can be used in having shares which will be inserted into the portfolio.

Among the variables that are expected to affect the stock price is earnings per share (EPS). Earning Per Share as a ratio commonly used in prospectus, presentation material, and annual report to shareholders which is net profit minus dividends (earnings available to ordinary shareholders) divided by weighted average of ordinary shares outstanding that will generate profit per share. Thus, earnings per share is a ratio that shows how much return earned by an investor or shareholder per share by dividing net income after tax by the number of ordinary shares outstanding. Earnings per share can be used as an indicator of company value level. Earnings per share is also one way to measure success in achieving profits for shareholders within a company.
Some research results on the relationship between earnings per share and stock prices has been done, such as Hunjra et al (2014) who conducted research on sugar industry, chemical industry, food and personal care section, and energy sector as many as 63 companies registered in KSE shows the result that EPS has a positive effect on stock prices. This research is supported by other research that is Seetharaman \& Raj (2011) which do research at bank in Malaysia found that there is positive relation between EPS with share price. Likewise with Kumar (2017) who examines the 8 companies listed on the Nifty Auto Index India shows that earnings per share have a positive impact on stock prices. As well as research Talamati and Pangemanan (2015), Malakar \& Gupta (2002), Bhatt \& Sumangala (2012). But unlike Umar \& Musa's (2013) research in Nigeria shows EPS has no significant effect on stock prices. Therefore the first hypothesis is:
H1: earnings per share has a positive effect on stock prices on basic and chemical industrial companies

The second variable that is suspected to have an effect on stock price is dividend payout ratio. This ratio determines the amount of profit divided in the form of cash dividends and retained earnings as a source of funding. This ratio shows the percentage of company earnings paid to shareholders in the form of cash dividends. Determination of dividend payout ratio should be perceived benefits for the benefit of the company and shareholders. for the company, the information contained in the dividend payout ratio will be used as consideration in determining the amount of dividend distribution and the
amount of profit held to support the operationalization and development of the company. If the retained earnings of a company for large corporate operations, then the profit to be paid as dividend becomes smaller.
On the other hand, if the company prefers to distribute profits as dividends, it reduces the portion of retained earnings and reduces internal funding sources. For the shareholders or investors, the information contained in the dividend payout ratio will be used as consideration in making investment decisions. Whether to invest or not fund a company in connection with its expectations for investment returns
However, if the company prefers to distribute profits as dividends, of course, it will increase the welfare of shareholders, so that shareholders will continue to invest their shares for the company.
Attah-Botchwey (2014) conducted a study seeking to find outthe impact of dividend payment and its relationship on the share price of some listed companies on the Ghana StockExchange (GSE) and how it helps shareholders to make an informed decision on whether to maintain or withdraw theirinvestment and reinvest in other companies. It was found out that as the dividend of companies increase, the share pricealso rises due to the pressure on the share.
This is reinforced by research Seetharaman \& Raj (2011) who conducted research on banks in Malaysia found that there is a positive relationship between EPS with stock prices. Likewise with Kumar (2017) who examines the 8 companies listed on the Nifty Auto Index India shows that earnings per share have a positive impact on stock prices. Other studies that show a positive influence between EPS on stock prices are Talamati and Pangemanan (2015), Malakar \& Gupta (2002), Bhatt \& Sumangala (2012). Other studies show that dividends have a positive impact on stock prices As Majanga research (2015), Sharif et al (2015), Dauglas \& Frank (2013).Therefore the Second hypothesis is:
H 1 : dividen payout ratio has a positive effect on stock prices on basic and chemical industrial companies

## METHOD

## Population

The population of this study are companies listed on the Indonesia Stock Exchange (IDX) in the Basic and Chemical Industry sectors with the study period 2013-2015. In that period, there were 10 companies consistently listed on IDX.

## Variable Operationalization

There are two research variables that are independent variable and dependent variable.

## Independent Variable

1. Earning Per Share (EPS), a ratio that measures success in achieving profit for shareholders in the firm, with an indicator of net income after taxes divided by the number of common shares outstanding.
2. Dividen Payout Ratio (DPR), is measure the amount of profit that is shared with investors from the profits to the stock owners in the company, with the indicator
of the dividend divided by the amount of net profit after tax.

## Dependent Variable

The dependent variable is the stock price, which is one way to measure success in achieving profit for the stock owners in the company, with the average price indicator of the closing price 5 days before and 5 days after financial reporting.

## Data Analysis Technique

The analytical technique used is multiple regression analysis with ordinary least square (OLS)estimator, which is aimed to know the effect of earnings per share and dividend payout ratio to stock price at basic and chemical industry companies listed on IDX through panel data collection year 2013 until 2015 in 10 companies that fit the study requirement criteria. The use of this OLS model as in research Hidayat \& Firmansyah (2017).

The ordinary least square regression equation is as follows:
$\mathrm{SP}=\mathrm{a}+\mathrm{b}_{1} \mathrm{EPS}+\mathrm{b}_{2} \mathrm{DPR}+\mathrm{e}$
Where: $\mathrm{a}=$ constanta, $\mathrm{b}_{1,2}=$ coefficient, $\mathrm{SP}=$ stock price, EPS $=$ earning per share, $\mathrm{DPR}=$ deviden payout ratio.

The conditions that must be passed to perform regression analysis ordinary least square (OLS) is the data must be qualified so that must be done classical assumption test consisting of normality test, autocorrelation test, heteroskedasticity test and multicollinearity test.

## RESULT

In this chapter the authors explain about matters relating to the data collected include sample description, analysis of variable assessment, multiple regression analysis Ordinary Least Square (OLS) approach on the influence of independent variables on dependent variable in Basic and Chemical Industry Companies in Indonesia Stock Exchange (IDX).

## Sample Description

Based on the data collected from the research results of Basic and Chemical Industry Companies in Indonesia Stock Exchange, 10 companies are obtained from 2013 to 2015 remain in the Stock Exchange. From a number of these companies then the next step is to collect the required data to the entire company.

## Descriptive Analysis

In this chapter will explain the condition of each research variables in the period of research year 2013 to 2015. The results of data analysis research can be presented in table 1:

Table 1 Descriptive Analysis

| Variable Names Amount | Minimum | Maximum | Mean | Std. Deviation |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| EPS | 30 | 8,00 | 1432,00 | 354,03 | 428,41 |
| DPR | 30 | 3,00 | 126,00 | 37,76 | 28,43 |
| SP | 30 | 301,00 | 22420,00 | 4958,93 | 6771,06 |

Source: Output SPSS
Based on research data collected, it can be explained as follows:
Variable earning per share (EPS) has an average value of 345.03 with the smallest value of 8.00 and the largest value of 1432.00. The standard deviation of this variable is 428.41 and the value is greater than the average indicating that the EPS
variable has a very low homogeneity level. The distance between EPS values between companies is very different. This indicates that the existing companies in Basic and Chemical industries have a much different share of profits among the existing companies.

The second variable is Dividend Pay Out Ratio (DPR) which has an average value of 37.76 with the smallest value of 3.00 and the largest value of 126.00 . The standard deviation of 28.43 so this value is smaller than the average value. Therefore, the percentage of profits earned by shareholders on their investment in basic and chemical industry companies has considerable homogeneity. However, the smallest and largest distances are very far away, namely the smallest value of 3.00 and the largest is 126.00 .
The third variable is the stock price. The average value of the stock price is $4,958.93$ with a minimum value of 301.00 and a maximum value of $22,420.00$. The standard deviation value is 6.771 .06 so this value is greater than the average. Therefore, stock prices that exist in basic and chemical industries have different values or quite diverse. This can be seen also in the range of values very far from the smallest nila with the greatest value.

## Classic Assumption Test

Results of data quality processing using SPSS ver. 20 are presented in Table 2.

Table 2 Classic Assumption Test

| Analysis Result of Classic Assumption |  |  |  |
| :---: | :---: | :---: | :---: |
| Kolmogorov- | Asymp. Sig. (2- |  |  |
| Smirnov Test | tailed) |  | 0,984 |
| Durbin Watson |  |  | 1,786 |
| Glejser Test | Sig. EPS |  | 0,257 |
| Collinearity | DPR | VIF. EPS1,033 | TOL. EPS0,968 |
| Statistics |  | DPR1,033 | DPR |

Source: Output SPSS
A good regression model is one that has a normal or nearnormal distribution. Which is intended to test whether the independent variables and the dependent variable in the regression model has a normal distribution or not. Testing of normal distribution is done by Kolmogorov-Smirnov test. If the value of Asymp. Sig (2-tailed) greater than 0.05, then the data is declared normal distribution. Based on table 3, we can see that the value of Asymp. Sig (2-tailed) is 0.984 . This value is greater than 0.05 or $5 \%$. Thus it is concluded that the data is stated normal distribution and can be said that the regression model meets the assumption of normality so that the data is feasible to use.

The second data quality test is the autocorrelation test. This test aims to test the correlation between the confounding error in period t with the error period $\mathrm{t}-1$ (previous). If there is a correlation, then there is called an autocorrelation problem. Autocorrelation arises because consecutive observations over time are related to each other. A good regression model is free of autocorrelation. Based on the analysis of Durbin Watson (DW) value of 1.786 . While based on Durbin Watson (DW) table with $\mathrm{k}=2$ and $\mathrm{n}=30$ then the value $\mathrm{dL}=1,284$ and $\mathrm{dU}=$ 1,567 , then $4-\mathrm{dU}=2,433$. Therefore DW values are between dU and $4-\mathrm{dU}$, this area is an area that does not happen autocorrelation.

The third data quality test is multicollinearity test. Test Multicolonierity of data can be done with correlation matrix by looking at the value of VIF (variance inflation factor) and tolerance value. A regression model that is free from multicolinearity has a VIF number around the number 1 and a tolerance score close to the number 1 or not more than the number 10. In Table2 it can be seen that the VIF value of each independent variable in basic and chemical industry companies is around the number 1 (less than 10). And the tolerance value (TOL) obtained shows a value greater than 0.10. From these results it can be seen that in the regression model freed from multicollinearity among independent variables.
Further data quality test is heteroscedasticity test. To detect the presence or absence of heteroscedasticity then used Glejser Test. From table 2 it can be seen that the value of sig. all independent variables are greater than 0.05 . This shows that there are no symptoms of heteroscedasticity on the regression model in this study.
After testing the data quality is complete, then regression analysis is done. Data analysis used in this research is by analysis of panel data model of Ordinary Least Square (OLS) using SPSS. To know the accuracy of the model (goodness of fit) the influence of variable earnings per share and dividend payout ratio to stock price variable F test is done.

## Analysis Result

Data analysis used in this research is by regression analysis approach Ordinary Least Square (OLS) model. To know the accuracy of the model (goodness of fit) the influence of independent variables to the dependent variable then tested $F$ test.

Based on the analysis result the results obtained that the significance value of 0.000 or smaller than the limit of the value of significance ( $\alpha=0.05$ ). The results of this study indicate that in order to explain the stock price variables, the EPS and DPR variables can be used together because the model is feasible to use.

Furthermore, for testing the first and second hypothesis that has been proposed, it is done by using $t$ test. This test is conducted to determine whether the independent variables partially significant effect on the dependent variable. Based on the test results using regression analysis tools obtained the following results:

Table3 Hypotesis Test

|  |  | Unstandardized <br> Coefficients | Standardized <br> Coefficients |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Model | B | Std. <br> Error | Beta |  | Sig. |
| 1 | (Constant) | 2,988 | , 410 |  | 7,288 | , 000 |
|  | EPS | , 805 | , 070 | , 912 | 11,588 | , 000 |
|  | DPR | , 017 | , 004 | , 347 | 4,412 | , 000 |

Source: Output SPSS

## Relationship between Earning Per Share (EPS) and Stock Price

The above output shows that the significance of EPS's influence on stock prices is 0.000 . This value is smaller than 0.05 so it can be concluded that EPS has a significant effect on stock prices. The coefficient is 0.805 (positive) so that EPS has
a positive effect on stock prices on basic and chemical industrial companies.

## Relationship between Dividen Payout Ratio (DPR) and Stock Price

The result of the analysis shows that the significance of Dividen Payout Ratioinfluence on stock price is 0.000 . This value is smaller than 0.05 so it can be concluded that the Dividen Payout Ratiohas a significant effect on stock prices. The coefficient is 0.017 (positive) so that the Dividen Payout Ratiohas a positive effect on the stock price of basic and chemical industry companies.

## DISCUSSION

The results of research and data processing has been done to find some very important findings described as follows:

## The Effect of Earning Per Share (EPS) on Stock Price

The results of the analysis show that EPS has a positive effect on stock prices on basic and chemical industry companies. These results explain that the magnitude of the ratio of earnings per share will increase the stock price. Certainly a company that is able to increase the value of its company will increase its confidence to the public that the company is a company that has a good performance that will attract investors to buy their shares. Signals indicated by the amount of earnings per share will be one of the investor's analysis that the company is in good shape. Therefore the value of stock will increase which is indicated by increasing stock price also. The results are in line with many previous studies of Hunjra et al (2014), Seetharaman \& Raj (2011), Kumar (2017), Talamati and Pangemanan (2015), Malakar \& Gupta (2002), Bhatt \& Sumangala (2012). Although this research is conducted on different sectors with previous research, but investors still believe that stock price is determined by the amount of profit distributed. The company's strength in making profits shows a stable stock price because of the company's best performance.

## The Effect of Dividen Payout Ratio (DPR) on Stock Price

The results of the analysis show that the Dividen Payout Ratioof Representatives has a positive influence on stock prices on basic industrial and chemical companies. These results explain that the magnitude of the dividend ratio that is distributed to investors will increase the stock price. Certainly a company capable of paying dividends well to investors will increase its confidence to the public that the company is a healthy company that will attract investors to buy its shares. The signals shown by a good dividend distribution will be one of the investors' analyzes that the company is able to maintain its financial stability. Therefore the value of stock will increase which is indicated by increasing stock price also. The results of this study are in line with research before such as Seetharaman \& Raj (2011), Kumar (2017), Talamati and Pangemanan (2015), Malakar \& Gupta (2002), Bhatt \& Sumangala (2012), Majanga (2015), Sharif et al (2015) and Dauglas \& Frank (2013).

The results of this study reinforce that in the basic and chemical industry, stock prices are determined by the dividends distributed. Dividends are one of the goals of investors in investing their funds so that investors believe that the company
that distributes dividends is still able to ensure the continuity of its operations, so that stock prices will tend to strengthen.

## CONCLUSSION

Based on the results of research and discussion above, this study can be concluded that earnings per share has a positive effect on stock prices on the basic and chemical industry companies listed on the Indonesia Stock Exchage (IDX), as well as dividend payout ratio positively affect the stock price in basic and chemical industry companies listed on IDX. Some suggestions in this research that the scope of research can be expanded not only in basic and chemical industry and research variables can be added to know more about the factors that affect stock prices.

## References

1. Attah-Botchwey, E. 2014. The Impact of Dividend Payment on Share Price of Some Selected Listed Companies onthe Ghana Stock Exchange. International Journal of Humanities and Social Science, 4(9,1), 179190
2. Bhatt, P. \&Sumangala, J.K. 2012. Impact of Earnings per share on Market Value of an equity share: An Empirical study in Indian Capital Market, Journal of Finance, Accounting and Management, 3(2), 1-14.
3. Douglas, L., \& Frank, B. 2013. The impact of increased dividend Announcements on stock price: A test of market efficiency. Proceedings of ASBBS, 20(1)
4. Hidayat, I.P. \& Firmansyah, Irman. 2017. Determinants of Financial Performance in the Indonesian Islamic Insurance Industry. Etikonomi. 6(1), 1-12
5. Hunjra, A.I., Ijaz, M.S., Chani, M.I., Hassan, S.U., \& Mustafa, U. 2014. Impact of Dividend Policy, Earning perShare, Return on Equity, Pro_t after Taxon Stock Prices. International Journal of Economics and Empirical Research. 2(3), 109-115
6. Kumar, Pankaj. 2017. Impact of Earning Per Share and Price Earnings Ratio on Market Price of Share: A Study on Auto Sector in India. International Journal of Research-Granthaalayah. 5(2).
7. Majanga, Byson B. 2015. The Dividen Effect on Stock Price-An Empirical Analysis of Malawi Listed Companies. Accounting and Finance Research, 4(3)
8. Malakar, B. and Gupta, R. 2002. Determinants of Share Price-A System Approach: The Modified Model, Finance India, 16(4), 1409-1418.
9. Seetharaman, A. \& Raj, John Rudolph. 2011. An Empirical Study on the Impact of Earning per Share on Stock Prices of Listed Bank in Malaysia. The International Journal of Applied Economics and Finance, 5(2), 114-126
10. Sharif, T., Purohit, H., \& Pillai, R. 2015. Analysis of Factors Affecting Share Prices: The Case of Bahrain Stock Exchange, International Journal of Economics and Finance. 7(3)
11. Talamati, M.R. \& Pangemanan, S.S. 2015. The Effect of Earning per Share (EPS) \& Return on Equity (ROE) on Stock Price of Banking Company Listed in Indonesia Stock Exchange (IDX) 2010-2014. Jurnal EMBA, 3(2), 1086-1094
12. Tandelilin, E. 2010. Portofolio and Invesment theory dan application. 1st Edition, KANISIUS, Yogyakarta
13. Umar M. S. \& Musa T. S. 2013, Stock Prices and Firm Earning per Share in Nigeria. JORIND 11(2), 187-192.

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