The Effect of Dividend Policy on Stock Price Changes in the Bank Sub Sector Companies Listed on Indonesia Stock Exchange

1st Cici Ardelia
Management, Economic Faculty
Sriwijaya University
South Sumatera, Indonesia

2nd Agnemas Yusoep Islami
Graduate School of Management
Management and Science University
Kuala Lumpur, Malaysia

3rd Isni Andriana
Management, Economic Faculty
Sriwijaya University
South Sumatera, Indonesia
isniandriana@fe.unsri.ac.id

4th Kemas M H Thamrin
Management, Economic Faculty
Sriwijaya University
South Sumatera, Indonesia

5th Yuliana Sari
Accounting Department
Polytechnic of Sriwijaya
Palembang, Indonesia

6th Muzakir Achmady
Management, Economic Faculty
Sriwijaya University
South Sumatera, Indonesia

Abstract—**This study aims to determine the effect of dividend policy on changes in stock prices in the bank sub-sector companies in the Indonesia Stock Exchange for the period 2013-2017. This type of research is quantitative with the sampling technique used is Purposive Sampling while for data collection in this study conducted with documentaries sourced from financial statement data reported on the Indonesia Stock Exchange. The data analysis technique used is multiple linear regression. The data analysis tool in this study uses classical assumptions and hypothesis testing in this case using the t test partially and F test simultaneously. The results of the tests conducted partially show that E-VOL and PER have a significant effect on stock prices. While the DPR and DY have no significant effect on stock prices. Simultaneously, DPR, DY, E-VOL and PER have a significant effect on stock prices.**

Keywords: DPR, DY, E-VOL, PER, stock prices

I. INTRODUCTION

Indonesia is a developing country that causes many factors that support this country's development including banks. Banks have an important function and role in the national economy. The Banking includes three activities are collecting funds, distributing funds, and providing other bank services. The activity of collecting and distributing funds are the main activity of the bank while providing other bank services is only a supporting activity[1]. he banking sector is one of the industrial sub-sectors in the Indonesia Stock Exchange (IDX). Banking itself is a sub sector of the financial sector in which there are several sub-sectors including, banking, financial institutions, securities companies, insurance and others. The development of the banking sector is also quite good, shares in the ranks of the industry are able to provide attractive benefits in addition to the high dividend payment annually as well the increasing of daily stock prices which often provide capital gains so that it is able to attract the investors to invest in the sector of the industry. This study uses a bank sub sector company as a sample of this study, with consideration of developments in the economic phenomenon. There are 43 banks listed on the

Indonesia Stock Exchange. The following is a graph of the development of average stock prices and dividends of bank sub sector companies in the period 2013-2017: According Development of Average Stock Prices and Dividends of Bank Subsector Companies During 2013-2017., it can be seen, the development of average stock prices and dividends in bank sub sector companies. The average development of stock prices in rupiah, while the development of dividends in thousands of rupiah. In 2014 the stock price experienced a fairly high development compared to the previous year of Rp.250.8, and a dividend of Rp.38.4, -. Whereas in 2015 the stock price experienced a slight downward slump was Rp.166.4, - either the development of dividends was Rp.114.7, - this was due to unfavourable economic conditions by decreasing of purchasing power, so that, it impact on the less investment desire. Then in 2016 the stock prices and dividends experienced the high increasing as the stock price was Rp.156.9, and dividend was Rp.205.3, - this illustrated the increase in purchasing power so that the desire to invest increases. In addition, the company's performance can also be a trigger for rising stock prices. In 2017 the stock prices and dividends kept rising by Rp.77 and Rp.420, with a fairly high increase. Go public companies on the Indonesia Stock Exchange (IDX) are often faced with the problem of determining policies and dividend payments, whether management will make a decision by distributing profits to shareholders as dividends or management will retain in the form of retained earnings for investment financing in the future.

II. LITERATURE REVIEW

A. Stock Price

Stock is an ownership sign of a person or entity in a company or limited liability company. By owning stock of a company, the benefit obtained is dividend (dividend), which is part of the company's profits distributed to stockholders, capital gain (return) is the profit obtained from the difference between the selling price with the purchase price of stock

and non-financial benefits in the form of emergence of pride and power to obtain voting rights in determining the run of the company[2].

B. Dividend

Dividend is the distribution of company profits to stockholders whose amount is proportional to the number of stock owned. There are several forms of dividends given by companies to stockholders [3].Dividend policy is a decision whether profits derived by a company will be distributed to stockholders as dividends or being retained in the form of retained earnings to finance the future investment.

Dividend payout ratio is the ratio that shows the comparison between dividends and earnings available to common stockholders. DPR is widely used in research as a way of estimating future dividends [4].Dividend yield is a ratio that connects dividends paid with common stock prices.

C. Earnings

According to[5] Earnings Volatility is the level of volatility (rapid changes) of the company's earning. Earnings are difficult to predict when the volatility is high.. Price Earnings Ratio is the ratio of price per share to earnings per share, it shows the amount that investors are willing to pay for every dollar of profit that reported [6].

D. Hypothesis

- H1:Dividend Payout Ratio (DPR) has significant effect on stock prices

- H2:Dividend yield has significant effect on stock prices

- H3:Earnings Volatility has significant effect on stock prices

- H4:Price Earnings Ratio (PER) has significant effect on stock prices

III. RESEARCH METHODOLOGY

The type of data used in this study is quantitative data, the data are obtained from samples or populations in the form of numbers [7]. The quantitative data of this study are financial statements of bank sub sector companies listed on the Indonesia Stock Exchange for the period 2013-2017. The data source used in this study is secondary data, it is data that has been created by the company and published in an annual report. The data were obtained through the official website of the Indonesia Stock Exchange, research journals, literature and theses that are closely related to the issues discussed in this study.

Population is an entire group of elements that show certain characteristics so that it can be used to make conclusions [8]. In this study the population is a bank sub sector company listed on the Indonesia Stock Exchange in 2013-2017. There are 43 bank subsector companies listed on the Indonesia Stock Exchange which are the population in this study. The sample is the selection of part of the population elements, in the hope that the results of the selection can reflect all the existing characteristics. The sample in this study was the company selectedaccording to the criteria. The sample selection in this study uses a purposive sampling technique that is the sampling technique with certain considerations.

Data analysis conducted in this research is using descriptive analysis, multiple linear regression analysis, classic assumption test and hypothesis testing using the f test to determine the effect of the independent variables simultaneously on the dependent variable and use the t test to determine the effect of the independent variables partially on dependent variable.

IV. RESULTS AND DISCUSSION

The data used in this study are 50 data samples, which show the minimum, maximum, mean and standard deviation of the independent and dependent variables in the study. The minimum dividend pay-out ratio value in the observation sample is 12.17 and the maximum value is 241.58 which is the value of the bank sub sector companies listed on the Indonesia Stock Exchange. While the average value of the dividend pay-out ratio in the observation sample is 43.5160 with a standard deviation of 39.94933. The standard deviation value is smaller than the mean value, this reflects the variable of dividend pay-out ratio is well distributed.

The minimum value of dividend yield in the observation sample is 0.96 and the maximum value is 14.64 which is the value of the bank sub sector companies listed on the Indonesia Stock Exchange. While the average value of the dividend yield on the observation sample is 3,8774 with a standard deviation of 2.97306. The standard deviation value is smaller than the mean value, this reflects the variable of dividend yield is well distributed.

The minimum value of earnings volatility in the observation sample is 0.00 and the maximum value is 0.04, which is the value of the bank sub sector companies listed on the Indonesia Stock Exchange. While the average value of earnings volatility in the observation sample is 0.0243 with a standard deviation of 0.00967. The standard deviation value is smaller than the mean value, this reflects the data of earnings volatility is well distributed.

The minimum value of price earnings ratio in the observation sample is 5.21 and the maximum value is 54.56 which is the value of the bank sub sector companies listed on the Indonesia Stock Exchange. While the average value of the price earnings ratio in the observation sample is 13.1940 with a standard deviation of 9,63098. The standard deviation value is smaller than the mean value, this reflects the data of price earnings ratio is well distributed.

The minimum value of the stock price in the observation sample is 157.00 and the maximum value is 21900.00 which is the value of the bank sub sector company listed on the Indonesia Stock Exchange. While the average value of the stock price in the observation sample is 4856.2000 with a standard deviation of 5086.05493. The standard deviation value is higher than the mean value, this reflects that the data of stock price variable is well undistributed.

the results of the normality test with the Kolmogorov Smirnov test show that the Asymp.Sig value is larger than the significant variable value (0.05) which is the residual value of 0.096, so it can be concluded that the data in the

study are normally distributed because the Asymptotic Significant value> 0.05.

In addition normality test shows the distribution of sample in the bank sub sector companies to find out whether the data has been normally distributed or not. The regression model meets the normality assumption. If the data does not spread far from the diagonal line, then the regression model does not meet the assumption of normality.

To detect the presence or absence of multicolineality in this study is to look at the value of Tolerance (TOL) and Variance Inflation Factor (VIF) in the regression model with reference if the TOL value> 0.10 and VIF value <10, then there is no multicolineality between the independent variables and vice versa.To detect the presence or absence of multicolineality in this study is to look at the value of Tolerance (TOL) and Variance Inflation Factor (VIF) in the regression model with reference if the TOL value> 0.10 and VIF value <10, then there is no multicolineality between the independent variables and vice versa.

The calculation of multicolinelity for the tolerance value of the dividend pay-out ratio is 0.123, dividend yield is 0.199, earnings volatility is 0.736, and price earnings ratio is 0.159. All independent variables have larger tolerance values than 0.10. At the VIF value of the dividend pay-out ratio is 8,116, dividend yield is 5,026, earnings volatility is 1,359 and price earnings ratio is 6,303. All independent variables have smaller VIF value than 10.00, so it can be concluded that there is no multicollinity or there is no high correlation between each independent variables in the regression model of this study.

Heteroscedasticity test resultsconcluded that there is no heteroscedasticity in the regression model in the sense that the variance of all these variables indicate that the independent variables can be used to predict stock prices in bank sub sector companies listed on the Indonesia Stock Exchange. Then, autocorrelation test results define that the Criteria for the occurrence of autocorrelation with DW values are indicated by using the following criteria:If Durbin-Watson number is less than -2 means that there is a positive autocorrelation, and if Durbin-Watson number between -2 to +2 means that there is no autocorrelation.The test results on the autocorrelation test of this study is illustrated in Table 5 above, it shows that the result of Durbin-Watson value is between -2 to +2, that is equal to 1,454 which means there is no autocorrelation in this study.

Based on the normality test and the classic assumption test above, it can be concluded that the research regression equation is declared worthy to continue the hypothesis testing. This is supported by the results of multicollinality, heteroscedastity and autocorrelation tests that do not have an element of error. The results of multiple linear regression analysis that conducted with SPSS. The equation of the multiple linear regression model as follows:

Y = -2662.205 - 34.536 dividend pay-out ratio – 378.260 dividend yield + 271574.380 earnings volatility + 294.732 price earnings ratio + e

Based on the multiple linear regression equation above, it can be explained that:

A constant value of -2662,205 means that if all independent variables namely dividend pay-out ratio, dividend yield, earnings volatility and price earnings ratio are considered constant (worth 0), then the dependent variable is the stock price that occurs at -2662,205.The value of the regression coefficient X1 has a negative value of -34,536 indicates that if the variable of dividend payout ratio increases by 1, the stock price will decrease by -34,536 and if the variable of dividend payout ratio decreases by 1, the dividend payout ratio will increase by -34,536.

The value of the regression coefficient X2 has a negative value of -378,260 indicates that if the variable of dividend yield increases by 1 then the stock price will decrease by -378,260 and if the variable of dividend yield decreases by 1 then the dividend yield will increase by -378,260.The value of the regression coefficient X3 has a positive value of 271574,380 indicates that if the variable of earnings volatility increases by 1 then the stock price will increase by 271574,380 and if the earnings volatility variable decreases by 1 then earnings volatility will increase by 271574,380.The value of the regression coefficient X4 has a positive value of 294,732 indicates that if the variable of price earnings ratio increases by 1 then the stock price will increase by 294,732 and if the variable price earnings ratio decrease by 1 the price earnings ratio will increase by 294,732.

Based on the testing results conducted for this study, the value of R square is 0.870, it means that 87.5% of the dependent variable is the stock price of the bank sub sector companies listed on the Indonesia Stock Exchange for the period 2013-2017 influenced by independent variables namely dividend pay-out ratio, dividend yield, earnings volatility and price earnings ratio. While the rest (100% - 87.5%) 12.5% is influenced by other variables outside the independent variables which discussed in this study.

The results of this study indicate that there is an insignificant negative effect between the dividend pay-out ratio on stock prices in bank sub sector companies listed on the Indonesia Stock Exchange. In the first hypothesis, the researcher states that the dividend pay-out ratio has a significant effect on stock prices. nevertheless, the processed data using SPSS version 24.0.0 2018 show negative and insignificant results, so the first hypothesis is rejected.

The results of this study indicate that the t-count on the variable of dividend pay-out ratio is -1,294, it is smaller than t table = 2,014 with a significance value of 0.202 higher than α = 0.05. Thus it can be said that there is insignificant effect between the dividend pay-out ratio (X1) on stock prices (Y), so the first hypothesis is rejected.

Based on the testing results that conducted, the value of R square which generated is 0.164, this means that 16.4% of the dependent variable is the stock price of the bank sub sector companies listed on the Indonesia Stock Exchange during 2013-2017 influenced by the independent variable namely dividend pay-out ratio. While the rest (100% - 16.4%) 83.6% is influenced by other variables outside the independent variable of dividend pay-out ratio.

The results of this study also indicate that there is an insignificant negative effect between dividend yields on stock prices in bank sub sector companies listed on the

Indonesia Stock Exchange. In the second hypothesis, the researcher states that the dividend yield has a significant effect on stock prices. Nevertheless, the processed data using SPSS version 24.0.0 2018 showed negative and insignificant results, so the second hypothesis is rejected.

The results of this study indicate that t-count value of the dividend yield is -1.340 smaller than t table = 2.014 with a significance value of 0.187 higher than $\alpha = 0.05$. Thus it can be said that there is an insignificant effect between dividend yield (X2) on stock prices (Y), so the second hypothesis is rejected.Based on the testing results that conducted, the value of R square generated by 0.552, it means that 55.2% of dependent variable is the stock prices in the bank sub sector companies listed on the Indonesia Stock Exchange in the period 2013-2017 influenced by independent variables namely dividend yield. While the rest (100% - 55.2%) 44.8% is influenced by other variables outside the independent variable of dividend yield.

The results of this study indicate that there is a significant positive effect between earnings volatility on stock prices in bank sub sector companies listed on the Indonesia Stock Exchange. In the third hypothesis, the researcher states that earnings volatility has a significant effect on stock prices. In the processed data using SPSS version 24.0.0 2018 showed positive and significant results, so the third hypothesis is accepted.The results of this study indicate that the value of t count on the variable of earnings volatility is 6,019 higher than t table = 2,014 with a significance value of 0,000 less than $\alpha = 0.05$. Thus it can be said that there is a significant effect between earnings volatility (X3) on stock prices (Y), so that the third hypothesis is accepted.

Based on the testing results that conducted, the value of R square generated at 0.624, it means that 62.4% of dependent variable, namely the stock prices of the bank sub sector companies listed on the Indonesia Stock Exchange during 2013-2017 influenced by the independent variable, namely earnings volatility. While the rest (100% - 62.4%) 37.6% is influenced by other variables outside the independent variable of earnings volatility.

The results of this study indicate that there is a significant positive effect between price earnings ratio on stock prices in the bank sub sector companies listed on the Indonesia Stock Exchange. In the fourth hypothesis, the researcher states that the price earnings ratio has a significant effect on stock prices. In the processed data using SPSS version 24.0.0 2018 showed positive and significant results, so the fourth hypothesis is accepted.

Based on the testing results that conducted, the value of R square generated at 0.479, it means that 47.9% of the dependent variable, namely the stock price of the bank sub sector companies listed on the Indonesia Stock Exchange in the 2013-2017 period influenced by the independent variable of the price earnings ratio. While the rest (100% - 47.9%) 52.1% is influenced by other variables outside the independent variable of price earnings ratio.

V. CONCLUSIONS

Based on the results of research and discussion of the effect of the dividend policy that represented (dividend pay-out ratio, dividend yield, earnings volatility and price earnings ratio) as the independent variable on stock prices changes as the dependent variable in the bank sub sector companies that listed on Indonesia Stock Exchange.

Based on the t-test, the regression results partially dividend pay-out ratio and dividend yield have negative and insignificant effect on stock prices, so the first and second hypotheses are rejected, for the variables of earnings volatility and price earnings ratio have a positive and significant effect on stock prices. Thus the third and fourth hypothesis are accepted.the F test shows the results of the independent variables (dividend pay-out ratio, dividend yield, earnings volatility and price earnings ratio) simultaneously have a significant effect on the dependent variable (stock prices).

The results of testing, the value of the coefficient of determination $R2$ measured from the R-square at 0.870 which shows that stock prices are influenced by the four independent variables are dividend pay-out ratio, dividend yield, earnings volatility and price earnings ratio at 87.5%. The rest (100% - 87.5%) 12.5% is influenced by other variables outside the independent variables that discussed in this study.

For further researches are expected to be able to use different variables such as Dividend per Share (DPS), Earning per Share (EPS), Price to Book Value (PBV), Debt to Equity Ratio (DER), Net Profit Margin (NPM), Return on Assets (ROA), Return on Equity (ROE), Retention Ratio (RR), Economic Value Added (EVA), MarketValue Added (MVA), Current Ratio, Quick Ratio and adding the number of samples in the research in order to expand the knowledge and developments regarding variables that affect the stock prices changes.

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