

The Impact of Dividend Payout Ratio (DPR), Leverage and Firm Size on Stock Price Volatility in Manufacturing Companies Listed on the Indonesia Stock Exchange

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ABSTRACT : Volatile stocks illustrate that the prices are varied from time to time and are certainly difficult to determine the prices in the coming period the higher level of volatility results the higher opportunity of profits or losses for investors in the short term. The purpose of this study is to find out the effect of dividend payout ratio, leverage and firm size on stock price volatility. This research was conducted in manufacturing companies listed on the Indonesia Stock Exchange in the 2014-2018 period. The population and sample are obtained from 11 companies with census sampling method. The population in this study are all companies that received dividend payments during the 2014-2018 period. The data collection method used non-participant observation. The analysis technique used multiple linear regression. The result of the analysis in this study indicates that dividend payout ratio, leverage, and firm size simultaneously have a significant effect on stock price volatility. Dividend payout ratio, and leverage have no significant effect on stock price volatility, while firm size significantly affects stock price volatility.

KEYWORDS: Dividend payout ratio, leverage, firm size, stock price volatility

I. INTRODUCTION

More fluctuating stock prices can provide large losses for investors in a short time (Sunariyah, 2011: 50). The measure to issue risk and represent the level of price changes on stocks within a certain time called volatility (Pirzada, 2017). Highly volatile stocks give a very varied illustrated of price from time to time because stock prices are very high or very low and difficult to match the stock price in the next period thus increasing the level of volatility in the short term. Average investors are reluctant to take risks, so a higher volatility often diminishes investor confidence. On the other hand, some investors prefer stocks with high levels of volatility because the opportunity to obtain capital gains will be even greater although the risk that will be obtained is also higher (Handayani et al., 2018). Therefore, volatility becomes a reference for the safety level of investing and it can also give an impact on investment decisions for investors. Stock prices in the manufacturing sector fluctuated during the 2014-2018 period. The manufacturing sector becomes one of the national economic support that provides a significant contribution to Indonesia's economic growth amid the uncertainty of the world economy's financial sector (www.economy.okezone.com). Investment in the manufacturing sector needs to be increased so that incoming investment is followed by opening employment.

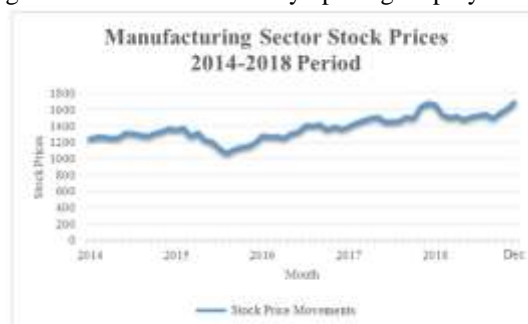


Figure 1. Development of Manufacturing Sector Stock Prices Registered on the Indonesia Stock Exchange during the 2014-2018 Period

Source: Secondary Data, 2019

Based on the stock price data of manufacturing companies listed on the Indonesia Stock Exchange which are accessed through www.finance.yahoo.com, it is known that there was a fluctuation of stock prices during the 2014-2018 period. For 5 (five) consecutive years, the average stock price decreased in 2015 and the following year, there was an increase during 2016-2018 period. In 2014, the average stock price was Rp1.292,852. Furthermore, in 2015 there was a decline in average stock price to Rp1.215,384 with a decrease in percentage reaching 5,992 percent. Despite the decline, during 2016-2018 the average stock price rose respectively to Rp1.341,318; Rp1.503,124 and Rp1.557,336 with the percentage of increases respectively reaching 10,362 percent; 12,063 percent and 0,036 percent.

Volatility or fluctuations of stock prices are related to several factors, such as dividend payout ratio, leverage, and firm size. The reason for choosing dividend payout ratio, leverage and company size variables in this study is due to variables which are micro factors that can affect stock price volatility. Micro factors approved by the company's internal activities can still be controlled by companies that compare external factors, besides that Husnan (2009: 303) explains the fundamental factors in estimating stock prices which are dividend policy. Darmadji et al. (2012: 113) also explain factors that can influence fluctuations in stock prices, namely the performance of supporting companies and one way to improve company performance by analyzing financial statements using financial ratios, using leverage and company size (Zaki et al., 2017).

The information content hypothesis explains that managers tend to have better information about the prospects of the company than investors so that assessing capital gains is riskier than dividends in cash so that companies choose to share their profits in the form of dividends. The high level of dividend payments causes investors to have excess funds. When some investors have excess funds and choose to reinvest their funds in the capital market that aims to obtain a return, it can increase stock demand. Investors are also more interested in buying stock companies that have a high ability in generating profits. When the stock demand is higher than the stock offering, it will cause an increase in stock price. The high movement of rising stock prices means that the level of stock price volatility is getting higher. This phenomenon shows that the higher the dividend payout ratio (DPR), the level of stock price volatility also becomes higher (Priana and Rm, 2017). This finding is supported by several research results from Hamid et al. (2017); Tahir (2017). Different results (research gap) were found by Ahmad and Alrjoub (2018); Shah and Noreen (2016) who showed that the dividend payout ratio (DPR) has a negative effect on stock price volatility while research from Dominica (2019) and Sutandijo (2019) gave the results that the dividend payout ratio do not affect stock price volatility. Based on the explanation, the hypothesis is obtained, as follows:

H1: Dividend payout ratio (DPR) has a significant positive effect on stock price volatility.

Companies with high levels of leverage mean more financing their assets with external loans, which results in companies having higher debt interest obligations and can cause uncertainties inherent in projections of future operating income. Signal theory explains that investment decisions in the capital market are information-oriented. The high level of leverage provides information to investors that the company has high financial risk so that some investors who are reluctant to take risks prefer not to buy these shares so that it can trigger a large downward movement in stock prices as a reaction from market forces (Marini and Dewi, 2019). In the short term, the impact of leverage can cause a bad news reaction from investors which causes an increase in stock price volatility (Mubarok, 2017). This phenomenon shows that the higher the level of leverage, the higher the level of volatility of its stock prices (Jannah and Haridhi, 2016). This finding is supported by several research results from Marini and Dewi (2019); Mubarok (2017). Different results (research gap) were found by Wijaya and Djajadikerta (2018) which showed that leverage has a significant negative effect on stock price volatility, research from Dewi and Suaryana (2016); Dominica (2019) has no significant effect on stock price volatility. Based on the explanation, the hypothesis is obtained, as follows:

H2: Leverage has a significant positive effect on stock price volatility.

The size of the company's assets can support increased business productivity and reduce investment risk so that the stock price becomes more stable (Dewi and Paramita, 2019). Surahmat, et al. (2017) also explains that large companies have public information that is widely distributed and tends to be open so that widespread information can reduce asymmetric information that can avoid irrational reactions from investors, such as giving low prices to companies in an effort to protect themselves (signal theory). Both of these phenomena indicate that the larger the size of the company, the more stable the stock price so that the level of volatility of stock prices is lower (Andiani and Gayatri, 2018). This finding is supported by several research results from Dewi and Paramita (2019); Nasir et al. (2018); Surahmat et al. (2017). Different results (research gap) found by research from Handayani et al. (2018) which showed that company size has a positive direction but not significant. Based on the explanation, the hypothesis is obtained, as follows:

H3: Firm size has a significant negative effect on stock price volatility.

Various studies have been conducted on factors that affect stock price volatility but are still considered interesting problems to study because of the inconsistency of the results of previous research (research gap).

II. LITERATURE REVIEW

1. Signalling Theory

Brigham and Houston (2013: 214) explain that a signal is an action taken by company management to give instructions to investors about management in looking at the company's prospects. The availability of information is very important because it gives an influence on investment decisions for the company's external parties. The announcement publishes information that can give a signal to investors. Investors need accurate, complete and relevant information on the capital market as an analytical tool in making investment decisions. Lack of company information that is owned by outsiders causes an effort to protect themselves by outsiders themselves by giving low prices to the company.

2. Stock

Stock is a sign of capital participation of a person (business entity) in a company or limited liability company (Ardiana, 2016: 22). Stocks are one of the popular financial instruments that are the choice of corporate funding. According to Sunariyah (2011: 50), the profit that can be obtained by investors with buying or owning shares are dividends which is the distribution of profits provided by the company issuing shares over the profits generated by the company and capital gains or the higher selling price of shares than the purchase price. According to Darmadji et al. (2012: 10-12), the risk of investing in ordinary shares are not getting dividends, capital loss or the lower selling price than the purchase price, the company is bankrupt or liquidated, shares are removed from the stock exchange (delisting) and shares are suspended (suspense).

3. Stock Price Volatility

The up and down or fluctuation in stock price is called volatility (Priana and Rm, 2017). Pirzada (2017) reveals that the volatility of common stock is a measure to define risk and represent the level of change in the price of a security during a certain time. The higher level of volatility illustrates that the higher opportunity of profit or loss for investors in the short term. Volatility becomes a reference to the level of investment security because if a stock is volatile, the price varies greatly from time to time and it is difficult to determine the exact price of the shares in the coming period. Darmadji et al. (2012: 113) explained that the factors that could affect fluctuations in stock prices were the performance of the issuer concerned, economic conditions and other factors that could not be explained. One way to assess a company's performance is to analyze the company's financial statements using financial ratios, such as leverage and company size (Zaki et al., 2017). Also, according to Husnan (2009: 303), dividend policy is one of the fundamental factors in estimating stock prices.

4. Dividend Policy

Sartono (2014: 281) explained the dividend policy is a decision on profits obtained by the company that will be distributed to shareholders as dividends or will be retained in the form of retained earnings to finance investment in the future. Every investment made by investors certainly has one goal which is to maximize wealth or to get a profit. For this reason, dividends are a way of valuing investors for investments made in a company. Dividends have or contain information as a condition of the company's prospects (Kusuma et al., 2018). Companies must determine dividends appropriately because they can affect stock prices, asset prices, capital structure, mergers, acquisitions, and capital budgeting.

5. Dividend Payout Ratio (DPR)

Dividend payout ratio (DPR) is the percentage of income paid to shareholders as dividends each year (Shah and Noreen, 2016). The level of dividend payments that tend to be high causes investors to have excess funds and choose to reinvest funds owned into the capital market that aims to obtain return (return) then it can increase stock demand so that the stock price will increase. The high movement of rising stock prices means that the level of stock price volatility is getting higher. Investors are also more interested in buying shares of companies that have high ability in generating profits.

6. Leverage

Leverage ratio is a ratio to measure how much a company is financed with debt (Fahmi, 2016: 72). Leverage ratios provide information that investors can consider when investing. Companies with a high level of leverage mean that they finance their assets more with external loans. High external loans result in companies having higher debt interest obligations and can result in reduced corporate profits or can also cause uncertainties inherent in future operating profit projections. So, it can be said that the level of corporate leverage illustrates the financial risk of the company (Priana and Rm, 2017).

7. Firm Size

Size is observed as a major determinant of performance in any company (Bayo, et al. 2016). The size of the company reflects the amount of experience and ability of the company to grow indicates the ability and risk level of investment management to provide prosperity for the company. Firm size provides information for investors that the company can manage its business activities well (Ananda and Mahdy, 2014). The size of the company's assets can support increased business productivity and reduce investment risk so that the stock price becomes more stable (Dewi and Paramita, 2019). Surahmat, et al. (2017) also explains that large companies have public information that is widely distributed and tends to be open so that widespread information can

reduce asymmetric information that can avoid irrational reactions from investors, such as giving low prices to companies to protect themselves (signal theory).

III. RESEARCH METHODS

The design of this study uses a quantitative approach in the form of associative to examine the effect of dividend payout ratios, leverage and firm size on stock price volatility. The location of the study was conducted on the Indonesia Stock Exchange in manufacturing companies in the 2014-2018 period with the object of research being stock price volatility as the dependent variable (Y) and dividend payout ratio, leverage and company size as the independent variable (X). The population in this study were all manufacturing companies that successively paid dividends during the 2014-2018 period and were listed on the Indonesia Stock Exchange. In this study, the population was 11 companies. The sampling method used is the saturated or census sampling method, where all members of the population are sampled so that the samples in this study are all members of the study population. The companies included in the research sample are (names based on the listing code listed on the Indonesia Stock Exchange), namely: ASII, AUTO, BATA, BRAM, ICBP, INDF, MLBI, SIDO, SMSM, TOTO, and UNVR. Data collection methods used in this study were non-participant observation. The type of data used in this study is qualitative data in the form of manufacturing companies listed on the Indonesia Stock Exchange in the 2014-2018 period and quantitative data in the form of stock price data, dividend payout ratio, leverage and total assets used to measure company size. Data sources used in this study are secondary data sources obtained from annual financial reports and historical stock prices published by manufacturing companies listed on the Indonesia Stock Exchange published and obtained through the official website for the 2014-2018 period published by IDX (Indonesian Stock Exchange) through the site www.idx.co.id and other financial websites, namely www.finance.yahoo.com. This research uses descriptive statistical analysis, classic assumption test and multiple linear regression analysis. The regression equation from this study is as follows:

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \varepsilon$$

Definition:

- Y = Stock price volatility
- α = Constant
- β_1 = Regression coefficient of dividend payout ratio (DPR)
- β_2 = Regression coefficient of leverage
- β_3 = Regression coefficient of firm size
- X1 = Dividend payout ratio (DPR)
- X2 = Leverage
- X3 = Firm Size
- ε = Error

IV. RESULT AND DISCUSSION

This study uses a transformation using the semi-log model because the data is not normally distributed. Ghozali (2013: 199) explained that the regression model used a semi-log model that is transforming only the dependent variable into a natural logarithmic form (Ln) so that the regression model becomes as follows:

$$\text{Ln}Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \varepsilon$$

Definition:

- LnY = Natural logarithmic form of stock price volatility
- α = Constant
- β_1 = Regression coefficient of dividend payout ratio (DPR)
- β_2 = Regression coefficient of leverage
- β_3 = Regression coefficient of firm size
- X1 = Dividend payout ratio (DPR)
- X2 = Leverage
- X3 = Firm Size
- ε = Error

The multiple linear regression analysis aims to find out the magnitude of the influence of the independent variables namely dividend payout ratio, leverage and firm size on the dependent variable, namely the volatility of stock prices and show the direction of the relationship between the independent and dependent variables. The following are the results of the multiple regression analysis presented in Table 1.

Table 1. Multiplier Linier Regression Analysis Result

Model	Unstandardized Coefficients	Standardized Coefficients	t	Sig.
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	B	Std. Error	Beta		
(Constant)	-.585	.556		-1.052	.298
Dividend payout ratio (X_1)	-.266	.155	-.228	-1.718	.092
Leverage (X_2)	-.133	.085	-.206	-1.568	.123
Firm Size (X_3)	-.072	.033	-.284	-2.143	.037

Source: Primary Data, 2019

The multiple linear regression equation in this study can be formulated as follows:

$$\text{LnY} = -0,585 - 0,266X_1 - 0,133X_2 - 0,072X_3 + \varepsilon$$

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

A constant value of -0.585 means that if all the independent variables are considered constant the volatility of the stock price decreases by 0.585 units or 58.5 percent. The regression coefficient of the dividend payout ratio (β_1) of -0.266 means that if the company's dividend payout ratio (DPR) increases by 1 percent, the volatility of the stock price decreases by 0.266 units or 26.6 percent, assuming other independent variables are constant. The value of the leverage regression coefficient (β_2) which is proxied by the debt to equity ratio (β_2) of -0.133 means that if the company's leverage increases by 1 percent then the volatility of the stock price decreases by 0.133 units or 13.3 percent with the assumption that other independent variables are constant. The firm size regression coefficient (β_3) of -0.072 shows that if the size of the company increases by 1 percent, the volatility of stock prices decreases by 0.072 units or 7.2 percent with the assumption that other independent variables are constant.

The F Test aims to test the effect and significance of all independent variables (dividend payout ratio, leverage, and firm size) on the dependent variable (volatility in stock prices) simultaneously (simultaneously). Based on the results of the F test in table 4.8, a ratio value of 3.840 was obtained with a significance <0.05. The F test results show that the dividend payout ratio, leverage, and firm size variables are right in predicting stock price volatility.

The coefficient of determination (R^2) measures how far the ability of the independent variable in explaining the dependent variable. The coefficient of determination (R^2) in this study is 0.184 which indicates that the independent variables studied are dividend payout ratio, leverage and firm size have a contribution of 18.4 percent to the dependent variable (stock price volatility), while the other 81.6 percent influenced by other factors outside the variables studied, such as government policies, interest rates, inflation, trading volume, asset growth, stock trading frequency, exchange rates, book value per share and earnings volatility.

Effect of dividend payout ratio on stock price volatility

The multiple linear regression analysis test in Table 1 gives the result that the significance value of the independent variable dividend payout ratio of 0.092 whose value is greater than the significance level of 0.05 with a regression coefficient of -1.718 shows that the dividend payout ratio does not significantly affect stock price volatility in manufacturing companies listed on the Indonesia Stock Exchange in the 2014-2018 period. The results of this study are not in line with the information content hypothesis which explains that stock prices follow changes in dividends solely because of the existence of information contained in dividend announcements. This finding also contradicts research from Hamid et al. (2017); Priana and Rm, (2017); Tahir (2017) which states that there is a positive influence between the dividend payout ratio on stock price volatility. This research gives the result that the high and low dividend payout ratio is not able to react to investors so that it is unable to influence the stock price volatility. Dividend payments are no longer considered as a signal calculated by investors because of the uncertainty of dividend payments in the future. Investors cannot ensure that companies that have distributed dividends at this time will be able to distribute dividends next year along with the nominal dividends to be paid later. The presence or absence of dividend payments ultimately causes investors to reinvest their funds using dividends received, both this year and previous years. New investors will take into account the dividend rate as a factor that reduces risk if the company establishes a stable and consistent dividend policy (Sutandijo, 2019). Therefore, this insignificant research result is in line with the results of research from Dominica (2019) and Sutandijo (2019) which states that the dividend payout ratio does not affect stock price volatility.

Effect of leverage on stock price volatility

The multiple linear regression analysis test in Table 1 gives the result that the independent leverage variable has a significance value of 0.123 whose value is greater than the significance level of 0.05 with a regression coefficient of -0.206 indicating that leverage has no significant effect on stock price volatility in manufacturing companies registered on the Indonesia Stock Exchange for the 2014-2018 period. The results of this study are not by the signal theory which explains that information about the high and low levels of leverage can affect investors' reactions so that it can trigger high and low levels of stock price volatility. This finding also contradicts research from Jannah and Haridhi (2016); Marini and Dewi (2019); Mubarok (2017) which states that there is a positive effect between leverage on stock price volatility. This study provides the results that the

high and low leverage is not able to react to investors so it is not able to give an effect on stock price volatility. Investors do not always pay attention to the company's dependence on debt in making investment decisions but rather pay attention to the company's ability to generate revenue (Dewi and Suaryana, 2016). Investors tolerate the use of a large enough debt by the company (Dominica, 2019) because the high level of leverage does not merely reflect the high risk to the company. Some companies prefer the use of debt as a funding decision as long as it can provide a higher rate of return than the payment of debt interest or the use of own capital. Therefore, the insignificant research results are in line with the results of research from Dewi and Suaryana (2016); Dominica (2019) which states that leverage has no significant effect on stock price volatility.

Effect of firm size on stock price volatility

The multiple linear regression analysis test in Table 1 shows that the independent variable of firm size has a significance value of 0.037 whose value is smaller than the significance level of 0.05 indicating that firm size has a significant negative effect on stock price volatility in manufacturing companies listed on the Indonesia Stock Exchange period 2014-2018. Regression coefficient (β_3) of -0.284 shows a negative direction and if the size of the company increases by 1 percent then the volatility of stock prices decreases by 0.266 units or 26.6 percent assuming other independent variables are constant. Firm size provides information for investors that the company can manage its business activities well (Ananda and Mahdy, 2014). The size of the company's assets can support increased business productivity and reduce investment risk so that the stock price becomes more stable (Dewi and Paramita, 2019). Surahmat, et al. (2017) also explains that large companies have public information that is widely distributed and tends to be open so that widespread information can reduce asymmetric information that can avoid irrational reactions from investors, such as giving low prices to companies to protect themselves (signal theory). Both of these phenomena indicate that the larger the size of the company, the more stable the stock price. The more stable movement of stock prices shows that the level of volatility of stock prices is getting lower because the volatility of stock prices represents changes in the price of a security level in a certain period. Therefore, it can be stated that the greater the size of the company, the lower the level of stock price volatility or in other words, the size of the company has a negative effect on stock price volatility (Andiani and Gayatri, 2018). This finding is supported by several research results from Dewi and Paramita (2019); Nasir et al. (2018); Surahmat et al. (2017) which also states that firm size has a negative effect on stock price volatility.

V. CONCLUSION

The dividend payout ratio and leverage have no significant effect on stock price volatility. This means that the dividend payout ratio and the leverage of manufacturing companies listed on the Indonesia Stock Exchange are not able to affect fluctuations in stock prices. Firm size has a significant negative effect on stock price volatility. This means that the size of manufacturing companies listed on the Indonesia Stock Exchange can affect fluctuations in stock prices. The greater the size of the company, the lower the level of stock price volatility or the smaller the size of the company, the higher the level of stock price volatility. Manufacturing companies are advised to pay attention to company size as a basis for financial decision making because it will affect stock price movements. Investors are advised to pay more attention to the size of the company in investing shares in the capital market to make the right investment decisions and minimize the risk of loss. This study has limitations on the independent variables, namely dividend payout ratio, leverage and firm size on the dependent variable, namely stock price volatility, and observations only made on manufacturing companies listed on the Indonesia Stock Exchange. For further research, it is suggested to use other variables that can be used as factors that can affect stock price volatility, such as government policies, interest rates, inflation, trading volume, asset growth, stock trading frequency, exchange rates, book value per share and earnings volatility and can expand the object of research, not only to manufacturing companies but to other companies or sectors listed on the Indonesia Stock Exchange.

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