The Determinants of Dividend Policy and Their Implications for Stock Prices on Manufacturing Companies Listed on the Indonesia Stock Exchange

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Abstract

This study aims to analyze (1) the determinants of dividend policy and (2) the implications for stock prices. This is a quantitative research conducted using panel data regression method. The population is all the financial statements of manufacturing companies listed on the Indonesia stock exchange. Samples were obtained through purposive sampling method, namely, manufacturing companies that distributed dividends according to the criteria in 2013–2015, as many as 19 companies. The findings of this study are: (1) firm size and profitability (ROA) affect the company’s dividend policy negatively and significantly. While leverage (DER) does not significantly affect the dividend policy; (2) variable firm size, profitability (ROA), and leverage (DER) significantly affect the company’s stock price. Simultaneously, variable firm size, profitability, and leverage have a significant effect on the dividend policy and also on the stock price of manufacturing companies listed on the IDX for the period 2013–2015. Managerial implications for companies in determining dividend policy and increasing stock prices must consider the variables of firm size, profitability, and leverage.

Keywords: dividend policy, stock price, firm size, profitability, leverage

1. Introduction

Dividend policy is the company’s policies which can be controversial. In a company, dividend policy is a complex matter because it involves the interests of many parties involved. Dividend policy is one of the determinants of a company (Lumapow and Tumiwa, 2017). If dividends are increased, cash flow will increase and benefit investors. But on the contrary, retained earnings that are re-invested decrease, the company’s future growth will decline and will harm investors later. This dividend policy controversy is an interesting phenomenon to study related to the company’s funding decisions which are the most important decisions for a company.
Investors have a goal to improve their welfare by getting a return, both in the form of dividend yields and capital gains. While companies need a source of funds to increase growth and expect the survival of the company. If the company chooses to distribute profits as dividends, it will reduce retained earnings and further reduce the total internal funding sources. Conversely, if the company chooses to withhold profit by not dividing it as dividends, then the ability to establish internal funds will be greater but reduce the welfare of investors. To maintain these two interests, financial managers must adopt an optimal dividend policy.

The dividend policy phenomenon can have an impact on the company’s stock price. The amount of dividends that will be received by shareholders is highly dependent on the company’s dividend policy. Therefore, investors have an interest in predicting how much their investment returns. Dividend policy includes the decision to share profits or hold them for company investment. An optimal dividend policy can lead to a balance between dividend payments and company growth for the future, which is done with the aim of maximizing the value of the company. In general, the company’s value is reflected in the development of the company’s stock price in the capital market. The higher the stock price of a company, the higher the value of the company. Dividend policy can affect the company’s investment opportunities, stock prices, financial structure, funding flows and liquidity position. Dividend policy can provide information about company performance. The purpose of this study aims are (1) to analyze the determinants of dividend policy, (2) to analyze the implications for stock prices.

2. Literary Review

2.1. Effect of firm size on the dividend policy

Firm size (size) positively affects the dividend payout ratio as a proxy of dividend policy. This shows that the greater the total assets of a company, the greater the size of the company. Well-established and large companies have easier access in the capital market compared to smaller companies. Good access can help companies meet their liquidity needs. The ease of accessibility to the capital market can be interpreted as the flexibility and ability of companies to obtain funds and earn profits by looking at the growth of company assets, so that the greater the size of the company, the higher the company’s ability to pay dividends to shareholders.

Hypothesis 1: Firm size has a positive and significant effect on dividend policy
2.2. Effect of profitability on dividend policy

Profitability has an influence on dividend policy. Dividends are part of the net income earned by the company. Therefore dividends will be distributed if the company makes a profit. Benefits that are worth sharing with shareholders are profits after the company fulfills its fixed obligations, namely interest and taxes. Therefore dividends taken from net profits will affect the dividend policy. The greater the profits of the company, the greater the portion of the revenue distributed. Thus profitability has a positive relationship with dividend policy (Jensen and Meckling 1976).

Hypothesis 2: Profitability has a positive and significant effect on the dividend policy

2.3. Effect of leverage on dividend policy

Leverage of companies proxied by debt to equity ratio (DER) has a negative influence on the dividend policy, which means that increasing leverage will have an impact on the company's dividend policy, because some of the funds are used to repay loans. Increasing interest costs, dividend payments will decrease so that the dividends paid will be smaller, because some funds are used to pay interest, the rights of shareholders will be smaller. It can be concluded that the greater the obligation of a company, the smaller the company's ability to pay dividends.

Hypothesis 3: Leverage has a negative and significant effect on the dividend policy

2.4. Effect of dividend policy on stock prices

Companies that have many investors will prefer to use dividends as signals. The signaling theory put forward by Bhattacharya (1979) is one model that underlies the notion that the announcement of changes in cash dividends has information content that results in a stock price reaction. This model explains that information about changes paid is used by investors as a signal about the company's prospects in the future. This is due to the existence of asymmetric information between managers and investors, so investors use dividend policy as an indicator of the company's prospects. The tendency to distribute dividends every year, whether in fixed, increasing, or variable proportions, will be information that has its own value which will have an impact on stock prices. The dividend increase paid is considered a favorable signal, giving rise to a positive stock
price reaction. Conversely the decrease in dividends paid is considered a signal that the company's prospects are less profitable, resulting in a negative stock price reaction.

Investors generally want a relatively stable dividend distribution, because with the stability of dividend payments can increase investor confidence in the company thereby reducing investor uncertainty in investing their funds into the company (Prasetiono, 2010), or in other words, the stability of dividend distribution will reduce risk.

Hypothesis 4: Dividend policy has a positive and significant effect on stock prices.

2.5. Effect of firm size on stock prices

Firm size affects the volatility of stock prices, because small companies usually have a smaller diversification in terms of operating and distribution activities. It is possible if small companies have more limited access to convey information about their stock prices to investors.

This firm size measures how big and small a company is, by looking at total assets in the financial statements. The larger the size of a company means that the company excels in terms of wealth and good performance, so that it will give investors the attraction to trust and want to invest their capital by buying shares, this causes the stock price to move up. It can be concluded that the size of the company has a positive effect on stock prices.

Hypothesis 5: Firm size has a positive and significant effect on stock prices.

2.6. Effect of profitability on Stock Prices

Return On Assets (ROA) is a proxy of profitability is the ratio used to measure the effectiveness of a company in generating profits by utilizing the assets it owns. ROA is a comparison between net income after tax and assets to measure the level of taking total investment. If ROA gets higher, then the higher the profits that the company will achieve. If a company is able to generate high profits, investor interest will also increase and this will have an impact on the increase in share prices.

Hypothesis 6: profitability has a positive and significant effect on stock prices
2.7. Effect of leverage on stock prices

Debt to Equity Ratio is the ratio used to assess debt with equity and is useful for knowing the amount of funds provided by the borrower (creditor) with the owner of the company. In other words, this ratio serves to find out every rupiah of its own capital that is used as collateral for debt. (Kasmir, 2008).

Debt costs are smaller than equity funds by adding debt to the balance sheet. Companies in general can increase leverage which then increases its stock price, thereby increasing the welfare of shareholders and building greater growth potential.

Hypothesis 7: leverage has a positive and significant effect on stock prices

3. Research Method

In accordance with the objectives to determine the relationship between variables through hypothesis testing.

3.1. Source and how to determine data

The data in this study is secondary data obtained from the annual financial statements of manufacturing companies listed on the Indonesia Stock Exchange during 2013 to 2015.
Sampling based on purposive sampling method. Based on the criteria then the number of samples obtained as many as 19 companies.

3.2. Operational variables

The variables used in this study include:

Model 1: the dependent variable is the dividend policy (DPR) and the independent variables are firm size (SIZE), profitability (ROA), leverage (DER).

Model 2: the dependent variable is the stock price (HS) and the independent variables are firm size (SIZE), profitability (ROA), leverage (DER), and dividend policy (DPR).

3.2.1. Dividend policy (DPR)

This exogenous variable is the ratio used to reflect the company's dividend policy that is part of the profits distributed to shareholders. Dividend payment policy is measured using dividend payout ratio which is dividend per share (DPS) divided by earnings per share (EPS), and given the symbol of DPR.

3.2.2. Firm size (SIZE)

The size of the company in this study is expressed by total assets, the greater the total assets of the company will be the greater the size of the company. The greater the asset, the more capital invested. Firm size can be seen from total assets owned by the company (Suherli, 2006). Firm size is assessed by log of total assets. Log of Total Assets is used to reduce the significant difference between the size of the company that is too large and the size of the company that is too small, then the total value of the asset is formed into natural logarithm, conversion of natural logarithm form aims to make the data of total assets distributed normally. Firm size is measured using the natural log of total assets.

3.2.3. Profitability (ROA)

Profitability is the ability of a company to make a profit. Profitability in this study is proxied by return on assets (ROA), which is used to measure the effectiveness of a company in generating profits by utilizing assets owned.
3.2.4. Leverage (DER)

Leverage is a ratio to measure the composition of long-term debt compared to the amount of company assets. In this study Debt to Equity Ratio (DER) is used which is a ratio to measure the level of leverage on the company’s shareholders equity.

3.2.5. Stock price (HS)

The dependent variable in this study is the stock price of a manufacturing company listed on the Indonesia Stock Exchange, taken from a close price of a stock transaction on the Indonesia Stock Exchange.

4. Result and Discussion

4.1. Model 1

The first model of the panel data regression model used in this study is a fixed effect model, namely the model that has eliminated the heteroscedasticity problem by stabilizing the residual by using white-heteroskedasticity, while the autocorrelation problem is not required in the fixed effect model so that the autocorrelation test can be ignored (Nachrowi & Usman, 2006) The estimation results of panel data regression using a fixed effect model with white-heteroskedasticity are shown in Table 1.

The estimation results of the influence of firm size variable (SIZE), profitability (ROA), and leverage (DER) by using a fixed effect model as shown in Table 1 can be written in the form of the following equation:

\[ DPR = [C_i + 17.41964] - 0.283387 \text{ SIZE} - 1.831706 \text{ ROA} - 0.192166 \text{ DER} \]  

\[ C_i = \text{Firm Fixed Effect Constants } i, i = 1, \ldots, 19 \]  

Further testing of each panel data regression coefficient that influences dividend policy using the \( t \)-test. The \( t \)-test is conducted to determine whether each of the independent variables used in this study can influence the company’s dividend policy as a dependent variable significantly with an alpha level of \( \alpha = 0.05 \).
TABLE 1: Estimation of factors affecting dividend policy.

Dependent Variable: DPR
Method: Pooled EGLS (Cross-section weights)
Date: 07/08/18 Time: 20:55
Sample: 2013 2015
Included observations: 3
Cross-sections included: 19
Total pool (balanced) observations: 57
Linear estimation after one-step weighting matrix
White cross-section standard errors & covariance (d.f. corrected)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>Std. Error</th>
<th>t-Statistic</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
<td>17.41964</td>
<td>2.560699</td>
<td>6.802689</td>
<td>0</td>
</tr>
<tr>
<td>SIZE?</td>
<td>–0.283387</td>
<td>0.05516</td>
<td>–5.137573</td>
<td>0</td>
</tr>
<tr>
<td>ROA?</td>
<td>–1.831706</td>
<td>0.497751</td>
<td>–3.679961</td>
<td>0.0009</td>
</tr>
<tr>
<td>DER?</td>
<td>–0.192166</td>
<td>0.104313</td>
<td>–1.842206</td>
<td>0.0757</td>
</tr>
</tbody>
</table>

Effects Specification
Cross-section fixed (dummy variables)

<table>
<thead>
<tr>
<th>Weighted Statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td>R-squared</td>
</tr>
<tr>
<td>Adjusted R-squared</td>
</tr>
<tr>
<td>S.E. of regression</td>
</tr>
<tr>
<td>F-statistic</td>
</tr>
<tr>
<td>Prob(F-statistic)</td>
</tr>
</tbody>
</table>

Unweighted Statistics

| R-squared | Mean dependent var | 0.425221 |
| Sum squared resid | Durbin–Watson stat | 3.887217 |

4.2. Goodness of fit test

For testing the goodness of fit as measured by the coefficient of determination ($R^2$) shows a number of 0.9538, which means that variations in changes in the ups and downs of dividend policies proxied by the company’s dividend payout ratio (DPR) can be explained by the company’s internal factors (firm size, profitability, leverage) amounting to 95.38%, while the remaining that is equal to 4.62% is explained by other variables not included in this research model. For the adjusted determination coefficient ($R^2$ adjusted) shows a number of 0.9109 which means that after considering the freedom degree of the panel data regression model used, all independent variables used in this study were able to explain the changes in the company’s dividend policy by 91.09%.
4.3. Model 2

The second model in this study also uses the Fixed Effects model. The results of panel data regression estimation using fixed effects model with white-heteroskedasticity are shown in Table 2 below.

**Table 2: Estimation of the factors that affect stock prices.**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>Std. Error</th>
<th>t-Statistic</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
<td>-70.43866</td>
<td>0.955386</td>
<td>-73.72796</td>
<td>0</td>
</tr>
<tr>
<td>DPR?</td>
<td>-0.042928</td>
<td>0.090654</td>
<td>-0.473531</td>
<td>0.6395</td>
</tr>
<tr>
<td>SIZE?</td>
<td>1.789504</td>
<td>0.161657</td>
<td>11.0697</td>
<td>0</td>
</tr>
<tr>
<td>ROA?</td>
<td>10.99284</td>
<td>1.247408</td>
<td>8.812548</td>
<td>0</td>
</tr>
<tr>
<td>DER?</td>
<td>0.374987</td>
<td>0.081582</td>
<td>4.596465</td>
<td>0.0001</td>
</tr>
</tbody>
</table>

**Effects Specification**

Cross-section fixed (dummy variables)

**Weighted Statistics**

| R-squared       | 0.998151 | Mean dependent var | 15.45705 |
| Adjusted R-squared | 0.996303 | S.D. dependent var | 12.78624 |
| S.E. of regression | 0.226791 | Sum squared resid | 1.440152 |
| F-statistic     | 539.93939 | Durbin–Watson stat | 2.822215 |
| Prob(F-statistic) | 0 | | |

**Unweighted Statistics**

| R-squared       | 0.987934 | Mean dependent var | 8.105382 |
| Sum squared resid | 1.903704 | Durbin–Watson stat | 2.198895 |

The estimation results of the influence of dividend policy, firm size, profitability, leverage, using a fixed effect model as shown in Table 2 can be written in the form of the following equation:

\[
HS = [C_i - 70.43866] - 0.042928 \text{DPR} + 1.789504 \text{SIZE} + 10.99284 \text{ROA} + 0.374987 \text{DER}
\]

(2)

\( C_i = \text{Firm Fixed Effect Constants } i, i = 1, \ldots, 19 \)
4.4. Determinants of dividend policy

Based on the estimation and analysis of empirical results on panel data regression with the Fixed Effect model, it can be concluded that the variable of firm size and profitability (ROA) has a significant effect on dividend policy, while the leverage variable has no significant effect on dividend policy.

Empirical evidence of this study shows that the firm size variable influences dividend policy negatively significantly. Firm size shows the size or size of assets owned by the company. The larger the size of a company, the smaller dividends will be distributed because companies that have a large size tend to invest their income to develop the company rather than distribute dividends. This is done because if the company re-invests the company’s assets will increase so that the company has a larger size. Unlike the research conducted by Nuringsih (2005) which found that there was a positive but not significant relationship between dividend policy and firm size. Management does not consider the size of the company in dividend distribution decisions. This research is also different from research conducted by Arilaha (2007) which states that firm size has a significant positive effect on dividend policy.

Different research results are also shown by Amalia’s (2011), Sutoyo and Kusumaningrum (2011) study, Prasetyo (2012) which states that firm size has negative implications and has no significant effect on dividend policy. On the contrary, the results of this study are not in agreement with the results of studies conducted by Amah (2012), Hardinugroho (2012), Amalia (2011), Difah (2011), Rejeki (2011), Primawestri (2011) which states that firm size has positive and significant influence against dividend policy. This anomaly is interesting considering the sample is an issuer whose market capitalization and total assets are large. In other words, the size of the company is not relevant for consideration of dividend policy by management, at least during the study period.

An interesting phenomenon is related to the empirical findings in this study that profitability (ROA) affects dividend policy negatively and significantly. ROA is a profitability ratio that shows a comparison between profit (after tax) and total assets of the company. This ratio shows the level of percentage of profits that a company can generate from the total assets it owns. The greater the profitability the greater the level of profit of the company. Because dividends distributed are derived from company profits, it is more likely that large company profits will increase the amount of dividends to be distributed. In other words, the higher the profitability will increase the dividends that the company will distribute, therefore theoretically profitability has a positive relationship to dividend policy. This research is in line with research conducted by Nuringsih (2005) which states
that profitability has a significant negative effect on dividend policy. However, the empirical findings of the research contradict previous studies, which mostly prove that profitability has a positive influence on dividend policy, including research by Arilaha (2009) and Jannati (2013).

Leverage (DER) affects the dividend policy negatively but insignificantly. This shows that management does not see leverage in deciding the amount of dividends to be distributed to shareholders. In addition, this finding also shows that the lower the leverage, the higher the company’s ability to pay all of its obligations. This is because the greater the proportion of debt used for the capital structure of a company, the greater the amount of liabilities. Increasing debt will in turn affect the size of the net income available to shareholders, including dividends to be received, because the obligation is prioritized over dividend distribution. If the debt burden is higher, the company’s ability to distribute dividends will be lower, so that leverage has a negative influence with the dividend payout ratio. Judging from the development of the observation period, the average manufacturing company has a high debt to equity ratio, this indicates that manufacturing companies prefer financing with external capital rather than using internal funds. This is not in line with the pecking order theory which states that companies like internal financing (funding from the results of company operations in the form of retained earnings) rather than external funding. This is inseparable from the effort to increase the credibility of the company in the eyes of external parties because debt provides a high risk, meaning that companies must be able to take decisions in the midst of offering benefits from leverage or maintaining the welfare of shareholders, by keeping them away from these risks.

The test results of this study strongly support the results of previous research conducted by Arsanda (2011), Santoso (2012), Hardiatmo (2012), Sumiadji (2011), Amalia (2011), Rejeki (2011), and Suharli (2006) which concluded that debt equity ratio has negative implications but does not have a significant effect on dividend payment policy. In general, this research supports Primawestri’s research (2011) where the results of his study stated that debt policy has negative implications and has a significant effect on dividend payment policy. Conversely, the results of this study do not support the study conducted by Amalia (2011), Arimawaty (2011), Hardinugroho (2012), Latiefasari (2011), Sutoyo and Kusumaningrum (2011), Diana (2012), and Hikmah and Astuti (2013) which states that debt policy has positive implications even though it has no significant effect on dividend payment policy. Furthermore, this study also does not support the results of a study conducted by Basuki (2012), and Putera (2011) which states that positive implicated debt policies have a significant effect on dividend payment policy.
4.5. The implications for stock prices

Based on the estimation and analysis of empirical results on panel data regression with a fixed effect model, it can be concluded that the variables of firm size, profitability, and leverage have a significant effect on stock prices, while the dividend policy does not have a significant effect on stock prices.

The company’s internal factors, namely firm size, profitability, and leverage, significantly affect the stock price of manufacturing companies during the 2013-2015 period, while the dividend policy does not significantly influence the stock price of manufacturing companies during the 2013-2015 period.

This study shows that the dividend policy variable negatively affects stock prices, but is not significant. This research is different from the research conducted by Wilianto (2012) which states that the dividend policy has a positive and significant influence on stock prices. Dividend Payout Ratio (DPR) is a percentage of income that will be paid to shareholders as ‘cash dividend’. Dividend payout ratio is the ratio between dividends per share and earnings per share in the period. The dividend per share component contains elements of dividends, so that if the greater dividends are distributed, the greater the dividend payout ratio will be.

One consideration of investors in deciding to buy a stock is dividend distribution. With dividend distribution, investors can assess the future prospects of the company. It is from this point that dividends can affect the formation of a company’s stock price. However, in this study the dividend policy variable shows no significant effect on the stock price of manufacturing companies listed on the IDX for the period 2013-2015. From this it appears that investors think that large dividends do not guarantee a good future prospect from the company. Investors consider that the company’s ability to return invested funds is more important than dividend distribution at the end of the year. Dividend distribution does not guarantee that the company earns a large profit, sometimes the company thinks that the profit obtained is better to invest in a project that has good prospects so that it can increase the company’s profit, of course with the approval of the shareholders.

Empirical evidence of this study shows that firm size variables influence stock prices positively significantly. This study is different from the research conducted by Ediningsih and Nilmawati (2010) which states that the size of the company does not have a significant effect on stock prices.

Profitability (ROA) has a positive and significant effect on stock prices. The results of this study are different from the research conducted by Nurmala and Yuniarti (2007)
which states that profitability (ROA) has a significant negative effect on stock prices. The results of this study are also different from the research conducted by Mukhtaruddin and Romalo (2007) which found no significant negative effect on stock prices.

Leverage (DER) affects stock prices positively significantly. This study is different from the research conducted by Mukhtaruddin and Romalo (2007) who found that there was no significant influence with the negative direction between the debt to equity ratio and the stock price. This study is also different from the research conducted by Fernando (2008) and Wilianto (2012) which states that debt to equity ratio has a significant negative effect on stock prices.

5. Conclusion

1. Firm size and profitability are determinants of dividend policy, which affect the company’s dividend policy significantly and negatively.

2. Leverage does not significantly affect the company’s dividend policy.

3. All fundamental variables such as firm size, profitability, and leverage together and significantly influence the dividend policy of manufacturing companies listed on the Indonesia Stock Exchange during the 2013-2015 period.

4. The dividend policy proxied by the DPR affects the company’s stock price negatively but insignificantly. The dividend policy has the smallest influence in influencing stock prices compared to other independent variables.

5. Leverage affects the company’s stock price positively and significantly.

6. All fundamental variables such as: firm size, profitability, leverage, and dividend policy jointly and significantly affect the stock price of manufacturing companies listed on the Indonesia Stock Exchange for the period 2013-2015.

References


