Determinants of corporate dividend policy in Indonesia

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Abstract. This study aims to investigate the determinants factors that effect the dividend policy. The sample used in this research is manufacture companies listed in Indonesia Stock Exchange (IDX) and the period 2011 – 2015. There are independent variables such as earning, cash flow, free cash flow, debt, growth opportunities, investment opportunities, firm size, largest shareholder, firm risk, lagged dividend and dividend policy used as dependent variable. The study examines a total of 32 manufacture companies. After analyzing the data using the program software Eviews 9.0 by multiples regression analysis reveal that earning, cash flow, free cash flow, firm size, and lagged dividend have significant effect on dividend policy, whereas debt, growth opportunities, investment opportunities, largest shareholder, and firm risk have no significant effect on dividend policy. The results of this study are expected to be implemented by the financial managers in improving corporate profits and basic information as return on investment decisions.

Keywords: cash flow, debt, dividend per share, earning, firm risk, firm size, free cash flow

1. Introduction

Dividend policy is important to firms because it is used to show the firm stability and its growth [1]. Shareholders and potential investors will decide to invest if they see the firm’s ability to generate dividends. Furthermore, dividend policy can be used by management or shareholders to reduce the agency cost. Many studies have been discussed determinants of dividend policy. Firms with high profit and stable earning are able to manage greater cash flow [2]. Firms with high earnings pay larger dividends to shareholders. A positive relationship found between earnings and dividend policy. Cash flow is one of determinants of dividend policy. Firm with high cash flow leads to pay greater dividends [3]. Cash flow has a positive relationship with dividend payment. Free cash flow is the residual cash flow at the end of period after paying expenses. Literature stated that greater free cash flow leads to greater dividend payment [4]. A positive association is found between free cash flow and dividends.

High level of debt results in lower dividend payment as firms choose to retain its funds to pay the debt than distribute them as dividends. A negative association between debt and dividends. Growth and investment as determinants of dividend policy is in line with the agency cost theory, whereby firms with no growth of fewer investment opportunities have greater exposure to agency cost [5]. In reducing the agency cost, these firms will pay higher dividends to the shareholders [4]. Firms with high growth and investment opportunities will need the internally generate funds to finance those investments, and thus tend to pay little or no dividends [5].

Firm size positively associated with dividends. A large firm typically has better access to capital markets and finds it easier to raise funds with lower cost and fewer constraints compared to a small firm [5]. Therefore, large firms are more likely to afford paying higher dividends to shareholders.
Largest shareholders play a greater role in monitoring management as compared to small shareholders, as they have greater voting power to influence a firm’s decision [6]. They found a positive relationship between largest shareholder and dividends. Next factor that affects the firm’s dividend policy is firm risk. In minimizing the firm’s risk, a firm will pay lower dividend [7]. A negative association found between firm risk and dividend policy.

Lagged dividend are the significant factors in determining dividend policy as current dividends affected by the firm’s past dividends. This is due to belief that the shareholders favor a reasonably stable rate of dividends [3]. Based on the above argument, a study was conducted to analyze determinants of dividend policy in manufacturing companies.

2. Research Method
The research design used for this research is hypothesis testing with purposed to understand the influence of earning, cash flow, free cash flow, debt, growth opportunities, investment opportunities, firm size, largest shareholder, firm risk and lagged dividend toward dividend policy. Data collected from financial report of manufacturing company that shared dividend to the shareholders and listed in Indonesia Stock Exchange for the period of 2011-2015. The analysis tool for this research is regression using E-views software.

2.1. Dependent variable
Dependent variable in this study is dividend policy. Dividend policy in this study measured by dividend per share [7].

\[
DPS = \frac{\text{Cash Dividend}}{\text{Outstanding Common Stock}}
\]  
(1)

2.2. Independent variable
Independent variables in this study are earning, cash flow, free cash flow, debt, growth opportunities, investment opportunities, firm size, largest shareholder, firm risk, and lagged dividend.

\[
\text{EPS} = \frac{\text{Net Income}}{\text{Number of Shares Outstanding}}
\]  
(2)

\[
\text{CF} = \frac{\text{Operation Cash Flow}}{\text{Total Asset}}
\]  
(3)

\[
\text{FCF} = \frac{\text{OCF} - \text{ANFA} - \text{ANWC}}{\text{Total asset}}
\]  
(4)

\[
\text{DEBT} = \frac{\text{Total Liabilities}}{\text{Total Asset}}
\]  
(5)

\[
\text{GROWTH} = \frac{\text{Current Sales} - \text{Last Year Sales}}{\text{Last Year Sales}}
\]  
(6)

\[
\text{INV} = \frac{\text{Retained Earnings}}{\text{Total Asset}}
\]  
(7)

\[
\text{SIZE} = \text{LOG of Total Asset}
\]  
(8)

\[
\text{LARGE} = \text{Percentage Shares Owned by Largest Shareholder}
\]  
(9)

\[
\text{RISK} = \text{Standard Deviation of Monthly Share Returns}
\]  
(10)

\[
D(t-1) = \text{Last Year Dividend}
\]  
(11)

\[
\text{SIZE} = \text{LOG of Total Asset}
\]  
(12)
2.3. Data analysis method
Analysis method used in this study is multiple linear regression. Purpose of this analysis method is to identify relationship of independent variables toward dependent variable. Multiple regression model in this study:

\[
DPS = \beta_0 + \beta_1 E + \beta_2 CF + \beta_3 FCF + \beta_4 DEBT + \beta_5 GR + \beta_6 INV + \beta_7 SIZE + \beta_8 LARGE + \beta_9 RISK + \beta_{10} (t - 1)
\]  

(13)

\(\beta_1\) = regression coefficient for earning; \(\beta_2\) = regression coefficient for cash flow; \(\beta_3\) = regression coefficient for free cash flow; \(\beta_4\) = regression coefficient for debt; \(\beta_5\) = regression coefficient for growth opportunities; \(\beta_6\) = regression coefficient for investment opportunities; \(\beta_7\) = regression coefficient for firm size; \(\beta_8\) = regression coefficient for largest shareholder; \(\beta_9\) = regression coefficient for firm risk; \(\beta_{10}\) = regression coefficient for lagged dividend

T test is used to examine the influence of independent variables individually toward dependent variable. Independent variables are earning, cash flow, free cash flow, debt, growth opportunities, investment opportunities, firm size, largest shareholder, firm risk, and lagged dividend. Dependent variable is dividend policy.

3. Results and Discussion
The objects of this study is manufacturing companies listed in Indonesia Stock Exchange for the period of 2011-2015. Sampling technique used for this study is purposive sampling method, the sampling based on certain criteria, namely manufacturing companies that have gone public and listed in Indonesia Stock Exchange and distribute it dividend for the period of 2011-2015. Data gathered from 30 companies within a period of 5 years.

Table 1. Descriptive statistics.

|          | N  | Mean    | Median | Maximum | Minimum | Std. Dev |
|----------|----|---------|--------|---------|---------|----------|
| DPS      | 150| 1.2144  | 0.1470 | 16.0000 | 0.0031  | 3.0901   |
| EPS      | 150| 1.6500  | 0.4445 | 17.6210 | 0.0090  | 3.5312   |
| CF       | 150| 0.4007  | 0.3343 | 0.8895  | 0.0933  | 0.1814   |
| FCF      | 150| 0.3193  | 0.2431 | 0.8671  | -0.1388 | 0.2009   |
| DEBT     | 150| 0.3490  | 0.3239 | 0.8013  | 0.0904  | 0.1476   |
| GR       | 150| 0.1184  | 0.1209 | 0.5301  | -0.2990 | 0.1149   |
| INV      | 150| 0.0851  | 0.0068 | 0.7773  | 5.75E-06| 0.1910   |
| SIZE     | 150| 6.5275  | 6.4114 | 7.9630  | 4.9913  | 0.7391   |
| LARGE    | 150| 0.5733  | 0.5477 | 0.9818  | 0.1017  | 0.2458   |
| RISK     | 150| 0.1105  | 0.0884 | 0.4386  | 0.0282  | 0.0707   |
| LAGGED   | 150| 1.1559  | 0.1440 | 14.0000 | 0.0031  | 2.9249   |

Source: Panel Data Regression Output Evies 9

3.1. Earning
The result of the coefficient showed the influence of earning on dividend policy is 0.286027. Statistical test showed the p-value is 0.0000 < 0.05. The result of this study indicate earning has a positive effect on dividend policy. Consistent with literature which found positive effect of earning on dividend policy [3]. Supported by literature, earning positively related with dividend policy [8]. The higher earning of the firm, the more likely the firm to pay higher dividend. Earning has positive impact on dividend policy, thus firm with high and stable earning will be able to manage it cash, therefore will leads to pay greater dividends [2].
Table 2. T test result.

| Variable | Coefficient | Probability | Conclusion  |
|----------|-------------|-------------|-------------|
| DPS      | 13.134      | 0.0077      | Significant |
| EARNING  | 0.2860      | 0.0000      | Significant |
| CF       | -4.4463     | 0.0003      | Significant |
| FCF      | 3.3182      | 0.0000      | Significant |
| DEBT     | 0.7107      | 0.3391      | Insignificant |
| GROWTH   | -0.5897     | 0.2278      | Insignificant |
| INV      | -1.4268     | 0.2373      | Insignificant |
| SIZE     | -1.6249     | 0.0124      | Significant |
| LARGE    | -2.0493     | 0.3070      | Insignificant |
| RISK     | -1.2405     | 0.0827      | Insignificant |
| LAGGED   | 0.1665      | 0.0226      | Significant |

Source: Output Data Eviews 9

3.2. Cash Flow
The result of the coefficient showed the influence of cash flow on dividend policy is -4.446376. Statistical test showed the p-value is 0.003 < 0.05. The result of this study reported cash flow has a negative effect on dividend policy. In contrast, literature found cash flow has no significant effect on dividend policy [3]. But it is in line with stated firm with lower cash flow will pay higher amount of dividend than the firm with high cash flow [9]. As cash flow increases, it will be difficult for investors to monitor the cash flow. Thus, the higher the cash flow, the higher agency cost. Therefore firm with higher cash flow tends to has higher agency cost and it results in reduce dividend payment. The negative effect is exists between cash flow and dividend policy.

3.3. Free Cash Flow
The result of the coefficient showed the influence of free cash flow on dividend policy is 3.318259. Statistical test showed the p-value is 0.0000 < 0.005. The result of this study reported free cash flow has a positive effect on dividend policy. In the other hand, [3] showed free cash flow has no effect on dividend policy. But this study supported by literature who found positive effect between free cash flow and dividend policy [10]. Availability of free cash flow leads the management to increase dividend payment to mitigate the agency cost. Free cash flow has positive effect on dividend policy [11]. Greater free cash flow is profitable as the remaining cash will be used to pay dividend to shareholders to maximize their wealth.

3.4. Debt
The result of the p-value is 0.3391 > 0.05 therefore it can be said it is insignificant. The result of this study reported debt has no significant effect on dividend policy. In contrast, a study by literature found a negative effect between debt and dividend policy [3]. Firm with high debt level leads to decrease in dividend payment. However this result found there is no significant effect of debt on dividend policy [12]. This means that the amount of debt does not effect firm’s dividend payment. This result also found no significant effect of debt on dividend policy [13].

3.5. Growth Opportunities
The result of the p-value is 0.2278 > 0.05 therefore it can be said it is insignificant. The result of this study reported growth opportunities has no significant effect on dividend policy. It is supported by literature on their study that growth opportunities does not effect dividend policy [3]. Supported by literature growth opportunities has no impact on firm’s dividend policy [13]. When growth opportunities of the firm increasing, it will not determine the amount of dividend paid by the firm. Thus there is no significant effect of growth opportunities on dividend policy.
3.6. Investment Opportunities
The result of the p-value is 0.2373 > 0.05 therefore it can be said it is insignificant. The result of this study reported investment opportunities has no significant effect on dividend policy. This result is not in line with literature which found investment opportunities has positive effect on dividend policy [3]. Firm with high investment opportunities will have a better cash flow then it can pay dividend in high amount. However result of this study supported by literature which there is no significant effect of investment opportunities on dividend policy [14]. Dividend payment depends on the investment decisions made by the firm. Thus there is no significant effect of investment opportunities on dividend policy.

3.7. Firm Size
The result of the coefficient showed the influence of firm size on dividend policy is -1.624961. Statistical test showed the p-value is 0.0124 < 0.05. The result of this study reported firm size has negative effect on dividend policy. In contrast, a significant positive association between firm size and dividend policy [3]. Large firms generally have various ownership. This increase the agency cost. Then to mitigate the agency problem between principal and agent, firm need to pay dividends. This result consistent with literature they found negative effect between firm size and dividend policy [12]. This happen as the larger size of the firm, the greater the expenses it owned, and it will leads to reduce the proportion of dividends distributed to shareholders. There is negative effect of firm size on dividend policy.

3.8. Largest Shareholder
The result of the p-value is 0.3070 > 0.05 therefore it can be said it is insignificant. The result of this study show largest shareholder has no significant effect on dividend policy. This result is in contrast to a study by literature who stated that largest shareholder has a positive effect on dividend policy [16]. The higher percentage shares owned by it largest shareholder, the dividend payment will be higher. The result of this study is supported by literature which found largest shareholder has no effect on dividend policy [15]. There is no effect of largest shareholder on dividend policy.

3.9. Firm Risk
The result of the p-value is 0.0857 > 0.05 therefore it can be said it is insignificant. The result of this study show firm risk has no significant effect on dividend policy. This supported by literature, they discovered firm risk has no impact on dividend policy [3]. This means that the amount dividend payment is not depends on the risk had by the firm. A study also stated no effect between firm risk and dividend policy [16]. Literature study found that firm risk has no significant effect on dividend policy [17].

3.10. Lagged Dividend
The result of the coefficient show the influence of lagged dividend on dividend policy is 0.166561. Statistical test show the p-value is 0.0226 < 0.05. The result of this study reported lagged dividend has positive effect on dividend policy. In contrast, literature found no significant effect between lagged dividend and dividend policy [3]. However it is supported by literature that discovered a significant positive association between lagged dividend and dividend policy [4]. Previous year’s dividend has positive relation on current dividend [12]. If the dividend of the previous year was in a stable form, then current dividend payment will be in a stable level or even better, increased.

4. Conclusion
This research is done to examine the influence of earning, cash flow, free cash flow, debt, growth opportunities, investment opportunities, firm size, largest shareholder, firm risk, and lagged dividend on dividend policy (dividend per share) in companies listed in Indonesia Stock Exchange for the period of 2011-2015. Based on above analysis and discussions, it can be concluded that significant positive effect on dividend policy: earning, free cash flow, lagged dividend; significant negative effect
on dividend policy: cash flow, firm size; significant positive effect on dividend policy: debt, growth opportunities, investment opportunities, largest shareholder, firm risk.

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