The Influence of Company’s Characteristics to Propensity to Pay Dividend

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Abstract: The study aims at describing and analyzing the influence of company’s characteristics to propensity to pay dividend. The units of observation were 4530 companies recorded by Indonesia Stock Exchange from 2008 up to 2017. In analyzing the data, logit regression was implemented. The finding shows that the greater the company’s profitability, the greater the propensity to pay dividend will be. Further, the lower the asset growth and market to book ratio, the greater the propensity to pay dividend will be.

1 INTRODUCTION

Baker and Wurgle (2004) explained that by having the control of company’s characteristics, the company will share the dividend based on the investor’s willingness. The manager will always serve the investors’ demand by paying the dividend when the investors determine the high price on premium dividend of payers company, and he also determines not to pay the dividend when the investors prefer non-payers companies to the payers companies (Baker & Wurgler, 2004a).

This theory emphasizes on investors’ demand on dividend which is affected by market sentiment. The main estimation of catering theory is that the probability on dividend payment depends on premium dividend. It can be measured by looking at the difference on average logarithm of market to book ratio of payers and non payers companies (Baker & Wurgler, 2004a). The catering theory also states that companies’ determination in sharing the dividend is not only influenced by the investors’ demand, but also considering the companies’ characteristic

Baker & Wurgler (2004b) implemented the company’s characteristics as a control variable for explaining the relationship between premium dividend and propensity to pay dividend in their research. Their finding shows that the company’s characteristic is influential to the probability of a company in paying the dividend. A company with a firm size, great profitability, low asset growth, and low market to book ratio considers more on the investors’ willingness on dividend than a company with a firm size, low profitability and high asset growth, and high market to book ratio. This finding is in line with the research conducted by Baker & Wurgler (2004a), Fama & French (2001), Ferris, Jayaraman, & Sabherwal (2009), Denis & Osobov (2008), Li & Å (2006), and Wang & Lin (2016). The company should not only consider the investor’s demand on dividend, but it should also assess the company’s characteristic

However, Tangjitprom’s research finding (2013) is rather different. It illustrates that high growth of company causes high probability of propensity to pay dividend. The company still pays the dividend although the company’s growth is high. This is because the company has high performance. Suranta, Eddy (2010) wrote that profitability and growth opportunities do not influence propensity to pay dividend. Nurhayati (2013) argued that firm size has negative influence to dividend payout ratio, while Situmorang (2017) found that firm size does not influence dividend payout ratio. Moreover, the company size does not impact the number of dividend shared by the company. It has not been able to become a guarantee yet for the company to give high
dividend. Then, the company can choose to keep its profitability to fund the company’s growth rather than giving the dividend. In fact, there are still research gaps and they can be explored deeper to test the impact of company characteristic to propensity to pay dividend in Indonesia.

2 LITERATURE REVIEW

Catering Theory of Dividend
An alternative approach on propensity to pay dividend is dividend catering theory proposed by Baker & Wurgler (2004a). They argued that dividend demanded by the investors encourage the company to pay the feasible dividend for investors. This market desire is called as "catering incentive". They use proxy to meet the investors’ needs on dividend; premium dividend is the difference between the average market ratio to book dividend payer and non payer.

Catering theory is developed based on 3 assumptions. First, it is unknown. In other words, it emerges because it may be because of psychological or institutional reasons. Some investors lack of information or stocks need various times to be levied on dividend. Second, arbitration is failed to avoid the demand to separate the price of payers not the payers. Third, managers rationally meet the investors’ demand (Baker & Wurgler 2004a). Based on above assumption, Baker & Wurgler (2004a) proposed that the decision to pay dividend is motivated by the investors’ demand. The manager serve the investors by paying the dividend when they set high price on premium dividend of payers company. Further, the manager chooses not to pay the dividend when the investors prefer non-payers company.

Their study has empirically proven that the changes of dividend paid to shareholders can be explained by looking at the market demand. Specifically, the study reveals the relationship between dividend premi and the company’s decision to pay dividend. Besides, dividend premi can clarify the phenomena of dividend lost because of the changes of company’s characteristic (Fama & French, 2001). Fama & French (2001) pointed out that payers companies are the companies that have great profitability and size, and low market to book ratio and asset growth. Baker & Wurgler (2004) stated that investors’ sentiment influences a company with great profitability and firm size. The relationship between dividend and life cycle can be explained by the theory of life cycle. This theory views that optimum dividend policy issued by the company depends on the life cycle of company. The more mature the company, the higher the dividend payment will be. The dividend payers are the mature companies that have the high ratio of profitability for capital contribution, while new companies usually have high growth, so that, they do not pay dividend. It can be concluded, mature companies with low growth will have high probability to pay dividend and new companies with high growth will have low probability to pay dividend.

Firm Size
Firm Size illustrates whether the company is small or big. The big and settled company have easy access to the capital market to rise their funds with low cost. Further, new and small companies will have many difficulties to access the capital market (Marietta & Sampurno, 2013). The ease of accessing the capital market means the ability of a company to attract investors to invest. The new fund can motivate the company to pay its duty that includes dividend payment to the shareholders. Wang & Lin (2016) found that firm size influences the probability of propensity to pay dividend positively. The bigger the company, the bigger the probability of company to pay dividend will be. That is also supported by Baker & Wurgler (2004), Fama & French (2001), and Utami (2015).

H1: Size influences propensity to pay dividend positively

Profitability
Profitability is defined as the ability of a company to yield profit for the company. The greater the profit yielded by the company, the greater the probability of dividend shared will be. This aims at giving trust for the investors (Utami, 2015). That is also supported by Baker & Wurgler (2004), Fama & French (2001), Adi & Kunci (2018), dan Situmorang (2017).

H2: Profitability has positive influence to propensity to pay dividend

Asset Growth
Growth is company asset, and it is used as operational asset of the company (Marietta & Sampurno, 2013). Baker & Wurgler (2004a) illustrated that the higher the asset growth of company, the lower probability of company to pay the dividend will be. The growing company needs much fund to develop the company in the future. The company prefers keeping its profit to paying dividend for shareholders as it is stated by

H3: Asset growth influences propensity to pay dividend negatively

**Market to Book Ratio**
The high chance to invest encourages the company to have the probability for paying fewer dividend. Residual theory says that the company will pay the dividend when they do not have beneficial chance of investment (Utami, 2015). Fama & French (2001), argued that the higher the market to book ratio for a company, the lower the probability of a company to pay dividend will be. This is also supported by Baker & Wurgler (2004 a b), Rahmawati (2017), and Tangjitprom (2013).

H4: Market to book ratio has negative influence to propensity to pay dividend.

### 3 METHOD

This study was quantitative. Besides, its design was casuality that might have cause and effect between variables. The data for this study was secondary data collected from the financial report of companies recorded at Indonesia Stock Exchange from 2008 up to 2017 and Indonesian Capital Market Directory (ICMD). The samples were 546 companies with 4530 companies as units of observation.

The probability of propensity to pay dividend in this study was measured by using dummy variables that have value of 1(one) for the companies that pay the dividend and 0 (zero) for the companies that do not pay the dividend (Fama & French, 2001).

The independent variables in this study was companies’ characteristics that include firm size, profitability, asset growth and market to book ratio. Firm size was measured by looking at the ranking percentage; company percentage that have market capital less or equal to the companies (Fama & French, 2001), (Baker & Wurgler, 2004). Firm size is formulated as follow: Firm size = % rank market capitalization

Profitability was calculated by comparing profit before tax to the total asset owned by a company (Fama & French, 2001), (Baker & Wurgler, 2004). The profitability is also formulated as follow:

\[
Prof = \frac{\text{Prof before tax}}{\text{Total Asset}}
\]

Asset Growth is calculated based on the relationship between total assets (t) minus total assets before (t-1) to total assets before (t-1) (Fama & French, 2001), (Baker & Wurgler, 2004). Asset Growth is formulated as follow:

\[
\text{Asset Growth} = \frac{\text{Asset total} - \text{Asset total}_{t-1}}{\text{Asset Total}_{t-1}}
\]

Market to book ratio is measured by comparing market value equity plus book value of liability to book value of asse (Baker & Wurgler, 2004). The formula of Market to book ratio is written bellow

\[
\text{M/B} = \frac{\text{Market value of equity} + \text{Book value of liability}}{\text{Book value of assets}}
\]

### 3.1 Data Analysis

#### 3.1.1 Selection of Estimation Model

This study implemented qualitative respond regression since the dependent variable used was binary (Gujarati, 2013:172). There are three approaches of qualitative respond regressions; they are Linear Probability Model, Logit and probit.

The best estimation model can be done by implementing these two ways (1) requirement fulfilment \( 0 \leq E(Y_i | X_i) \leq 1 \), and (2) Normality test.

The Linear Probability Model was chosen as estimation if model the two requirements above are fulfilled. Further, the score should be between 0 and 1; and data was normally distributed. However, if one of the requirements can not be met, the estimation model that should be chosen was logit or probit model. Even though those models can be implemented easily, but there are some weaknesses; they are (1) nonnormal residual (galat), (2) heteroskedasticity (3) the possibility of Y value is not at the range of 0-1, and (4) \( R^2 \) is usually low (Gujarati, 2013:175).

The model of logit estimation interprets the results by using the value of odd ratio. While the model of probit estimation interprets the results by using standard normal table to transform the Z score to the opportunity. Basically, the difference between logit and probit is Logit means Cumulative standard logistic distribution (F), while Probit means Cumulative standard normal distribution (Φ). However, those two models actually have the same result

#### 3.1.2 Regression Model

Regression analysis with logit model in Eviews 9 was used in this study. The regression equation used is written bellow
\[ \text{PTPi} = \ln \left( \frac{P_i}{1-P_i} \right) = \beta_1 + \beta_2 X_1 + \beta_3 X_2 + \beta_4 X_3 + \beta_5 X_4 + \mu_i \]

Explanation:
PTPi = Dependent Variable (= 1 if the company pay dividend and has 0 value, if the company does not pay dividend)
\( P_i \) = probability of a company to pay dividend
\( X_1 \) = Firm size
\( X_2 \) = Profitability
\( X_3 \) = Asset Growth
\( X_4 \) = Market to book ratio
\( \mu_i \) = error standard

Goodness-of-Fit Test
Feasibility Test can be done by two ways; they are by looking at (1) Hosmer value and Lemeshow’s Goodness-of-fit-test statistic, and (2) value of McFadden R-Square (3) multicolinearity test

3.2 Hypothesis Test

In testing the hypothesis, \( H_0 \) on the estimation of logit or probit regression, and the estimation of maximum likelihood (ML), not OLS were implemented. The significance level applied was 0.05 (\( \alpha = 5\% \)). This means that researchers believed 100% on samples. The probability of samples that did not have the population’s characteristics was 5%. The hypothesis, \( H_0 \) was accepted if the significance value was less than 5. This means that dependent variables influences dependent variables

4 FINDINGS AND DISSCUSSION

Table 1. The Percentage of Payers Company

<table>
<thead>
<tr>
<th>Year</th>
<th>Payers</th>
<th>Non-Payers</th>
<th>Total</th>
<th>Payers</th>
</tr>
</thead>
<tbody>
<tr>
<td>2008</td>
<td>144</td>
<td>216</td>
<td>360</td>
<td>40.00%</td>
</tr>
<tr>
<td>2009</td>
<td>143</td>
<td>226</td>
<td>369</td>
<td>38.75%</td>
</tr>
<tr>
<td>2010</td>
<td>158</td>
<td>233</td>
<td>391</td>
<td>40.41%</td>
</tr>
<tr>
<td>2011</td>
<td>186</td>
<td>234</td>
<td>420</td>
<td>44.29%</td>
</tr>
<tr>
<td>2012</td>
<td>190</td>
<td>250</td>
<td>440</td>
<td>43.18%</td>
</tr>
<tr>
<td>2013</td>
<td>204</td>
<td>267</td>
<td>471</td>
<td>43.31%</td>
</tr>
<tr>
<td>2014</td>
<td>208</td>
<td>289</td>
<td>497</td>
<td>41.85%</td>
</tr>
<tr>
<td>2015</td>
<td>215</td>
<td>294</td>
<td>509</td>
<td>42.24%</td>
</tr>
<tr>
<td>2016</td>
<td>183</td>
<td>344</td>
<td>527</td>
<td>34.72%</td>
</tr>
<tr>
<td>2017</td>
<td>217</td>
<td>329</td>
<td>546</td>
<td>39.74%</td>
</tr>
</tbody>
</table>

Sources: The Processed Secondary Data

The above table illustrates the percentage of companies that pay the dividend from 2008 to 2017. The number of payers companies are fluctuated each year. Generally, the trend decreases. The lowest percentage was in 2014 which was amounted to 34.72% and the highest was in 2011 which reached 44.29%. The average percentage of payers company from 2008 up to 2017 was 40.85% and it could not reach 50% of the total companies listed at Indonesia Stock Exchange

4.1 Descriptive Statistics

Table 2. The descriptive Statistics of Variables

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>Median</th>
<th>Maximum</th>
<th>Minimum</th>
<th>Std. Dev.</th>
</tr>
</thead>
<tbody>
<tr>
<td>SIZE</td>
<td>0.09</td>
<td>0.02</td>
<td>1</td>
<td>0.000</td>
<td>0.18</td>
</tr>
<tr>
<td>PROF</td>
<td>0.00</td>
<td>0.03</td>
<td>170.5</td>
<td>-265.1</td>
<td>4.98</td>
</tr>
<tr>
<td>GROWTH</td>
<td>16.2</td>
<td>0.09</td>
<td>6576</td>
<td>-12.3</td>
<td>97.97</td>
</tr>
<tr>
<td>MTB</td>
<td>2.43</td>
<td>1.09</td>
<td>885.0</td>
<td>0.004</td>
<td>18.55</td>
</tr>
</tbody>
</table>

Sources: The Processed Secondary Data

Based on the data description, the growth of companies under study have greater various data than MTB, size and profitability.

Table 3. Hosmer and Lemeshow’s

<table>
<thead>
<tr>
<th>H-L Statistic</th>
<th>Prob. Chi-Sq(8)</th>
</tr>
</thead>
<tbody>
<tr>
<td>263.2044</td>
<td>0.000</td>
</tr>
</tbody>
</table>

Source: The Processed Secondary Data

Table 3 shows that the value of H-L statistic is 263.204 with the significance value less than 0.01 (0.000<0.01). It can be said that the model is not accepted (the model is not fit), so that the above independent variables can not be used to estimate the status of propensity to pay dividend.
Table 4. McFadden R-squared Testing

<table>
<thead>
<tr>
<th>Dependent Variable: PTP</th>
<th>Method: ML - Binary Logit</th>
</tr>
</thead>
<tbody>
<tr>
<td>McFadden R-squared</td>
<td>0.079457</td>
</tr>
<tr>
<td>LR statistic</td>
<td>486.7106</td>
</tr>
<tr>
<td>Prob (LR statistic)</td>
<td>0.0000</td>
</tr>
</tbody>
</table>

Source: The processed Secondary Data

Table 4 illustrates the value of McFadden R-Square that is at 0.079457. This means that dependent variables can be explained by independent variables, 7.94%. Generally, all of independent variables have significant impacts to propensity to pay dividend as they are shown by the statistic of LR value, 486.7106 with the probability of less than 5%.

4.2 Hypothesis Test

Based on table 5, it can be seen that all significance values of independent variables are less than 5% (α=0.05). This means that all firm size variables, profitability, asset growth and market to book ratio have significant impact to the probability of propensity to pay dividend.

The coefficient of firm size and profitability are positive. This means that the greater the firm size and the profitability, the higher the probability of company to pay dividend will be, and vice versa. The asset growth coefficient and market to book ratio are negative. This means that the probability of company to pay dividend will be lower.

Table 5. The Result of Logit Regression

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>Std. Error</th>
<th>z-Statistic</th>
<th>Prob.</th>
<th>Odd Ratio/Exp(β)</th>
</tr>
</thead>
<tbody>
<tr>
<td>SIZE</td>
<td>2.0672</td>
<td>0.200</td>
<td>10.31</td>
<td>0</td>
<td>7.9132</td>
</tr>
<tr>
<td>PROF</td>
<td>4.4663</td>
<td>0.335</td>
<td>13.29</td>
<td>0</td>
<td>87.281</td>
</tr>
<tr>
<td>GROWTH</td>
<td>0.1329</td>
<td>0.035</td>
<td>3.715</td>
<td>02</td>
<td>0.8755</td>
</tr>
<tr>
<td>MTB</td>
<td>0.1620</td>
<td>0.022</td>
<td>7.234</td>
<td>0</td>
<td>0.8503</td>
</tr>
<tr>
<td>C</td>
<td>0.5069</td>
<td>0.045</td>
<td>11.15</td>
<td>0</td>
<td>0.6021</td>
</tr>
</tbody>
</table>

Source: The Processed Secondary Data

Based on above table, a regression equation can be formulated; and it is written as follow:

\[ \ln \left( \frac{p}{1-p} \right) = -0.507 + 2.067 \text{ Size} + 4.466 \text{ Profit} - 0.133 \text{ Growth} - 0.162 \text{ MTB} + u \]

The interpretation of logit model equation uses odd ratio or Exp(β) (See Table 5). From the equation, it can be seen that the coefficient of firm size is 2.06722 with the odd ratio value of 7.9132. This means the probability of company to pay the dividend increases as many as 7.9132 times when there is a rise of 1 unit on firm size.

**Firm Size to Propensity to Pay Dividend**

The findings show that firm size influences positively and significantly to the probability of propensity to pay dividend. The greater the firm size, the greater the total assets will be. Further, the lower the investment to meet the needs of asset, the greater the probability of propensity to pay dividend will be. These findings are in line with the researches conducted by Baker & Wurgler (2004 a b), Elisabete & Neves (2018), Tangjitprom (2013), and Utami (2015). The companies with great total assets may have lower possibility to purchase more asset. Then, the profit can be allocated to the dividend share.

**Profitability to Propensity to Pay Dividend**

The findings show that the profitability influences the probability of propensity to pay dividend positively and significantly. The higher the profitability gained by a company, the higher the probability of propensity to pay dividend. The aim is for getting investors’ trust. This finding is in line with Utami(2015), (Tangjitprom, 2013), Ferris, Jayaraman, & Sabherwal (2009), and Denis & Osobov (2008).

The company with high profitability is usually at mature stage, so that, it does not need much fund for investment. It will impact on the probability of higher dividend payment.

**Asset Growth to Propensity to Pay Dividend**

The finding shows that asset growth has negative and significant impact to the probability of propensity to pay dividend. The company with high growth needs money to fund the growth of company in the future both investment and expansion, so that, the probability of company to share the dividend is low. Those are also argued by Chahyadi (2010), Fama & French (2001), Baker & Wurgler (2004), and Simbolon & Sampurno (2017). A company with high growth needs much fund for investment, so that, the probability to pay the dividend is low.
Market to book ratio to Propensity to Pay Dividend
The finding explains that market to book ratio of a company influences the propensity to pay dividend significantly and negatively. The higher the market to book ratio of company, the lower the probability of propensity to pay dividend. It is suitable with the residual theory that says a company will pay the dividend if it does not have an opportunity to have beneficial investment. In other words, the companies with high opportunities to expand will keep their current asset as their profit will be kept and allocated more for investment than dividend sharing as it is stated by Fama & French (2001), Tangjitprom (2013), and Ferris, Jayaraman, & Sabherwal (2009).

5 IMPLICATION
The greater the firm size, the higher the probability of a company to pay dividend will be. The higher the asset growth, and the market to book ratio of a company, the lower the probability of company to pay dividend will be. These findings support Baker & Wurgler (2004a) that is about trade-off. When the investor will increase the value of a company at the market because of dividend sharing, then, the company should pay the dividend. However, if the investors prefer non-payer to payer, then the company do not need to pay the dividend. This study does not only discuss how much dividend that should be paid, but also the possibility of company to pay the dividend. As trade-off matter, the company will consider the characteristic of company.

REFERENCES