Factors Affecting Dividend Policy at Consumer Goods Sector Companies Listed in Indonesia Stock Exchange Period 2010-2014

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ABSTRACT: This study objective is to analyze the effect of sales growth, risk, profitability, and investment opportunity set on dividend policy of Consumer Goods Industry Sector Companies in Indonesian Stock Exchange since 2010 to 2014. The total samples used in this study are 25 companies for each period. This study uses quantitative approach with multiple linear regression method. This study found that company sales growth, company risk, company profitability, and investment opportunity set simultaneously have significantly effect on dividend policy of Consumer Goods Industry Sector Companies since 2010 up to 2014. Partially, only investment opportunity does not affect significantly on dividend policy, and other sales growth, risk, profitability significantly affect on dividend policy. These results indicate that management should pay attention to sales growth, risk, and profitability to makes dividend policy.

Keywords: dividend policy, sales growth, profitability, investment opportunity.

I. INTRODUCTION

Dividend policy is a fundamental part and very important because the dividend has a special attraction for investors (Hatta, 2002). The management company should determine the optimal dividend policy to create a balance between current dividends and future growth.

Data from Indonesian Stock Exchange (IDX) in 2008-2011 shows that consumer goods sector is a largest contributor sector to Dividend Payout Ratio (DPR). Average DPR of consumer goods sector in 2008-2011 reached 27.74% (Halim, 2013). I chose the consumer goods sector for period 2010-2013 that will be examined. Research about dividend with DPR as proxy shows several factors that have a significant effect on DPR, namely growth, risk, profitability, and investment opportunities.

Rodzef (1982) suggest that growth and risk have negative and significant effect on dividend policy. Suwarna (2007) examined effect of profitability and investment opportunities or investment opportunity set (IOS) on DPR. The result shows that only profitability has significant effect on DPR with a negative direction. Marpaung and Hadianto (2009) examine three factors to affect the DPR, namely growth, profitability, and IOS. Research results showed profitability and IOS variables has significant and effect on DPR. Suwardi and Aziz (2006) examined five factors to affect the DPR, namely growth, risk, agency cost, profitability, and IOS. Research results show only IOS that significantly has positive effect on DPR. Ahmad (2009) examined two factors affecting the DPR, namely the profitability and IOS. The research results show that IOS have a negative and significant on DPR. Leon and Son (2014) states that only the growth and profitability have a significant effect on dividend policy, while the investment opportunities did not have a significant effect. Ahmad and Wardani (2014) show that profitability has significant and positive effect on dividend policy. Eije et al. (2012) examined the effect of risk on company's dividend policy. The research result shows that risk has significant and negative on dividend policy.

II. LITERATURE STUDY AND HYPOTHESIS DEVELOPMENT

According Wachowicz (1997) in Puspita (2009) Dividend policy is an integral part of company funding decisions. The dividend payout ratio determines the amount of retained earnings as a funding source. Greater retained earnings will decrease less amount of profit allocated for dividend payments. Determining the profits allocation as retained earnings and dividend payments is a major aspect in dividend policy. The ratio between dividends and net income is often referred to as Dividend Payout Ratio (DPR). At first glance, shareholders like if net profit is distributed as dividend increases. However, if the DPR is bigger the retained earnings will smaller, while funding by retained earnings (internal financing) has a smallest cost of capital compared to other funding methods. Therefore, dividend decision will refer to an optimal dividend policy, especially adapted to concept of maximizing the value of company (Suwardi and Aziz, 2006).

Company growth potential is an important factor to determine the dividend policy (Chang and Reee, 1990, in Puspita 2009). The higher rate of growth will increase funds need to finance the expansion. The greater fund need for funds in future will increase possibility to retain profits and not pay it as dividends by considering that cost of capital from retained earnings is smallest (Easterbrook, 1984, in Marpaung and Hadianto, 2009).
Rozeff (1982) stated that company will pay a lower dividend when found a high risk market. High market risk reflects high cost of operation and financial high. Therefore, company pays lower dividend to avoid the cost of external financing.

Anil and Kapoor (2008) stated that profitability has been long time become a major indicator to shows the company's capacity to pay dividends. Linter (1956), Anil and Kapoor (2008) shows the pattern of dividend payments was affected by dividend payment this year and last year. Profitable company can to pay dividends while keeping the internal funds in form of retained earnings to finance investment.

Company investment opportunity is one determinant of dividend payment (Erkaningrum, 2007). There is relationship between investment funds should be paid out as cash dividends to shareholders and will be used to purchase a profitable investment (Suharli, 2007). Companies with good prospects have many investment opportunities that encourage companies to decrease the dividend payments, so that companies have internal equity to finance investment (Erkaningrum, 2007) to reduce the problem of underinvestment (Suharli 2007).

Based on above literature, below are hypothesis developments for this study:

- H1: The company's growth significantly affects company's dividend policy
- H2: Market risk significantly affect on company's dividend policy
- H3: Profitability significantly affect on company's dividend policy
- H4: Investment opportunity set significantly affect on company's dividend policy

The research framework can be shown at figure 1 below.

### III. RESEARCH METHODS

This is an applied research when seen from the findings. This study is a causal research to determine the effect of independent variables (growth, market risk, profitability, and investment opportunity set) on dependent variable (dividend policy). This study is experimental is based on techniques used. Based on kind of independent and dependent variables studied, study uses a quantitative approach. The model is analyzed by multiple linear regressions.

The variable in this study is divided into two, namely the dependent and independent variables. Each of these variables will be explained below.

1. **Dependent variable**

   The dependent variable in this study is the dividend policy. Dividend policy is a plan of action to be followed in decision making of dividends on consumer goods sector companies in Indonesia Stock Exchange during the period 2010-2013. This dividend policy is proxied by Dividend Payout Ratio (DPR). DPR can be measured by using the formulation below.

   \[ DPR = \frac{\text{Dividend}_t}{\text{Net Income}_t} \]

2. **Independent Variables**

   **a) Company Growth**

   The company growth is company effort to maintain its business position in economic and industrial development. The company's growth can be proxied by using Sales Growth. Sales Growth can be measured by using the formulation below.

   \[ SG = \frac{Sales_t - Sales_{t-1}}{Sales_{t-1}} \]
b) Market Risk
Market risk is the risk that cannot be diversified by company’s portfolio that comes from factors beyond the company control. Market risk can be proxied by the beta coefficient. Beta coefficient is based on a single index model or market model. Beta coefficient can be calculated by formulation below.

$$\beta_i = \frac{\sigma_{wi}}{\sigma_{wi}^2}$$

c) Profitability
Profitability is something acquired companies with costs to be incurred, as difference between the company's revenue with costs to be incurred in an accounting period. Profitability can be proxied by Return on Assets (ROA). ROA can be measured by formulation below.

$$ROA = \frac{Net\ Income_{t}}{Total\ Assets_{t}}$$

d) Investment Opportunity Set
Investment Opportunity Set is the breadth of opportunities or investment opportunities in future, which would represent growth of these companies. Investment Opportunity Set in this study is proxied by Market to Book Value (MTBV). MTBV can be measured by formulation below.

$$MTBV = \frac{P_t}{Book\ Value_t}$$

This research uses is secondary data. Secondary data were obtained from financial statement of consumer food companies listed in Indonesia Stock Exchange during the period 2010-2013 and performance summary the companies listed on Indonesia Stock Exchange during the period 2010-2013. Data obtained from the financial statements www.idx.co.id and Indonesian Capital Market Directory (ICMD). Performance summary is obtained from www.idx.co.id. Stock quotes are obtained from finance.yahoo.com, and official website of each company.

The target population in this study is all go public consumer goods companies sector and its shares are listed in Indonesia Stock Exchange in period 2010-2013. Data is collected by purposive sampling method. Population selection is based on an assessment of some of characteristics that are tailored to purpose of research. Population is determined from following characteristics: (1) Listed in Indonesia Stock Exchange, paying cash dividends regularly or irregularly during the period 2010-2013; (2) Issuing a coherent financial statements and audited each year during the period 2010-2013; (3) Never delisted from the Indonesia Stock Exchange during the period 2010-2013; (4) Audited Financial Statements can be accessed during the period 2010-2013; (5) Using Rupiah as the recording and reporting currency in 2010-2013.

Data collection procedures performed in this study include the establishment of necessary data in accordance with variables in study, looking for source of data provider, download the data, processing and make the data tabulation. The data will be processed with SPSS. Statistical processing in this study includes descriptive analysis, followed by classic assumption test and hypothesis testing.

1. Descriptive Statistics Analysis
This study uses descriptive statistical analysis to shows the average, minimum and maximum values, and standard deviation of each variable.
2. Classical Assumption Test
   a. Normality Test. This test is aimed to analyze the confounding variable in regression model (residual) and is the has a normal distribution. Gujarati (1991) in Andriani (2011) states that residual confounding variables must be removed to eliminate the linear effect to purify the effect from contamination.
   b. Test Multicollinearity. According to Gujarati (2004) in Tanzania (2010) "multicollinierity show a perfect linear relationship between all or some of independent variables of a regression model". Linear relationship between the independent variables can create bias in equation used.
   c. Autocorrelation Test. Autocorrelation is a condition where error of each independent variable has correlation. This test is aimed to determine the presence or absence of autocorrelation, or to see whether a linear regression model has no correlation between errors period t with an error in period t1 (previously). The calculation can be done by test Durbin-Watson (DW) (Adhiputra, 2010).
   d. Heteroscedasticity Test. Heteroscedasticity test aims are to determine whether the independent variables will contribute equally to dependent variable (Santoso, 2000 in Halim, 2011). According Priyatno (2010) in Halim (2011), heteroscedasticity is a state where there is inequality variant of residuals for all observations in regression model. If there is variance of observations residuals to other
observations, it is called homoscedasticity and if different is called Heteroscedasticity (Ghozali 2005, in Ahmad, 2009).

3. Regression Analysis

This study uses multiple linear regression to process the data to see the effect of independent variables on dependent variable.

The equation used for testing hypotheses is below

\[ DPR = \alpha + \beta_1 \text{SG} + \beta_2 \text{BETA} + \beta_3 \text{ROA} + \beta_4 \text{MTBV} + e \]

Description:

- DPR = Dividend Payout Ratio for I firm in t period
- \( \alpha \) = constants
- SG = Sales Growth of I company in t period
- BETA = Beta of I firm in t period
- ROA = Profitability of I firm in t period
- MTBV = The investment opportunity set of I firm in t period
- \( \beta_1, \beta_2, \beta_3, \beta_4 \) = coefficient of regression
- e = Standard error (the error)

4. The determination coefficient (R²)

The determination coefficient shows independent variables ability to explain variability in dependent variable. R² values assigned to certain restrictions, namely R² lies between 0 and 1 (0 ≤ R² ≤ 1). When the value of R² = 1 or closer to 1, proportion of diversity on dependent variable (dividend policy) which can be explained by independent variables (growth, market risk, profitability, and investment opportunities) is 100%.

There are two tests were conducted of equation testing and regression coefficients testing, (1) simultaneous testing (test F); and (2) the partial test (t test). According to Nugroho (2005), F test aims is to determine the simultaneous effect of independent variable (growth, market risk, profitability, investment opportunities set) on dependent variable (dividend policy). Partial test was conducted to determine how the partial effect of independent variables (growth, market risk, profitability, investment opportunities set) on dependent variable (dividend policy). Both of these tests will use a 5% significance level.

IV. RESULTS AND ANALYSIS RESEARCH

Descriptive analysis result is presented at table 1 below

Table 1. Descriptive Statistics

<table>
<thead>
<tr>
<th></th>
<th>DPR</th>
<th>BETA</th>
<th>SG</th>
<th>ROA</th>
<th>MTBV</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>0.344</td>
<td>1.061</td>
<td>0.173</td>
<td>0.133</td>
<td>5.560</td>
</tr>
<tr>
<td>Maximum</td>
<td>1.751</td>
<td>11.521</td>
<td>1.269</td>
<td>0.670</td>
<td>46.955</td>
</tr>
<tr>
<td>Minimum</td>
<td>-0.077</td>
<td>-1.550</td>
<td>-0.389</td>
<td>-0.113</td>
<td>0.281</td>
</tr>
<tr>
<td>Std. Dev.</td>
<td>0.381</td>
<td>1.422</td>
<td>0.221</td>
<td>0.133</td>
<td>8.788</td>
</tr>
<tr>
<td>Observations</td>
<td>125</td>
<td>125</td>
<td>125</td>
<td>125</td>
<td>125</td>
</tr>
</tbody>
</table>

Source: Primary data, Processed

Table 1 shows that number of observations in this study are 125. The number of observations that should be used actually 116, but due to disposal of 1 outliers then the last number of observations are 125. The highest average (mean) is opportunity investment amounting to 5.560 and lowest is profitability variable that equal to 0.133. Variables that had the highest standard deviation are investment opportunity set at 8.788 and lowest is profitability. The higher standard deviation value indicates greater range value of variable.

Multicollinearity test results at table 2 in this study used can be seen from tolerance value of each independent variable is above 0.10 and all VIF values are under 10. Therefore, it can be concluded that regression model is free of multicollinearity. In other words, assumption free multicollinearity is fulfilled.

Table 2. Multicollinearity Test Results

<table>
<thead>
<tr>
<th>Model</th>
<th>Tolerance</th>
<th>VIF</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>SG</td>
<td>0.960</td>
<td>1.121</td>
<td>Free from multicollinearity</td>
</tr>
<tr>
<td>BETA</td>
<td>0.910</td>
<td>1.211</td>
<td>Free from multicollinearity</td>
</tr>
<tr>
<td>ROA</td>
<td>0.613</td>
<td>1.933</td>
<td>Free from multicollinearity</td>
</tr>
<tr>
<td>MTBV</td>
<td>0.611</td>
<td>1.790</td>
<td>Free from multicollinearity</td>
</tr>
</tbody>
</table>

Source: Primary data, Processed
Normal Probability Plot. Analysis result shows that the point is along with diagonal line. It can be concluded that the data is normal.

**Figure 2. Normal Probability Plot**

Scatter Plot graphs to determine heteroscedasticity of regression model. Based on the figure 3, it can be seen that points on graph spreads above and below zero on y axis, so it can be concluded that there is no heteroscedasticity in regression model.

**Figure 3. Scatter Plot graphs**

Durbin Watson is used to test the autocorrelation problems. Analysis result show the Durbin Watson is 1.990. The number of observations (n) is 125 and independent variables (k) are 4 variables. Therefore the lower limit of 1.76 and an upper limit of 2.24. These results show that regression model is between the upper and lower limits and there is no autocorrelation in regression model. The following is test results of Durbin Watson regression model.

**Table 3. Results of Durbin Watson Test**

<table>
<thead>
<tr>
<th>Lower Limit</th>
<th>Durbin Watson</th>
<th>Upper Limit</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.76</td>
<td>1.990</td>
<td>2.24</td>
<td>Free from autocorrelation</td>
</tr>
</tbody>
</table>

Source: Primary data, Processed
Table 4 below shows that significance value of F test is 0.000 F test. It can be concluded that all the independent variables simultaneously have significant effect on dividend policy.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>t-Statistic</th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
<td>0.211</td>
<td>5.201*</td>
</tr>
<tr>
<td>SG</td>
<td>-0.581</td>
<td>-5.410*</td>
</tr>
<tr>
<td>BETA</td>
<td>-0.041</td>
<td>-2.200*</td>
</tr>
<tr>
<td>ROA</td>
<td>1.799</td>
<td>7.899*</td>
</tr>
<tr>
<td>MTBV</td>
<td>0.007</td>
<td>1.245</td>
</tr>
</tbody>
</table>

R-squared = 0.626
Adjusted R-squared = 0.711
F-statistic = 46.119*

Note: * Significant at 5% level

Source: Primary data, Processed

Table 5 above shows that constant value is 0.211. It means that if all the independent variables (growth, enterprise risk, profitability, and investment opportunity set) are 0, then the dividend policy value is 0.211. Regression coefficient of company's growth (SG) is -0.581. This value indicates that there is a negative relationship between growth (SG) and dividend policy. The coefficient value also means that increasing a unit of growth (SG) with assumption of other independent variables remains constant will make dividend policy decrease by 0.581. The coefficient value risk (BETA) is -0.041. This value indicates that there is a negative relationship between risks (BETA) with dividend policy. The coefficient value also means that increase one unit of company's risk (BETA) assuming other independent variables remain constant will make dividend policy decrease by 0.041. Regression coefficient of profitability (ROA) is 1.799. This value indicates a positive correlation between a company's profitability (ROA) and dividend policy. The coefficient value also means that increase one unit of company's profitability (ROA) assuming other independent variables remain constant will makes dividend policy value increase by 1.799. Regression coefficient value of investment opportunities set (MTBV) is 0.007. This value indicates a positive correlation between investment opportunities (MTBV) and dividend policy. The coefficient value also means that increase one unit of investment opportunity set (MTBV) assuming other independent variables remain constant will makes dividend policy value will increase by 0.007.

From the above description can be made the regression equation below.

\[ DPR = 0.211 - 0.581 \text{SG} - 0.041 \text{BETA} + 1.799 \text{ROA} + 0.007 \text{MTBV} \]

Company's growth has a negative effect on dividend policy with a regression coefficient of 0.581 and a significance level of 0.000. This indicates that variable company growth has a significant and negative effect on dividend policy. Higher the growth will decrease dividend distributed by company. This proves that hypothesis 1 is accepted. This result is also supported by other studies of Rozeff (1982), Munthe (2009), Leon and Son (2014), and Puspita (2009) which shows that growth has a negative effect on company's dividend policy. The higher company growth needs more funds to finance such growth. The company usually will prefer to hold their income rather than pay by considering the lower costs. Increasing sales growth makes company will tend to give priority to investments with high potential for returns than pay dividends to shareholders. In other words, dividend distribution will decline in value because the funds had been for investment. Adversely, if the company has achieved a growth rate at well established level, funds needs can be met from the capital markets or other external funding sources. In such cases the company can establish a high dividend payout ratio (Riyanto, 2001, in Puspita, 2009).

Company risk has a negative effect on dividend policy with a regression coefficient of 0.041 and significance level of 0.036. This indicates that company's risk variables have a significant negative effect on dividend policy. Higher company risk can decrease dividend distributed by company. This proves that second hypothesis is accepted. This result is also supported by other studies of Rozeff (1982) and Efendi (2007). Rozeff (1982) stated that company will pay a lower dividend when the company faced a high risk market. High market...
risk reflects the operating and financial costs are high. Therefore, company pays a dividend to a lower amount to avoid the cost of external financing. This is consistent with Efendi (2007) that Company with higher degree of market risk will pay dividends at a lower level. This is done to avoid dividends cut if profits fall. Market risk has a negative effect on dividend payout ratio. Apart from the two above results, Suhartono (2004: 42), and D'Souza and Saxena (1999) mentioned that beta is used as an indicator of market risk, so that when a high beta value of a company, it will be sensitive to changes in market, so the possibility of company to get funds from abroad to finance its investment is more difficult, because investors and lenders will be more cautious.

Company profitability variable has a positive effect on dividend policy with a regression coefficient of 1.799 and a significance level of 0.000. This indicates that company profitability has a significant positive effect on company's dividend policy. Higher the company profitability can increase the dividends distributed by company. This proves that third hypothesis is accepted. This result is also supported by other studies of Marpaung & Hadianto (2009), Hadiwidjaja (2007), Harahap (2004), Halim (2013), and Kadir (2010) who found that company profitability has a significant positive effect on dividend policy company. According to Harahap (2004), theoretically the higher return generated from existing assets will increase the company's net profit; increase in net income will increase dividend payments. Weston and Copeland (1992) in Harahap (2004) stated that rate of return on assets are expected to determine the relative option to pay such profits as dividends to shareholders (which would use the funds elsewhere) or use in company. It is reinforced by results of research and Wardani Ahmad (2014), Leon and Son (2014) states that higher company profitability makes company will have more money. The money can be used to pay dividends and also maintain company's revenue.

Investment opportunities set variable has a positive effect on dividend policy with a regression coefficient of 0.004 and significance level of 0.227. This indicates that investment opportunity set has positive but insignificant effect on dividend policy of company. Investment opportunity magnitude has insignificant effect on company's dividend policy. This proves that hypothesis 4 is rejected. This result is also supported by other studies conducted by Erkaningrum (2007), and Anil Kapoor (2008) who found that variable investment opportunity set has no significant effect on company's dividend policy. This can happen because the companies listed in consumer goods industry sector use the dividend policy range from zero-growth dividend, constant dividend growth, and low-regular-and-extra dividend. Halim (2013) found some companies use policy of zero-growth dividend as DVLA, companies that use policies constant growth of dividend as TCID, and companies that use the policy low-regular-and-extra of dividend as TSPC. Funds size spent on investment will not significantly affect on dividend policy.

Table 5 show that Adjusted R-squared in this study was 0.711. This means that variable company growth, company's risk, profitability, and investment opportunity set could explain 71.1% of company's dividend policy. While the remaining 28.9% is explained by other variables.

V. CONCLUSIONS AND RECOMMENDATIONS

Testing hypotheses by F test showed that variables of company’s growth, risk, profitability and investment opportunities set simultaneously have a significant effect on dividend policy of consumer goods sector company in Indonesia Stock Exchange during the period 2010 -2013. This indicates the model can be used to predict the factors affecting the dividend policy of company.

Hypotheses testing with t test show that company growth variable significantly has a negative effect on company dividend policy, company risk have a negative and significantly risk on company dividend policy, company profitability has a positive and significant effect on company dividend policy, and investment opportunity set has no significant positive effect on company dividend policy of consumer goods industry sector during the period 2010-2014.

The coefficient of determination R^2 in this study was 0.711. This means that variable of company growth, company risk, company's profitability and investment opportunities set could explain 71.1% of company's dividend policy. While the remaining 28.9% is explained by other variables.

Based on research results, it can be made the following recommendations. (1) Company management should always pay attention to any strategic decisions, especially decisions related to company's profitability, because the profitability has a significant effect on corporate dividend policy that will affect on investors interest to invest in company. All strategic decisions are expected to increase the profitability to increase dividends payment. (2) Investors who want a dividends return should concern to company profitability, because
profitability has a positive effect on company dividend policy. In addition, investors should choose a company at low risk level because it will be followed by higher dividends payment.

REFERENCES