LEVERAGE AND LIQUIDITY ON DIVIDEND POLICY

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Abstract

The purpose of this research is to find out the influence of Leverage (DER) and Liquidity (CR) on dividend policy especially of LQ-45 listed manufacturing companies on Indonesia Stock Exchange. The sample was taken using purposive sampling method and the sample fulfilled the criteria of ten manufacturing companies. The data used were secondary data, namely the financial statements of companies that have gone public and LQ-45 listed on the Indonesia Stock Exchange in the period of August 2017. The data analysis techniques using panel data regression, test coefficient of determination, T test and F test shows that Leverage (DER) has a negative and insignificant effect on dividend and liquidity (CR) has a positive and insignificant effect. For determination coefficient test, $R^2$ value is 0.422502 which means that the combination of independent variable is able to explain dependent variable equal to 42% while the remaining 58% is explained by other factors outside the research model.

Keywords: “Leverage (DER), Liquidity (CR) and Dividend Policy (DPR)”
INTRODUCTION

Investors invest funds in a company with the aim of making a profit. The profits obtained can be in the form of dividends or more differences on the sale of shares sold (Capital Gain). Dividends are compensation received by shareholders, in addition to capital gains (Hanafi, 2015). Dividends distributed or received each year often vary in number. This kind of situation is unfavourable to the investors, as investors are more interested in stable dividends. Stable dividends are one of the strong indicators reflecting good and stable financial position of the company. Information about changes in dividends can also contain changes in future earnings. (Hotriado et.al, 2013) Hotriado (2013) stated in their study that problems in dividend policy have an impact on investors and companies that are at odds with each other. The company has a goal to improve the welfare of the investors by getting returns, both in the form of dividend yield and capital gains. Whereas the company also needs fund sources to increase and expects growth in order to survive. Various considerations regarding the determination of the right amount to be paid as dividends are a difficult financial decision for management (Ross, dkk 2009). One problem that is often considered by companies is debt. (Marlina dkk, 2009) revealed that the increase in debt will affect the size of the net income available to shareholders including dividends received because the obligation to pay debts takes precedence over dividend distribution. Not only companies but investors also make debt as one indicator in determining whether the company is worthy of being an investment place or not. Consequently a company must provide guarantees for investors in order that they become interested in investing in the company, one of them is liquidity. Greater liquidity indicates a higher ability of the company in fulfilling its short-term obligations. A high liquidity indicates investor confidence in the ability of the company to pay the promised dividend payout ratio.

Research on dividend policy has been carried out by several researchers and shows inconsistent results. Therefore, researchers are interested in further researching dividend policy using panel data regression analysis techniques. This study aims (1) to determine the effect of leverage (DER) on dividend policy, (2) to determine the effect of liquidity (CR) on dividend policy.

LITERATURE REVIEW

Dividend Policy

Dividends are compensation received by shareholders, in addition to capital gain (Hanafi, 2015). However, dividend distribution is not an obligation but a management policy called dividend policy. According to Darminto (2008),
Dividend policy is the policy of company management in determining the profits available to shareholders paid to them in the form of dividends or profits which are held in order to finance future investments. Whereas the Indonesian Accountants Association (2004), in PSAK No. 23, formulating dividends as distribution of profits to shareholders in accordance to their proportion of certain types of capital.

Theories related to dividend policy are:

a. *Dividend Irrelevance Theory*

Modigliani dan Miller (1961) who proposed the Dividend Irrelevance Theory stated that the value of a company is not determined by the size of the dividend payout ratio, but by net income before tax and company risk class. So, according to MM, dividend is not relevance. MM argue that a company value is only determined by the ability of the company to generate profits from the level of business risk, in other words MM believe that the value of a company depends entirely on the income generated by its assets.

b. *The Bird in The Hand Theory*

Other theory is opposing the theory of MM, Relevant Theory, the argument of irrelevance of dividend policy (Dividend Irrelevance) which assumes a perfect and efficient market. The perfect and efficient market meant here is no tax, no emission fees or transaction costs, investor preferences for dividends and capital gains are the same, sharing the same information. In reality, unfortunately, there is no perfect and efficient market.

c. *Tax Preference Theory*

This theory is proposed by Litzenberger dan Ramaswamy. Based on their argument, capital gains tax is usually lower than the tax on dividends,
therefore investors prefer companies to hold profits after tax and are used to finance investments rather than cash dividends. They stated that with the existence of taxes, investors prefer *capital gains* rather than dividends because *capital gains* can delay payment of taxes, where the tax on new *capital gains* will be paid after shares are sold, while taxes on dividends must be paid annually after dividend payment.

**Leverage**

Financial leverage is a partial funding practice of assets of companies with securities that bear the burden of fixed returns in hopes of increasing the final return for shareholders (Keown *et al.*, 2010:121). The bigger a company, the more it dares to take large amounts of debt in a long period of time. The leverage ratio is a measure of how much the company is financed by debt. The use of debt that is too high will endanger the company because the company will be categorized as extreme leverage, a category of a company which is caught in a high debt level and which finds it difficult to release the debt burden. (Irham Fahmi, 2016). *Debt to Equity Ratio* (DER) is a ratio that measures how far the company is financed by debt, a higher ratio of this reflects unfavourable symptoms of the company (Sartono, 2012). Pertinent theories are:

a. **Trade-off Theory**

The implication of the trade-off theory, according to Brealey dan Myers (1991), is companies with big business risks must use less debt than the companies with low business risk, because with greater business risk, the greater use of debt will increase the interest burden which results in increasing financial complication of the company. Companies that are subject to high taxes at certain limits should use a lot of debt because of the tax shield. The debt ratio target will vary between
one company with another company. Companies that are profitable and tangible assets have higher debt ratio targets. Unprofitable companies with high risk and intangible assets have lower debt ratios and rely more on equity.

b. Pecking Order Theory

This theory states that companies tend to prefer funding from internal companies rather than external. The use of external funding is carried out if the company's internal funds are insufficient. The larger proportion of debt can increase high profit growth, but on the other hand, large debt will increase the possibility of bankruptcy for the company, especially if the debt causes the company's growth to be small or even negative.

The result of Isnani Umah's research (2012) shows that the Debt to Equity Ratio has a positive and not significant effect on the Payout Dividend. Whereas Latiefasari and Chabachib (2011) in their research revealed that Debt to Equity Ratio (DER) had a negative and not significant effect on the Dividend Payout Ratio (DPR).

Liquidity

Liquidity is defined as the company's ability to pay off all its short-term obligations and fund business operations (Suhalri, 2006). Liquidity Ratio is the ability of a company to meet its short-term obligations in a timely manner. Current Ratio (CR) shows the ability of a company to pay its current debt using current assets (Sudana, 2009). Research of Sumarto (2007) reveals that liquidity variables have a positive influence on dividend policy, meaning the greater the liquidity position of a company, the greater the ability to pay dividends. The theory that supports this is:
a. Signalling Theory

This theory states that a good quality company will intentionally give a signal to the market, thus the market is expected to be able to distinguish good quality companies and poor quality ones (Hartono, 2005: 38). Announcement of dividends as a tool to send a tangible signal to the market regarding the results of the work of the company in the present and in the future is the right way, although it is expensive but very meaningful. (Sumarto, 2007) revealed that liquidity variables have a positive influence on dividend policy.

Latiefasari and Chabachib (2011) in their study stated that Current Ratio (CR) had a positive and not significant effect, while the results of the analysis on Kuniawan’s et al research (2016) shows that Current Ratio (CR) had no effect on the Dividend Payout Ratio (DPR).

The factors that influence the dividend policy included in the factor test are Leverage (DER) and Liquidity (CR). The relationship between the independent variable and the dependent variable can be described as follows:

![Conceptual Framework](image)

**Research Hypothesis**

H1: Leverage (DER) has influence on Dividend Policy

H2: Liquidity (CR) has influence on Dividend Policy
Research Method Research Design

This research is a quantitative research using associative methods, and the aim of this study was to determine the effect or also the relationship between two or more variables. The data used in this study is secondary data as these data have been published or used by organizations that are not their processors. This secondary data is obtained from Indonesia Stock Exchange (IDX) as well as the Annual Report for the period of 2013-2016.

Population dan Sample

The population in this study were companies listed LQ-45 on the IDX, totaling 45 companies. The selection of research samples was carried out by purposive sampling method with the following criteria: (1) The company was included in the LQ-45 list on the Indonesia Stock Exchange in the August 2017 period. (2) The company has submitted financial statements and notes to the financial statements as of December 31 on a regular basis for four years according to the research period required, namely from 2013 to 2016. (3) Companies that submit data in full in accordance with the information needed. (4) Companies included in the manufacturing sector.

Based on the criteria, the number of companies which became the samples in this study is ten companies for four years. So the number of observations in this study (10 x 4) = 40 observations.

Operational Definition of the Variable

Dividend Policy

Dividend policy is a decision that must be determined by a company, if the profit balance is distributed to shareholders as dividends, the retained earnings balance will be reduced and if not distributed will be recorded as retained earnings which will be used to increase the Company's working capital.
The formula for calculating the Dividend Payout Ratio is as follows:

\[
DPR = \frac{\text{Dividen Per Share}}{\text{Earning Per Share}}
\]

**Leverage**

*Debt to Equity Ratio* is a measure used to see how much debt is financing a company's operations, when a debt reaches a certain point it will endanger the condition of the company. The formula for calculating the *Debt to Equity Ratio* is as follows:

\[
DER = \frac{\text{Total Debt}}{\text{Total Equity}}
\]

**Liquidity**

*Current Ratio* is the ability of a company to pay its short-term debt when due by utilizing its current assets, the better the current assets the greater the guarantee to pay for its current debt. The formulat for calculating the *Current Ratio* used is as follows:

\[
CR = \frac{\text{Current Asset}}{\text{Current Debt}}
\]

**Analysis Technique**

The data analysis employed was quantitative analysis expressed by numbers and the calculations employed standard methods. Data analysis used in this study was panel data analysis.
Panel data analysis was used to test the effect of Leverage (DER) and Liquidity (CR) on dividend policy in manufacturing companies listed on LQ-45 on the Indonesia Stock Exchange. The Panel Data Regression Model is as follows:

Description:

\[
\begin{align*}
\text{Dep} & = \text{Dividend Payout Ratio} \\
\text{Const} & = \text{Constant} \\
\text{DE} & = \text{Independent Variable 1 (DER)} \\
\text{CR} & = \text{Independent Variable 2 (CR)} \\
\beta_{\text{1..2}} & = \text{The regression coefficients of each independent variable} \\
e & = \text{Error term} \\
I & = \text{Company} \\
t & = \text{Time}
\end{align*}
\]

ANALYSIS AND DISCUSSION

Descriptive Analysis

Table 1. Descriptive Analysis

<table>
<thead>
<tr>
<th>DATE: 31/01/18</th>
<th>TIME: 20:49</th>
</tr>
</thead>
<tbody>
<tr>
<td>SAMPLE: 2013 2016</td>
<td>COMMON SAMPLE</td>
</tr>
<tr>
<td></td>
<td>DP</td>
</tr>
<tr>
<td>R?</td>
<td>R?</td>
</tr>
<tr>
<td>MEAN</td>
<td>0.</td>
</tr>
<tr>
<td>55</td>
<td>88</td>
</tr>
<tr>
<td>MAXIM</td>
<td>1.</td>
</tr>
<tr>
<td>UM</td>
<td>96</td>
</tr>
<tr>
<td>MINIMU</td>
<td>0.</td>
</tr>
<tr>
<td>M</td>
<td>00</td>
</tr>
<tr>
<td>STD.</td>
<td>0.</td>
</tr>
<tr>
<td>DEV.</td>
<td>36</td>
</tr>
</tbody>
</table>

In the table above the descriptive analysis shows that the Dividend Payout Ratio had the highest value of 1.96%, namely at PT. HM Sampoerna Tbk in 2016, and the lowest value is 0.00% at PT. Semen Indonesia Tbk, which in 2016 did not pay dividends. Mean or average of 0.55% with a standard deviation of 0.36%. Standard deviation Dividend Payout Ratio is lower than the Mean, this shows that the Dividend Payout Ratio (DPR) in this study did not have data outliers or data which was too extreme.
Debt to Equity Ratio (DER), has the highest value that is equal to 2.56%, namely at PT. The average or mean Debt to Equity Ratio is 0.88% with a standard deviation of 0.66%. Variable Current Ratio has the highest value of 6.56% owned by PT. HM Sampoerna Tbk in 2015 and the lowest value was 0.60% at PT. Unilever Indonesia Tbk in 2016. The mean value is 2.53% with a standard deviation of 1.66%.

Chow Test

Table 2. Chow Test

<table>
<thead>
<tr>
<th>REDUNDANT FIXED EFFECTS TESTS</th>
<th>EFFECTS TEST</th>
<th>Statistic</th>
<th>d.f.</th>
<th>PR OB.</th>
</tr>
</thead>
<tbody>
<tr>
<td>POOL: DATA TEST CROSS-SECTION FIXED EFFECTS</td>
<td>CROSS-SECTION F</td>
<td>7.59302</td>
<td>7,8</td>
<td>0.00</td>
</tr>
<tr>
<td></td>
<td>CROSS-SECTION CHI-SQUARE</td>
<td>49.4260</td>
<td>9,20</td>
<td>0.00</td>
</tr>
</tbody>
</table>

Based on Table 2, it shows that $F_{\text{count}}$ is smaller than $F_{\text{table}}$ where Chow Test produces $F_{\text{count}}$ of 0.0002 smaller than $F_{\text{table}}$ which is 0.05 ($0.0000 < 0.05$). Based on the results of these studies, it can be concluded that $H_0$ is rejected and $H_1$ is accepted, so the model used is the Fixed Effect Model.

Hausman Test

Table 3. Hausman Test

| CORRELATED RANDOM EFFECTS - HAUSMAN TEST |
|---|---|
| POOL: BARU |
| TEST CROSS-SECTION RANDOM |
Based on table 3, the Hausman Test produces a probability value of 0.486, this value is greater than the value of α which is 0.05 (0.0486 > 0.05). So it can be concluded that H0 is accepted and H1 is rejected. The most appropriate model to use is Fixed Effect Model.

**t Test**

Table 4. Fixed Effect Model

<table>
<thead>
<tr>
<th>VARIABLE</th>
<th>Coefficient</th>
<th>Std. Error</th>
<th>t-Statistic</th>
<th>PR OB.</th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
<td>0.891150</td>
<td>0.2819874</td>
<td>3.160398</td>
<td>0.00</td>
</tr>
<tr>
<td>DER?</td>
<td>-0.404257</td>
<td>0.246485</td>
<td>-1.640082</td>
<td>0.11</td>
</tr>
<tr>
<td>CR?</td>
<td>0.006016</td>
<td>0.043191</td>
<td>0.139281</td>
<td>0.89</td>
</tr>
</tbody>
</table>

**FIXED EFFECTS (CROSS)**

- _ASII—C: -0.047313
- _GGRM—C: -0.081481
- _HMSP—C: 0.630829
- _ICBP—C: -0.229064
- _INDF—C: 0.024180
Based on table 4.4, the fixed effect model produces a regression coefficient of Debt to Equity Ratio (DER) of -0.404257 with a probability value of 0.1122 where the probability value is greater than the significant level (0.1122 > 0.05). So that it can be concluded that H0 is accepted and H1 is rejected, meaning that partially Debt to Equity Ratio (DER) has a negative and not significant effect on the Dividend Payout Ratio (DPR). This means that any increase in the Debt to equity Ratio (DER) will result in a decrease in dividends. Whereas Current Ratio (CR) shows regression coefficient value of 0.006016 with probability value 0.8902. And it can be concluded that H0 is rejected and H1 is accepted, meaning that partially Current Ratio (CR) has a positive but not significant effect on the Dividend Payout Ratio (DPR). This means that any increase in Current Ratio (CR) will have an impact on increasing dividends.

Testing the Simple Data Panel Regression Model

Table 5 Result of Data Panel Model Testing

<table>
<thead>
<tr>
<th>Dependent Variable: DPR</th>
<th>Pool ed Least Squ are (PL S)</th>
<th>Fix ed Effe ct Model (FEM)</th>
<th>Rand om Effe ct Model (REM)</th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
<td>0.508123</td>
<td>0.891150</td>
<td>0.649159</td>
</tr>
<tr>
<td>DER</td>
<td>0.052977</td>
<td>0.40425</td>
<td>0.16986</td>
</tr>
<tr>
<td>CR</td>
<td>0.034499</td>
<td>0.006016</td>
<td>0.019650</td>
</tr>
<tr>
<td>Probability DER</td>
<td>0.0163</td>
<td>0.1122</td>
<td>0.2624</td>
</tr>
<tr>
<td>Probability CR</td>
<td>0.0000</td>
<td>0.8902</td>
<td>0.6167</td>
</tr>
<tr>
<td>R²</td>
<td>-</td>
<td>0.422502</td>
<td>0.060021</td>
</tr>
<tr>
<td>0.178194</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 5 shows a comparison of the results of panel data testing between
Pooled Least Square (PLS), Fixed Effect Model (FEM) and Random Effect Model (REM). In the results of the panel data model using Pooled Least Square (PLS), the DER regression coefficient value is -0.052977 with a probability value of 0.0163, this value is smaller than the significant level of 0.05 (0.0163 < 0.05) and CR of 0.034499 with a probability value of 0.0000 and the value is smaller than the significant level.

The results of the panel data model using Fixed Effect Model (FEM), resulting in a DER regression coefficient of -0.404257 with a probability value of 0.1122, the resulting value is greater than the significant level of 0.05 (0.1122 > 0.05). CR shows a coefficient of 0.006016 with a probability of 0.8902, the result is greater than a significant level.

The results of the panel data model using Random Effect Model (REM), resulting in a DER regression coefficient of -0.169860 with a probability value of 0.2624, the resulting value is greater than the significant level of 0.05 (0.2624 > 0.05). CR shows the coefficient of 0.019650 with a probability of 0.6167, the result is greater than the significant level. From Table 4.5 a simple linear regression equation for panel data was formulated as: 

$$Y = \alpha + \beta_1 \text{DER} + \beta_2 \text{CR} + e$$

$$\text{DPR} = 0.891150 + (-0.404257) \text{DER} + 0.006016 \text{CR} + e$$

The coefficient of $\beta_1$ is called the regression coefficient and states that the change in the average of the Y variable for each change in variable X is equal to one unit. So from the simple panel regression equation above, it can be explained that if the Debt to Equity Ratio (DER) is equal to 0, the Dividend Payout Ratio (DPR) will change by 0.891150. The regression coefficient of Debt to Equity Ratio (DER) of (-0.404257) states that every increase of 1% Debt to Equity Ratio (DER), the Dividend Payout Ratio (DPR) will decrease by 40.42%. While the value of Current Ratio (CR) states the opposite with a regression coefficient value of 0.006016, each increase of 1% Current Ratio (CR), the Dividend Payout Ratio (DPR) will increase by 0.60%.

**Coefficient of Determination $R^2$**

<table>
<thead>
<tr>
<th>Dependent Variable: DPR? Method: Pooled Least Squares</th>
</tr>
</thead>
<tbody>
<tr>
<td>Date: 12/30/17 Time: 01:20 Sample: 2013 2016 Included observations: 4 Cross-sections included: 10 Total pool (balanced) observations: 40</td>
</tr>
</tbody>
</table>
Based on the results of the coefficient of determination test in the table above, the value of R-squared in the regression model is 0.422502. This means that the partial contributions given by DER and CR to Dividend Payout Ratio (DPR) is 42.25% while the remaining 57.75% is influenced by other factors not included in this study.

Discussions of the finding

Based on the decision-making criteria in the Leverage variable (DER), it can be concluded that H_0 is accepted and H_1 is rejected, meaning Leverage (DER) in this study has a negative and not significant effect on the Dividend Payout Ratio (DPR). With a regression coefficient of -0.404257 and a probability of 0.1122, the value is not significant as it exceeds the significant level or F_{table} which is 0.05. This is because an increase in debt will reduce the net income available to shareholders including dividends received because the obligation to pay debts takes precedence over dividends. However, in this study, the commitment of manufacturing companies to always distribute dividends yearly makes the rise and fall of debt not a problem for the company as long as the use of debt is always accompanied by an increase in corporate profits (Lisa Marlina and Clara Danica, 2011). This proves that the debt equity ratio has no significant effect on the dividend payout ratio, the results of this study are in line with the results of research from Latiefasari and Chabachib (2011), Lanawati & Amlin (2015), Kuniawan et al (2015), and Hanif & Bustamam (2017), which states that Debt to Equity Ratio (DER) has a negative and not significant effect on the Dividend Payout Ratio (DPR).

Whereas in the Liquidity variable (CR) it can be concluded that H_0 is rejected and H_1 is accepted, meaning that Liquidity (CR) has a positive and
insignificant effect. If the CR value increases, the value of the Dividend also increases by 0.60%. As the data on the HMSP company, which was the sample, the CR value is 6.56% while the DER is only 0.19%, this displays strong liquidity but the circulation of funds is very slow.

While the data on UNVR companies in 2016 showed a high DER level of 2.56% whereas the CR was 0.60%, yet the company still paid dividends even though to guarantee DER alone did not meet the CR criteria of which the company was said to be healthy when it was able to guarantee 1: 2 debt. This shows that the company takes a high risk by using its own capital. These findings support the results of research conducted by Oktaviani and Basana (2012), Isnani Umah (2012), Darminto (2008), which shows that Liquidity (CR) has a positive and insignificant effect.

Judging from the coefficient of determination test, the R-squared value generated is 0.422502. This shows that Leverage (DER) and Liquidity (CR) explain changes in the Dividend Payout Ratio (DPR) of 42.25%, the remaining 57.75% is influenced by other variables such as Cash position (CASH), Return On Assets (ROA), Size, Asset Growth (GROWTH), Institutional Ownership.

Conclusion

Based on the findings and discussion of “The Influence of Leverage and Liquidity on Dividend Policy of LQ-45 Listed Manufacturing Companies at Indonesia Stock Exchange in 2013-2016” the following conclusions are drawn:

1. Leverage (DER) has a negative and not significant effect on Leverage (DPR) with a regression coefficient of -0.404257. This means that every increase of 1% Debt to Equity Ratio (DER), the Dividend Payout Ratio (DPR) will decrease by 40.42%.

2. Liquidity (CR) has a positive and not significant effect on the Dividend Payout Ratio (DPR) with a regression coefficient of 0.006016. This means that every 1% increase in Current Ratio (CR), the Dividend Payout Ratio (DPR) will increase by 0.60%.
Recommendations

1. For investors who want to benefit from dividends. In order to be able to monitor the growth rate or the movement of dividends, study the ability of the company to repay loans as well as its ability to manage funds well.

2. For further researchers, it is strongly recommended to add other independent variables – such as Cash position (CASH), Return On Assets (ROA), Size, Asset Growth (GROWTH), and Institutional Ownership – which can affect the dividends of manufacturing companies, in order to yield better research findings.

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