

The Effect of Retained Earnings on Dividend Policy from the Perspective of Life Cycle

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Abstract- *The dividend distributed by the company to the shareholders is very different when it is viewed from the standpoint of the company's life cycle. Companies in the established phase have a higher chance to pay dividends than companies in the decline stage. This is relevant to the company's life cycle theory. This study aimed to examine the effect of the retained earnings ratio on the probability and the level of dividend payout based on the life cycle of the company. The selected research objects were companies listed on the Indonesia Stock Exchange during period 2012-2015. Samples of this research were taken by using purposive sampling method. The analysis methods applied in this research were probit regression and tobit regression. The results confirmed that retained earnings that were chopped with retained earnings to total equity had a positive and significant effect on the probability of the company paying dividend and dividend payment rate. However, the results of the study did not show significant evidence that retained earnings had a stronger effect on the probability and firm level of paying dividends.*

Keywords - Retained Earnings; Dividend; Company's Life Cycle

I. INTRODUCTION

Dividend policy as one of the core in financial theory is one of the most frequently debated topics and remains a prominent issue. Many researches have contributed to the theoretical thought and provides empirical evidence pertaining to the determinants of a dividend policy. Nevertheless, the issue of dividend policy has not been resolved yet. The harder we see the picture of dividends the more real it looks like a puzzle with messy fragments and non-conformity [1]. Dividend looks like a puzzle because dividends are taxed higher than the capital gain [2]. Dividend issues as one of the ten unresolved financial issues in finance [3]. on the other hand, dividend policy is one of the most difficult and challenging for financial economists [4]. Dividends are also the most popular and efficient method of distributing cash to investors or shareholders [5]. Dividend payout policy, in the context of the company's life cycle theory, is seen as an evolution of the trade off theory about factors which empirically affect the dividend payout [2][6][7]. Some empirical evidence shows that dividend payout policies vary according to the company's life cycle. This life cycle supports

the regularity of corporate development, where the development process of the company is segmented in the stages of the time period. In the established stage the company has a high profitability but low investment opportunities and large company size. On the other hand, at the stage of growth the company has a low profitability but high investment opportunities [2]. The dividend payment policy becomes an important decision in a company because it involves two parties who have different interests: the shareholders and parties associated with the company itself. It is related to the funding decision of the company in which the dividend payout is determined by the amount of retained earnings. The greater the retained earnings is the less the amount of profit allocated to pay the dividends. The determination of profit as retained earnings and dividend payout are the key aspects of the dividend policy [8].

II. LITERATURE REVIEW

This article is explored using agency theory. The theory states that dividends will rise as a result of the request of minority shareholders to prevent abuse by minority shareholders [9]. Agency costs can be reduced by paying dividends in a certain amount of free cash flow, so it can minimize the use of company resources [10]. The level of profit implied will increase when dividend payments are reduced as investors prefer to receive dividends rather than capital gains resulting from retained earnings [11]. However, if capital gains are taxed equal to dividend income, capital gains are reduced. Tax on new capital gains is paid after the shares are sold, while taxes on dividends should be paid annually after the dividend payment. As a result, investors will ask for higher after-tax profits on stocks with high dividend yields than those with low dividend yields. Therefore, this theory suggests that the companies should determine low dividend payouts or not even pay dividends.

Retained Earnings and Dividend Policy

The probability of established companies paying dividends positively affects the capital mix of retained earnings from the proposition of *retained earnings totot equity* (RE / TE) and *total assets* (RE / TA) [6]. Retained earnings reflect the company's long-term profitability. Companies with a mixture

of high retained earnings tend to be so more mature with sufficient cumulative rate of returns that it tends to pay dividends whereas companies with low retained earnings in the early stages and requiring additional funds needs keep their profit[6]. A study conducted on manufacturing company listed on the Indonesia Stock Exchange 2005 - 2009, state that the company's financial performance is represented by earnings per share, debt to equity ratio, return on investment, total asset turnover and price book value simultaneously affect cash dividend, while partially only debt to equity ratio, return on investment, total asset turnover affect cash dividend[12]. Other research illustrates that the factors affecting dividend policies are the income level for both the period concerned and the level of income expectation for the next period and the pattern of previous dividend payout[13]. Payment dividends in the United States is significantly related to the ratio of retained earnings of total equity[14]. The main determinants of dividend policy are the current level of earnings, future earnings expectations and dividend patterns in the previous period[15]. Firstly, the main factors determining dividend decisions are patterns of past dividends, stability of earnings, and earnings rates for current earnings as well as earnings expectations for the foreseeable future. In general, the important factors for companies listed on the Nasdaq are also very important for companies listed on the NYSE[16]. Secondly, it does not imply that factors affecting dividend decisions are the same for the whole company[16]. Earnings stability, current earnings levels and future earnings are the important factors in influencing dividend policy[16].

Based on the above description, the first and second hypotheses are constructed as follows:

- H1: Retained earnings ratios significantly influence the probability of paying dividends.
- H2: Retained earnings ratio has significant effect to company dividend payment rate.

Retained Earnings and Dividend Policies based on the Company Life Cycle

The linkage of corporate life cycle theory to dividend policy is based on the idea that the company is able to generate higher cash, to increase investment opportunities and to optimally pay profit to shareholders in the form of dividends.

At the growth stage, companies are still spending enormous investment to develop, maintain market share and technology empowerment. Young companies tend to save money and not pay dividends. At the mature stage, sales growth is at its maximum, the company's investment activity for fixed asset capital has begun to decline and the company is able to generate profits from assets planted in the previous life cycle period, thus, it tends to pay dividends. This is in accordance with the corporate life cycle theory[17] stated that the company at the growth stage has a great investment opportunity but the profit has not been able to meet the funding of internal cash. At the same time, at the mature stage, the investment opportunity of company start to decrease, profitability and growth are equal, the risk systematically decreases and internal cash income of company increases. Retained earnings positively related to dividend payments [6].

Retained earnings have a greater impact on the likelihood of dividend payout compared to profitability, growth opportunities and firm size. Companies with negative retained earnings have a probability of not dividing the dividend and if the established firm does not pay dividends, the company's cash balance becomes large and long-term debt is reduced. The earned surplus is positively related to the increase in dividend payout and initiating dividend, but it will negatively affect dividend and omitting dividend[1]. The company will pay dividends when it earns a high surplus, but the investment opportunity is low. Likewise, when there is an increase and initiating dividend. The characteristics of companies that pay stock dividends have high asset growths, low profitability and *retained to total equity ratio* compared to companies that pay cash dividends[18]. Companies paying cash dividends have high profitability but low developments. The factors that mostly influence the company pay dividends are the size of the company, profit, profitability and the development of the company. However, for companies that are engaged in the technology industry, only the companies' development affect companies pay dividends. A research on the linkage of financial life cycle theory in dividend policy (a study on the economic sector listing on BEI), suggests that RETE and RETA variables do not affect dividend probabilities[10]. As a result, a company's life cycle cannot be seen clearly in developing countries. In relation to the testing of control variables, the result shows that the company's ROA and SIZE variables present a positive influence on the probability of dividend change, while the LEV and AGR (*asset growth rate*) control variables has no significant effect on the probability of dividend change.

Based on the above descriptions, the third and fourth hypotheses were constructed as follows:

- H3: The influence of retained earnings ratio was greater towards the probability of established companies paying dividends compared to companies at the growing stage.
- H4: the influence of retained earnings ratio was greater towards the level of dividend payout at established companies compared to companies at the growing stage.

III. METHODOLOGY

We conducted this research on manufacturing companies listed in Indonesia Stock Exchange with observation period from 2012 until 2016. The sampling method applied in this study was purposive sampling, with some criteria 1) Manufacturing companies that were always listed on BEI from 2012-2015. The data of companies that were always listed on the Indonesia Stock Exchange was obtained from ICMD (www.idx.co.id); 2) Companies with complete financial reports; 3) Companies with retained earnings, total assets and total equity as the proxy of earnings retained against total assets (RE / TA) and total equity (RE / TE). The data of financial reports to get the value and the ratio of each required research variable was obtained from Bloomberg Universitas Gadjah Mada; 4) Companies that conducted *corporate actions* other

than dividend cash distribution such as stock dividend, mix dividend, warrant distribution, rights issue, mandatory conversion (stock split, merger and acquisition) and payment of bond in the same year were not included as sample. The data of companies conducting corporate action activities were obtained from KSEI; 5) Companies which were not in the growing and steady phase were excluded from the sample. In addition, we also utilized the companies' fundamental information as a control variable. Sales growth proxied with *Sales Growth Rate* was used as the criterion to determine the life cycle of a company in order to find samples entering the growing and steady stage. The detail of research variables used in research can be seen in the following table:

Based on Table 1, there were nine variables used in this study, in which the variables were applied in two kinds of statistical models. They were the *probit regression model* which was used to empirically test the factors that affected the probability of a company paying dividends; and *tobit regression model* which was used to determine the level of dividend payout. The models applied to answer the first hypothesis (H1) and the second hypothesis (H2) are as follows:

$$Y_{it} = \beta_0 + \beta_1 RE/TE_{it} + \beta_2 RE/TA_{it} + \beta_3 ROA_{it} + \beta_4 SGR_{it} + \beta_5 AGR_{it} + \beta_6 TE/TA_{it} + \beta_7 SIZE_{it} + \epsilon_{it} \quad (1)$$

Statistical model 1 consists of two independent variables and one dependent variable, where, Y is the probability of dividend payout and the dividend payout rate proxied by the dividend yield which is denoted as the dependent variable. RE / TE is the ratio between retained earnings with total equity. RE / TA is the ratio between retained earnings and total assets. Both variables are denoted as independent variables. In addition, there were five control variables as predictors, which served as a neutral influence of independent variables on the dependent variable. ROA is a comparison between return on assets owned by the company. SGR is a measure of company growth on sales every year. AGR is a measure of corporate growth on company assets. TE / TA is a measure of the level of capital ownership owned by the company. SIZE is the logarithm of order of total assets. Furthermore, a second statistical model was also constructed to test the third (H3) and fourth hypothesis (H4) as follows:

$$Y_{it} = \beta_0 + \beta_1 RE/TE_{it} + \beta_2 RE/TA_{it} + \beta_3 D_{life\ cycle} + \beta_4 ROA_{it} + \beta_5 SGR_{it} + \beta_6 AGR_{it} + \beta_7 TE/TA_{it} + \beta_8 SIZE_{it} + \epsilon_{it} \quad (2)$$

Identical to the first statistical model, the probability of dividend payout and dividend yield were also employed as the dependent variables. However, the company's life cycle was used as a dummy variable, which was worth one, if the company was a steady and the variable was worth zero if the company was at grown stages.

IV. RESULTS AND DISCUSSION

A. Retained Earnings Ratio Affects Probability and Level of Dividend Payment

The probability of companies paying dividends is influenced by the characteristics of the companies. The intended characteristic is the retained earnings ratio procured by *retained earnings to total equity* to describe the return on equity and *retained earnings to total assets* to illustrate the profitability of an asset against the probability of companies paying out a dividend. This can be explained by using probit regression analysis. The statistical test of the retained earnings ratio against the probability of the company paying the dividends is presented in the following table:

Table 2. Probit And Tobit Regression Results

Independent Variables	Probit		Tobit	
	coefficient	Prob	coefficient	Prob
<i>Retained earnings to total equity</i>	0,752	0,015*	0,183	0,34
<i>Retained earnings to total assets</i>	0,464	0,310	-0,959	0,86
total observations	272		272	

Note: * p < 0.05 indicates a 5 percent significance level.

This table illustrates the results of probit and tobit regression. Probit regression is to determine the relationship of each independent variable (RE / TE, RE / TA) to the probability of the companies paying dividends. The dependent variable in this model is the dummy variable, which is 1 when the companies pay dividends and 0 when they do not pay dividends. Whereas, tobit regression is used to know the factors that influence the level of dividend payout. The dependent variable in this model is *dividend yield*. Probit and Tobit testing model is as follows:

$$Y_{it} = \beta_0 + \beta_1 RE/TE_{it} + \beta_2 RE/TA_{it} + \epsilon_{it}$$

The result of probit regression test showed that the retained earnings of 75.2% (*retained earnings to total equity*) was positively related to the probability of paying dividend, while *retained earnings to total assets* of 46.4% was positively correlated but not significant to the probability of paying dividends. The findings from a research on 272 observations, non-financial companies in Indonesia proved that the companies would pay dividends when they had high retained earnings. Hence, the first hypothesis stated that retained earnings have a positive and significant effect on the probability of paying dividends was accepted.

The result of tobit regression test showed that retained earnings variable of 183% (*retained earnings to total equity*) were positively correlated while *retained earnings to total assets* of 959% were negatively related to the dividend payout rate and both were insignificant. Through the tobit model, the research findings on 272 observations of non-financial companies in Indonesia failed to recognize that retained earnings had a positive and significant effect on the companies' rate of paying dividends. As a consequences, the second hypothesis which

states that retained earnings have a positive and significant effect on the company's rate of paying a dividend is rejected.

This finding is in line with a study which suggests that retained earnings affects the probability of a company paying dividends[6]. Retained earnings as long-term profitability affects the probability of companies paying cash dividends, whereas companies with no retained earnings will not pay dividends[18]. In addition, the main factors that determine dividend decisions are patterns of past dividends, stability of earnings, and earnings levels for current time and earnings for the future[16].

B. Retained Earnings Ratio Has Stronger Effects to the Probability and Rate of Established Companies Paying Dividends.

Probabilitas dan tingkat perusahaan membayar dividen juga dipengaruhi oleh adanya The probability and rate of the companies paying dividends are also influenced by the existence of different characteristics of the company. The following table displays the answer for the third and fourth hypotheses which states that retained earnings affect the probability and rate of dividend payout:

Table 3. Probit Regression Results And Tobit Life Cycle

Independent Variables	Probit		Tobit	
	Coefficient	Prob	Coefficient	Prob
<i>Retained earnings to total equity</i>	0,785	0,012*	0,166	0,39
<i>Retained earnings to total assets</i>	0,435	0,344	-0,110	0,84
<i>Dummy life cycle</i>	0,407	0,020*	0,200	0,52
total observation	272		272	

Note: * p <0.05 indicates a 5 percent significance level. This table illustrates the results of probit and tobit regression. Probit regression is used to determine the relationship of each independent variable (RE / TE, RE / TA) to the probability of a well-established company paying dividends. The dependent variable in this model is the dummy variable, which has value = 1 when it pays dividends and 0 when it does not pay dividends. Meanwhile, tobit regression is used to know the factors that influence the level of dividend payout. The dependent variable in this model is dividend yield. Probit and Tobit testing models is as follows:

$$Y_{it} = \beta_0 + \beta_1 RE/TE_{it} + \beta_2 RE/TA_{it} + \beta_3 D_{lifecycle} + \epsilon_{it}$$

The result of probit regression test shows that the retained earnings of 78.5% (*retained earnings to total equity*) is positively and significantly correlated with the probability of established companies paying dividends. On the other hand, *retained earnings to total assets* of 43.5% are positively but not significantly correlated to the probability of a well-established company paying dividends. The life cycle of a company stating a well-established company of 40.7% is positively and significantly correlated. The findings on 272 observations of non-financial companies in Indonesia proved that companies at the established stage would pay dividends when they possessed

high retained earnings. Thus, the third hypothesis which states that retained earnings have a positive and significant effect on the probability of established companies paying dividends is rejected. The result of tobit regression test shows that the retained earnings variable of 166% (*retained earnings to total equity*) is positively correlated while *retained earnings to total assets* of 100% is negatively correlated to the dividend payout rate, the life cycle of the company stating the established companies of 200% is positively correlated and all of the three are not significant. By the tobit model, the research findings on 272 observations of non-financial companies in Indonesia fail to capture that retained earnings and companies' life cycles have a positive and significant effect on the level of established companies paying dividends. Thus the fourth hypothesis which states that retained earnings have a positive and significant effect on the level of established companies paying dividends is rejected.

This finding is supported by research which suggests that retained earnings reflect the company's long-term profitability[6]. Companies with high mixed retained earnings tend to be more mature with sufficient cumulative profit levels that tend to pay dividends. Meanwhile, companies with low retained earnings in the early stage and that need additional funds to keep their profits. The *earned surplus* is positively related to the possibility of the company paying dividends[1]. Other findings reveal that the *earned surplus* is positively associated with increased dividend payout and *initiating dividend*, but it will negatively affect dividend and *omitting dividend*.

V. CONCLUSION

This research was conducted on 272 samples of non-financial companies that were always listed on the Indonesia Stock Exchange from the period 2012 to 2016. The results of this research indicate that retained earnings that are proportioned to retained earnings to total equity are the main factors affecting the probability of a company paying dividends and dividend payout rates. This is shown in the results of hypothesis testing which states that retained earnings are positively and significantly related to the probability of dividend payout.

The difference of findings in this study with previous research indicates that the factors that influenced the probability and the level of dividend payout could not be applied to all types of industrial industries [16]. This became one of the limitations in this study. We have tried to test empirically on the factors that influence dividend payouts in the context of enterprise life cycle theory[6] [7]. However, we have not explored and tested more details by involving companies in all sectors listed on the Indonesia Stock Exchange. So the results of this research can not be generalized. Technically, we also do not consider the use of proxies other than RETE and RETA. While our results may strengthen findings related to factors affecting dividend payouts, it would be better if subsequent research could consider another variable of interest to measure the life cycle of a company. For example by using institutional ownership variables that still dominate the ownership of listed companies in Indonesia [19].

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