EFFECT OF ACCRUAL QUALITY OF FINANCIAL STATEMENTS AND DEBT MATURITY ON INVESTMENT DECISIONS WITH SIZE OF THE COMPANY AS CONTROL VARIABLE

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ABSTRACT

This study aims to determine the influence of the quality of financial statements through the quality of accruals and debt maturity on investment decisions under conditions of underinvestment and overinvestment with firm size as control variable. The research sample is a mining sector manufacturing company with 152 observations. The research sample is non probability sampling method with purposive sampling technique. The type of data is secondary data. Data analysis techniques Binary logistic regression analysis. The results showed the number of companies with 40 companies in underinvestment conditions, 72 companies in normal investment and 40 companies in overinvestment conditions. The results show the quality of financial statements negatively affect the conditions of underinvestment and overinvestment. While debt maturity has a positive effect on the conditions of underinvestment and overinvestment. Regulators must play an active role in carrying out monitoring tasks and encourage companies to improve the quality of their financial reporting.

Keywords: Quality of financial statements, Debt Maturity, Investment Decisions

INTRODUCTION

Investment is a commitment to several funds or other resources made at a time, aiming for a number of benefits in the future. Investors will make the right investment decisions, so that investments made will be efficient. (Richardson, 2006) total investment is all company expenses related to capital expenditures, acquisitions and research and development reduced by the results obtained from the sale of property, plants and equipment. From this understanding it can be said that the type of corporate investment can be in the form of capital expenditures. Capital expenditures can be in the form of purchasing shares and other securities. Then investment can be in the form of expenses to acquire other companies, but it can be in the form of expenses related to research and development and the purchase of fixed assets. The right investment decision is when the assets or investment of the company is right and there is no waste of resources but is optimal in making a profit. The right investment requirement is an efficient investment to avoid the problem of overinvestment and underinvestment (Sari & Suaryana, 2014). Overinvestment conditions are where the company has excess capital (free cash flow) but the company's growth is slow, this is because it cannot allocate its capital properly while the underinvestment condition is a condition where the company has the opportunity to invest using large amounts of debt but the company does not have collateral sufficient debt repayment (Sari & Suaryana, 2014). One example of a case that occurred at PT Freeport was that the company was less efficient in investing or that resulted in underinvestment. One of the factors causing underinvestment is the lack of quality of PT Freeport's financial statements and there are also cases with the Government of Indonesia. The lack of quality of the financial statements of the company is evident from the lack of transparency of the financial statements. Financial statements also contain information asymmetry which results in a lack of investor confidence in the company. The conclusion that can be drawn is that PT Freeport is lacking in terms of financial report transparency which may result in inefficient investments made by the company (www.merdeka.com).

Financial statements which often used as investment decisions is the income statement. It's because earnings could describe the company's performance better. Profit presented in the income statement contains an accrual element. Accrual policy by management can affect the quality of earnings and the quality of the company's financial statements. The accrual quality of financial statements is important to assess the quality of financial statements which can also influence investment decisions (Dechow P. &., 2004), (Francis, 2005), (Johnston, 2009), (Lyimo, 2014), (Suganda & Firman, 2015). In addition to the accrual quality of the financial statements, another factor influencing investment decisions is debt maturity. Debt Maturity is a policy carried out by the company in determining the maturity of the debt that will be used by the company. According to (Jensen & Meckling, 1976) agency theory is a contract between management (agent) and owner (principal). In order for this contractual relationship to run smoothly, the owner will delegate the decision making authority to the manager. Appropriate contract planning aims to align the interests of managers and owners in terms of conflict and interests, this is the core of agency theory. In fact monitoring that is linked to debt can be used to reduce agency conflicts between managers and owners. According to Barclay (1995) debt maturity can play a significant role in reducing agency costs. Shorter debt maturity could alleviate the problem of underinvestment. Short-term debt can also increase the frequency of monitoring of managerial actions (Raghuram & Winton Andrew, 1995). Corporate investment decisions are also influenced by company size. According to (Brigham, 2001) states that the definition of company size is as follows: "The size of the company is the average total net sales of the year in question until a few years later." Large companies tend to make large investments as well, while small companies will decided to make a smaller investment. (Biddle, Hilary, & Verdi, 2009) found that the quality of financial statements has a negative relationship with the conditions of overinvestment and underinvestment. The existence of good quality financial reporting will be able to improve the monitoring function of shareholders so as to reduce the possibility of overinvestment or underinvestment conditions. (Chen & Wang, 2010) also conducted the same research but on a sample of private firms in America. They find that the quality of financial statements is negatively related to the conditions of over- and underinvestment, even in closed companies. Then formed the following hypothesis:

H1a   : The quality of financial statements has a negative effect on the condition of underinvestment.
H1b   : The quality of financial statements has a negative effect on the condition of overinvestment.

Debt Maturity is a policy to determine the maturity of debt by a company that is divided into two, namely short term debt maturity and long term debt maturity (Amrullah & Fatima, 2014). The use of short term debt maturity policies can reduce the problem of information asymmetry (Ballesta, 2013). The use of larger short-term debt can increase control and supervision of managers better (Diamond, 1993). The existence of short-term debt can reduce investment irregularities and increase investment efficiency. This can happen because short-term debt allows lenders to better oversee managers. Supervision will be better because shorter debt maturities will require setting interest rates more frequently, so that lenders will have a closer relationship with borrowers and can ensure company performance at the beginning of the period (Ballesta, 2013). Such supervision can reduce agency conflicts between creditors and borrowers arising from investment opportunities (Barclay, 1995), (Guedes & Opler, 1996), (Parrino & Weisbach, 1999), (Lai, 2011), (Ballesta, 2013). Then formed the following hypothesis:

H2a   : Debt maturity short-term debt has a negative effect on underinvestment..
H2b   : Debt maturity short-term debt has a negative effect on overinvestment.

RESEARCH METHODS

This research is an associative causality research because it examines the effect of a variable on other variables that are causal (Sugiyono, 2017). This study examines the effect of the accrual quality of financial statements and debt maturity on investment decisions. The object of research is an investment decision underinvestment and overinvestment. The study population is all mining companies listed on the Indonesia Stock Exchange. The sample is determined by the non probability sampling method with a purposive sampling technique. The criteria used are mining companies that present annual reports and financial reports during the observation year. Research using quantitative data. Data source is secondary data. Research data were collected by the documentation method. The documents observed were annual financial reports published by mining companies from 2015 to 2018 and were obtained from the capital market reference center (Indonesia Stock Exchange) and BEI official website (www.idx.co.id). The dependent variable is investment decision or investment efficiency (Y). The independent variables used in this study are the quality of financial statements (X1) and debt maturity (X2). The control variable is company size (X3). Investment decisions are measured using an investment model that functions as growth opportunities. The investment model used follows the investment model used by (Biddle, Hilary, & Verdi, 2009). According to (Biddle, Hilary, & Verdi, 2009) total investment is derived from total new investment in machinery, equipment, vehicles, land and buildings and added to the cost of research and development minus total sales of fixed assets divided by total assets in year t. Here is the model:

$$Investment_{i,t+1} = \beta_0 + \beta_1 * Sales\ Growth_{i,t} + \varepsilon_{i,t+1} \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots (1)$$

Note:
$Investment_{i,t+1}$ = size of the total investment made by the company i.
$Sales\ Growth_{i,t}$ = percentage of sales changes from last year to this year.
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The calculation of the investment model will get a residual value. The residual value of the model will be used as a proxy for the company's investment decisions. According to Biddle, Hilary, & Verdi ((2009) the residual value obtained from each company will be sorted from the largest to the smallest. Then the residual value will be divided into quartiles, where the lowest quartile is a company that is included in the underinvestment category. Companies in the top quartile will be categorized as overinvestment companies. Whereas the middle quartile will be used as a reference for determining the category of over- or underinvestment. The top quartile is given a score of 3 or categorized as overinvestment, the middle quartile is given a score of 2 as a benchmark or can be said to be a company with normal investment, while the lowest quartile is given a score of 1 or categorized as underinvestment.

The independent variable (X1) is the quality of the financial statements. (Biddle, Hilary, & Verdi, 2009) states that the quality of a financial statement can be described from the accrual quality. In order to be able to measure the value of the accruals, this study will follow the latest accrual measurement model conducted by (Kothari & Wasley, 2005) which corrects the shortcomings of the Jones & modified Jones accrual calculation model to obtain a new model whose calculation results are more accurate and stronger in measuring the value of accruals. The following is an accrual calculation model performed (Kothari & Wasley, 2005):

$$TA_{i,t} = \alpha_0 + \alpha_1[1/ASSETS_{i,t-1}] + \alpha_2 \Delta SALES_{i,t} + \alpha_3 PPE_{i,t} + \alpha_4 ROA_{i,t(or\ i,t-1)} + \varepsilon_{i,t\ldots}(2)$$

Information :
$TA_{i,t}$ = a measure of total company accrual i in year t
$\Delta SALES_{i,t}$ = change in the amount of sales of company i in t
$PPE_{i,t}$ = net total value of fixed assets owned by company I in year t
$ROA_{i,t}\ or_{\ i,t-1}$ = performance measurement derived from the rate of return on assets.
$ASSETS_{i,t-1}$ = the total value of the company's assets in the previous period

Variable X2 is Debt Maturity, which is a policy to determine the maturity of a debt undertaken by the company. Research using short term debt maturity policies can reduce the problem of information asymmetry (Ballesta, 2013). The use of larger short-term debt can improve control and supervision of managers better (Diamond, 1993), good supervision is able to prevent managers from taking managerial actions. Shortening debt maturity can reduce the problem of underinvestment, because

short-term debt will be liquidated in a short time and all profits will become the property of the company. According to (Barclay, 1995) in addition to debt levels, the use of larger short-term debt can play a significant role in reducing agency costs. This agency fee arises because of conflicts between company stakeholders. According to (Amrullah & Fatima, 2014) short term debt maturity can be calculated using the short-term debt ratio. The following are calculations to measure short term debt:

$$STD = \frac{Short-term\ debt}{Total\ debt}$$…………………………………….(3)

STD is the value of the ratio of short-term debt (all debts that fall due in one year and the portion of long-term debt that falls due in the current year) to the total debt of the company.

The data analysis technique used is the Model Feasibility Test Model and the binary logistic regression used for the expansion of logistic regression with the dependent variables of two categories. The dependent variable in this study is investment decisions which are explained using three categories, namely:

Category 0: normal investment (as a reference category)
1) Category 1 : underinvestment
2) Category 2 : overinvestment

Of the three categories will be divided into two logistic regression models. The first model is to determine the effect of accrual quality and debt maturity on the probability of a company experiencing underinvestment conditions, while the second model aims to determine the effect of accrual quality and debt maturity on the probability of a company experiencing overinvestment. The following is a binary logistic regression model of this study.

$$In\left(\frac{P_1}{1-P_1}\right) = \beta_{01} + \beta_{11}X_1 + \beta_{21}X_2 + \beta_{31}X_3$$

$$In\left(\frac{P_2}{1-P_2}\right) = \beta_{02} + \beta_{12}X_1 + \beta_{22}X_2 + \beta_{32}X_3$$

Information:
P_1 = probability of company i experiencing a condition of underinvestment
P_2 = probability of company i experiencing overinvestment
X_1 = accrual quality of financial statements (KA)
X_2 = debt maturity (DM)
X_3 = Company Size (UP)

RESULT AND DISCUSSION

The object of research is the mining sector manufacturing companies listed on the Indonesia Stock Exchange (IDX) in 2015-2018. There are 41 mining companies. Based on the results of sample selection using a purposive sampling technique, there were 3 companies that did not publish complete financial reports so the research sample was 38 companies and 152 observations. The decision variable frequency test results show the number of companies that have underinvestments are 40 companies, which have normal investments are 72 companies, and those that have overinvestments are 40 companies. The feasibility test of the research model of the influence of KA, DM, and UP on the condition of underinvestment companies results in a Chi-square calculation of 68.994 and a significant value of 0,000. Significance value of 0,000 <significance level of 5 percent, which means the train, DM, and UP significantly influence the condition of the underinvestment company. The feasibility test of the research model influences KA, DM, and UP on the condition of the company overinvestment. Chi-square calculation results amounted to 58,635 and a significant value of 0,000. Significance value of 0,000 <significance level of 5 percent, which means KA, DM, and UP significantly influence the condition of the company overinvestment. Calculation of the coefficient of determination of model 1 and model 2 Nagelkerke R Square value of Model 1 is 0.631, which means 63.1 percent of the variation underinvestment conditions influenced by variations in the KA, DM, and UP variables. The Nagelkerke R Square model 2 value is 0.560, which means that 56 percent of the variation in overinvestment conditions is influenced by variations in the KA, DM, and UP variables. The results of the analysis of the validity of model 1 and model 2. The results of prediction of normal company conditions are 68, while the results of observations are 72, so the accuracy of model 1 predicts the condition of normal companies is 94.4 percent. Underinvestment company prediction results as many as 28 out of 40 observations, so the accuracy of underinvestment company predictions is 70 percent. Overall the prediction accuracy of model 1 was 85.7 percent. The results of the prediction of normal company conditions are 68, while the observation results are 72, so the accuracy of model 2 predicts the normal company condition is 94.4 percent. The results of overinvestment company predictions are 24 out of 40 observations, so the accuracy of overinvestment company predictions is 60 percent. Overall the prediction accuracy of model 2 is 82.1 percent. The results of logistic regression analysis of the effect of accrual quality of financial statements, debt maturity, and company size on underinvestment can be seen in Table 1. While the results of logistic regression analysis of the effect of accrual quality, debt maturity, and company size on overinvestment can be seen in Table 2.

This research proposes four hypotheses. Hypothesis 1a (H1a), the accrual quality of financial statements has a negative effect on the condition of underinvestment. Table 1 reports that the regression coefficient sign is negative according to the H1a direction with a significant value of 0,000. The significance value is less than 5 percent so H1a is accepted. This means that the accrual quality of financial statements has a negative and significant effect on the condition of underinvestment. This hypothesis supports the results of the study (Verdi, 2006) found that financial statements have a negative relationship with underinvestment.

He mentioned that the good quality of a financial statement can improve the efficiency of a company's investment by reducing information asymmetry. (Biddle, Hilary, & Verdi, 2009) found that the quality of financial statements has a negative relationship with the conditions of underinvestment. Good quality financial reporting will improve the monitoring function of shareholders so as to reduce the possibility of underinvestment. (Chen & Wang, 2010) also conducted the same research but on a sample of private firms in America. They find that the quality of financial statements is negatively related to the conditions of underinvestment.

Table 1. Model 1 Logistic Regression Results

	B	S.E.	Wald	T	Sig.	Exp(B)
KA	-6,651	1,564	18,094	2,08	0,000	0,001
DM	2,621	0,664	15,587	1,37	0,000	13,743
UP	0,349	0,280	1,553	0,17	0,213	1,418
Constant	-9,488	2,540	13,954	1,40	0,000	0,000

Source: processed from raw data (2019)

Table 2. Model 2 Logistic Regression Results

	B	S.E.	Wald	Sig.	Exp(B)
KA	-5,445	1,310	17,264	0,000	0,004
DM	1,029	0,377	7,458	0,006	2,798
UP	0,088	0,256	0,118	0,731	1,092
Constant	-5,695	2,027	7,897	0,005	0,003

Source: processed from raw data (2019)

Hypothesis 1b (H1b), The accrual quality of financial statements has a negative effect on the condition of overinvestment. Table 2 reports that the regression coefficient is negative according to the H1b direction with a significance value of 0,000. Significance value is smaller than percent so H1b is accepted. This means that the accrual quality of financial statements has a negative and significant effect on the condition of overinvestment. These results are in line with research (Verdi, 2006) (Biddle, Hilary, & Verdi, 2009) finding that the quality of financial statements has a negative relationship with the conditions of overinvestment. (Chen & Wang, 2010) found that the quality of financial statements is negatively related to the condition of overinvestment, even though the company is closed.

Hypothesis 2a (H2a), debt maturity has a negative effect on the condition of underinvestment. Table 9 reports that your regression coefficient is positive in contrast to the H2a direction. The significance value is 0,000. The significance value is smaller than 5 percent so H2a is rejected. This means that debt maturity has no negative and significant effect on the conditions of underinvestment. The results of the study contradict the hypothesis. The results showed DM had a significant positive effect on investment decisions. Hypothesis 2b (H2b), debt maturity has a negative effect on the condition of overinvestment. The H2b test results are presented in Table 2. Table 2 reports that the regression coefficient is positive not in accordance with the H2b direction. The significance value is 0.006. The significance value is smaller than 5 percent so H2b is rejected. The results showed that debt maturity had a positive and significant effect on overinvestment conditions. Based on this, it can be concluded that short-term debt plays a role in improving investment efficiency. The existence of short-term debt can reduce investment irregularities and increase investment efficiency. This can happen because short-term debt allows lenders to better oversee managers. Supervision will be better because shorter debt maturities will require setting interest rates more frequently, so that lenders will have a closer relationship with borrowers and can ensure company performance at the beginning of the period (Ballesta, 2013). Such supervision can reduce agency conflicts between creditors and borrowers arising from investment opportunities ((Barclay, 1995); (Guedes & Opler, 1996); (Parrino & Weisbach, 1999); and (Lai, 2011), (Ballesta, 2013)). The firm size control variable does not significantly influence the investment decision variable either in model 1 or model 2.

Implications

The results of this study have several implications. First, the results of this study can encourage investors to more closely examine the condition of the company whether underinvestment or overinvestment occurs so that it can help investors in investing. Second, this research is expected to encourage company management to make quality financial reporting because it can help reduce underinvestment and overinvestment. Third, the results of this study are expected to be input for making and evaluating accounting standards in the context of developing and choosing financial reporting policies.

CONCLUSION AND SUGGESTION

The results of this study indicate that the quality of financial reporting accruals has a negative effect on underinvestment and overinvestment. In the condition of underinvestment and overinvestment, the quality of financial reporting is associated with investment efficiency. These results indicate that the quality of financial reporting will affect investment efficiency, which is a negative effect on underinvestment and overinvestment. The more qualified the accrual financial statements the smaller the investment decisions underinvestment and overinvestment are smaller. The results of this study also show that debt maturity has a positive effect on underinvestment and overinvestment. In this condition a high debt maturity, the investment decision on the conditions of underinvestment and overinvestment is even greater. This means that investment decisions are less efficient when the debt policy is high,

Regulators must play an active role in carrying out monitoring tasks and encourage companies to improve the quality of their financial reporting. Limitations of the research is how short the study period is, by using only 4 years. It is suggested that further research may use a longer period. Secondly, this research was only conducted at mining sector companies. Future studies can add other service and manufacturing companies. Third, this study uses only one measurement of investment inefficiency.

Future studies can use other proxies, such as using the growth of fixed assets in measuring investment growth.

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