



THE ROLE OF QUALITATIVE CHARACTERISTICS OF ACCOUNTING INFORMATION ON THE INVESTMENT EFFICIENCY AT MANUFACTURING COMPANIES IN INDONESIA

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ABSTRACT

This study aims to examine whether the attributes of the quality of accounting information reflect the qualitative characteristics of financial statements and examine the effect of the quality of accounting information on investment efficiency. The attributes of the quality of accounting information are predictability, discretionary revenue, discretionary accruals. Investment efficiency is measured by investment inefficiency as underinvestment and overinvestment. The sample was a manufacturing companies listed on the Indonesia Stock Exchange in 2012 until 2015 as many as 493 observations for examine the attributes of the accounting information quality to form factors that reflect the quality of the financial statements. While the sample of 479 observations used to test the influence of the quality of accounting information against underinvestment. Observation of overinvestment was not analyzed in this study because it has only 14 observations. Data analysis technique used is factor analysis and multiple linear regression. The results showed that the three attributes of the accounting information quality form two factors, the first factor called predictability and the second factor is called discretion.

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Both of these factors reflect the qualitative characteristics of the accounting information. However, the quality of accounting information measured by these two factors has no significant effect on underinvestment. Likewise, the operating cycle, ROA, and age have no effect on underinvestment. Meanwhile, firm size, tangibility, and dummy loss have a significant effect on underinvestment.

Keywords: *Accounting Information, Discretionary Accruals, Discretionary Revenue, Investment Efficiency, Predictability, Underinvestment.*

1. INTRODUCTION

The role of accounting in providing information, one of which related to the financial condition of the company is very important for internal and external users to make a decision. The financial information of a company is reflected in the financial statements that each period is prepared by the management company. Stice, Stice, and Skousen (2010) states that the objectives of the preparation of financial statements include providing usefulness to users of financial statements in decision making, targeted to investors and creditors, assessing future cash flows, evaluating economic resources, and focusing on earnings (accrual).

Qualitative characteristics of accounting information are understandability, relevance, reliability, comparability (Kartikahadi, Sinaga, Syamsul, Siregar, 2012). Each user of accounting information has different interests related to a company's financial statements. One of the users that needs to be highlighted because of frequent use of information in the financial statements is the board of directors. The financial statements are very important for the board of directors as they will be used as a reference in evaluating and planning the strategies that have been and will be done. One of the decision is related to investment decision. In order to the company to grow and sustain requires the right investment decisions.

The right investment decisions can be shown by an efficient investment that means not underinvestment or overinvestment. Underinvestment is a condition in which the company faces investment opportunities with the condition of the use of debt in large numbers without any guarantee of adequate debt repayment. Meanwhile, the overinvestment is a condition if the company has limited investment opportunity due to slow company growth but has a large asset so that it is feared that the company does investment activity on less profitable project (Sari and Suaryana, 2014). With the existence of quality accounting information then the company can be avoided from underinvestment or overinvestment.

A study that links the quality of accounting information and the investment efficiency is Biddle and Hillary (2006) that proves high quality of accounting information can improve investment efficiency by reducing information asymmetry between manager and outside supplier of capital. Then, Verdi (2006); Biddle, Hillary, and Verdi (2009); Chen, Hope, and Li (2011) obtained the result that the quality of financial statements has a negative relationship to underinvestment and overinvestment. Handayani, Siregar and Tresnaningsih (2015) proves that the quality of financial reporting tend to have a significant negative effect on underinvestment but not significantly affect the overinvestment of companies in ASEAN. Similar results were obtained from Sari and Suaryana (2014) that the quality of financial reporting significant negative effect on underinvestment but does not affect to overinvestment.

Previous studies have examined the attributes of the quality of financial statements and their impact on information asymmetry (Fanani, 2009; Indriani and Khoiriyah, 2010) and previous studies only examined the effect of financial reporting quality on investment efficiency (Handayani, Siregar and Tresnaningsih, 2015 ; Chen, Hope, and Li, 2011) . This

research develops previous researches that examine the attributes of financial statements (accounting information) quality and the impact of the quality of financial statements on investments efficiency. The purpose of this study are to test the quality attributes of financial statements that reflect the qualitative characteristics of financial statements and to prove the effect of qualitative characteristics of financial statements on investment efficiency. This research provide insight that with qualified financial report will impact on the right or efficient investment decision. This research contributes to research around the topic of accounting information quality and investment efficiency.

2. LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

2.1 Qualitative characteristics of financial statements (accounting information)

Qualitative characteristics of financial statements are normative measures that need to be manifested in accounting information so as to meet its objectives or produce quality information. Qualitative characteristics is a characteristic that makes the information in the financial statements useful for the wearer. There are four qualitative characteristics that is (Stice, Stice, and Skousen, 2010):

1. Understandability: the information presented in the financial statements is said to be understandability if the user understands with the information presented and able to interpret it. This can be seen from the benefits of the information presented to the decision-making.
2. Relevance: financial reports are said to be relevant if the information contained within them meets the needs of the user, thus influencing user decisions, particularly in evaluating past or present events, predicting the future, and affirming or correcting their evaluation results in the past. Information can be said to be relevant if have feedback value, predictive value, timeliness, and completeness.
3. Reliability : the information has a reliable quality if free from misleading notions, material faults, and dependability as a faithful representation of what should be presented reasonably expected to be presented. This characteristics include representational faithfulness, verifiability, neutrality.
4. Comparability : the information contained in the financial statements will be more useful if it can be compared with the previous period financial statements or the financial statements of other entities in general. Comparison can be done internally and externally.

Francis, Lafond, Olsson, Schipper (2004) measures the quality of financial statements that focus on the quality of earnings which is divided into two attributes that are market-based attributes consisting of value relevance, timeliness and conservatism as well as accounting-based attributes consisting of accrual quality, earnings persistence , predictability, smoothness.

2.2 Investment efficiency

Investment efficiency is a function of risk, return, and total cost of an investment management structure, depending on the limits that can be exercised by investors (Hodgson, Breban, Ford, Streatfield, Urwin, 2000). These limitations include financial and non-financial elements as examples of the time used by investors to manage investment arrangements, accountability, and legislative requirements. In the Hodgson et al. (2000) suggests that investment efficiency should consider combining financial efficiency and non-financial efficiency.

Biddle, Hillary, and Verdy (2009) states that firms make efficient investments if all their investments have a positive net present value in the absence of agency cost and adverse selection. If the company missed the investment opportunities that will result the positive net present value in the absence of adverse selection is then referred to as underinvestment.

Meanwhile, if the company makes an investment that generates a negative net present value is called overinvestment.

2.3 Research framework

This study examines the attributes that represent qualitative characteristics of financial statements and the impact of those qualities on investment efficiency. Figure 1 shows the framework of this study.

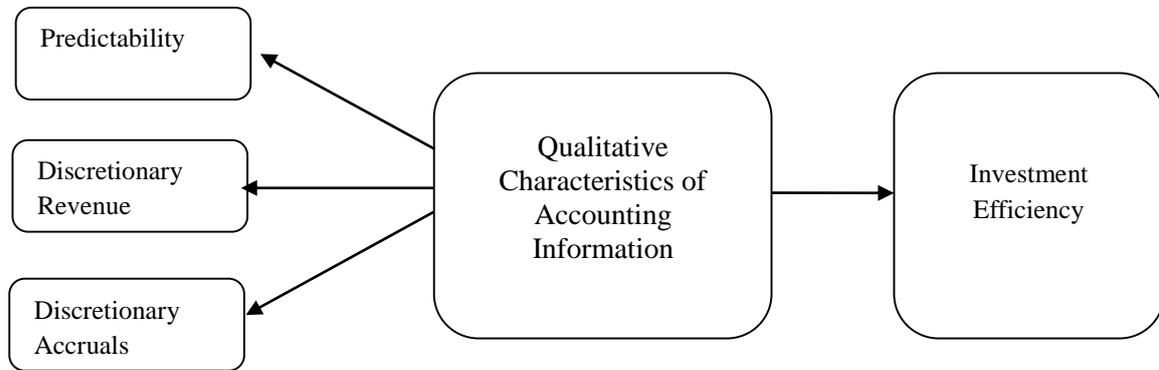


Figure 1: Research framework

2.4 The development of hypothesis

The four main of qualitative characteristics of a financial report consists of understandability, relevance, reliability, and comparability. Francis et al. (2004) shows that between earnings attributes there is no overlapping. Fanani (2009) conducted a test of market-based attributes indicating that there is no overlap between these attributes and only the attributes of conservatism and value relevance that form the quality of financial reporting. Meanwhile, Pagalung, G. (2006) in his research using accounting-based (earnings) attributes differ from each other and the quality of factorial earnings is formed from attributes of predictability, accrual quality, and income smoothing. Therefore, the hypothesis proposed in the study that is **H₁: The attributes of the quality of the financial statements reflect the qualitative characteristics of the financial statements.**

Research on the usefulness of accounting information (financial report) is done first by Ball and Brown (1968) that examines the impact of information content and timeliness of accounting information on market reaction. The financial statements provide information that affects decision making, one of which is the investment decision. Given the quality of good financial statements, the information asymmetry that occurs between management and principal declines so that decisions are made more accurately. Research conducted by Biddle and Hillary (2006) stated that high quality financial report can improve investment efficiency. Verdi (2006); Biddle, Hillary, and Verdi (2009); Chen, Hope, and Li (2011) obtained the result that the quality of financial statements has a negative relationship to underinvestment and overinvestment in other words the higher the quality of financial statements the more efficient the investment. Sari and Suaryana (2014) stated that the quality of financial statements has a significant negative effect on underinvestment but not to overinvestment. Similar results are shown by Handayani, Siregar and Tresnaningsih (2015) which proves that the quality of financial reporting tends to have a significant negative effect on

underinvestment but does not significantly affect the overinvestment. Therefore, we proposed hypothesis is as follows

H_{2a} : Qualitative characteristics of financial statements reduce underinvestment.

H_{2b} : Qualitative characteristics of financial statements reduce overinvestment.

3. RESEARCH METHODS

3.1 The measurement of variables

The dependent variable in this research is investment efficiency. Efficient investment reflects that the company engages in investment activity with a positive net present value (Chen, Hope, and Li, 2011). The efficiency of the investment is measured by the deviation from the expected investment using a model that predicts investment as a function of growth opportunity (Chen, Hope, and Li, 2011). Chen, Hope, and Li (2011) used investment measurement models from McNichols and Stubben (2008) in which investment relationships with sales growth will be different as sales increase and decrease. Then, both deviations are underinvestment (negative deviation value) and overinvestment (positive deviation value) indicates investment inefficiency. Model to estimate expected investment as follows.

$$\text{Investment}_{i,t} = \beta_0 + \beta_1 \text{Neg}_{i,t-1} + \beta_2 \% \text{RevGrowth}_{i,t-1} + \beta_3 \text{Neg} * \% \text{RevGrowth}_{i,t-1} + \varepsilon_{i,t} \quad (1)$$

Investment_{i,t} is the total investment of firm i in year t on fixed assets and research and development minus sales of fixed assets, then scaled by total assets of previous year. Neg_{i,t-1} is the dummy 1 if the sales growth rate is negative, and dummy 0 if the sales growth rate is positive. Percentage of RevGrowth_{i,t-1} is the rate of change of sales in company i in year t-1. Error term (ε_{i,t}) is the residual value of the regression model reflecting the inefficiency of the investment. If the residual value is positive then the firm invests over the optimal limit (overinvestment) and if the residual value is negative then the firm has not reached the expected investment (underinvestment). Then, we absolute the value of underinvestment, so that the higher value shows the higher underinvestment.

The independent variables in this research are qualitative characteristics of financial statements as measured by factor scores of the attributes of financial statement quality. These attributes consist of predictability, discretionary revenue and discretionary accruals that is an attribute-based accounting (Francis et al., 2004). The measurements of each of these attributes are as follows.

a. Predictability: the ability to predict earnings based on past earnings information (Francis et al., 2004; Yoon, 2007).

$$X_{i,t} = \beta_0 + \beta_1 X_{i,t-1} + \varepsilon_{i,t} \quad (2)$$

X_{i,t} is the earnings before extraordinary items year t in company i. Predictability is measured by the standard deviation of the residual or the value of ε_{i,t} from equation (2). Therefore, the lower of residual value, the more predictable.

b. Discretionary revenues: usually used as a proxy of earnings management. The formula for calculating discretionary income (McNichols and Stubben, 2008 referred to in Chen, Hope, and Li, 2011):

$$\Delta \text{AR}_{i,t} = \beta_0 + \beta_1 \Delta \text{Sales}_{i,t} + \varepsilon_{i,t} \quad (3)$$

$\Delta AR_{i,t}$ is the change of accounts receivable in year t in company i. $\Delta Sales_{i,t}$ is the change of sales in year t in company i. All variables are scaled by total lagged assets. The residual value of equation (3) is discretionary revenues, that is changes in trade receivables that's not explained by sales growth. The residual value is absolute and multiplied by -1 so that a high value indicates a high quality of financial reporting as well.

c. Discretionary accruals: discretionary revenue and discretionary accruals are commonly used to measure earnings management. Discretionary accruals measured using the Kothari (2005) model are referred to in Chen, Hope, and Li (2011).

$$TA_{i,t} = \beta_0 + \beta_1(1/Assets_{i,t-1}) + \beta_2\Delta Sales_{i,t} + \beta_3PPE_{i,t} + \beta_4ROA_{i,t} + \varepsilon_{i,t} \quad (4)$$

$TA_{i,t}$ is the total accrual (changes in current assets non-cash-current-debt changes-depreciation expenses) scaled by total assets t-1 in year t in company i. $\Delta Sales_{i,t}$ is the changes of sales in year t in company i. $PPE_{i,t}$ is the current assets scaled by total assets t-1 in year t in company i. $ROA_{i,t}$ is the earnings before extraordinary item divided by total assets in year t in company i. The residual value of equation (4) is discretionary accruals, which is absolute and multiplied -1 so the high value indicates high quality of financial reporting as well.

Control variables are used in this study because many factors determine investment efficiency. Control variables in this study among others.

a. Operating cycle: the number of days required to convert receivables and inventories into cash flow. How to calculate the operating cycle follows Chen, Hope, and Li (2011) and the end result is transformed in logarithmic form.

$$\text{Operating Cycle} = \left(\frac{\text{average accounts receivable}}{\text{sales}} \right) \times 365 + \left(\frac{\text{average inventory}}{\text{cost of goods sold}} \right) \times 365 \quad (5)$$

b. Total assets: represents the size of a company as measured by the logarithm of total assets in the Financial Position Report (Handayani, Siregar and Tresnaningsih, 2015).

c. Tangibility: the ratio of tangible fixed assets to total assets (Handayani, Siregar and Tresnaningsih, 2015).

d. Dummy Loss: dummy 1 if the company suffers losses and dummy 0 if experiencing profit (Chen, Hope, and Li, 2011).

e. Return on Assets: one of profitability ratios as measured by income before extraordinary items divided by total assets (Chen, Hope, and Li, 2011).

f. Age: measured by the logarithm of the company's age since it was listed on the Indonesia Stock Exchange until year t (Handayani, Siregar and Tresnaningsih, 2015).

3.2 Population and sample

The population of this study covers all manufacturing companies listed on the Indonesia Stock Exchange (IDX). Meanwhile, the sample that will be used in this research is chosen based on certain criteria that are the company that issued the financial statements for the period ended 31 December, the companies issuing financial statements during the period of observation of research that is from 2012 to 2015 (4 years) in Rupiah currency, and have all the necessary data in this study.

3.3 Data analysis method

Analysis of the data in this study consisted of descriptive statistical that provides an overview of sample data related to the mean, standard deviation, mode, minimum, and maximum. This research also undertakes factor analysis for testing of the attributes of financial statement

quality and multiple linear regression analysis for testing the influence of the quality of financial report on investment efficiency.

4. RESULT AND DISCUSSION

4.1 Sample and descriptive statistics

The object of this research is the manufacturing sector companies which is listed on the Indonesia Stock Exchange in 2012 until 2015 with the population as many as 624 companies firms-years. The population of 624 observations were reduced in accordance with predetermined criteria so that the final sample of 493 observations for testing related attributes of quality of financial statements (hypothesis 1), consist of 479 underinvestment observation and 14 overinvestment observation. Because small observations of underinvestment (under 30 observations) so it is not possible to do the testing. Therefore, the second hypothesis is only examine for underinvestment observation. Table 4.1 presents the results of sample selection.

Table 4.1: Sample selection results (IDX, 2016)

Description	Sample
Manufacturing sector in 2012	200
Manufacturing sector in 2013	138
Manufacturing sector 2014	143
Manufacturing sector by 2015	143
Total population	624
The financial statements are presented in foreign currency	(79)
Incomplete data	(52)
Number that meets the criteria for hypothesis testing 1	493
Overinvestment data	(14)
The number that meets the criteria for testing hypothesis 2 (underinvestment)	479

4.2 The factor analysis result (hypothesis 1)

Descriptive statistical test consists of minimum, maximum, mean, and standard deviation for predictability, discretionary revenue, discretionary accruals. The results are presented in Table 4.2.

Table 4.2: Descriptive statistics results - attribute quality of financial statements

Description	N	Min	Max	Mean	Std. Dev
Predictability	493	-0.53	14.87	0.0057	1.0308
Discretionary revenue	493	-9740,87	-0.85	-80,4221	551,7870
Discretionary accruals	493	-775.02	-0.09	-3.9642	35,7988

Description: N: number of observations; Min: minimum; Max: maximum; Std.Dev: standard deviation.

Table 4.2 shows that the number of observations for each attribute of the quality of the financial statements is 493. For attributes predictability has a minimum value of -0.53 and a maximum of 14.87, where this value indicates if greater predictability means the quality of financial statements is low because the value to measure predictability comes from the standard deviation of residual value or actually indicates the future earnings period can't be predicted only by the earnings of the current period. The average value of 0.0057 with a standard deviation of 1.03. Based on the average score shows that the ability of predictability is quite good because it is close to 0 so the quality of financial statements is also quite good.

The discretionary revenue attribute has a minimum and maximum value of -9740.87 and -0.85. The average value is -80.4221 and the standard deviation of 551,7870. The value of discretionary revenues indicates that the higher of the discretionary revenue value, the higher the financial report quality because the absolute value of the discretionary revenue has been multiplied by -1. Thus, the higher the inverse value of discretionary revenue means the closer to the number 0, which means less discretion can be made by managers. Based on the average value it is seen that the inverse of discretionary revenues is low and the minimum value also shows that the value is low so the quality of the financial statements is also low.

The discretionary accruals attribute has a minimum and maximum value of -775.02 and -0.09. The average score of -3.9642 and the standard deviation of 35.7988. The discretionary accruals value indicates that the higher the discretionary accruals so the higher the financial statement quality because the absolute value of discretionary accruals has been inverse or multiplied by -1. Thus, the higher the inverse value of the discretionary accruals means the closer to the number 0, which means less occurring accrual discretion by the manager. Based on the average value (mean) it is seen that the inverse of the discretionary accruals is quite high as it approaches 0 so the quality of the financial statements is quite high.

The result of correlation between attribute of quality of financial report that is predictability, discretionary revenue, and discretionary accruals shows low correlation value (below 0.9) so that it can be concluded that there is no correlation between attributes or between attributes does not occur overlapping. The results of the correlation matrix are shown in Table 4.3.

Table 4.3: Correlation results

	Predictability	Discretionary Rev.	Discretionary Accr.
Predictability	1	0,007	-0,020
Discretionary Rev.	0,007	1	0,000
Discretionary Accr.	-0,020	0,000	1

The purpose of KMO MSA and anti-image matrices testing is to determine whether factor analysis can be continued and what variables are feasible to be analyzed. The results of both tests are shown in Table 4.4.

Table 4.4: Results of KMO MSA and anti-image matrices

	Predictability	Discretionary Rev.	Discretionary Accr.
MSA KMO value			0,500
Anti-image matrices (anti-image correlation value)	0,500	0,500	0,500

Based on Table 4.4 it can be seen that the value of KMO MSA is 0,500 and the *anti-image* value is 0,500 for all attributes. The value of KMO MSA and anti-image in this study is at the limit of 0.5 then it can be said that factor analysis can be continued and all attributes worthy to be tested.

The next step is to know how many factors are formed from the three attributes that exist. The result of factor formation is shown in Table 4.5.

Table 4.5: Result of factor formation

	Component 1	Component 2	Component 3
Eigenvalues	1.021	1,000	0.979

Based on Table 4.5 it is seen that of the three components only two components that have eigenvalues above 1 so that the factors formed there are two (Ghozali, 2013). The next stage are specified this attributes to factor 1 or factor 2 by looking at the value of the component matrix. The result of grouping attributes into factors is shown in Table 4.6.

Table 4.6: Component matrix

	Component 1	Component 2
Predictability	0.715	0.002
Discretionary Rev.	0.240	0.941
Discretionary Accr.	-0.673	0.337

Table 4.6 shows that the attribute of predictability, the highest loading factor value is in the component 1 that is equal to 0.715 so that the attribute of predictability comes as a factor 1. Whereas, the attribute of discretionary revenue and discretionary accruals as a factor 2 because the value of loading factor is higher in component 2 that is 0.941 and 0.337. Thus from the three attributes that are divided into 2 factors namely factor 1 called predictability factor and factor 2 called the discretion factor. The result of grouping these attributes means that both discretionary revenues and discretionary accruals explain the same thing.

4.3 The result of linear regression analysis (hypothesis 2)

Descriptive statistical test consists of minimum, maximum, mean, and standard deviation for investment inefficiency, underinvestment, overinvestment, financial statement quality (factor 1 and factor 2), and all control variables (operating cycle, log_TA, tangibility , dummy loss, ROA, age). The results are presented in Table 4.7.

Table 4.7: Descriptive Statistics

Description	N	Min	Max	Mean	Std. Dev
Investment Inefficiency	493	4.71	8644,51	126.3042	647.66028
Underinvestment	479	4.71	1067.01	64.0537	60.9660
Overinvestment	14	5.77	8644,51	2256.1628	3272.6748
Factor 1 (predictability)	479	-15.46	0.40	0.0160	0.9313
Factor 2 (discretion)	479	-16.99	2.50	0.0321	0.8108
Operation cycle (Cycle_Op)	479	-16.60	88438.45	420.3135	4302.0332
Log_total asset (Log_TA)	479	2.41	8.39	6.1832	0.7277
Tangibility	479	0.00	742.73	2.3618	33.9007
Return on Assets (ROA)	479	-3.47	11363.73	28.4196	523.7277
Age (Log_ Age)	479	0.00	1.57	1.1334	0.3606
Dummy loss (D_Loss):					
Dummy 1 (loss)	78				
Dummy 0 (profit)	401				

Based on Table 4.7 it can be seen that for the variables of investment inefficiency (underinvestment and overinvestment) are distributed at the most in underinvestment observation that is 479 while the observation of overinvestment only 14 observations. This indicates that the sample of this research is the most underinvestment that is missed

investment opportunities that will generate a positive net present value in the absence of adverse selection. This is also true of Handayani, Siregar and Tresnaningsih (2015) research which states that developing countries have difficulty in obtaining external financing so that more underinvestment than overinvestment. Also consistent with Verdi (2006) and Chen, Hope, and Li (2011) where underinvestment observation is more than overinvestment.

The variable of factor 1 (predictability) and 2 (discretion) is a proxy of the quality of financial statements (accounting information) or the qualitative characteristics of financial statements. Predictability factors have minimum and maximum values of -15.46 and 0.40 with mean and standard deviation values of 0.0160 and 0.9313. This indicates that the average predictability factor is quite low which means the quality of the financial statements is quite high. As for the discretion factor has a minimum and maximum value of -16.99 and 2.50 with the average value and standard deviation of 0.0321 and 0.8108. This indicates that the average discretion factor is close to 0 or high enough which means the quality of the financial statements is quite high.

The operating cycle has minimum and maximum values of -16.60 and 88438.45 with mean and standard deviation values of 420.3135 and 4302,0332. Log_total assets as a variable to control firm size has minimum and maximum value of 2.41 and 8.39 with mean value and standard deviation equal to 6.1832 and 0.7277. Variable tangibility as a variable to control the amount of tangible assets in a company because it impacts on investment efficiency, has a minimum and maximum value of 0.00 and 742.73 with the average value and standard deviation of 2.3618 and 33.9007. Dummy loss as control variable from observation that have loss, have observation most profit that is equal to 401 observation which have loss which only equal to 78 observation. The ROA variable to control the impact of the profitability ratios on investment efficiency has a minimum and maximum value of -3.47 and 11363.73 with mean and standard deviation values of 28.4196 and 523.77277. Log_age to control the impact of the age of the company or the length of the company listed on the Exchange against investment efficiency has a minimum and maximum value of 0.00 and 1.57 with an average and standard deviation of 1.1334 and 0.3606.

The second hypothesis test is the influence of financial report quality on underinvestment. Based on the F test it is seen that the significance value of 0.000 below $\alpha = 0.01$ so it can be concluded that the independent variables have a mutual influence on the dependent variable. The result of goodness of fit test shows that the adjusted R square value is 0.582 which means the independent variable is able to explain variation of dependent variable equal to 58% while the rest equal to 42% explained by other variable outside this research model.

Table 4.8: F test and goodness of fit

Information	Value
Test F:	
Sig.	0.000 *
Goodness of fit :	
Adjusted R square	0.582

Description: Dependent variable: *underinvestment*;*) significance level α : 1%.

The result of linear regression is t test, shown in Table 4.9.

Table 4.9: *t* test result

Description	Coefficient	Sig. Value
Quality of Financial Statements (Factor 1: Predictability)	0.915	0.672
Financial Statement Qualities (Factor 1: Discretion)	1.752	0.440
Operation Cycle (Cycle_Op)	0,00007919	0.948
Log_Total Assets (Log_TA)	-8.823	0.001 *
Tangibility	1.324	0.000 *
Dummy Loss (D_Loss)	11.357	0.022 **
Return on Assets (ROA)	-0.003	0.431
Age of Company (Age)	-6.070	0.230

Description: Dependent variable: *underinvestment* ; sig. level α : 1% (*), 5% (**).

Table 4.9 shows that the quality of financial report measured by predictability and discretion factor have significance value above α that is 0.67 and 0.440 so it can be concluded that the quality of financial statements do not have a significant effect on underinvestment. Thus, hypothesis 2a is rejected.

Tests for control variables shows that the company's operating cycle, ROA, and age of the firm have no significant effect on underinvestment due to significance values above α . While, total asset logarithm has significance under $\alpha = 0.01$ that is 0.001 and coefficient value equal to -8.823 which means that higher company size measured by total asset logarithm will decrease underinvestment. Tangibility also shows significance under $\alpha = 0.01$ that is 0.000 and coefficient value equal to 1.324 which mean higher tangible asset of a company then increase underinvestment. Dummy loss variable has significance value below $\alpha = 0.05$ that is equal to 0.022 with coefficient equal to 11.357 which mean company in condition of losing tend to more underinvestment than if in condition of profit.

4.4 Discussion

This study examines two things. First, the examination of the attributes of the quality of the financial statements does reflect the qualitative characteristics of the financial statements which used the accounting attributes (Francis, Lafond, Olsson, Schipper, 2004). Based on the test of factor analysis, it can be concluded that the three attributes of the quality of financial statements tested in this study are predictability, discretionary revenue, and discretionary accruals form two factors, namely factor 1 (predictability) and discretionary revenue and discretionary accruals into factor 2 (discretion). All these attributes and factors do not overlap and reflect the qualitative characteristics of the financial statements. The predictability factor is measured by the standard deviation of the residual value so that the lower the value indicates more predictable earnings or high quality of financial statements. The discretionary factor is measured by the inverse measure of discretionary revenue and discretionary accruals, so the higher the value indicates the higher the quality of the financial statements because the discretion value decreases.

Predictability factors mean that high quality financial statements should have the ability to predict future earnings and cash flows. This is reflected from the relevant qualitative characteristics in which one of the relevant elements is predictive value. Predictive value means that accounting information can help users to predict future results based on results past and present events (PSAK no.1, 2015). The results of this study are consistent with the results of Pagalung, G. (2006) which obtained the result that the quality of factorial profit is formed from attributes of predictability, accrual quality, and income smoothing.

The second test is the influence of the quality of financial statements as measured by two factors that have been formed against underinvestment conditions. The results of multiple linear regression analysis showed that neither predictability nor discretion factor had a significant impact in reducing underinvestment. Thus, underinvestment behavior is still done by managers although the quality of financial statements produced high.

Efficient investment is an investment activity undertaken by a company whose investment has a positive net present value in the absence of agency cost and adverse selection (Biddle, Hillary, and Verdi, 2009). If the firm passes an investment opportunity that will generate a positive net present value in the absence of adverse selection is referred to as underinvestment. Inefficient investment is in case of underinvestment or overinvestment. Qualified financial statements (predictable and non-discretionary from managers) provide information that is not asymmetric and can be used for decision making for firms to make efficient investments. However, in this study obtained the result that although the financial statements of qualified companies but the company still underinvestment which can be caused by the company does not have the allocation of funds to finance the investment so that although the company knows there is an investment that has a positive net present value but not to take this investment. Handayani, Siregar and Tresnaningsih (2015) argued that companies in developing countries such as Indonesia have difficulty obtaining external financing. Thus, the company does not take an investment that has a positive net present value when there is no information asymmetry due to limited funding for investment activity. But, the results of this study are not consistent with Verdi (2006); Chen, Hope, and Li (2011); Handayani, Siregar and Tresnaningsih (2015).

The result of control variable test shows that firm size (total asset logarithm), tangibility, and dummy loss have significant impact on underinvestment. The higher total assets owned by the company means the company has resources that can be used to finance the investment activity so that the company will make an efficient investment that has a positive net present value. On the other hand, the higher fixed asset ratio than the total assets, the company has more tangible assets, then the company does not take all the investment despite giving a positive net present value so as to increase the underinvestment. Dummy loss indicate that underinvestment conditions tend to occur at a time when companies are losing money due to limited funding and allocation of retained earnings for investment compared to firms when profitable. Other control variables such as the operating cycle, ROA, and age of the firm have no significant impact on underinvestment.

5. CONCLUSIONS AND SUGGESTIONS FOR FUTURE RESEARCH

This study aims to provide empirical evidence about the attributes that form qualitative characteristics of financial statements (accounting information) and the influence of qualitative characteristics of these financial statements on investment efficiency. The result of testing attributes that formed the quality of financial statements shows that from three attributes analyzed that is predictability, discretionary revenue, and discretionary accruals formed two factors, that are factor 1 namely predictability and factor 2 namely discretion. Both of these factors shape and reflect the qualitative characteristics or quality of the financial statements.

The results of multiple linear regression testing indicate that the quality of financial statements as measured by predictability and discretion factors have no significant effect on underinvestment. This may be due to the fact that the company does not have sufficient financing or no allocation of funds for investment activity although the company knows that if the investment is taken it will give a positive net present value. This is also reinforced by the result of the dummy loss variable which shows that in the condition of losers tend to be more

underinvestment than if the company is in profit condition. In addition, the results of the control variables show that the higher the size of a firm as measured by the total asset logarithm will lower the underinvestment. The higher fixed asset ratio than the total asset will increase the underinvestment. Meanwhile, the company's operating cycle, profitability ratios as measured by ROA, and firm age have no significant effect on underinvestment.

This study has several limitations. First, the number of unbalanced observations between underinvestment and overinvestment observation so that only underinvestment observation is analyzed. Second, the samples were analyzed limited only manufacturing companies. Third, in there are 2 variables that occur heteroscedasticity. Fourth, the attributes of the quality of the financial statements analyzed limited only predictability, discretionary revenue and accruals. Suggestions for further research is first, increase the number of companies and years so that observations both underinvestment and overinvestment can be analyzed. Second, the financial statement quality attributes are added with other accounting attributes such as accrual quality, persistence, smoothness and can also include market attributes such as value relevance, conservatism, and timeliness. Third, the investment efficiency measurement model uses quartiles such as those conducted by Biddle, Hillary, and Verdi (2009) so as to enable adequate observation of overinvestment.

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