Financial Distress Prediction in Indonesia

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Abstract: - Altman in 1968 specified that there were five ratios of company difficulties, namely Working Capital to Total Assets (WCTA), Retained Earning to Total Assets (RETA), Earning Before Interest and Tax to Total Assets (EBITTA), Market Value of Total Liabilities (MVETL), Sales to Total Assets (STA). The purpose of this study was to analyze the effect of WCTA, RETA, EBITTA, MVETL, and STA on predictions of the occurrence of Financial Distress conditions. The population of this study is the annual report of Manufacturing companies listed on the Indonesia Stock Exchange during 2012-2016 with a purposive sampling method resulting in 40 total samples. Using Logistic regression analysis with SPSS 21.0 proves that Market Value of Equity to Total Liabilities (MVETL) and Sales to Total Assets (STA) have a significant negative effect on prediction of Financial Distress. Working Capital to Total Assets (WCTA), Retained Earning to Total Assets (RETA) and Earning Before Interest and Tax to Total Assets (EBITTA) have no effect on financial distress predictions.

Key-Words: - Altman Z-Score, Bankruptcy, Financial Distress

1 Introduction

Bankruptcy is the condition of the company entering the final period which is marked by the beginning of the disappearance of the company's opportunity to obtain income to be able to carry out the sustainability of its business. The symptom faced when a organization experiences bankruptcy occurs marked the start of financial difficulties at the company. If an organization tries to improve and resolve financial problems it faces but fails there are two things that are experienced, namely bankruptcy or the company is liquidated. Problems regarding internal and external conditions are problems that are very closely related to the triggers of the company's bankruptcy conditions. This can be the cause of the high risk of financial difficulties if the company is not ready to face uncertainty. Thus resulting in financial difficulties to make bankruptcy. Some financial ratios are predicted to contribute to explaining predictions of financial difficulties. Altman (1968) specifies there are five ratios that can provide an overview of the company's difficulties, namely Working Capital to Total Aset (WCTA), Retained Earning to Total Aset (RETA), Earning Before Interest and Tax to Total Aset (EBITTA), Market Valuer of Equity to Total Liabilities (MVETL), Sales to Total Aset (STA). The prediction that has been made by Altman has become the driving pioneer in the emergence of development research trends regarding financial distress for the past decade. The testing of financial distress prediction analysis has started to be done by several researchers. The condition of corporate financial distress is a condition that must be avoided for a company.

There are inconsistencies in the results of research on the Altman model and testing the ratio is to predict financial distress. Altman variable to determine the level of liquidity by testing the working capital variable with the amount of total assets owned by WCTA, Nyamboga et al., (2014) showed that liquidity ratios were found not significantly significant for predicting Financial Distress conditions. Rahmawati and Hadiprajitno (2015), Hapsari (2012) also show that the Working Capital to Total Asset (WCTA) variable has an

influence but is not significant to the occurrence of Financial Distress conditions. However, these results contradict the research conducted by Anisa and Suhermin (2016), Nugroho and Mawardi (2012), showing that the WCTA has a positive significant effect on financial distress to predict conditions. The second, influence in testing the Altman, how the model predicts model relationships and influences of the Retained Earning to Total Asset (RETA) variable on predictions of the occurrence of Financial Distress conditions. Rahmawati and Hadiprajitno (2015) results obtained that the RETA variable shows inconsistent and insignificant results on the occurrence of the condition of the Company's Financial Distress. The high and low RETA ratio does not affect the likelihood of a company experiencing a Financial Distress. There is also research that shows that the RETA variable has a significant positive effect carried out by Anisa and Suhermin (2016), and Nugroho and Mawardi (2012) show that the RETA variable significantly positive effect on financial distress prediction.

The third variable contained in the Altman model is the Earning Before Interest and Taxes to Total Asset (EBITTA) variable, in the test also found inconsistencies in the results obtained by several studies such as research conducted by Nyamboga et al., (2014); Annisa and Suhermin (2016) empirically prove that EBITTA has a positive impact on predictions of financial distress. However, different results shown by Mas'ud (2012) show that the Earning Before Interest and Taxesto Total Asset (EBITTA) variables have no significant effect in predicting the bankruptcy of the company. The fourth variable in which was tested Altman 1986 namely (MVETL) variable, also found inconsistent results such as the research conducted by Yamboga et al., (2014), Rahmawati and Hadiprajitno (2015) that leverage ratios does not significantly affect the prediction of financial difficulties. That cause the results of this study to conflict with the results of the study research conducted by Zhaklina and Vasilika K (2016). The results obtained show that the Leverage variable measured by the MVETL has a very large effect the occurrence of the company's insolvency condition. This is also supported by research conducted by Nugroho and Mawardi (2012) showing that the MVETL variable significantly positive effect on predictions of financial distress.

The fifth variable used in the Alman variable is the Sales to Total Asset (STA) variable, the results of several studies show that the STA variables obtain different results, as well as research conducted by Rahmawati and Hadiprajitno (2015) showing that the STA variable indicates influence but not significant. This result also contradicts the research conducted by Mas'ud (2012) which shows that the Asset Turnover ratio as measured by the STA variable results that the STA significantly positive effect on financial difficulties and corporate bankruptcy. Based on the results of these studies illustrate that there are inconsistencies in the results of testing the predictions of financial distress conditions. It takes an effort to predict the bankruptcy of the company is very important to do and is a way that must be taken by a company. Early recognition of financial conditions can be done by doing signaling or by implementing a company Early Warning System item. This study further examines the development of models in an effort to predict the condition of corporate financial difficulties carried out using the Altman model. This study aims to analyze WCTA, RETA, EBITTA, MVETL, and STA on predictions of the occurrence of Financial Distress conditions**.**

2 Problem Formulation

2.1 Signalling Theory

Signaling theory is one sign that describes the response to current corporate conditions. Even though what has been done by the company has an impact on parties outside the company. Thus, the importance of managing information owned by the company determines the response to investment decisions made by investors. According to Brigham and Houston (2011) signal theory is an effort made by management in a company to be able to provide direction for investors regarding how management sees the prospects of the company in the future. This theory supports companies to be able to compete in managing information to be better, so that it can make more interest for investors and creditors to be able to invest in the company's investment, the more investors invest in the company's investment decisions, the more value a company has complete, credible and timely in conducting financial reporting is a positive signal for parties related to the company. This is a determining factor whether creditors and investors will decide to provide investment because, information about these financial statements will first be obtained and then analyzed by the parties who decide to lend funds to the company.

The above explanation was also supported by Jogiyanto (2013) who explained that everything related to company information that has been publicized will provide a signal for investors and creditors in making decisions. The relationship with

this research is that if the results of a predictive analysis of the conditions of difficulties in terms of corporate finance will provide a signal for investors and creditors in making decisions in investing. This will apply otherwise, if the results of the analysis explain that the company is in a crisis or is facing financial difficulties then it can provide input to be able to plan the decisions made in the future so that investors and creditors do not suffer losses in the future.

2.2 Hypotheses Development

WCTA is a ratio used to determine the level of a company's ability to obtain net working capital in total by looking at the amount of assets owned by the company. Working capital is a measure of the level of liquidity of the company, if the liquidity ratio gets higher then it gets a lower company facing the condition of financial distress. This is because companies easily pay short-term obligations. This is also evidenced by research conducted by Lakshan and Wijekoon (2013); Alifiah et al., (2013), the study examined the effect of WCTA showing significant negative effect on predictions of financial distress. This ratio shows level of management efficiency in an effort to manage production, administration and sales activities (Ray, 2011). This shows that if the company gets a high Retained Earning ratio, it shows that the company earns high profits in an effort to finance assets and pay dividends, so that a high Retained Earning ratio will reduce the likelihood that the company will experience a Financial Distress. The theory that supports using retained earnings as a source of funding is the Risk Society Theory. This theory explains the manager seeks to consider risk estimation, the company uses the results of the company's operating profit as an alternative in an effort to develop business and consider the risks faced by the company, the high proportion of retained earnings held by the company to estimate the condition of the company. When the higher the profit obtained by the company, the lower the prediction of financial distress. A similar study was also presented by Lakshan and Wijekoon (2013), explaining the relationship between Retained Earning to Total Asset variables obtained by the company negatively influencing the condition of the Financial Press at the company. That is, the higher the RETA ratio will further reduce the probability of the occurrence of the Financial Distress condition.

The ratio obtained from EBITTA used to determine value of company's operating profit generated from the amount of assets owned by the company. The company's operating profit shows the amount of profits obtained from operating activities before the interest deferral and taxes that must be deferred by the company. This ratio analysis is used to measure whether the assets obtained have been used effectively to generate profits from operating activities. Companies that obtain high EBITTA value, the company has carried out effectiveness in production activities, so as to reduce the probability of companies experiencing financial distress. The high profit generated supports more trust for investors who can support the increase in stock prices. Based on Signaling Theory explains that the high profit earned by the company provides good prospects in the future. This can illustrate the response of sensitive signals for investors to profit. The description this research is in line with the results of the research presented Rahmawati and Hadiprajitno (2015) explaining that found the EBITTA variables there was a significant negative impact on predicting financial distress. It can be concluded that the higher the EBITTA, the lower of the company in financial distress.

MVETL is obtained from the amount of shares issued by the company multiplied by the amount of value per share. The results obtained are divided by the total value of debt owned by the company, the results in the form of this ratio can be used as a guide to the company's value in the eyes of the market or can be referred to as market capitalization value. Equity market value shows the amount of capital value owned by the company based on an assessment conducted by market participants. Stocks are one of the decisive indicators in determining market value. The size of the value of this stock is the most decisive policy that relates to the level of the higher the market value means the value of the company the higher the financial difficulties, the smaller. Pitaya's research (2015) proved that the MVETL ratio showed a significant negative prediction of financial distress.

The ratio of the amount of value obtained from Sales to Total Assets is used to show the extent to which the company's strength in creating sales that come from all the company's total assets. Sales obtained by the company address the company's ability to obtain company profits. Earnings obtained show the company's performance in carrying out the company's operational activities related to sales. The more sales obtained by the company can show high efficiency and a good signal not only for the company, but also for investors. This ratio is called the asset turnover ratio. The higher the acquisition of asset turnover, if the lower the level of profitability is financial difficulties. This is in line with Signaling Theory shows that profitability is

measured from the acquisition of income and sales that gives a signal to investors. Namely the higher the income generated, the more reating an increase in investor confidence, with this matter can make it easier for the management to take capital in the form of shares. This applies otherwise if the company experiences a decrease in sales resulting in a decrease in the value of earnings per share. A similar study by Pitaya (2015) states that the Altman variable namely Sales to Total Asset has have a significant negative impact on financial distress. Theoretical Framework in this study is presented in Figure 1.

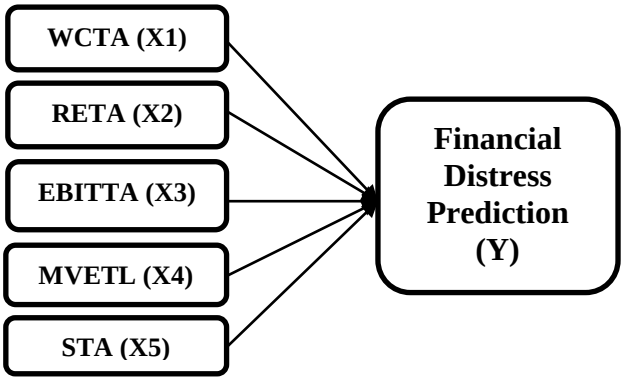

Fig 1. Theoretical Framework

Based on explanation described, the research hypothesis is as follows:

H1: WCTA has a negative effect on Financial Distress Prediction

H2: RETA has a negative effect on Financial Distress Prediction

H3: EBITTA has a negative effect on Financial Distress Prediction

H4: MVETL has a negative effect on Financial Distress Prediction

H5: STA has a negative effect on Financial Distress Prediction

3 Problem Solution

This study uses an annual report sample of Manufacturing companies for the period 2012-2016 which registered on the Indonesian Stock Exchange. Total companies included in the population category in the study were 150 companies, 65 companies in the Industrial and Chemical Sector, 43 in the Various Industry sectors and 42 in the Consumer Goods Industry sector. Sampling of this study using purposive sampling method with criteria as follows:

a. The company is a company that conducts business activities related to the manufacturing sector
b. The company is listed and listed on the IDX during 2012-2016 and the company continuously conducts financial reporting
c. The company conducts financial reporting that has been through the audit process by the IDX during the period of the study.
d. The company has submitted complete data during the research period relating to financial ratios contained in the Altman prediction model.
e. Companies that have negative Earning Per Share for the last 2 sequentially.

With the criteria, the total sample in this study is presented in table 1:

Table 1. Number of Study Samples

Criteria	Number of Samples
Total population	150
The company carries out business activities related to the manufacturing sector	150
The company is listed BEI period 2012-2016 and is continuously conducting financial reporting	87
The company conducts financial reporting that has gone through the audit process	70
The company has submitted complete data on financial ratios contained in the Altman prediction model	70
Negative Earning Per Share for the last 2 years in a row	8
Number of Samples Obtained (5 years)	40

Source: Secondary data processing, 2019

3.1. Analysis Methods

This study explains the use of tools and mechanisms used by Altman's model in predicting Financial Distress. This research was conducted at manufacturing companies that can be analyzed through the value of Earning Per Share, the information can be seen from the financial statements issued by each company. The technique is used to do data analysis. This study which is using logistic binary regression and uses dummy variables on the dependent variable. Number 1 for companies that experience financial distress and number 0 for companies that do not experience financial distress. This test uses a statistical tool, SPSS 21.0. A complete description of the analysis method and the results of this descriptive statistical test to find out the financial ratio of the 1986 Altman model such as min, max, mean, standard deviation. The dependent Binary variable used is a classification based on categories, while the independent variables are presented in the form of numerical data. The classification of the bound variable is in the form of values 1 and 0, each

prediction of the independent and dependent variables are described in the form of probability values. This model is referred to as the binary logistic regression model (Ghozali, 2016).

3.2. Operational Definition of Variables

Financial Distress is the stage of a company facing a decline in financial performance, if this happens it can indicate a company is experiencing bankruptcy or liquidation. The use of an analysis model on Financial Distress can now be used as an Early Warning System so that it can immediately take action to take immediate action to improve the condition of the company. Measurements regarding Financial Distress variables can also be explained if a company has a negative Earning Per Share (Elloumi and Gueyie, 2001). The measurement of the dependent variable uses a dummy variable using binomial size, values 1 and 0. Value 1 is used for the corporate category where there is a Financial Distress, the value of 0 is the category of the company does not occur Financial Distress. The following is a further explanation regarding how to calculate the overall variable. Altman's 1968 prediction analysis model uses five ratios then performs testing using Binary Logistic Regression. The financial ratio in the Altman is WCTA, RETA, EBITTA, MVETL and STA. Prediction function the Altman calculated by the formula:

Z = X1 +X2 +X3 +X4 +X5
Z = Indeks Financial Distress
X1: WCTA
X2: RETA
X3: EBITTA
X4: MVETL
X5: STA

The classification of the Altman Financial Distress index (1968) uses a cut-off value of 2.675 and 1.81 with the following classification:

1. Value of Z >2,675, the company is predicted not to experience the condition of Financial Distress;
2. Z value is between $1.81 \leq Z \leq 2.675$ then the company is categorized as Gray Area condition, classified in Non Financial Distress;
3. Value of Z <1.81, the company is predicted to experience the condition of Financial Distress.

Summary explanation of the operational definitions of variables shown in Table 2:

Table 2. Operational Definition of Variables

No.	Variable	Definition	Scale	Proxy
1.	Working Capital/Total Aset (WCTA)	This financial ratio is a ratio to determine the condition of a company's liquidity in terms of the total value of assets held and the position of working capital.	Ratio	$\text{WCTA} = \frac{(\text{Current Asset} - \text{Current Liabilities})}{\text{Total Asset}}$
2.	Retained Earning/Total Asset (RETA)	This ratio is used as an indicator of the company in showing the level of management effectiveness in an effort to manage production performance, administration, sales, and other activities.	Ratio	$\text{RETA} = \frac{\text{Retained Earning}}{\text{Total Asset}}$
3.	Earning Before Interest and Tax / Total Asset (EBITTA)	Level productivity of operating activities derived from assets owned by the company, regardless of deferred tax or interest expenses.	Ratio	$\text{EBITTA} = \frac{\text{Earning Before Interest and Taxes}}{\text{Total Asset}}$
4.	Market Value of Equity/Total Liability (MVETL)	The level of leverage in the company resulting from the comparison of company value with capital market decisions in the eyes of investors	Ratio	$\text{MVETL} = \frac{\text{Market Value of Equity}}{\text{Total Liabilities}}$
5.	Sales to Total Asset (STA)	This financial ratio is used in measuring levels ability to make business efficiency by utilizing assets owned by the company.	Ratio	$\text{STA} = \frac{\text{Sales}}{\text{Total Asset}}$

Source: Secondary data processing, 2019

3.3. Data Analysis

In conducting data analysis there is a descriptive analysis test, this test is useful to will get complete information about variable data which is reflected in the number of samples performed shown Table 3.

Table 3. Descriptive Statistics Test Results

Variable	N	Min	Max	Mean	Standard Dev.
Financial Distress Prediction		0	1	0,60	0,49
WCTA	40	-4,25	0,62	-0,22	1.16
RETA	40	-9,53	0,76	-1,07	2.65
EBITTA	40	-0,09	0,18	0,05	0.05
MVETL	40	0,01	59,21	2,81	9,67
STA	40	0,02	1,88	0,84	0,59
Valid N (listwise)					

Source: Secondary data processing, 2019

The results of Table 4. Block 0 from the results show that the value of -2 Log likelihood Block 0 is 53,841 while the acquisition of -2 Log likelihood Block 1 gets a value of 13,999. With the addition of Altman variables into the research model can improve the model to be better. The decrease in knowing significance can be seen further in the Omnibus Test of Model Coefficient, this result shows the difference from -2 Log likehood in Block 0 and Block 1. Partial is a test that is used with the aim to prove whether the independent variable has an effect on the dependent variable. the results of this coefficient prove that the relationship between two variables. This relationship can be seen through the magnitude of the value obtained, if the significance is <0.05, the variable has a partial influence on Y. This applies the opposite, if the acquisition of P value (significance) >0.05 so that the variable does not have a partial significant effect on the dependent variable.

$$\text{Ln}\frac{P}{(1-P)} = 8{,}524 - 0{,}731\,\text{WCTA} - 0{,}831\,\text{RETA} - 24{,}260\,\text{EBITTA} - 4{,}500\,\text{MVETL} - 4{,}579\,\text{STA}$$

Test partial regression results Table 5 can be obtained as follows:

Table 4. Obtaining Block 1: Method=Enter

Interation		-2loglikelihood	Coefficients					
			Constant	WCTA	RETA	ABITTA	MVETL	STA
Step 1	1	40,332	1,753	-1,183	,203	-1,515	-,078	-1,318
	2	33,726	2,307	-1,158	-,021	-2,236	-,241	-1,689
	3	26,400	3,178	-1,154	-,297	-3,731	-,604	-2,143
	4	21,112	4,290	-1,782	-,384	-6,442	-1,142	-2,608
	5	16,550	5,044	-1,052	-,337	-7,975	-2,167	-2,847
	6	14,483	6,495	-,672	-,559	-12,389	-3,333	-3,544
	7	14,071	7,624	-,605	-,750	-18,124	-4,021	-4,136
	8	14,003	8,305	-,677	-,820	-22,774	-4,391	-4,473
	9	13,999	8,511	-,727	-,831	-24,178	-4,494	-4,573
	10	13,999	8,524	-,731	-,831	-24,260	-4,500	-4,579
	11	13,999	8,524	-,731	-,831	-24,260	-4,500	-4,579

Source: Secondary data processing, 2019

Table 5.Obtaining Partial Significance Test

		B	S.E	Wald	Df	Sig.	Exp (B)	95% C.I for EXP (B)	
								Lower	Upper
Step 1	WCTA	-,731	3,825	,036	1	,849	,482	,000	867,900
	RETA	-,831	1,136	,535	1	,464	,436	,047	4,036
	EBITTA	-24,260	28,035	,749	1	,387	,000	,000	2,123
	MVETL	-4,500	2,093	4,624	1	,032	,011	,000	,671
	STA	-4,579	2,326	3,875	1	,049	,010	,000	,981
	Constant	8,524	4,188	4,142	1	,042	5032,966		

Source: Secondary data processing, 2019

Table 6. Summary of Binary Logistic Regression Test Results

Hormer and Lemeshow	Block 0	Block 1	Nagelkerke R Square	Level of Accuracy	Omnibus Test	Conclusion
0,943 >0,05	53,841	13,999	0,853	95%	0,000 <0,05	
Each Variable Significance Ratio						
Variable Altman				**Significance Ratio**		
WCTA				Not significant	0,849 >0,05	H1 Rejected
RETA				Not significant	0,464 >0,05	H2 Rejected
EBITTA				Not significant	0,387 >0,05	H3 Rejected
MVETL				Significant	0,032 >0,05	H4 Accepted
STA				Significant	0,049 <0,05	H5 Accepted

Source: Secondary data processing, 2019

3.4 WCTA on Financial Distress Prediction

Testing using logistic regression to measure the influence of variables contained in the Altman model by looking at the magnitude of the influence both simultaneously and partially on the potential for the occurrence Financial distress in manufacturing companies during 2012-2016. Based on the results of the analysis presented in Table 6. influence Working Capital variable to Total Asset shows that the significance level obtained is 0.849 (0.849 >0.05), the results of this significance value show more than 0.05. This result is concluded that rejected, this means that WCTA variables partially do not affect the Financial Distress variable. The WCTA variable coefficient is negative -0.731 and the significance value exceeds the significance value of α. Company makes an effort the composition of the value of high current liabilities shows that the company is making efforts to fulfill long-term obligations and seeks to cover other losses. Thus, the greater or lesser the score obtained in the variable does not affect the level of probability in predicting the occurrence of Financial Distress conditions.

The results of the Nyamboga et al., (2014) study show that liquidity ratios have a significant effect on financial distress. Target sample of the study was 38 non financial public companies registered in the NSE. The method used is with Multiple Discriminant Analysis. A similar study supporting the results of this study was by Rahmawati and Hadiprajitno (2015) showing that WCTA ratios obtained in regression coefficients showed inconsistencies in non significant variables at one. This study illustrate that the company must be smart enough to make an effort to composition the financial structure, because if there is an excess composition, it also creates high financial risks. But the amount of working capital obtained by the company has not allowed the company to experience the condition of Financial Distress, because the composition of current assets owned by each company is different.

3.5 RETA on Financial Distress Prediction

Logistic regression testing to measure the magnitude of the influence both simultaneously and partially on the potential for the occurrence of financial distress conditions carried out on during 2012-2016. Based on the results of the analysis presented in Table 6. contribution of significance Retained Earning to Total Asset (RETA) variable is 0.464. This shows that the significance level exceeds the acquisition of the p value of significance (0.464> 0.05), the variable has no partial effect on financial distress. And the direction of the relationship shows a negative relationship with the coefficient shown in the negative variable which is -0.831. So the proposed H2 is rejected. Retained Earning is one element of shareholder equity. The size of the amount of the distribution of retained earnings can occur because of the policies made by company leaders (Baridwan, 2010). Decisions regarding the composition of retained earnings are a source for the company to be able to make business expansion efforts, assets planted in the form of equipment and factories, not in the form of bank accounts. So that it can be said that the size of the retained earnings cannot be categorized as experiencing financial difficulties due to these reasons.

The results of this study are supported by researchers Rahmawati and Hadiprajitno (2015) explaining that the Retained Earning to Total Asset (RETA) variable shows a significance value exceeding 0.05, which makes the Retained Earning to Total Asset (RETA) variable insignificant on one. Similar research that supports the results of the hypothesis, namely by Pranowo et al., (2010) shows that the Retained Earning variable does not related to predictions of financial distress, Retained Earning is not necessarily predicted by the condition of Financial Distress, because each company has policies relating to business expansion efforts.

3.6 EBITTA on Financial Distress Prediction

Testing using logistic regression analyze in knowing the influence contained in Altman model by looking at the magnitude of the effect both simultaneously and partially on the potential for the occurrence of conditions in the Financial Distress. Results obtained Table 6 can be seen the magnitude of the effect of the Earning variable EBITTA shows a significance level 0.387, value (0.387 >0.05) is greater than the significance value of α. So that the H3 proposed in the study was rejected, judging by the magnitude of the significance value it means that the EBITTA variable does not partially affect the Financial Distress variable. The coefficient obtained by the EBITTA variable is negative -24,260. So it can be concluded that the negative results of Earning Before Interest and Tax (EBITTA) do not necessarily occur in the condition of Financial Distress.

EBITTA is used to determine the ability of a company to generate profits derived from the company's total assets. If a company earns income that is considered less than fair valuation, it means that the acquisition between income and expenditure does not show a positive gain, so this can make one of the small causes of the EBIT variable acquisition value. Whereas when viewed the value of assets owned, in the sense of bankruptcy the company experiences insolvency. The company has a liability whose value is large enough to exceed the fair valuation of assets owned. However, with the high level of EBITTA acquisition, the company is not necessarily facing financial distress. This is because along with the low income acquisition at the same time the company makes improvements by making investments to make business development efforts. Dhamo and Kume (2016) which examines the trend characteristics of Financial Distress, Financial ratio EBITTA shows a negative signal in predicting Financial Distress, meaning that if an average value increases average makes the level of variability decrease a prediction. The sample used was to examine three industries in the country of Albania, southeastern Europe.

3.7 MVETL on Financial Distress Prediction

Research in testing the influence of this variable uses Binary Logistic Regretion. Testing carried out to analyze and determine the magnitude of the influence on predictions of financial distress. Based on Table 6 can be known the magnitude of the effect of MVETL shows level significance obtained is 0.034 (0.034 <0.05) this value indicates smaller than the significance value α. So that H4 is accepted, this means that the MVETL is a variable that affects predicting financial distress. MVETL variable coefficient is negative -4,537 and the significance value obtained is below the α significance value. The negative coefficient sign indicates that if there is one MVETL ratio increases, it decreases the probability value of a Financial Distress, or it can be said that it will be more influential with the Financial Distress variable. MVETL a ratio that is used as a guide to the extent to which the ability of a company with the value of the market capitalization that is owned compared to the acquisition of corporate debt value. The results of the MVETL ratio show that if the company has a large debt value there is a tendency for a large amount of Financial Distress. Pranowo et al., (2010) in the results of his research showing the significance value of this ratio MVETL is <0.05. So that it can be said that the Leverage variable has a correlation with the occurrence of the Financial Distress condition. A similar study was also conducted by Gepp and Kumar (2008) the results obtained showed that Financial Leverage variables are very important variables, because this ratio can signal a danger that companies experience business failures. The sample used in the study was 285 companies in Australia. The method used for testing variables using Discriminant and Logit Analysis.

3.8 STA on Financial Distress Prediction

Tests to be able to know the good effect simultaneously of partial production can be known by doing logistic regression testing, to be able to know the effect Financial Distress prediction on variables used in Altman model. based on the results of data analysis presented in Table 6. magnitude of the effect of the Sales to Total Asset (STA) variable shows the significance level obtained is 0.049 (0.049 <0.05). So that H5 is accepted, this result proves that the STA partially influences the prediction of financial distress. Coefficient obtained by the STA variable is negative -4,579 significance value is smaller than the level of significance. If seen the significance obtained shows that there is a correlation between the Sales to Total Asset (STA) variable with predictions of the occurrence of Financial Distress conditions on the company. Companies that show low asset turnover show that profits derived from sales are low. The occurrence of a decline in sales conditions certainly creates risks that arise due to the inefficiency of the company in obtaining income so that this supports the company experiencing the condition of Financial Distress. There is a similar study that supports (Asnita and Fuadi, 2016). The results of study show that asset turnover variables detected using the sales

to total asset variable Has significant significance for predicting financial distress.

4 Conclusion

The study of the testing of the market value of equity to total liabilities (MVETL) and Sales to Total Assets (STA) has a significant negative effect on prediction of financial distress. Working Capital to Total Assets (WCTA), Retained Earning to Total Assets (RETA) and Earning Before Interest and Tax to Total Assets (EBITTA) have no effect on financial distress predictions.

The research carried out is still lacking, while the first limitation in the form of the model the Altman 1968, this study was conducted by predicting 5 variables namely WCTA, RETA, EBITTA, MVETL, and STA. The acquisition of the test coefficient of determination shows the value of Nagelkerke R-Square of 85.3% explaining variability in the study, 14.7% explained by other variables outside the study. The next researcher would like to be able to provide corrections by considering other variables outside of this study, as well as using variables contained in the Ohlson model, Fulmer, Springate, Zmijewski. Furthermore, the results of the accuracy of predictions show a gain of 95%, while 5% is still a mistake in predicting the results of the research, so that the next researcher can find a test method in predicting Financial Distress conditions with better accuracy. So that it can be reliable with the results obtained.

Based on the limitations that have been conveyed, the next researcher needs to apply the solutions that have been delivered or create new solutions to be able to produce research that can be in accordance with current conditions. These suggestions, namely further research are expected to continue to look for new variables added to the research model such as cash flow ratios, balance sheets and financial statements. This is to be able to obtain variability that is more accurate and general in nature for the company. There are several research models of Financial Distress that can provide a picture of new variability such as Ohlson, Fulmer, Springate, Zmijewski etc.

References:

[1] Altman, E. I. (1968). Financial ratios, discriminant analysis and the prediction of corporate bankruptcy. *The journal of finance*, *23*(4), 589-609.

[2] Anisa, V. D., & Suhermin, S. (2016). Analisis variabel kebangkrutan terhadap terhadap financial distress dengan metode Altman Z-Score. *Jurnal Ilmu & Riset Manajemen*, *5*(5).

[3] Alifiah, M. N., Salamudin, N., & Ahmad, I. (2013). Prediction of financial distress companies in the consumer products sector in Malaysia. *Sains Humanika*, *64*(1).

[4] Asnita, R., & Fuadi, R. (2016). Analisis Perbandingan Prediksi Kebangkrutan Perusahaan dengan Menggunakan Multivariate Discriminant Analysis dan Regresi Logistik pada Perusahaan Pertambangan Batubara Periode 2010-2014. *Jurnal Ilmiah Mahasiswa Ekonomi Akuntansi*, *1*(1), 230-246.

[5] Baridwan, Z., & Hariani, A. R. (2010). The Presence of Earnings Manipulation Incentive as a Prerequisite for Positive Accounting Theory the Benefits of Higher-Quality Audit to be Realized: The Case of Indonesia. *Universitas Gadjah Mada (UGM) and Universitas Gadjah Mada Working Paper Series*.

[6] Brigham, E. F., & Houston, J. F. (2012). *Fundamentals of financial management*. Cengage Learning.

[7] Dhamo, Z., & Kume, V. (2016). Financial Performance and management differences: A Comprehensive Study on Couse of Financial Distress for Albanian Businesses.

[8] Elloumi, F., & Gueyie, J. P. (2001). Financial distress and corporate governance: an empirical analysis. *Corporate Governance: The international journal of business in society*, *1*(1), 15-23.

[9] Gepp, A., & Kumar, K. (2008). The role of survival analysis in financial distress prediction. *International research journal of finance and economics*, (16), 13.

[10] Ghozali, I. (2016). Aplikasi Analisis Multivariete IBM SPSS 23. *Semarang. Universitas Diponegoro*.

[11] Hapsari, E. I. (2012). Kekuatan Rasio Keuangan dalam Memprediksi Kondisi Financial Distress Perusahaan Manufaktur di BEI. *Jurnal Dinamika Manajemen*, *3*(2).

[12] Jogiyanto, H. M. (2013). Sistem Teknologi Informasi Bisnis: Pendekatan Strategis. *Jakarta: Salemba Empat*.

[13] Nugroho, M. I. D., & Mawardi, W. (2012). *Analisis Prediksi Financial Distress dengan Menggunakan Model Altman Z-Score Modifikasi 1995 (Studi Kasus pada Perusahaan Manufaktur yang Go Public di Indonesia Tahun 2008 sampai dengan Tahun 2010)* (Doctoral dissertation, Fakultas Ekonomika dan Bisnis).

[14] Nyamboga, T. O., Omwario, B. N., Muriuki, A. M., & Gongera, G. (2014). Determinants of Corporate Financial Distress: Case of Non-Financial Firms Listed in the Nairobi Securities Exchange. *Research Journal of Finance and Accounting*, *5*(12), 193-207.

[15] Mas'ud, I., & Srengga, R. M. (2012). Analisis rasio keuangan untuk memprediksi kondisi financial distress perusahaan manufaktur yang terdaftar di Bursa Efek Indonesia. *Jurnal Akuntansi Universitas Jember*, *10*(2).

[16] Lakshan, A. M. I., & Wijekoon, W. M. H. (2013). The Use of Financial Distress. Ratios in Predicting Corprate Failure in Sri Lanka. *GSTF Journal on Bussines Review (GBR) Vol*, *2*.

[17] Pitaya, D. H. A. (2015). *Aplikasi Prediksi Financial Distress Menggunakan Metoda Altman: Studi Pada Perusahaan Manufaktur yang Terdaftar di Bursa Efek Indonesia Periode 2010-2013* (Doctoral dissertation, Universitas Gadjah Mada).

[18] Pranowo, K., Achsani, N. A., Manurung, A. H., & Nuryartono, N. (2010). Determinant of corporate financial distress in an emerging market economy: Empirical evidence from the Indonesian stock exchange 2004-2008. *International Research Journal of Finance and Economics*, *52*(1), 81-90.

[19] Rahmawati, A. I. E., & Hadiprajitno, P. B. (2015). *Analisis Rasio Keuangan Terhadap Kondisi Financial Distress pada Perusahaan Manufaktur yang Terdaftar di Bursa Efek Indonesia tahun 2008-2013* (Doctoral dissertation, Fakultas Ekonomika dan Bisnis).

[20] Ray, S. (2011). Assessing corporate financial distress in automobile industry of India: An application of Altman's model. *Research journal of Finance and Accounting*, *2*(3), 155-168.