THE FACTORS THAT INFLUENCE FINANCIAL DISTRESS OF INDONESIA MANUFACTURING COMPANY

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ABSTRACT

This research is a quantitative research to determine which independent variables are the most significant influential in determining the condition of financial distress in the manufacturing company. The sample of this study is the Manufacturing Industry listed on the Indonesia Stock Exchange in the period of 2012-2016. The sampling technique was purposive sampling technique, which is selecting samples based on predetermined criteria. The variables that will be observed by researchers in examining the effect of financial ratios to predict financial distress conditions in manufacturing companies are the dependent variables, namely financial distress (Y) and independent variables, that is liquidity (X1), leverage (X2), Firm Size (X4), Profitability (X6), Managerial Ownership (X7), Institutional Ownership (X8). The results showed that the logistic regression conformity test was significant. This indicates that logistic regression is able to predict the company's financial distress in the study period. Hypothesis test results show that the variables that influence the company's financial distress are leverage, profitability and institutional. While variables that do not affect the company's financial distress are liquidity, firm size and managerial ownership. The results of the accuracy of the model calcification amounted to 76.4%, this indicates that the model is able to predict precisely the financial distress of the manufacturing company in the study period of 76.4% or 422 of the 552 observational data.

Keywords: Financial Distress, Manufacturing, Logistic Regression

INTRODUCTION

At present conditions economic and business developments are characterized by high levels of competition. In this case, the manager or executive must understand and predict the condition of the company in the future. It is intended that the company can survive in the long term and avoid bankruptcy. Some companies that have operated within a certain period of time often experience bankruptcy due to financial difficulties.

The phenomenon that occurred in Indonesia especially in manufacturing companies in 2015 there were 2 companies that experienced delisting including the PT. Davomas Abadi, Tbk (DAVO), and PT. Unitex, Tbk (UNTX). In 2017 there is 1 delisting manufacturing company namely PT. Sorini Agro Asia Corporindo, Tbk (SOBI). PT. Davomas Abadi, Tbk (DAVO) is a company engaged in cocoa producers who entered the food and beverage sector officially resigned from the Indonesia Stock Exchange in January 2015. The company resigned because it was considered to worry about its financial condition. The last few years in the company's financial statements recorded in the balance sheet show that the equity value is negative, this is due to an operational loss that has an impact on the company's dividend distribution which will later be received by the shareholders. In this case it shows that the condition of the company is experiencing financial difficulties so that later it will impact bankruptcy

With the existence of a company that is delisted from the exchange, it is important for a manager to predict the condition of financial difficulties which can be known by the company's financial decline in paying off its obligations prior to liquidation (Widarjo & Setiawan, 2009). According to Rodoni and Ali (2010: 176) to find out the financial condition of the company there are three interrelated conditions as the cause of financial difficulties, namely insufficient capital, large debt costs and interest, and suffer losses.

Predicting the condition of financial difficulties of a company can be known by analyzing financial statements using financial ratios. Financial ratios are a form of financial statements that describe the company's performance. In this case the financial statements can provide information and prospects for the company's condition in the future. Based on signaling theory, if the results of financial statement analysis show good financial performance of the company, then the company can provide a good signal to external parties such as investors and creditors.

Widarjo & Setiawan (2009) there are two reasons for conducting research on financial distress prediction in companies, the first is to examine the relationship and influence between financial factor variables and measurement of failure or bankruptcy, while the second is to develop models in forecasting or bankruptcy predictions.

Rahayu & Winarti (2016) the development of financial security models is important to do because the signs of a company before going bankrupt will surely experience financial difficulties. In this case financial difficulties must

be predicted from the start by taking action to anticipate the occurrence of bankruptcy. In detecting financial difficulties, namely by using a particular model which of the detection models can help investors or creditors in determining investment decisions.

According to Lin, Liang and Chen (2011) Factors that influence the prediction of Financial Distress are the variables used. With the many differences in predictor variables tersut it will give different results. Most of the studies that predict Financial Distress use more financial variables, but there are several non-financial variables that can also provide influence in providing research results.

Most of the research on Financial Distress uses financial ratio variables obtained from the company's financial statements per year. According to Sun, He and Li (2011) a relatively long period is to predict within a period of one year, while predictions made less than one year or shorter are still a small part done. Previous research according to Umi Zhahratun, Budi, and Stefanus (2013) in the study entitled Financial Distress prediction models in Go Public manufacturing companies in Indonesia that use financial variables, non-financial variables, and macroeconomic variables with SVM and LDA processing techniques that result in variable which significantly affects financial difficulties are financial and non-financial variables while macroeconomic variables do not contribute.

LITERATURE REVIEW

Financial Distress

Part of a financial reporting process is the definition of financial statements according to SAK No.1. All transactions that occur during one period will be recorded and reported, so that functionally, financial statements are one of the media of communication to the parties who have interests in the company that contain financial information of the company. Financial statements are important for stakeholders, including investors, including knowing the health of the company or predicting financial difficulties using financial ratios.

Much of the research that has been done relates to the health of the company and financial difficulties. The ability of a company to operate its business will be reflected through the health of the company itself, besides that it can also see the potential for bankruptcy. The potential for bankruptcy arises due to financial difficulties which if left untreated will lead to bankruptcy.

Agency Theory

Issues of interest arise because of differences in interests that arise between management and the owners of capital. In the perspective of agency theory, management should have an interest in prospering the owner because management is an agent of the owner, but because of the risks that must be borne by management, they will also consider their importance in decision making (Hardiningsih and Meita, 2012).

Managers have different personal goals and compete with the company's goals of maximizing the prosperity of shareholders (Brigham and Houston, 2006). Company owners give managers the power to make a decision. This actually creates a potential conflict of interest called agency theory. Brigham and Houston (2006) state that agency problems arise when company managers have less than 100% of the company's shares.

Liquidity with Financial Distress

Liquidity is the ability of a company to pay off its short-term obligations. Research conducted by Almilia and Kritijadi (2003), shows that the more liquid a company is, the more probabilities the company will avoid financial distress.

H1: Liquidity has a negative effect on financial distress

Financial Leverage with Financial Distress

In practice, the source of corporate funding is divided into two, debt capital (debt capital) and own capital (equity capital) (Gitman, 2000). Funding needs to run company activities are carried out with a variety of reasons, one of which is due to non-fulfillment of the needs of funds originating from internal companies in the form of retained earnings

The form of funding from debt certainly has costs in the form of loan interest. The bigger the debt, the higher the loan interest or interest expense. Based on research conducted by Seoki et al (2010), it shows that the higher the level of leverage of the company, the higher the probability of companies experiencing financial distress.

H_2: Financial leverage has a positive effect on financial distress

Firm Size to Financial Distress

Company size is a description of the size of a company (Brigham and Houston, 2011). Large companies tend to have better ability to maintain their level of liquidity because assets owned can be used as collateral. Besides that, companies that have large total assets will easily diversify so that the probability of companies going bankrupt will be smaller.

H3: Company size has a negative effect on financial distress

Profitability with Financial Distress

Profitability provides a measure of the level of management effectiveness of a company, because it shows the ability of profits generated from sales and investment income (Kasmir, 2012: 197). There are several ratios used to measure profitability, among others, profit margin on sales, return on total assets, basic earnings power, and return on equity. Research conducted by Andre (2009) states that the level of profitability has a significant effect on financial distress. Hapsari's research (2012) shows that profitability has a negative and significant effect on financial distress. The same thing was also revealed in the results of research by Widarjo and Doddy (2009).

H4: Profitability has a negative effect on financial distress

Managerial Ownership with Financial Distress

Managerial ownership is the company's share ownership by the management of the company (Hartaro and Atahau, 2007). Sujoko and Soebiantoro (2007) revealed that managerial ownership is the ownership of the company's shares by management which is measured in the percentage of the number of shares held.

Emiraldi (2007) states that the greater the number of managerial ownership, the greater the probability of decreasing financial distress potential. In other words, the more the percentage of share ownership by management will reduce the potential for financial distress.

H5: Managerial ownership has a negative effect on financial distress

Institutional Ownership with Financial Distress

A high level of ownership by institutions in a company will lead to greater oversight efforts. This great supervision will directly or indirectly oversee the manager's performance from decisions that are not in accordance with the interests of the company, in this case the owners of the company.

Supervision carried out on the management side in carrying out the company's operations will create opportunities for smaller financial distress (Parulian, 2007). This is also supported by research conducted by Emiraldi (2007) which states that institutional ownership has a negative influence on financial distress.

H6: Institutional ownership has a negative effect on financial distress

RESEARCH METHODOLOGY

This research is a type of quantitative research to determine which independent variables are the most significant influential in determining the condition of financial distress in the company. This research was conducted on the Manufacturing Industry listed on the Indonesia Stock Exchange in the period 2012-2016. The object of this research is financial distress. The population in this study are companies in the manufacturing industry listed on the Indonesia Stock Exchange in the period 2012-2016. The annual financial statements and summary of company performance in the period 2012-2016 are used for the calculation of the dependent variable as a determinant of financial distress. The sampling technique in this study used purposive sampling technique, namely by selecting samples based on predetermined criteria.

The following are the criteria determined by the researcher for sampling:

1. Companies in manufacturing industries that have been listed on the Indonesia Stock Exchange in the period 2012-2016
2. Has published annual financial reports and annual reports that are complete in accordance with the needs of researchers relating to financial ratios with financial statements ending on 31 December and the number of institutional ownership and managerial ownership.
3. Companies included in the manufacturing industry listed on the Indonesia Stock Exchange in 2012-2016 which presented their financial statements in rupiah.

The variables that will be observed by researchers in examining the effect of financial ratios to predict financial distress conditions in manufacturing companies are the dependent variables namely financial distress (Y) and independent variables namely liquidity (X1), Laverage (X2), Firm Size (X4), Profitability (X6), Managerial Ownership (X7), Institutional Ownership (X8)

Financial Ditress

Financial distress is a condition faced by a company if the company experiences financial difficulties in fulfilling its obligations, which causes the company to suffer losses continuously. In this study the financial distress criteria are based on the argument that if the company experiences losses for two consecutive years it shows that the company is not good enough. If the company continues to leave these conditions without improvement, the impact that must be received by the company is even worse (bankruptcy). The indicator used is pre-tax profit, due to avoidance.

Liquidity

The liquidity ratio can be used to measure a company's ability to pay obligations. But only within the scope of its short-term obligations. The liquidity ratio can be measured using several measurement methods, but researchers in predicting the company's financial distress are more focused on measuring using the current ratio. The current ratio can explain the extent to which current liabilities can be covered by current assets. Current ratio can be calculated using the formula:

$$\text{Current ratio} = \frac{\text{Current Assets}}{\text{Current Debt}}$$

Profitability

Profitability Ratios can be used to measure a company's ability to generate profits or profits in its operations such as in sales activities and so on. For research using profitability ratios measured using Return on assets to determine asset turnover through sales volume.

Return on assets can be calculated using the formula:

$$\text{Return on Aset} = \frac{\text{Net Income}}{\text{TotalAssets}}$$

Good Corporate Governance

In this study Good Corporate Governance is measured using managerial ownership and institutional ownership variables.

d.1. Managerial ownership

The ownership structure in this study was measured using a proxy used in Xuan-Quang and Zhong-Xin (2013) studies. The way to measure it is as follows:

d.1. Kepemilikan manajerial (Managerial ownership)
$$\text{MaOW} = \frac{\text{Total of Management's Stock}}{\text{Total of Stock}}$$

d.2. Institutional Ownership

The ownership structure in this study was measured using a proxy used in Xuan-Quang and Zhong-Xin (2013) studies. The way to measure it is as follows:d.2. Institutional ownership

$$\text{MaOW} = \frac{\text{Total of Institutional's Stock}}{\text{Total of Stock}}$$

Firm Size

This activity ratio can measure how the company's activities so far include the activities of companies in sales, purchases, and so on. In predicting financial distress conditions researchers measure using activity ratios as measured by sales to total assets that can describe total assets turnover seen from the volume of sales or describe the extent of the ability of all assets to create sales.

Sales to total assets can be calculated using the formula:

$$\text{Sales to total assets} = \frac{\text{Sales}}{\text{total assets}}$$

ANALYSIS AND DISCUSSION

Compatibility Test of the Logistic Regression Model

Suitability test of logistic regression model to find out whether the model is feasible to use and further analysis can be carried out. The compatibility test of the logistic regression model consists of 3 tests namely the Hosmer and Lemeshow's test Goodness of Fit Test, the Omnibus Test of Model Coefficient and -2 log likelihood.

Table 1. Uji -2 log likelihood.

Iteration		-2 Log likelihood	Coefficients						
			Constant	Likuiditas	Leverage	Firm Size	Profitabilitas	K. Manajerial	K. Institusional
Step 1	1	574.585	-1.675	-.326	.424	-.055	.206	.048	-.149
	2	569.092	-2.120	-.388	.549	-.061	.285	.064	-.224
	3	569.010	-2.180	-.391	.565	-.060	.296	.065	-.237
	4	569.010	-2.181	-.391	.565	-.060	.296	.065	-.237

a. Method: Enter
b. Constant is included in the model.
c. Initial -2 Log Likelihood: 597.863
d. Estimation terminated at iteration number 4 because parameter estimates changed by less than .001.

The test results of the model suitability test with 2 log likelihood indicate that the model is feasible to use which means that the model is able to predict the company's financial distress. Test of suitability of the model can also be seen from the value of the omnibus test and presented in the table as follows:

Table 4.2. Omnibus Tests of Model Coefficients

		Chi-square	df	Sig.
Step 1	Step	28.854	6	.000
	Block	28.854	6	.000
	Model	28.854	6	.000

The omnibus test table informs that the significance value of the Omnibus test is less than 0.05, this can be concluded that the model is feasible to use which means that the model is able to predict the company's financial distress. Test the suitability of the model can also be seen from the Hosmer and Lemeshow test and presented in the table as follows:

Table 4.3 Hosmer and Lemeshow Test

Step	Chi-square	df	Sig.
1	11.525	8	.174

The Hosmer and lemeshow test tables inform that the significance value of the Hosmer test and the free test test is more than 0.05, this can be concluded that the model is feasible to use which means that the model is able to predict the company's financial distress

Hypothesis testing

This test is used to determine the effect of independent variables on dependents by using an error tolerance value of 5%. The research hypothesis is accepted if the independent variable significance value is less than 0.05. The results of hypothesis testing using logistic regression are presented in the table as follows:

Table 4.4. Hypothesis testing

		B	Sig.	Exp(B)	Keterangan
Step 1[a]	Likuiditas	-.391	.060	.677	Not Significant
	Leverage	.565	.003	1.759	Significant
	Firm Size	-.060	.348	.942	Not Significant
	Profitabilitas	.296	.022	1.345	Significant
	Manajerial. O	.065	.309	1.067	Not Significant
	Institusional. O	-.237	.009	.789	Significant
	Constant	-2.181	.000	.113	

H1 : Liquidity Influence on financial distress

Based on the results of the study, it shows that the current ratio has a regression coefficient of -0,391 with a significance level of 0.060> 0.05, so that it can be concluded in this study that liquidity does not significantly influence the Company's financial distress condition. Furthermore, it can be concluded that H1 is rejected.

The liquidity ratio shows the company's ability to pay off its short-term debt / liabilities. This ratio is calculated from working capital, namely current assets and current debt. The liquidity ratio includes the current ratio, quick ratio and the ratio of cash to current assets. Current ratio describes the ability of a company to pay off its short-term debt with current assets. This ratio can be calculated by comparing between current assets divided by current debt. The greater the value of the current ratio, the less likely the company to experience financial distress because the company has a number of liquid assets such as cash or money used to pay off its debt and finance its operational activities both in the transaction period and future period so that the company does not experience financial difficulties or threatened the continuity of its business.

The results of this study indicate that the current ratio does not have a significant effect on financial distress. Based on the results of logistic regression and descriptive statistics of the current ratio and financial distress, it shows that the current ratio tends to fluctuate while financial distress increases. A high current ratio signifies the company's high ability to pay off its current debt using its smooth assets. The results of this study are in line with the research conducted by Hapsari (2012), Widarjo and Setiawan (2009), Mas'ud and Srengga (2012) and Widhiari and Aryani (2015) which state that the current ratio does not significantly influence financial distress. However, it is different from the research conducted by Istiantoro and Indrawati (2015) and Ray (2011) which states that the current ratio has a significant effect on the condition of financial distress.

H2 : Leverage Influence onfinancial distress

Based on the results of the study, it shows that the debt ratio has a regression coefficient of 0.565 with a significance level of 0.003 <0.05, so it can be concluded in this study that leverage has a significant effect on predicting financial distress. Furthermore, it can be concluded that H2 is accepted

In practice, the source of corporate funding is divided into two, debt capital (debt capital) and own capital (equity capital) (Gitman, 2000). Funding needs to run company activities are carried out with a variety of reasons, one of which is the lack of fulfillment of funds from internal companies in the form of retained earnings.

The form of funding from debt certainly has costs in the form of loan interest. The bigger the debt, the higher the loan interest or interest expense. Based on the research conducted by Seoki et al (2010), it shows that the higher the level of leverage of the company, the higher the probability of companies experiencing financial distress

H3 : Firm Size Influence on financial distress

Based on the results of the study, it shows that Firm Size has a regression coefficient of -0.060 with a significance level of 0348> 0.05, so that it can be concluded in this study that Firm Size has no significant effect in predicting financial distress conditions. Furthermore, it can be concluded that H3 is rejected.

Company size is a description of the size of a company (Brigham and Houston, 2011). Large companies tend to have better ability to maintain their level of liquidity because assets owned can be used as collateral. Besides

that, companies that have large total assets will easily diversify so that the probability of companies going bankrupt will be smaller.

H4 : Profitability Influence on financial distress

Based on the results of the study, it shows that Profitability has a regression coefficient of 0.296 with a significance level of 0.022 <0.05, so that it can be concluded in this study that Profitability has a significant effect in predicting financial distress conditions. Furthermore, it can be concluded that H4 is accepted.

This priftability ratio shows the company's ability to generate profits. this ratio is also often called the operating ratio. The profitability ratio is the profit margin, return on assets, return on total assets and return on equity. The smaller the value of return on assets can be made possible by the company's performance is less effective in processing assets owned to generate profits so that it can cause losses that result in negative cash flow and the company will experience financial distress if it occurs within a few years. This is due to an imbalance between operating expenses and income generated

.

The results of this study indicate that return on assets have a significant effect on financial distress. Based on the results of logistic regression and descriptive statistics of return on assets and financial distress, it shows that return on assets tends to decrease while financial distress increases. Decreasing return on assets is due to the relatively small increase in net income obtained by companies every year, not comparable to the relatively high number of assets each year. The results of this study are in line with the research conducted by Hapsari (2012), Widarjo and Setiawan (2009), Mas'ud and Srengga (2012), Ray (2011) and Gong, Bose and Chen (2015) which state that return on assets has a significant effect towards financial distress conditions. However, different from the research conducted by Istiantoro and Indrawati (2015) which stated that return on assets did not significantly influence financial distress conditions.

H5 Manjerial O Influence on financial distress

Based on the results of the study, it shows that K. Manjerial has a regression coefficient of 0.065 with a significance level of 0.309> 0.05, so it can be concluded in this study that K. Manjerial has no significant effect in predicting financial distress conditions. Furthermore, it can be concluded that H5 is rejected

Managerial ownership is the company's share ownership by the management of the company (Hartaro and Atahau, 2007). Sujoko and Soebiantoro (2007) revealed that managerial ownership is the ownership of the company's shares by management which is measured in the percentage of the number of shares held.

Emiraldi (2007) states that the greater the number of managerial ownership, the greater the probability of decreasing financial distress potential. In other words, the more the percentage of share ownership by management will reduce the potential for financial distress.

H6 : Institusional O. Influence on financial distress

Based on the results of the study, it shows that Institutional K. has a regression coefficient of -0.237 with a significance level of 0.009 <0.05, so it can be concluded in this study that Institutional K. has a significant effect in predicting financial distress conditions. Furthermore, it can be concluded that H6 is accepted.

A high level of ownership by institutions in a company will lead to greater oversight efforts. This great supervision will directly or indirectly oversee the manager's performance from decisions that are not in accordance with the interests of the company, in this case the owners of the company.

Supervision carried out on the management side in carrying out the company's operations will create opportunities for smaller financial distress (Parulian, 2007). This is also supported by research conducted by Emiraldi (2007) which states that institutional ownership has a negative influence on financial distress

Accuracy of Model Classification

The classification of the model's accuracy shows the accuracy of the model in predicting the company's finances while the results of the classification of the model's accuracy are presented in the table as follows

Tabel 4.5 Model Classification

	Observed		Predicted		
			Banking Conditions		Percentage
			0	1	Correct
Step 1	Banking Conditions	0	416	8	98.1
		1	122	6	4.7
	Overall Percentage				76.4

The table above informs that the model is able to predict manufacturing companies that do not experience financial distress of $416 / (416 + 8) = 98.1\%$. The model is able to predict manufacturing companies that experience finacial distress of $6 / (6 + 122) = 4.7\%$. The accuracy of the model predicts overall corporate financial distress of $(416 + 6) / (416 + 6 + 122 + 8) = 76.4\%$. Thus it can be concluded that the model correctly predicts financial distress of manufacturing companies in the study period of 76.4%, namely, 422 of 552 companies.

CONCLUSIONS AND SUGGESTION

The results showed that the logistic regression conformity test was significant, this indicates that logistic regression is able to predict the company's financial distress in the study period. Hypothesis test results show that the variables that influence the company's financial distress are leverage, profitability and institutional. while variables that do not affect the company's financial distress are liquidity, firm size and k. managerial. The results of the accuracy of the model calcification amounted to 76.4%, this indicates that the model is able to predict precisely the manufacturing distress of the manufacturing company in the study period of 76.4% or 422 of the 552 observational data. Furthermore, it can add independent variable variables that are considered capable of predicting company financial distrees and also use other statistical analysis methods that allow more accurate predictions of corporate financial distress.

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