The Influence of Liquidity, Leverage and Profitability on Financial Distress of Listed Manufacturing Companies in Indonesia

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Abstract

This research aims to empirically examine the influence of (1) liquidity, (2) leverage and (3) profitability on financial distress of manufacturing companies listed in Indonesian Stock Exchange (IDX). The population in this study are all manufacturing companies listed in Indonesian Stock Exchange. The research sample was selected using purposive sampling method resulted with a total of 118 companies. The research used secondary data obtained from ICMD. Logistic regression was used to analyze the data. The research results show that (1) liquidity has a negative and significant influence on financial distress of manufacturing companies, (2) leverage has a negative and significant influence on financial distress of manufacturing companies, and (3) profitability has a negative and significant influence on financial distress of manufacturing companies listed in Indonesian Stock Exchange.

Keywords: liquidity, leverage, profitability, financial distress

Introduction

Increasingly intense competition between companies causes the cost to be incurred by the company will be higher, this will affect the performance of the company. If a company is not able to compete then the company will suffer losses, which in turn can make a company experiencing financial distress (Wahyu & Doddy, 2009). Moreover, in digital era, in order to survive and win the competition, every company is encouraged to decide the best decision immediately. One of them is how companies manage finances to avoid financial distress and bankruptcy.

According to Platt and Platt (2002), financial distress is the stage of decline in financial conditions that occur prior to the occurrence of bankruptcy or liquidation. According to Wurck (1990) financial distress is a condition in which operating cash flow is insufficient to meet its current liabilities such as accounts payable or interest charges. Financial distress can be started from the difficulty of liquidity (short-term) as the lightest indication of financial distress, until bankruptcy statement which is the most severe financial distress.

In this study, the object of research is a manufacturing company listed on the Indonesia Stock Exchange (BEI). This study decided to choose manufacturing companies because the manufacturing industry sector plays an important role in the national economy. According to Central Statistical Agency, (*Badan Pusat Statistik*—BPS), manufacturing sector provides the largest value added among nine other economic sectors. This is evidenced on the basis of Gross Domestic Product (GDP) at constant 2010 prices, in 2014 the contribution of the manufacturing industry to the economy reaches 21.02%.

According to Elloumi and Gueyie (2001), financial distress is defined as a company with negative earnings per share (EPS). EPS is the ratio most widely used by shareholders in assessing the prospects of the company in the future compared to other financial ratios. According to (Tandelilin, 2001) also

said that for investors, EPS information is the most fundamental and useful information, because it can illustrate the future earnings prospects of the company. Thus, a company has good growth in the future if it has a positive earning per share (EPS) continuously in each period (Whitaker, 1999). Conversely, negative EPS in some periods illustrates the prospect of bad earnings and also the growth of the company so that it is less attractive to investors. Under such conditions companies will find it difficult to obtain funds that can trigger bankruptcy profitability.

In this study the first ratio to predict the occurrence of financial distress is the ratio of liquidity. According to Fahmi (2013), liquidity ratio is the ability of a company to pay its financial obligations to be repaid (short term) and the company's ability to provide funds for the company's operations. That is, if the company billed, the company will be able to meet the debt, especially debt that has matured. If the company is able to finance and pay off its short-term liabilities well, then the company's potential to experience financial distress will be smaller.

This research chose current ratio as a measure of liquidity variable. Current ratio is a ratio that measures a company's ability to meet its short-term liabilities with its current assets (Brigham & Houston, 2001). A company with current assets that is greater than its current liabilities is considered in a liquid condition to cover its current liabilities possible financial distress.

In addition to the liquidity ratio, leverage ratios can also be used to predict the occurrence of financial distress. According to Keown (in Ferry, 2011), leverage ratio represents the level of interest expense and debt expense incurred by firms using external funds. This refers to a trade-off model in which the use of debt at the optimal level can increase the value or profit of the company so that the possibility of financial distress is unlikely.

This study chose Debt to Equity Ratio (DER) as a measure of leverage variables. Debt to equity ratio is the ratio used to measure the level of debt utilization to total shareholder's equity owned by the company. Debt to equity ratio shows the percentage of provision of funds by shareholders to lenders. The higher the DER ratio, the lower the company's funding provided by the shareholders. So, the use of debt can increase the value of the company. Increased corporate value decreases the probability of occurring financial distress.

The third ratio that affects financial distress is profitability ratio. According to Mamduh and Abdul (2007), profitability ratio measures how big the company's ability to generate profits. This study decided to choose return on equity as a measure of profitability variable. It was because ROE shows the company's ability to generate net income by using its own capital and generating net income available to owners or investors. This means that the higher ROE of the company, the higher the value of the company will be. This is certainly an attraction for investors to invest in the company.

In this study, company size was measured by using natural logarithm to total assets acts as a control variable with the aim that in the prediction of financial distress in this study is not influenced by factors other than financial ratios. Firm size is a scale that indicates the size of a company or a lot of at least the company's assets, which can be measured in various ways, including total assets, log size, stock market value, and others (Hidayat, 2013). Basically the size of the company only divided into three categories, namely large, medium, and small companies.

Based on the background, this study formulates the research problem: **Do liquidity, leverage and profitability influence financial distress of manufacturing companies listed in Indonesian Stock Exchange during 2013 – 2016?**

Methods

The population of this study are all manufacturing companies listed on the Indonesian Stock Exchange (IDX). The sample companies were selected using purposive sampling technique by looking at the completeness of the data financial statements resulting with 118 companies. As for the observation period which is done for a period of 5 year, i.e. covering the financial statements from 2012 to 2016.

From each company, information was gathered with relation to presence or absence of EPS, current ratio, debt to equity ratio, and return on equity. The data were obtained from the official website of Indonesian Stock Exchange www.idx.co.id. As such, the data used in this research was panel data.

Research Hypotheses

H_1: Liquidity has a significant negative influence on financial distress of manufacturing companies listed in IDX.

H_2: Leverage has a significant negative influence on financial distres of manufacturing companies listed in IDX.

H_3: Profitability has a significant negative influence on financial distress of manufacturing companies listed in IDX.

Results and Discussion

Table 1 shows the results of Hosmer and Lemeshow Goodness of Fit Test to assess the eligibility of regression model. The significance level is 0.580 more than 0.05, it is means that logistic regression models can be used for further analysis.

Table 1 Hosmer and Lemeshow test

Step	Chi-square	df	Sig.
1	6.604	8	0.580

In logistic regression, a model is said to be good and fit if there is a decline in the value of -2 Log likehood. This phenomenon indicates the possibility of a relationship between independent variables and their dependent variables. Based on Table 2, it is seen that the value of 2 Log likehood from block 0 to block 1 has decreased. It can be concluded that this model can be used for subsequent analysis.

Table 2 Overall model fit

Iteration History[a,b,c]			
Iteration		-2 Log likelihood	Coefficients Constant
Step 0	1	256.504	-1.506
	2	248.368	-1.897
	3	248.223	-1.958
	4	248.223	-1.960
	5	248.223	-1.960
Step 1	1	228.496	-1.059
	2	196.983	-1.328
	3	189.428	-1.695
	4	188.780	-1.863
	5	188.774	-1.884
	6	188.774	-1.884

Based on Table 3, test results obtained a decrease in value 2 log likehood of 59.449 with a significance of 0.000 is smaller than 0.05. It is means that there is a mutual influence of the four predictors in explaining the occurrence of financial distress.

Table 3 Omnibus tests of model coefficients

		Chi-square	df	Sig.
Step 1	Step	59.449	4	0.000
	Block	59.449	4	0.000
	Model	59.449	4	0.000

Table 4 shows that of 332 samples, 291 samples were in a group of companies not experiencing financial distress while 41 samples were in a group of companies experiencing financial distress. In the group of companies not experiencing financial distress, logistic regression model can predict as much as 97.9%, while in the group of companies experiencing financial distress, logistic regression model can predict as much as 19, 5%. The overall result shows the prediction accuracy of 88.3% and it can be concluded that this model is good.

Table 4 The classification matrix

			Predicted		
			Financial Distress		
	Observed		Non Financial Distress	Financial Distress	Percentage Correct
Step 1	Financial Distress	Non Financial Distress	285	6	97.9
		Financial Distress	33	8	19.5
	Overall Percentage				88.3

Table 5 below shows the ability of financial ratios in predicting financial distress of manufacturing companies go public in Indonesia. There are three financial ratios selected as the best determinants namely liquidity, leverage and profitability.

Table 5 Results of hypotheses testing

Predictor Variable	Regression Coefficient	Sig
Constant	-1.884	0.152
Liquidity	-0.005	0.013
Leverage	-0.660	0.000
Profitability	-0.090	0.000
Size	0.207	0.092

Liquidity

The results of the study show that liquidity has a negative and significant influence on financial distress manufacturing companies listed on the Stock Exchange 2013-2016. This is evidenced by negative liquidity test results 0.005 and wald value of 6,167 with a significance of 0.013 <0.05. The value of this significance indicates a change in liquidity affects financial distress. That is, if a company is able to meet its short-term obligations, obtain a high level of profit, and able to use company funds in accordance with the portion then the company can avoid the Financial Distress.

The results of this study in accordance with the opinion (Amalia and kristijadi, 2003) where high liquidity can reduce financial distress which in this study shows that liquidity can reduce financial distress.

Leverage

Based on the results obtained that leverage has a negative and significant influence on financial distress manufacturing companies listed on the Stock Exchange 2013-2016. This is evidenced by the test results of negative leverage coefficient of 0.660 and wald value of 19.812 with a significance of 0.000 <0.05. The value of this significance indicates that leverage changes affect financial distress. That is, if the leverage increases, it will affect the financial distress company. Then from the leverage coefficient value of 0,517 indicates that the likelihood of financial distress influenced by leverage is equal to 51,7%.

The results of this study in accordance with the theory of trade off. According to the theory of trade off the use of debt will increase the value of the company and reduce financial distress, because the results of research from this manufacturing company shows that the leverage measured through the DER ratio has a negative and significant impact on financial distress it can be concluded that the use of debt in this sector affects financial distress. This research is supported by research conducted by Luciana and Kristijadi (2003) and Pasaribu (2008) and Evanny (2012), where leverage has a negative and significant effect on financial distress. This means that if the company manages the debt well can increase the profit and value of the company so as to avoid the occurrence of financial distress.

Profitability

Based on the results obtained that profitability has a negative and significant effect on financial distress manufacturing companies listed on the Stock Exchange 2013-2016. This is evidenced by the results of testing the negative profitability coefficient of 0.090 and wald value of 22.818 with a significance of 0.000 <0.05. The value of this significance indicates a change in profitability affects financial distress. That is, the better the use of the company's equity in generating profits. The more net profit owned by the company, the more avoided from financial distress .. Then from the value of profitability coefficient of 0.914 indicates that the financial distress opportunity is affected by profitability is equal to 91.4%.

The results of this study are in accordance with Luciana's research (2003 and 2006), Mahde Salehi (2009). The election of profitability ratios as one of the best determinants in predicting financial distress and bankruptcy is in line with Tasman and Masdupi (2014), Tasman and Kurniawati (2014). It is means that this profitability ratios need to get serious attention from corporate managers to be more alert to bankruptcy symptoms. The sooner the symptoms of bankruptcy are known to be better so that managers can take immediate corrective action in the future.

Conclusions

The objective of this study is to empirically examine the influence of liquidity, leverage and profitability on financial distress in manufacturing companies listed in Indonesian Stock Exchange (IDX). The research sample was selected using purposive sampling method resulted with a sample of 118 companies. Logistic regression was used to analyze the data.

The results of the study show that:

1. Liquidity has a negative and significant influence on financial distress of manufacturing companies listed on IDX from 2013 to 2016;
2. Leverage has a negative and significant influence on financial distress of manufacturing companies listed on IDX from 2013 to 2016; and
3. Profitability has a negative and significant influence on financial distress of manufacturing companies listed on IDX from 2013 to 2016.

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