

THE EFFECT OF LIQUIDITY, LEVERAGE, PROFITABILITY, OPERATING CAPACITY, AND MANAGERIAL AGENCY COST ON FINANCIAL DISTRESS OF MANUFACTURING COMPANIES LISTED IN INDONESIAN STOCK EXCHANGE

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Abstract—This study aims to analyze the effect of liquidity, leverage, profitability, operating capacity, and managerial agency cost on financial distress. Using purposive sampling, 203 manufacturing companies listed on the Indonesian stock exchange for the period 2015 – 2017 are determined as a sample. Logistic regression was analyzed using SPSS 19 software. The results show that liquidity and managerial agency cost have no effect on financial distress. Leverage further has a significant positive effect on financial distress, whereas profitability and operating capacity have a significant negative effect on financial distress.

Keywords—liquidity, leverage, profitability, operating capacity, managerial agency cost.

I. INTRODUCTION

The economy of companies in Indonesia has higher competitiveness because more of them are going public. Therefore, companies must be careful to manage both financial management and operations. This is done to remain stable and avoid the occurrence of financial distress. Companies which can maintain their financial effectiveness will continue to run well, and the profits will increase and progress. In fact, obligations in fulfilling short and long-term debt will also run smoothly and according to the company's purposes.

Financial distress is a condition in which a company's finances are unhealthy or in crisis. Financial distress can be caused by internal or external factors. Internal factors include cash flow difficulties, the large amount of debt, and losses in the operations for several years, while external factors include the increase in the loan interest rate (Yustika, 2015) .

Previous studies generally used the financial ratio to determine the condition of the company for the future. Therefore, this study also uses the financial ratio to provide an overview of the good and bad conditions of the company, namely, liquidity, leverage, profitability, activity (operating capacity), and managerial agency cost on financial distress.

Liquidity is the ability of an entity company to pay off its liabilities by utilizing the current assets (Triwahyuningtyas, 2012) . Previous study by Ardiyanto and Prasetyono (2011) and Yustika (2015) proved that liquidity has a significant effect on financial distress, while the results of Putri and Merkusiwati (2014), Srikalimah (2017) and Nukmaningtyas and Worokinasih (2018) revealed that liquidity has no effect on financial distress.

Leverage is a ratio which shows the company's ability to meet its total obligations. This ratio shows how many assets are debt-funded companies (Widarjo & Setiawan, 2009). A previous study of Lisiantara and Febrina (2018) stated that leverage has a significant effect on financial distress, whereas Hadi and Andayani (2014), Cinantya and Merkusiwati (2015), and Widhiari and Merkusiwati (2015) found that leverage has no effect on financial distress.

Profitability is the net end result of various policies and decisions, where this ratio is used as a measuring driver for the company's ability to obtain the profits generated (Widarjo & Setiawan, 2009). Previous study by Rahmayanti and Hadromi (2017) and Nukmaningtyas and Worokinasih (2018) stated that profitability has a significant negative effect on financial distress, while Hidayat (2013) showed that profitability has no significant effect on financial distress.

Operating capacity is the ratio which measures a company's ability to manage its assets for the operations. A previous study by Hadi and Andayani, (2014) stated that operating capacity has a positive effect on financial distress, whereas Widhiari and Merkusiwati (2015) stated that operating capacity has a negative effect on financial distress.

Managerial agency cost is the costs incurred by owners to regulate and monitor the performance of managers so that they work based on the interests of the company (Yustika, 2015). A previous study by Fadhilah and Syafrudin (2013) stated that managerial agency cost has a significant effect on financial distress, whereas Yudha and Fuad (2014) showed that managerial agency cost has no effect on financial distress. Based on previous studies that contradict to each other, this study is very important to be explored.

II. LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

A. Agency Theory

Agency theory is a contractual relationship that occurs between the owner (principal) and the manager (agent), where the manager is given trust by the owner to manage the company in accordance with a contract that has been agreed. Agency theory causes the separation of ownership and management of companies between principals and agents. Conflicts occur when both parties want to maximize their wealth, respectively. The agent as the company manager, and given authority to make decisions on behalf of the owner, will know more about information and condition of the company than the principal so that he/she maximizes his/her wealth and acts in contrast with the principal's wishes (Jensen & Meckling, 1976).

B. The Effect of Liquidity on Financial Distress

Liquidity shows the company's ability to fund operations and pay off short-term liabilities. If the company is able to fund and pay off its short-term obligations properly, the potential of the company to experience financial distress will be smaller (Hanifah & Purwanto, 2013). Widhiari and Merkusiwati (2015) stated that liquidity has a negative effect on financial distress. This means that the greater the availability of funds to fulfill obligations, the less likely the company will experience financial distress. Thus,

H1: Liquidity has a negative effect on financial distress

C. The Effect of Leverage on Financial Distress

Leverage is a ratio which shows the company's ability to meet total debt (Widarjo & Setiawan, 2009). The greater the amount of debt, the greater the company's potential to experience financial distress. Therefore, companies avoid financing by using debt. This is a risk for the company in the future because debt is greater than the assets. If the situation cannot be

resolved properly, the potential for financial distress will be greater (Hanifah & Purwanto, 2013). Rahmayanti and Hadromi (2017) showed that leverage has a significant positive effect on financial distress. Thus,

H2: Leverage has a positive effect on financial distress

D. The Effect of Profitability on Financial Distress

Profitability is the company's ability to obtain the profits generated (Widarjo & Setiawan, 2009). The management must be able to effectively manage assets in accordance with the portion needed for operational activities so that the company gets higher profits. The higher the profit ratio it shows the more effective the company is in generating profits by utilizing its assets, so that the likelihood of financial distress becomes smaller (Ardiyanto & Prasetyono, 2011). Rahmayanti and Hadromi (2017) and Nukmaningtyas and Worokinasih (2018) found that profitability has a negative effect on financial distress. Thus,

H3: Profitability has a negative effect on financial distress

E. The Effect of Operating Capacity on Financial Distress

Operating capacity is proxied by total asset turnover. High total assets turnover shows greater effectiveness of the company in using its assets to generate sales to provide large profits (Hanifah & Purwanto, 2013). This function is to avoid the possibility of financial distress. Widhiari and Merkusiwati (2015) stated that operating capacity has a negative effect on financial distress. Thus,

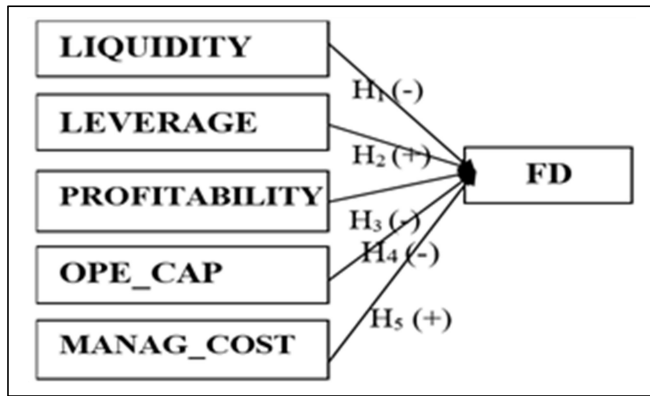
H4: Operating capacity has a negative effect on financial distress

F. The Effect of Managerial Agency Cost on Financial Distress

Managers are a shareholder of agents who tend to use company resources exploitatively to meet objectives. The massive use of resources by managers does not guarantee the achievement of good performance and enables financial distress, so that an effective monitoring mechanism is needed (Fadhilah & Syarifuddin, 2013). Fadhilah and Syarifuddin (2013) found that managerial agency cost has a significant positive effect on financial distress. Thus,

H5: Managerial agency cost has a positive effect on financial distress

G. Framework



III. METHODS

This study is conducted at manufacturing companies listed on the Indonesian Stock Exchange for the period 2015 – 2017. By using purposive sampling, there are 201 companies selected as sample. Logistic regression analysis is applied to analyze the data.

A. Measurement

Financial distress is measured using a dummy variable. If the company has positive Earnings Per Share (EPS), it is 0 (zero) and if the company has negative EPS, it is 1 (one) (Ardiyanto & Prasetyono, 2011).

Liquidity is measured using the current ratio, which is the ratio divided by the number of current assets with the company's current debt.

Leverage is measured using the debt ratio, which is total debt divided by total assets.

Profitability is measured using a comparison between net income and total assets (Ardiyanto & Prasetyono, 2011).

Operating capacity is measured using total asset turnover (Yustika, 2015).

$$Total\ Asset\ Turnover = \frac{Sales}{Total\ Asset} \quad (1)$$

Managerial agency cost (BAM) is measured using the following formula:

$$BAM = \frac{Administrative\ and\ general\ costs}{Sales\ or\ revenue} \quad (2)$$

IV. RESULTS AND DISCUSSION

Descriptive statistics are used to provide a clear sketch of the data. This can be seen from the average value, standard deviation, maximum, and minimum value.

TABLE 1 DESCRIPTIVE STATISTICS

	N	Minimum	Maximum	Mean	Std. Deviation
CR	201	.0337	10.3962	1.963233	1.5960418
DER	201	.1190	16.6728	.640755	1.2078557
ROA	201	-.5468	.5262	.030585	.1283270
TATO	201	-.0545	26.2292	1.045290	1.9398181
EPS	201	-665.0	1183.84	87.52267	246.16441
FD	201	0	1	.36	.481

Source: Own calculations

Table 1 explains that the number of samples (N) is 201 companies with an average value (0.36), standard deviation (0.481), minimum (0), and maximum (1). Earnings Per Share companies have an average value (87.52267), standard deviation (246.16441), minimum (-665.000), and maximum (1183.84). Liquidity has an average value (1.963233), standard deviation (1.5960418), minimum (0.337), and maximum (10.3962). Leverage has an average value (0.640755), standard deviation (1.2078557), minimum (0.1190), and maximum (16.6728). Profitability has an average value (0.030585), standard deviation (0.1283270), minimum (-0.5468), and maximum (0.5262). Operating capacity has an average value (1.045290), standard deviation (1.9398181), minimum (-0.545), and maximum (16.5159). Managerial agency cost has an average value (0.1737459), standard deviation (1.1737459), minimum (-0.0018), and maximum (16.5159).

A. Goodness of Fit Testing

Hosmer and Lemeshow's test for goodness of fit can be used to assess whether the regression model is feasible or not. If the statistical value is equal to or less than 0.05, it means that there is a significant difference between the regression model and the observation value.

TABLE 2 HOSMER AND LEMESHOW TEST

Step	Chi-square	Sig.
1	12.197	.143

Source: Own calculations

Table 2 shows that the values of Hosmer and Lemeshow's goodness of fit are 12.197 with a significance value of 0.143. This means that the model is accepted because the model can predict the observation value.

B. Chi-Square Testing

Chi-square testing for the whole model is carried out by comparing the value of -2 log likelihood (Block number = 0) and (Block number = 1). A good model can be seen if the log-likelihood has decreased.

TABLE 3 LIKELIHOOD OVERALL TEST OF BLOK 0 AND BLOCK 1

Iteration		-2 Log likelihood
Step 0	1	262.269
	2	262.257
	3	262.257
Step 1	1	190.996
	2	174.362
	3	170.228
	4	167.749
	5	167.364
	6	167.357
	7	167.357
	8	167.357

Source: Own calculations

Table 3 shows that testing on Block number 0 obtained the value of -2 log likelihood of 262.257, whereas in Block number 1, the value of -2 log likelihood is 167.357. This shows a decrease in the value of -2 log likelihood, which means that the model is very fit with the data.

TABLE 4 OMNIBUS TEST OF MODEL COEFFICIENTS

		Chi-square	Sig.
Step 1	Step	94.900	.000
	Block	94.900	.000
	Model	94.900	.000

Source: Own calculations

The results of the omnibus test in Table 4 obtained a chi-square value of 94.900 (decrease -2 log likelihood) and significance value of 0.000, which was lower than 0.05. This indicates that there is a significant effect of the independent variables on the dependent variable.

C. Classification Table 2x2

Classification Table 2 x 2 is used to calculate the correct and incorrect estimation values.

TABLE 5 CLASSIFICATION TABLE 2 X 2

Observed		Predicted			
		FD		Percentage Correct	
		0	1		
Step 1	FD	0	117	12	90.7
		1	26	46	63.9
	Overall Percentage				

Source: Own calculations

Based on Table 5, it can be seen that, out of 129 samples that have non-financial distress, there are 117 companies (90.7%) which can be accurately predicted by regression models and 12 companies which cannot. There are 72 companies experiencing financial distress, 46 companies (63.9%) can be predicted by the regression model and 26 cannot. Overall, 117 + 46 = 163 companies (81.1%) can be predicted precisely by the regression model. This indicates a good regression model.

D. Hypothesis Testing

Hypothesis testing aims to determine the significant effect of each independent variable on the dependent variable. This study uses a significance level of 5%.

TABLE 6 HYPOTHESIS TESTING

		B	Sig.	Result
Step 1 ^a	CR	.060	.718	Rejected
	DER	3.190	.003	Accepted
	ROA	-12.542	.000	Accepted
	TATO	-.917	.058	Accepted
	BAM	2.537	.173	Rejected
	Constant	-1.740	.039	

Source: Own calculations

E. The Effect of Liquidity on Financial Distress

A high liquidity ratio indicates that the company is able to pay off its obligations. This can be seen from the larger current assets in companies than current debt. In addition, it is possible for companies to have low current liabilities and be more concentrated in long-term liabilities. Therefore, its current assets can be used to pay off current debts and avoid financial distress. In this study, several companies have low liquidity ratio values. This is because the value of the current debt is too large so that current assets are not enough to finance current debt. High and low liquidity ratio does not necessarily fulfill all short-term debt if management cannot manage assets efficiently. This causes the liquidity to have no effect on financial distress.

F. The Effect of Leverage on Financial Distress

High leverage has a high risk because the company's assets used cannot cover the total debt, so the company has a greater responsibility to pay off the total debt. If the company, in its operational activities, uses a lot of funds obtained from a third-party loan, the company's leverage will be higher and the debt will increase. This will make the company unable to pay the total debt properly because the amount of debt is too large and the assets held are not proportional to the debt. If the cost of the loan cannot be managed properly, the company cannot obtain profit effectively, and the debt increases, because the profits obtained are not enough to cover all company debts and daily operational costs. This makes the company increasingly take on further loans and it will experience financial distress.

G. The Effect of Profitability on Financial Distress

Profitability is used to measure how much a percentage of income can be generated. The higher the profitability, the more likely of the company to experience financial distress. Therefore, the company will supervise management to do their job properly, so that the company will get high profits. To achieve this, management must maximize the use of company assets and develop appropriate strategies to produce higher

profits. A higher value of profitability shows the more effective the company is to produce profits, so that the smaller the value means the company may experience financial distress.

H. *The Effect of Operating Capacity on Financial Distress*

If the company is able to manage existing assets properly to increase the company's production, increased production will also increase sales. Increasing sales will have an impact on the increase of profits. If the company has a high asset turnover value with good asset management, it will generate high profits to avoid financial distress. This causes the operating capacity to have a negative effect on financial distress.

I. *The Effect of Managerial Agency Cost on Financial Distress*

For the smooth running of the company, the owner incurs costs to regulate and supervise the performance of the manager so that they are in accordance with their duties. This will affect the increase of company revenues. The high and low value of the ratio does not necessarily guarantee the occurrence of financial distress. Companies have high managerial agency costs because managers can manage and supervise operational activities properly, and they do not necessarily get high profits. This happens because the company's sales are not good enough. This causes managerial agency to have no effect on financial distress.

V. CONCLUSION

From the results of the study it can be concluded that: (1) liquidity and managerial agency costs have no effect on financial distress; (2) leverage has a positive significant effect on financial distress; (3) profitability and operating capacity have a significant negative effect on financial distress.

This study has limitations, i.e., the data tend to be abnormal. This causes a limited number of observations to be used as samples. Therefore, future research needs to expand the sector beyond manufacturing and into other sectors such as banking.

The results of this study can be used as information so that the company knows to what extent the company management can manage its business well, for operational activities and finances. For investors and creditors, this study can be used as information to invest and to provide capital loans to companies.

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