

EFFECT OF PROFITABILITY, LEVERAGE, LIQUIDITY AND ACTIVITY AGAINST FINANCIAL DISTRESS CONDITIONS

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ABSTRACT

This research aims to determine the effect of profitability, leverage, liquidity and activity on financial distress. The research period is 2018. The approach in this study is quantitative research with all manufacturing companies listed on the IDX in 2018 as the population, which were then selected by purposive sampling method to obtain samples. This research uses logistic regression analysis method. The results of the study indicate that profitability has a negative effect on financial distress as indicated by the regression coefficient of -0.40732. and the prob value. 0.0097 is less than 0.05. Leverage has a positif effect on financial distress. This refers to the regression coefficient of 0.090522 and the prob value. 0.0353<0.05. Liquidity has no effect on financial distress conditions. This refers to the regression coefficient of 0.003604 and the resulting significance value is greater than the required level of significance, namely 0.503> 0.05. Activity has negative effect on financial distress. This refers to the regression coefficient of -0.09906 and the resulting significance value is less than required, namely 0.0047<0.05.

Keywords: Activity, Financial Distress, Leverage, Liquidity, Profitability.

Article History

Received : 05 November 2020 Revised : 14 December 2020 Accepted : 27 December 2020 Available online : 31 December 2020

INTRODUCTION

The era of globalization requires companies to be more effective and efficient in their operations. Free trade makes companies have to develop their business so that they are not left behind by competitors. However, companies need capital to carry out these developments. Companies can easily raise funds from the capital market (Damayanti et al., 2017). The capital market provides several sources of funding, namely through debt by issuing bonds or through equity by issuing shares. Inaccurate calculation of the composition of funding sources can cause the company to experience financial problems.

Financial problems that can be experienced by companies are financial distress. The definition of financial distress is the initial process before bankruptcy or liquidation is marked by declining financial performance (Platt and Platt, 2002 in Yudiawati & Indriani, 2016). According to Kristanti(2019) financial distress is characterized by problems with the company's ability to earn profits. So at this stage what occurs in the company is a very sharp decline in company performance and value, usually marked by decreased sales, significant changes in operating profits, many complaints from customers. regarding product quality, delivery, and company services. This condition may make the company experience financial difficulties, but it is still able to pay its obligations to creditors. Managers must be careful in analyzing and following up on the company's financial condition. Predictions of financial distress can be the basis for managers to be more careful in making decisions. The decline in the company's financial condition can reduce the interest of investors to invest. Investors are generally more interested in investing their funds in companies with a high probability of getting a profit. This is of course very dangerous for companies that are in need of capital to improve their financial conditions. Managers must devise strategies to convince investors that future financial prospects will improve. Measuring the probability of a company's financial condition whether it is experiencing financial distress can be assessed through its interest coverage ratio. This ratio shows the comparison between earnings before interest and taxes divided by interest expense (Hidayat and Meiranto, 2014). This ratio connects the profit resulting from the use of assets and financial costs arising from the use of debt.

The financial ratio is often used as an indicator to assess whether a company is suffering from financial distress. Observations Damayanti et al., (2017) show that a high level of profitability will reduce the probability of a company suffering from financial distress. This study is not in line with the results of observations (Hidayat and Meiranto, 2014) which prove that the level of profitability cannot significantly influence financial distress. Studies related to the impact of the level of leverage on financial distress show that a high level of leverage will increase the probability of a company experiencing financial distress (Hidayat and Meiranto, 2014). The study of Atina and Rahmi (2019) shows different results

which state that financial distress cannot be affected by the level of corporate leverage. Atina and Rahmi (2019) also examined the effect of the level of liquidity on financial distress with the results showing that a high level of liquidity would reduce the possibility of a company experiencing a financial distress. Different results were obtained in the research of Hanifah and Purwanto (2013) which showed that the level of liquidity did not significantly affect financial distress conditions. Hidayat and Meiranto (2014) research shows that activity proxied by total assets turnover has a negative effect on financial distress. These results indicate that the high effectiveness of the company in utilizing all of its resources in an effort to generate sales will reduce the probability of the company experiencing financial distress, while the research of Restianti and Agustina (2018) states that total asset turnover has no effect on financial distress.

Company financial problems can be triggered by global and national economic conditions. The trade war caused the world economy to become unstable. The effect of the increase in the FED interest rate over the last few years has caused investors to withdraw their funds to invest in their country, namely the United States, thus making the currencies of several countries that have been left weaker including Indonesia (CNN Indonesia, 2018). This weakening occurred in the period from 2014 to 2018. The average rupiah exchange rate against the US dollar throughout 2014 was still around Rp. 11,878.30. Meanwhile in 2015 the average exchange rate of the rupiah weakened significantly to Rp. 13,391.97. After that the rupiah exchange rate against the US dollar in 2016 and 2017 was stagnant at around Rp. 13,300-Rp. 13,400. A significant decline in the average rupiah exchange rate occurred again in 2018 which reached Rp. 13,882.62. These events can have a bad impact on Indonesia's economic conditions (CNBC Indonesia, 2018).

According to BPS data, Indonesia's economic growth from year to year fluctuates but tends to decline. The sector that contributes most to Indonesia's economic growth is the household consumption sector. The average contribution of household consumption to Indonesia's Gross Domestic Product is around 55%. Household consumption growth has also decreased from year to year. In 2012 and 2013 household consumption growth reached 5.28%. Then, after that household consumption growth was quite volatile but tended to decline. In 2014, 2016 and 2018 the growth in household consumption was 5.14%, 5.01% and 5.05%, respectively. Meanwhile, the lowest point of growth in household consumption occurred in 2015 and 2017 where household consumption growth only reached 4.96% and 4.94%. The weakening of household consumption indicates that people's purchasing power is decreasing. This can have a negative impact on the sales of companies that produce consumer goods. In addition, the weakening of the rupiah exchange rate can also increase the cost of raw materials obtained through imports.

Based on the above background, the problems in this study can be formulated as follows; (1) Does profitability affect financial distress?, (2) Does leverage affect financial distress?, (3) Does liquidity affect financial distress?, (4) Does the activity affect financial distress?.

LITERATURE REVIEW

Theoretical basis

Agency theory describes the cooperation between agent and principal in an agency relationship that is bound in a contract which states that the principal uses an agent to manage the company (Jensen and Meckling, 1976). This cooperation contract involves the owner of capital who acts as the principal, while the agent is the management or manager who is given responsibility for all company activities. Financial performance, which is part of the company's manager's responsibility, can be reflected in the ratios stated in the financial statements. Important ratios to pay attention to are such as profitability, leverage, liquidity and activity.

Financial Distress

financial distress is the possibility of a company going bankrupt, which depends on the level of liquidity of assets according to credit availability (Hendel, 1966 in Kristanti, 2019). Beaver, (1966) states that financial distress is a major financial deficiency that causes failure to pay dividends and corporate bonds and goes into bankruptcy. Brigham and Gapenski (1997) state that there are five types of financial difficulties, namely:

- a. Economic failure. This condition occurs when the company's revenue is unable to cover a number of costs, even the cost of capital.
- b. Business Failure. Business failure is defined as a condition when a company ceases business operations resulting in losses for creditors.
- c. Technical Insolvency. This situation is also called equity insolvency, which according to Altman (1983) is a condition of the company where they do not have the ability to pay their debts smoothly at maturity.
- d. Insolvency in Bankruptcy. This is a condition when the market value of the asset is less than the book value of the company's debt (Altman, 1983).
- e. Legally bankrupt. this is a situation of bankruptcy legally in accordance with the applicable laws.

Effect of Profitability on Financial Distress

The company's capacity to create profit margins can be reflected in its level of profitability (Damayanti et al., 2017). Profitability can be used as an indicator of a company's financial health and also to determine the level of profit or investment gain in a company. Company management can make profitability an indicator of their success in managing the company's assets so that they can evaluate their performance if they don't reach the target. Investors can study the level of company profitability in order to estimate the efficiency of management policies in exploiting all the assets owned by the company to get profits that will keep the company from going bankrupt. Research by Damayanti et al., (2017) shows that profitability, which is proxied by return on assets (ROA), has a significant negative effect on financial distress.

Hal: Profitability has a negative effect on Financial Distress

The Effect of Leverage on Financial Distress

Leverage shows the proportion of the use of funds from third parties with equity for the purpose of financing the company's operations. Leverage shows the large share of the company's assets that are supported by debt (Widhiari and Merkusiwati, 2015). Companies that develop rapidly tend to have high levels of liabilities because the more funds that enter the company the easier it is for the company to meet its operational needs, while those that are moving slowly are mostly financed by the company's own equity so that the available funds tend to be less which will hinder the company's development. However, high leverage indicates that the company has a high level of default risk as well. Hidayat and Meiranto, (2014) and Damayanti et al., (2017) show that leverage has a significant positive effect on financial distress conditions.

Ha2: Leverage has a positive effect on Financial Distress.

Effect of Liquidity on Financial Distress

Liquidity shows how much the company's ability to complete its current liabilities (Triwahyuningtias and Muharam, 2012). Liquidity can be caused by the company's past decisions in debt policy from the creditors. Funding from creditors will create new liabilities in the future, such as interest liabilities. High liquidity indicates high available working capital. Low liquidity illustrates that the size of the company's assets is currently unable to guarantee all of its short-term liabilities. A study by Hidayat and Meiranto (2014) shows that there is a significant negative effect between liquidity and financial distress.

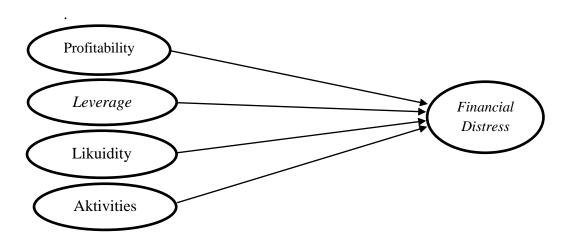
Ha3: Liquidity has a negative effect on Financial Distress

Effect of Activity on Financial Distress

Activity is the company's success rate in using and managing its assets (Atika et al., 2011). The high effectiveness of the company in using its assets can increase the amount of production so that it will have an impact on the company's sales level. In addition, the efficient use of assets can eliminate and minimize operational costs that are not too important. Continuously high sales can ensure the availability of funds within the company so that all of the company's operating needs can be accommodated and minimize the use of funds from third parties and will keep the company away from financial difficulties. The observations of Hidayat and Meiranto (2014) show that activity proxied by total asset turnover has a significant negative effect on financial distress.

Ha4: Activities have a negative effect on Financial Distress

Research Framework



Source: Data processed, (2020)

Figure 1
Research Framework

METHODOLOGY

This type of research is quantitative research, which is research where the data is in the form of numbers and uses statistics. The purpose of this study is to analyze and find empirical evidence of the effect of profitability, leverage, liquidity and activity on financial distress. The population in this study were all manufacturing companies listed on the Indonesia Stock Exchange in 2018. The sampling technique in this study was purposive sampling and obtained 87 sample companies. Data processing in this study was assisted by the Eviews 9 software.

Effect of Profitability, Leverage, Liquidity and Activity Against Financial Distress Conditions

The dependent variable is financial distress, which in this study is proxied by the interest coverage ratio, which is the ratio between earning before interest and taxes or operating profit and interest expense. Financial distress in this study is a dichotomous variable or a dummy variable. If a company has an ICR of less than 1 then it is classified in financial distress and marked with code 1, while companies that have an ICR level of equal to or more than 1 are classified as non-financial distress and marked with code 0

The independent variable in this study is profitability proxied by return on assets (ROA), leverage is proxied by debt to assets ratio (DAR), liquidity is proxied by current ratio (CR) and activity is proxied by total asset turnover (TATO).

Method of Analysis

The determination of the relationship between variables in this study is based on the results of logistic regression analysis. According to Ghozali and Ratmono (2017) The functions in this study are as follows:

$$L_{i} = L_{n} \left(\frac{P}{1-P} \right) = \beta_{0} + \beta_{1} PROFIT + \beta_{2} LEV + \beta_{3} LIK + \beta_{4} AKTIV + e$$

Where:

P = probability that the company experiences financial distress.

 $\beta 0$ = Constant

 β 1- β 4 = coefficient of each independent variable

PROFIT = Profitability

LEV = Leverage

LIK = Liquidity

ACTIV = Activity

e = Error

RESULT

Hosmer and Lemeshow's Goodness of fit test

The Hosmer and Lemeshow's (HL) test is intended to prove whether the empirical data fits the model (Ghozali and Ratmono, 2017). The null hypothesis in the test states that the model is fit with data marked with the HL Goodness-of-fit value greater than 0.05. Meanwhile, if the HL Goodness-of-fit value is less than 0.05, the null hypothesis is rejected, which means that the data does not fit the model.

Table 1 Hosmer and Lemeshow's Goodness of fit test

Quantile of Risk			Dep=0		Dep=1	Total	H-L	
	Low	High	Actual	Expect	Actual	Expect	Obs	Value
1	3.00E-29	1.00E-08	8	8	0	1.90E-08	8	1.90E-08
2	2.00E-08	1.00E-05	9	8.99994	0	5.70E-05	9	5.70E-05
3	2.00E-05	0.0001	9	8.99946	0	0.00054	9	0.00054
4	0.0001	0.001	8	7.9952	0	0.0048	8	0.00481
5	0.0011	0.0034	9	8.97857	0	0.02143	9	0.02148
6	0.0036	0.0284	9	8.92385	0	0.07615	9	0.0768
7	0.0362	0.111	6	7.43891	2	0.56109	8	3.96841
8	0.1243	0.4073	9	6.76442	0	2.23558	9	2.97442
9	0.4291	0.9492	2	2.84133	7	6.15867	9	0.36405
10	0.9753	1	0	0.05833	9	8.94167	9	0.05871
		Total	69	69	18	18	87	7.46928
H-L Statistic			7.4693		Prob. Ch	i-Sq(8)	0.4869	
And	Andrews					_		
Statistic		49.4981		Prob. Chi-Sq(10)		0		

Source: Output Eviews 9, 2020

The test results show that the value of Prob. Chi-Sq (8) is 0.4869, which means it is greater than the specified significance level of 0.05. These results indicate that Ho is accepted, which means the data model is fit.

The McFadden R-squared coefficient

The McFadden R-Squared coefficient will show that the level of change in the dependent variable can be explained by fluctuations in the independent variable. The McFadden R-Squared coefficient is 0 to 1.

Table 2 Mc Fadden R-squared

McFadden R-squared	0.716136	Mean dependent var	0.206897
		Total obs	87

Source: Output Eviews 9, 2020

McFadden R-Squared efficiency in the table above is 0.716136, which means the ability of the variables of profitability, leverage, liquidity and activity to explain the variable financial distress conditions is 71.6136%.

Effect of Profitability, Leverage, Liquidity and Activity Against Financial Distress Conditions

Simultaneous Test (LR statistic)

Simultaneous test (LR Statistic) is carried out to prove whether simultaneously or together the independent variables have an effect on the dependent variable. In this test, the determination of the hypothesis decision is based on the prob value. LR statistic. This test is done with an accuracy of 95% with a significance level (α) = 5%.

Table 3
Simultaneous Test Results

	70		
LR statistic	63.52693	Avg. log likelihood	-0.14472
Prob(LR statistic)	0,0000		
Obs with Dep=0	69	Total obs	87
Obs with Dep=1	18		

Source: Output Eviews 9, 2020

From the table above, it is known that the Prob (LR Statistic) value is 0.000, which means it is smaller than the significance level of 0.05. This shows that Ho is rejected and Ha is accepted, which means that profitability, leverage, liquidity and activity simultaneously affect financial distress conditions.

Hypothesis testing

Tabel 4
Hypothesis Test Results

Variable	В	Exp(β)	Prob.
Profit	-0.40732	0.665433	0.0097
Lev	0.090522	1.094746	0.0353
Lik	0.003604	1.003611	0.503
Aktiv	-0.09906	0.905685	0.0047
С	1.33829	3.812519	0.6845

Source: Output Eviews 9, 2020

Based on the table above, the regression model obtained is as follows:

$L_{\rm n}(\frac{P}{1-P}) = 1.33829 - 0.40732 PROFIT + 0.090522 LEV + 0.003604 LIK - 0.09906 AKTIV + e$

Based on table 4, the effect of profitability, leverage, liquidity and activity can be explained as follows:

1. The results of the study show that profitability has a significant negative effect on financial distress. This can be indicated by the prob value. equal to 0.0097, which means under the alpha coefficient of 0.05 and The β coefficient is -0.40732 which reflects that if the profitability increases in value by 1%, there will be a decrease in the average logit estimate of -0.40732 on the condition that other variables do not change in value. This

means that first hypothesis is accepted. Exp (β) profitability is 0.665433, which means an increase in the value of profitability will reduce the company's chances of experiencing financial distress by 0.665433 times or 66.5633%. The negative effect is due to the high profitability of the company, which reflects the company's capacity to create a high profit margin. Funds from profits can be utilized in several functions, such as in the framework of operating financing, investing activities and settling liabilities. The company's power to avoid financial distress is influenced by the efficient use of assets to generate profit margins (Carolina et al., 2017). High returns will be excellent for investors and creditors to invest so that companies can use these funds for company development that will further keep away from the risk of bankruptcy.

- 2. The results of the study show that leverage has a significant positive effect on financial distress. This can be indicated by the prob value. amounting to 0.0353 which means under the alpha coefficient of 0.05 and The β coefficient is 0.090522 which reflects that if the leverage has an increase in value of 1%, there will be an increase in the average logit estimate of 0.090522 provided that other variables do not change in value. This shows that second hypothesis is accepted. Exp (β) leverage is 1.094746, which means an increase in the value of leverage will increase the company's chances of experiencing financial distress by 1.094746 times. Syamsuddin (2004) explains that an increase in debt to total asset ratio reflects an increase in the amount of third party funds used for the purpose of increasing company profits. Companies that have a high level of leverage will certainly have a high risk of default too. This situation will cause the interest rate of the company's debt to also be high, which is a real threat to the company which will be closer to a condition of financial difficulty if it is unable to pay it off.
- 3. The results of the study show that liquidity does not have a significant effect on financial distress. This can be indicated by the prob value. amounting to 0.503 which means above the alpha coefficient of 0.05 and The β coefficient is 0.003604, which reflects that if liquidity has increased in value by 1%, there will be an increase in the average logit estimate of 0.003604 on condition that other variables do not change in value. This shows that third hypothesis is rejected. Exp (β) liquidity is 1.003611, which means an increase in the value of liquidity will increase the company's chances of experiencing financial distress by 1.003611 times. In current assets, there are components of inventory and receivables that turn them into cash which takes uncertain time. Inventories and receivables are also used to settle short-term liabilities. Thus, this uncertainty makes each liquidity value unable to be used as a measure to influence the possibility of a company

Effect of Profitability, Leverage, Liquidity and Activity Against Financial Distress Conditions

- experiencing financial difficulties. Short-term loans or current liabilities are not really considered because most of the short-term debt is a natural thing that can be used for the needs of the company's operations (Syamsuddin, 2004).
- 4. The results of the study show that activity has a significant negative effect on financial distress. This can be indicated by the prob value. equal to 0.0047 which means under the alpha coefficient of 0.05 and β coefficient of -0.09906 which reflects that if the activity has an increase in value by 1%, there will be a decrease in the average logit estimate of -0.09906 on the condition that other variables do not change in value. This shows that fourth hypothesis is accepted. Exp (β) activity is 0.905685, which means an increase in the value of activity will reduce the company's chances of experiencing financial distress by 0.905685 times. High sales value can print a large margin for the company. This high margin can be used to meet the company's obligations, so that a high sales turnover can ensure that the company avoids the possibility of financial difficulties. In addition, the efficient cost of the production process to the sales stage can significantly increase profit margins.

CONCLUSIONS

Based on the explanation above, the results of the study and findings can be summarized as follows:

- 1. Profitability has a significant negative effect on financial distress. This can be indicated by the prob value. equal to 0.0097, which means under the alpha coefficient of 0.05 and the β coefficient of -0.40732. Exp (β) profitability is 0.665433, which means an increase in the value of profitability will reduce the company's chances of experiencing financial distress by 0.665433 times.
- 2. Leverage has a significant positive effect on financial distress. This can be indicated by the prob value. amounting to 0.0353 which means under the alpha coefficient of 0.05 and the β coefficient of 0.090522. Exp (β) leverage is 1.094746, which means an increase in the value of leverage will increase the company's chances of experiencing financial distress by 1.094746 times.
- 3. Liquidity does not have a significant effect on financial distress. This can be indicated by the prob value. amounting to 0.503 which means above the alpha coefficient of 0.05 and coefficient β of 0. Exp (β) liquidity is 1.003611, which means an increase in the value of liquidity will increase the company's chances of experiencing financial distress by 1.003611 times.
- 4. Activities have a significant negative effect on financial distress. This can be indicated by the prob value. equal to 0.0047 which means under the alpha

coefficient of 0.05 and β coefficient of -0.09906 Exp (β) activity is 0.905685, which means an increase in the value of activity will reduce the company's chances of experiencing financial distress by 0.905685 times.

Based on the above findings, the increase in profitability and the value of the company's activities is needed to minimize the chances of the company suffering from financial distress. The use of debt as corporate funding must be done as efficiently as possible to reduce the company's leverage. Meanwhile, liquidity has no real effect because short-term debt is a normal requirement for financing company operations.

This study has several limitations, namely the sample used is only within the scope of manufacturing companies listed on the IDX and the independent variables used are limited to the aspect of financial ratios. Suggestions for further research are to expand the scope of the population and research sample and add variables outside of financial ratios such as good corporate governance.

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