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The Effect of Profitability, Liquidity, Leverage, Firm Size, Operating Capacity, and Retained Earnings Towards Financial Distress: Evidence from Energy Companies

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A B S T R A C T

This research aims to anticipate the possibility of financial distress by analyzing fundamental company financial factors such as profitability, liquidity, leverage, firm size, operating capacity and retained earnings ratio, specifically in energy sector companies listed on the Indonesia Stock Exchange in 2018-2022. The type of research carried out is causal associative research. This research data uses secondary quantitative panel data. The population in this study are energy companies listed on the Indonesia Stock Exchange in the 2018-2022 period. This sector was selected due to indications that energy companies were facing financial difficulties during the pandemic, as evidenced by several energy companies being delisted from the stock exchange. The sampling technique used was purposive sampling, obtaining 58 companies as research samples with five years of observation, resulting in 290 total observation data. The technique used for analysis is logistic regression with the help of EViews 13 software. The results of this study show that liquidity, firm size, and retained earnings hurt financial distress, while leverage has a positive effect on financial distress. Meanwhile, profitability and operating capacity do not affect financial distress. This research provides empirical evidence about the factors that influence financial distress and contributes to the signaling theory application literature in predicting bankruptcy conditions through financial distress analysis. Thus, this research could be a consideration for stakeholders when making decisions.

1. INTRODUCTION

The purchase of company shares by investors is due to investors' belief that their funds will be used productively for company growth so that investors will get a share of the profits from their investment. However, some companies have yet to utilize their capital to drive growth and even face financial difficulties (Imron et al., 2022). Lin et al. (2008) defined financial distress as a situation where a company has more debt than the size, profitability, and asset composition that the company can sustain. Platt & Platt (2002) stated that financial distress is a term that describes a company condition that precedes more catastrophic events such as bankruptcy or liquidation. In other words, if this condition is not resolved appropriately, it will potentially result in the company experiencing bankruptcy or liquidation (Pryangan & Payamta, 2020). Symptoms of a company's bankruptcy generally do not appear suddenly but take place in a long process and should have been detected early (Imron et al., 2022). Therefore, it is an important for companies to conduct a bankruptcy analysis to evaluate any financial difficulties they face so that these conditions can be handled before the company goes bankrupt (Galih & Indah, 2021).

Uncertain economic conditions in both the global and national environment affected most business sectors' financial condition (Rohma, 2023). The sectors most affected by the crisis condition rely on external demand (tradable), including the energy sector, which is highly related to oil, gas, and coal mining (Dirman, 2020). This is evidenced by the fact that several energy sector companies have been delisted from the Indonesia Stock Exchange due to financial, performance, and administrative problems, such as PT

Sekawan Intipratama Tbk and PT Bara Jaya Internasional Tbk in 2019 and also PT Borneo Lumbung Energi & Metal Tbk and PT Cakra Mineral Tbk in 2020 (IDX, 2022). Based on previous studies conducted, factors that affect financial distress include aspects of financial ratios (Adielyani & Pangestuti, 2023; Cahyani & Iramani, 2022; Dirman, 2020; Harianti & Paramita, 2019; Heniwati & Essen, 2020; Masita & Purwohandoko, 2020; Ningsih & Asandimitra, 2023; Putri & Aminah, 2019; Restianti & Agustina, 2018; Sari & Hartono, 2020), company size (Hikmawati, 2022; Nilasari & Ismunawan, 2021; Putri & Kautsar, 2023; Sariroh, 2021), sales growth (Digdowiseiso & Ningrum, 2022; Harianti & Paramita, 2019; Heniwati & Essen, 2020; Letiana & Hartono, 2023), operating capacity (Heniwati & Essen, 2020; Hikmawati, 2022), ownership structures (Kristiawan, 2020; Masita & Purwohandoko, 2020; Putri & Kautsar, 2023; Udin et al., 2016), good corporate governance (Adielyani & Pangestuti, 2023; Fathonah, 2016; Hikmawati, 2022; Mafiroh & Triyono, 2016), and CEO characteristics (Maghfiroh & Isbanah, 2020; Putri & Kautsar, 2023). In addition, some researchers investigated the influence of macroeconomic factors like exchange rates and inflation (Myllariza, 2021; Nilasari & Ismunawan, 2021; Tinoco & Wilson, 2013).

One of the financial distress determinants that is interesting to study is the company's financial ratios, which include profitability, liquidity, and leverage ratios. Based on signaling theory, financial ratios can be a signal for investors in predicting whether a company is in good condition or is experiencing financial difficulties. High profitability, for example, indicates a healthy financial condition because the company can generate profits. Besides, profitability is also a fundamental factor often widely used as a benchmark for investors in assessing a company's financial condition. It is supported by research by Masita & Purwohandoko (2020), Heniwati & Essen (2020), Cahyani & Iramani (2022), and Adielyani & Pangestuti (2023), which prove that profitability negatively affects financial distress. However, another research by Digdowiseiso & Ningrum (2022) shows the contrary result that profitability positively affects financial distress. Other research by Sariroh (2021) and Mafiroh & Triyono (2016) proves that profitability has no significant effect on financial distress.

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A high liquidity ratio also provides a positive signal for investors because it reflects the company's ability to fulfill its obligations. Companies that have adequate liquidity will not use operational funds to finance short-term liabilities (Pandeirot & Sumanti, 2021), supported by the negative relationship between liquidity and financial distress shown in research by Putri & Aminah (2019) and Adielyani & Pangestuti (2023). Other previous research, however, shows a positive relationship of liquidity towards financial distress, such as research conducted by Cahyani & Iramani (2022) and Mafiroh & Triyono (2016). It indicates that high liquidity is only sometimes good for the company because it shows that it has high idle funds, which companies should use to allocate cash budgets or investments more profitably. Meanwhile, other research by Heniwati & Essen (2020), Sariroh (2021), and Ningsih & Asandimitra (2023) proves that there is no relationship between liquidity and financial distress.

In addition, a low ideal leverage value indicates that the company can manage its dependency on external parties through its debt ratio. Leverage shows a positive effect towards financial distress in research conducted by Antoniawati & Purwohandoko (2022), Masita & Purwohandoko (2020), Cahyani & Iramani (2022), and Ningsih & Asandimitra (2023). On the other hand, research by Gunawan et al. (2017) shows contrary result that leverage hurts financial distress. Moreover, research by Letiana & Hartono (2023), Putri & Kautsar (2023) and Dirman (2020) did not show any significant effect of leverage on financial distress instead.

In this study, we are interested in re-examining the effect of those three financial ratios above by adding several other variables that are thought to affect financial distress. This is by the described phenomenon

gaps and research gaps. In addition, there are still limitations in previous research that need to be continued by providing a new research model with other variables tested (Antoniawati & Purwohandoko, 2022), so this study will carry out the recommendations of previous researchers to test other variables such as firm size (Adielyani & Pangestuti, 2023; Heniwati & Essen, 2020; Putri & Kautsar, 2023), operating capacity (Heniwati & Essen, 2020; Hikmawati, 2022; Khasanah et al., 2021), and retained earnings to total asset ratio (Chabachib et al., 2019; Elbannan, 2021; Restianti & Agustina, 2018). By providing research using the latest data in current years, it is hoped that the study of these fundamental and popular variables will provide an updated, broad, and more holistic view of financial distress so the managers can anticipate it early. The investors and other stakeholders can also take this as relevant information as their analysis is the basis for making a decisions.

Firm size is another important indicator that can signal the health of a company's financial condition. Firm size reveals the size of a company's total assets, so the larger the company size, the more guaranteed the company in maintaining its sustainability so that the company will be relatively protected from financial distress (Hikmawati, 2022). The relationship between firm size and financial distress still also shows inconsistent results, as shown by research by Adielyani & Pangestuti (2023) and Dirman (2020) that this factor has a negative effect, while according to Heniwati & Essen (2020), Sariroh (2021), and Putri & Kautsar (2023) there is no effect of this variables towards financial distress.

Another variable that can be used in assessing the probability of financial distress of a company is operating capacity. Operating capacity is a ratio used to describe a company's operational performance (Khasanah et al., 2021). According to signaling theory, a company's efficiency in managing its assets signals its good financial condition and makes it less likely to face a distressing condition. The effect of operating capacity variables on financial distress still shows different results, such as positive effect (Khasanah et al., 2021), negative effect (Cahyani & Iramani, 2022; Mafiroh & Triyono, 2016; Putri & Aminah, 2019), and no significant effect (Digdowiseiso & Ningrum, 2022; Heniwati & Essen, 2020; Hikmawati, 2022; Restianti & Agustina, 2018).

The next variable to be examined is the retained earnings ratio to total assets. Retained earnings is the remaining profit after dividends paid by the company to all shareholders (Yolanda & Mulyana, 2023). The amount of retained earnings of a company is often closely related to the company's age because the longer the company operates, the higher the accumulation of retained earnings will be (Nustini & Amiruddin, 2019). According to signaling theory, a high amount of retained earnings is a signal of the maturity of the company's financial management because it can allocate its profits as internal funds to finance its activities properly. Furthermore, companies with high retained earnings do not depend on other parties, characterized by a high level of debt, which can lead to financial distress. This concept is evidenced by the result of previous research conducted by Elbannan (2021), which shows a negative effect of retained earning ratio towards financial distress. However, other research by Chabachib et al. (2019) and Restianti & Agustina (2018) showed that retained earnings ratio did not significantly affect financial distress. Therefore, it is interesting to investigate whether or not the amount of retained earnings of a company really affects the condition of financial distress, considering that many mature companies with high retained earnings may still experience bankruptcy.

Using regression logistic analysis, this research will fill the gap explained before by examining the effect of profitability, liquidity, leverage, firm size, operating capacity, and retained earnings ratio towards financial distress in companies on the Indonesia Stock Exchange, especially energy sector companies in 2018-2022. Results of this study revealed that liquidity, firm size, and retained earnings ratio partially have negative effect on financial distress, while leverage partially has a positive effect on financial distress. Meanwhile, profitability and operating capacity have no significant effect on financial distress. This research gives empirical evidence regarding factors that can influence financial distress, and also contributes to the literature of signaling theory application in predicting bankruptcy condition through financial distress analysis. Thus, this research can be a consideration for stakeholders in making their decisions.

2. LITERATURE REVIEW

Signaling theory is one of the widely used theories in financial management. Signaling theory proposed by Spence (1973) involves two parties, namely management who acts as the party giving the signal, and investors who receive the signal (Pryangan & Payamta, 2020). Signaling theory elaborates how a company should deliver signals to financial report users. Signaling theory explains why a company is motivat-

ed to provide financial report information to external parties. The encouragement that a company has to provide information is due to the information asymmetry, where the company has more knowledge about the entire company's condition than the outside parties (Haras et al., 2022). Signaling theory reduces information asymmetry between management, principal, and outside parties by producing credible financial report information. Restianti & Agustina (2018) stated that healthy companies will be more likely to disclose or send good "signals" than companies experiencing financial difficulties. This implied that companies with healthy condition will influence management in providing company information, and management tends to serve information that will improve company performance in the eyes of investors. Conversely, when a company experiences financial difficulties, the company will show negative signals or bad news that investors can interpret. In summary, financial data in a company's financial statements can signal whether the company is experiencing financial distress. If a company's financial condition is good, then this is a positive signal for users of financial reports and if the financial reports show that the company experienced losses for several periods, then this is a negative signal for users of financial reports because the company may potentially go bankrupt.

Profitability is defined as management's ability to earn net income (Rohma, 2019). As explained in signaling theory, a high profitability value will signal or inform stakeholders that the company's health is in good condition and not experiencing distress (Restianti & Agustina, 2018). Stakeholders will see this good signal that the company is able to generate high profits. In this way, the company's operations will run smoothly and investors will get a large return on their investment. This good condition will prevent the company from experiencing financial difficulties that lead to bankruptcy and increase the positive image and value of the company. This evidenced by some research results that conducted by Limbong et al. (2022), Wahyuningsih et al. (2022), and Caronge et al., (2022) that show negative effect of profitability towards financial distress. Conversely, companies with any potential to have financial distress are companies with low profitability. Low profitability and even losses can happen because the expenses are greater than the income of the company. This shows the company's poor financial condition because they cannot generate sufficient profit. If this loss condition is not immediately anticipated, it can result bankruptcy for the company (Cahyani & Iramani, 2022). Thus, the proposed hypothesis is:

H1: Profitability has a negative effect on financial distress

Companies that have a high liquidity ratio show the ability to meet their short-term obligations with their current assets (Faqiha & Sidik, 2023). One of the most frequently observed signs of a company experiencing financial difficulties is a lack of funds to pay its debts on time. This lack of funds continued until the company finally went bankrupt. Meanwhile, companies with high liquidity values provide a positive signal as explained on signaling theory that the company is in good health in terms of its ability to pay off its obligations (Hikmawati, 2022). A company that is able to pay its debts well using its current assets shows the availability of sufficient funds and good financial management by company managers. Thus, it can reduce the level of possibility of corporate financial distress (Sutra & Mais, 2019). Research by Adielyani & Pangestuti (2023) proves that liquidity negatively affect financial distress, meaning that the higher liquidity a company has, the lower possibility that the company faced financial distress. The result is in line with research of Putri & Aminah (2019). Therefore, the hypothesis proposed in this study is:

H2: Liquidity has a negative effect on financial distress

Leverage ratio shows how much debt the company has. The relationship between leverage and financial distress can be explained by signaling theory. The high value of a company's debt which is not balanced by the amount of its assets is a signal that the company is in poor condition and performance, because if the company's financial condition is healthy then it will be able to finance its operation with the results of its own profits from operational activities without having to rely on creditors who are external parties. If the company has a small debt, the possibility of financial distress in the company decreases (Antoniawati & Purwohandoko, 2022). The level of leverage is also a part of the company's policy that interpreted as a signal for investors in making decisions (Heniwati & Essen, 2020). A low level of leverage indicates the stability of the company and less likely for the company to experience financial distress (Ningsih & Asandimitra, 2023). Conversely, companies with a high proportion of debt to assets are at risk of facing difficulties in paying off their obligations in the future and can increase the risk of financial distress (Hikmawati, 2022). This idea is supported by research of Masita & Purwohandoko (2020) that proves

that leverage has a positive effect on financial distress. Thus, the hypothesis proposed is:
H3: Leverage has a positive effect on financial distress

Firm size or company size indicates how much total assets are owned by a company (Sariroh, 2021). The larger the size of a company describes that company has sufficient capital to carry out its operational activities (Heniwati & Essen, 2020). In accordance to signaling theory, companies with large amount of total assets provide a positive signal to stakeholders because it is indicated that the company will have a good ability in the future to diversify and pay off its obligations, so that the company will not face financial distress (Dirman, 2020). In addition, a good company should be able to finance the company's operations using its own assets and not from debt, so that the company will not depend on external parties which can increase risk of bankruptcy due to debt payment failure (Putri & Kautsar, 2023). Companies with large total assets are considered to have better management capabilities in organizing more complex company situation, and have more assets to ensure the healthy financial condition. This is supported by research conducted by Adielyani & Pangestuti (2023) which shows that firm size negatively affect financial distress. Thus the hypothesis proposed is:
H4: Firm size has a negative effect on financial distress

Operating capacity or known as activity ratio is used as an indicator of a company's asset management effectiveness and efficiency (Khasanah et al., 2021). Companies that can utilize their assets effectively can reduce company expenses and increase company revenue (Cahyani & Iramani, 2022). In relation to signaling theory, a high operating capacity value is a positive signal that shows the company can generate expected sales and profits from its assets. This means that the assets owned by the company can be utilized efficiently and are not left in idle or unproductive position, but are able to be converted into sales and profits that accumulatively will continue to increase the company's equity. This will ensure the sustainability and continuity of the company's business operations.. The situation indicates that the company is in a healthy condition and less likely to experience any financial difficulties (Digdowiseiso & Ningrum, 2022). Several previous studies have also supported the concept that operating capacity had a negative effect on financial distress (Cahyani & Iramani, 2022; Mafiroh & Triyono, 2016; Putri & Aminah, 2019). Therefore the hypothesis proposed in this study is :
H5: Operating capacity has a negative effect on financial distress

Retained earnings is the amount of profit that is not distributed to as dividends. A high retained earning ratio shows that there are high profit earned by the company in order to finance the assets and pay dividends (Chabachib et al., 2019). Then the high ratio of retained earnings to total assets shows that the company finances most of its investments using retained earnings rather than from equity and external debt (Restianti & Agustina, 2018). This signals that the company's financial condition is good and healthy therefore they can avoid financial distress condition. In research of Chabachib et al. (2019) and Restianti & Agustina (2018), this variable is proven to have a negative effect on financial distress. Thus the hypothesis proposed is :
H6: Retained earning to total asset ratio has e negative effect financial distress

3. RESEARCH METHOD

This research using quantitative method. Research data uses secondary quantitative data obtained through financial data documentation methods from annual reports and company financial reports. Based on the time span, this research data is panel data which merges time-series and cross-section data. The research population is all energy sector companies that listed on the Indonesian Stock Exchange. Energy companies were facing financial difficulties in the pandemic crisis, as they were most affected by the crisis condition because they were highly rely on external demand related to oil, gas and coal mining (Dirman, 2020). It was evidenced by several energy companies being delisted from the stock exchange. Sampling from the population was carried out using a purposive sampling technique by determining some criteria as follows: 1) Energy sector companies listed on the Indonesia Stock Exchange during the entire period 2018-2022, 2) Companies publish annual and financial reports containing data needed for research during 2018-2022. Based on those criteria, a sample of 58 companies was obtained with five years of observation so that

the observation data amounted to 290 data. The technique used in analyzing the data is logistic regression with the help of EViews 13 software, including descriptive statistics analysis, Hosmer-Lemeshow goodness of fit test, coefficient determination and simultaneous test, and also logistic regression analysis to examine the influence of each independent variable partially towards the dependent variable.

The dependent variable in this research is financial distress. Financial distress is a resistant decline on financial condition of a company which leads to bankruptcy (Sariroh, 2021). Financial distress in this study was measured using a dummy variable by giving a score of 1 for companies experiencing financial distress and a score of 0 for companies not experiencing financial distress. Determining whether a company is experiencing financial distress or not is done by calculating the Altman Z" Score bankruptcy score (Antoniawati & Purwohandoko, 2022) with a cutoff point of 1.1. If the Z" Score is > 1.1, the company is in good health and is not experiencing financial distress, whereas if the Z" Score is < 1.1, the company is indicated to be experiencing financial distress. The Z" Score calculation formula is as follows: $Z'' = 6.56X1 + 3.26X2 + 6.72X3 + 1.05X4$. X1 = (Current Assets − Current Liabilities) / Total Assets; X2 = Retained Earnings / Total Assets, X3 = Earnings Before Interest & Taxes (EBIT) / Total Assets; X4 = Book Value of Equity / Total Liabilities.

The independent variables in this research are profitability, liquidity, leverage, firm size, operating capacity, and retained earning to total asset. Profitability is a ratio that measures the success of a company in gaining profits (Ningsih & Asandimitra, 2023). Profitability in this research is measured using the return on equity ratio which is calculated as follows: ROE = (net income after tax and interest / total equity) x 100%. The second independent variable is liquidity. Liquidity is a ratio that represents a company's ability to meet its due obligations (Sariroh, 2021). Liquidity is measured using the current ratio which is calculated as follows: CR = (current assets / current liabilities) x 100%. The third independent variable is leverage. Leverage is a ratio that reflects how far the company is financed by debt (Galih & Indah, 2021). Leverage is measured using the debt to asset ratio (Sariroh, 2021) which is as follows: DAR = (total liabilities / total assets) x 100%. The fourth independent variable is firm size. Firm size shows how many assets a company owns (Dirman, 2020). Firm size is measured using the company's total assets which are calculated as follows: Firm Size = Ln Total Aset. The fifth independent variable is operating capacity. Operating capacity or activity ratio is a measure to see how effective and efficient a company manages its assets (Khasanah et al., 2021). Operating capacity is measured using the total asset turnover ratio which is calculated using the following formula: TATO = Sales / Total Assets. The sixth independent variable is retained earnings to total asset ratio. This ratio is one of indicator to show the management effectiveness level in managing performance of production, administrative ratio, sales amount and other activities (Chabachib et al., 2019). This variable is calculated using the following formula: RETA = Retained earnings / Total Assets.

4. RESULT AND DISCUSSION

Descriptive statistics provides a general overview of the variable data. The dependent variable in this study, financial distress, is measured with dummy variable by giving score 1 for companies experiencing financial distress and score 0 for companies that are not experiencing financial distress. Based on the data shown in Table 1, companies that experience financial distress amount to 191 observation data or 65.86% of the total data, while companies that do not experience financial distress amount to 99 observation data or 34.14% of the total data. Furthermore, Table 2 represents the results of descriptive statistics analysis of the independent variables. This analysis describes the minimum, maximum, mean (average), and standard deviation values of the six independent variables in this research, namely profitability which is proxied by return on equity, liquidity proxied by the current ratio, leverage proxied by the debt to asset ratio, firm size in thousands of United States dollars, operating capacity as a proxy by the total asset turnover ratio, and retained earnings to total asset ratio.

Table 1. Frequency of Dependent Variables

Dependent Variable Value	Count	Percentage (%)
0	191	65.86
1	99	34.14

Source: Processed Data, 2023

Table 2. Descriptive Statistics

Variables	Min	Max	Mean	Stdev
Profitability (%)	(2,137.77)	4,854.49	21.50	335.46
Liquidity (%)	1.26	14,693.14	267.06	1,084.24
Leverage (%)	0.16	1,327.84	61.01	85.39
Firm size (USD)	1.66	10,782,307	877,362	1,742,040
Operating capacity	0	7.38	0.64	0.65
Retained earning ratio	(4.14)	18.98	(0.02)	1.33

Source: Processed Data, 2023

Based on Table 2, profitability that proxied by return on equity has a minimum value of -2,137.77, a maximum value of 4,854.49, an average value of 21.50, and a standard deviation of 335.46. Liquidity that proxied by current ratio has a minimum value of 1.26, a maximum value of 14,693.14, an average value of 267.06, and a standard deviation of 1,084.24. Leverage that proxied by debt to asset ratio has a minimum value of 0.16, a maximum value of 1,327.84, an average value of 61.01, and a standard deviation of 85.39. Firm size has a minimum value of 1.66, a maximum value of 10,782,307, an average value of 877,362, and a standard deviation of 1,742,040. Operating capacity that proxied by total asset turnover ratio has a minimum value of 0, a maximum value of 7.38, an average value of 0.64, and a standard deviation of 0.65. Retained earning to total asset ratio has a minimum value of -4.14, a maximum value of 18.98, an average value of -0.02, and a standard deviation of 1.33.

The goodness of fit of logistic regression model was conducted using the Hosmer-Lemeshow Test, with the results shown in Table 3. If the Hosmer-Lemeshow statistical value is >0.05 then H0 can be accepted, which means that there is no significant difference between the model and the observed values empirical data, so that it can be concluded that the model is fit with the data (Ghozali, 2016). Based on the data in Table 3, the H-L probability number is 0.9806 which is greater than 0.05, so the conclusion is that the logistic regression model is declared fit and suitable for use to predict the dependent variable financial distress in this study.

The logistic regression coefficient of determination value is shown by the McFadden R-squared value (Sarwono, 2016) which can be seen in Table 4. Based on the data in Table 4, the McFadden R-squared value is 0.785916 which means 78.59% variation of the financial distress (as dependent variable) can be explained by the combination of independent variables, while 21.41% is explained by other variables outside the research model. Furthermore, the simultaneous significance test is carried out by looking at the probability ratio (LR) statistics values as shown in Table 4. According to Ghozali dan Ratmono (2017) in Gondokusumo & Susanti (2022), the probability value of LR statistics that is equal or less than 0.05 means that all independent variables in this research model together have a simultaneous effect towards the dependent variable. As can be shown in Table 4, the probability value of LR statistics is 0.000 which is smaller than 0.05, means that the independent variables in this research model together have a significant effect towards the dependent variable. This analysis is used to explain the influence of each independent variable partially on the dependent variable. Table 5 shows the results of logistic regression analysis.

Table 3. Hosmer-Lemeshow Test

H-L Statistic	1.5915	Prob. Chi-Sq(8)	0.9911

Source: Processed Data, 2023

Table 4. Coefficient of Determination

McFadden R-squared	0.785916
LR statistic	292.6191
Prob(LR statistic)	0.000000

Source: Processed Data, 2023

Table 5. Logistic Regression

Variable	Coefficient	Prob.	Interpretation
C	-1.186091	0.1717	-
ROE	-0.013608	0.1840	Insignificant effect
CR	-0.000930	0.0011	Negative effect
DAR	0.052092	0.0000	Positive effect
LNTA	-0.146721	0.0374	Negative effect
TATO	-1.016389	0.0978	Insignificant effect
RETA	-6.176583	0.0000	Negative effect

Source: Processed Data, 2023

Based on the statistical output in Table 5, the logistic regression equation is obtained in predicting the dependent variable financial distress: Ln $\frac{FD}{(1-FD)}$ = -1.186091– 0.013608ROE – 0.000930CR + 0.052092DAR – 0.146721LnTA – 1.016389TATO –6.176583RETA. Based on Table 5, the probability value of ROE as a proxy for profitability is 0.1840 with a coefficient value of -0.013608. The probability value is greater than 0.05 and a negative coefficient indicates that profitability has a negative insignificant effect toward financial distress. In other words, profitability has no significant effect on financial distress. Therefore, the first hypothesis (H1) which proposes that profitability has a negative effect on financial distress is rejected. The probability value of CR as a proxy for liquidity is 0.0011 with a coefficient value of -0.000930. The probability value of 0.0011 is smaller than 0.05 and a negative coefficient means that liquidity has a significant negative effect on financial distress, so the second hypothesis (H2) which proposes that liquidity negatively affects financial distress can be accepted. Thus, the higher value of liquidity that a company has, the smaller the possibility of financial distress the company will face. The probability value of DAR as a proxy for leverage is 0.0000 with a coefficient value of 0.052092. The value of probability 0.0000 is smaller than 0.05 and a positive coefficient means that leverage has a significant and positive effect towards financial distress, so the third hypothesis (H3) which proposes that leverage will positively affect financial distress can be accepted. Thus, the higher the company's leverage value will add possibility to face financial distress for a company. The probability value of lnTA as a proxy for firm size is 0.0374 with a coefficient value of -0.146721.

The probability is smaller than 0.05 and a negative coefficient means that firm size has a significant negative effect on financial distress, so the fourth hypothesis (H4) which proposes that firm size has a negative effect on financial distress can be accepted. Thus, the higher the firm size value of a company will reduce the possibility of the company facing financial distress. The probability value of TATO as a proxy for operating capacity is 0.0978 with a coefficient value of -1.016389. The probability is greater than 0.05 and a negative coefficient indicates that operating capacity has a negative but not significant effect on financial distress. In other words, operating capacity has no significant effect towards financial distress, so that the fifth hypothesis (H5) which proposes that operating capacity has a negative effect on financial distress is rejected. The probability value of RETA is 0.0000 with a coefficient value of -6.176583. The probability of 0.0000 is smaller than 0.05 and a negative coefficient means that retained earnings to total assets ratio has a significant negative effect on financial distress. So, the sixth hypothesis (H6) which proposes that retained earnings to total asset ratio has a negative effect on financial distress can be accepted. Thus, the higher value of this ratio indicates the smaller possibility of the company experiencing financial distress.

This research result shows that profitability has no significant effect on financial distress. It means that the increase and/or decrease in profitability of a company does not give any impact towards the probability of financial distress that can be faced by the company. Return on equity itself describes management's ability to obtain net profit compared to company equity. A high profitability value will provide a signal or information, as signaling theory explains, to company stakeholders that the company's health is in good condition and is not experiencing distress (Restianti & Agustina, 2018). However, the results of this study failed to show significant influence of profitability on financial distress. This happens because high profits are not a guarantee that the company will not experience financial difficulties, especially if high profits may result in high debt (Mafiroh & Triyono, 2016). This result supports the previous research of Haras, Monoarfa and Dungga (2022), Murni (2018), and Dahruji and Muslich (2022) which proved that profitability which proxied by return on equity has negative but insignificant effect towards financial distress, due to the company's ability to earn profits and the ability to control all operational and non-operational costs are

other key factors that can determine profitability value, although they do not always reflect any potential of financial distress.

This research result shows that liquidity has a significant negative effect on financial distress. Liquidity is used as a measure of the ability of a company to fulfill its short-term liabilities using the current assets it owns (Kasmir, 2019). Companies experiencing liquidity problems are characterized by the company's inability to fulfill its short-term obligations, and if these difficulties are not quickly resolved, it can result in bankruptcy (Putri & Aminah, 2019). On the other hand, companies with high liquidity values give a positive signal as described in signaling theory that the company is in good health in terms of its capabilities in terms of paying off its obligations (Hikmawati, 2022). Therefore, liquidity will minimize financial distress probability for the company, reflected by the sufficient current assets that the company has to pay the liabilities. This result is in line with previous research by Putri & Aminah (2019) and Adielyani & Pangestuti (2023) which proves that liquidity has a negative significant effect on financial distress because if a company has a high liquidity value, it can be said that the company is able to pay its short-term obligations so that it can avoid liquidation or bankruptcy problems which characterized by early symptoms of financial distress.

This research result shows leverage has a significant and positive effect towards financial distress. The leverage or solvency ratio is used as a measure of how much debt funded the company's assets (Kasmir, 2019). The level of leverage is part of company policy and is a signal for investors in making decisions (Heniwati & Essen, 2020). A low level of leverage indicates company stability and there is a small possibility for the company to experience financial distress (Ningsih & Asandimitra, 2023). On the other hand, companies with a high proportion of debt to assets are at risk of facing difficulties in paying off their obligations in the future and can increase the financial distress risk (Hikmawati, 2022). This result supports the research of Masita & Purwohandoko (2020) which found positive and significant effect of leverage towards financial distress, as companies that have large debts mean that the dependency load they bear is greater, so the risk of default is also greater and increase the probability of financial distress. This research is also in line with Antoniawati & Purwohandoko (2022) and Ningsih & Asandimitra (2023) which proves that leverage that measured by debt to asset ratio positively and significantly affects financial distress.

This research result shows that firm size has a significant negative effect on financial distress. Firm size reflects how much total assets that owned by a company (Sariroh, 2021). The larger the size of a company indicates that the company has sufficient capital to carry out its operational activities (Heniwati & Essen, 2020). Companies which have large amount of total assets provide a positive signal to the stakeholders because it is indicated that the company has a good ability to fulfill its obligations and diversify in the future, so that the company will be secured from financial distress (Dirman, 2020). This result is in line with research by Adielyani & Pangestuti (2023) and Dirman (2020) which proved that firm size has a negative effect on financial distress, because the greater the total assets a company owned will have an influence to increase the company ability in paying off corporate obligations in the future, so that the company is able to avoid financial difficulties. The large size of a company is usually balanced by good asset management capabilities of the managers compared to companies with a smaller scale, so that the possibility of experiencing financial distress can also be better anticipated.

This research result shows that operating capacity has a negative but not significant effect on financial distress. Operating capacity or activity ratio is a measure effectiveness and efficiency of a company in managing the assets owned (Khasanah et al., 2021). In relation to signaling theory, a high operating capacity value is a positive signal that shows the company can generate the expected sales and profits from the assets it owns. This indicates that the company is in good condition and is unlikely to experience financial difficulties (Digdowiseiso & Ningrum, 2022). However, the result analysis does not prove that operating capacity has any significant effect on financial distress. This result is in line with research by Digdowiseiso & Ningrum (2022), Hikmawati (2022), Heniwati & Essen (2020), and Restianti & Agustina (2018) which states that operating capacity has no effect on financial distress. This is because the company requires high capital to get high sales, so that in obtaining inventory the company needs to increase funds from external parties such as creditors. The sales results will then generate profits for the company, but some of these profits must be used to fulfill the company's high liabilities, therefore high sales turnover does not always mean the company is free from financial difficulties (Restianti & Agustina, 2018). Apart from that, the low value of operating capacity or activity ratio can be caused by an increase in the value of the company's total assets accompanied by stagnant sales values due to external factors of the company such as weakening

economic conditions. As long as the company is still able to earn positive profits amidst stagnant sales, the company's health can still be said to be good and it is not experiencing financial distress (Heniwati & Essen, 2020). Thus, the level of operating capacity cannot necessarily predict the chance of financial distress occurring in a company.

This research result shows that retained earnings to total assets ratio has a significant negative effect on financial distress. Retained earnings are the amount of profit that is not distributed to shareholders in dividends form. A high value of retained earnings ratio reflects that the company are able to earn profits that will be used to finance assets and then pay dividends (Chabachib et al., 2019). Furthermore, the high ratio of retained earnings to total assets indicates that the company finances most of its investments using retained earnings rather than external debt and equity (Restianti & Agustina, 2018). This gives a signal that the condition of the company is well and protected from the financial distress. This result supports Elbannan (2021) which proves that companies with a high retained earnings ratio are less likely to experience financial distress compared with those which has less retained earnings to total asset ratio. It is also in line with the research of Chabachib et al. (2019) and Restianti & Agustina (2018) that shows a negative effect of this variable towards financial distress. A company with a high retained earnings ratio reflects management's ability to manage the profits generated to finance its operational activities. Besides, the company also has a good confidence that investors will continue to invest their capital even though some profits are allocated as retained earnings and not distributed as dividends which can attract investors' attention, this is because the company already has a matured positive performance and image in the eyes of stakeholders. Therefore, companies like this are less likely to experience the possibility of financial distress.

5. CONCLUSIONS, LIMITATIONS, AND SUGGESTIONS

The results of this research evidenced that profitability and operating capacity have insignificant effect on financial distress. Meanwhile, liquidity, firm size, and retained earnings to total asset ratio have a negative effect on financial distress. Furthermore, leverage is proven to have a positive effect towards financial distress. This research provides empirical evidence regarding factors that can influence financial difficulties in companies based on the research data analysis. Furthermore, this research contributes to the literature regarding the application of signaling theory in predicting financial distress that the companies faced by considering internal factors that can influence. Therefore, this research can be a source of enrichment and consideration for stakeholders in making their decisions. Nevertheless, this research still has limitations in terms of the variables used and the research sample, so it is hoped that future research can examine other independent variables besides those tested in this research, as well as adding other types of variables such as moderation, mediation and control variables. It is also hoped that future research can expand the research sample to obtain more general results. Finally, the regulators as policy makers can anticipate bankruptcy conditions by analyzing the potential financial distress of a company, such as applying a Z"Score limit to assess the company's financial condition, and then immediately implementing evaluation and rescue steps for companies whose financial condition is unhealthy so that they can restore their financial health condition before bankruptcy occurs.

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