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Determinants Of Financial Distress In Energy Sector Companies Listed On Indonesia Stock Exchange 2018-2022

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Article info

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current asset, debt to asset, financial distress, retained earning to total asset, return on equity, total asset turnover.

Abstract

The aim of this research is to test and analyze the influence of profitability, liquidity, leverage, firm size, operating capacity, and retained earnings to total assets on financial distress 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 2018-2022. Sampling used the purposive sampling method and produced a sample of 55 companies with five years of observation resulting 275 total observation data. The analysis technique used is logistic regression analysis with the help of Eviews 13 software. The results of this study show that liquidity measured by the current ratio, firm size measured by the natural logarithm of total assets, and retained earnings to total assets ratio have a negative effect on financial distress, while leverage measured by debt to asset ratio has a positive effect on financial distress. Meanwhile, profitability measured by the return on equity ratio and operating capacity measured by the total asset turnover ratio have no effect on financial distress.

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Introduction

For go-public companies, 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 not been able to utilize their capital to drive growth, and even tend to face financial difficulties (HR *et al.*, 2022). According to Lin et al. (2008), financial distress reflects a condition 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. In other words, if this condition is not resolved appropriately, it will potentially result in the company experiencing bankruptcy (Pryangan and Payamta, 2020). Symptoms of bankruptcy of a company generally do not appear suddenly, but take place in a long process and should have been detected early (HR *et al.*, 2022). Therefore, it is important thing for companies to conduct bankruptcy analysis in order to evaluate any financial difficulties they face, so that these conditions can be handled before the company goes bankrupt (Galih and Indah, 2021).

Uncertain economic conditions in both the global and national environment can affect the financial condition of most business sectors. Indonesia's economic growth in 2019 decreased to 5.02% from 5.17% in 2018. Economic growth fell even more sharply in 2020 and reach -2.07% (Badan Pusat Statistik, 2021) along with Covid-19 pandemic and some restrictions on social activities that affect economies around the world. The sectors that most affected by the crisis condition are those that rely on external demand (tradable), one of which is the energy sector 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 difficulties (Galih and Indah, 2021). In 2019, two mining companies were delisted from the Indonesia Stock Exchange due to performance and administrative problems, namely PT Sekawan Intipratama Tbk and PT Bara Jaya Internasional Tbk. Two other mining companies followed delisting from the IDX in 2020, namely PT Borneo Lumbung Energi & Metal Tbk and PT Cakra Mineral Tbk (IDX, 2022).

Financial distress has become a hot topic in the academic and practical worlds of business, finance, and banking (Li et al., 2020). Factors that affect financial distress based on previous studies include aspects of financial ratios (Restianti and Agustina, 2018; Harianti and Paramita, 2019; Putri and Aminah, 2019; Dirman, 2020; Heniwati and Essen, 2020; Masita and Purwohandoko, 2020; Sari and Hartono, 2020; Cahyani and Iramani, 2022; Adielyani and Pangestuti, 2023; Ningsih and Asandimitra, 2023), company size (Nilasari and Ismunawan, 2021; Sariroh, 2021; Hikmawati, 2022; Putri and Kautsar, 2023), sales growth (Harianti and Paramita, 2019; Heniwati and Essen, 2020; Digdowiseiso and Ningrum, 2022; Letiana and Hartono, 2023), operating capacity (Putri, Hardi and Silfi, 2017; Heniwati and Essen, 2020; Hikmawati, 2022), ownership structures (Udin, Khan and Javid, 2016; Kristiawan, 2020; Masita and Purwohandoko, 2020; Putri and Kautsar, 2023), good corporate governance (Fathonah, 2016; Mafiroh and Triyono, 2016; Hikmawati, 2022; Adielyani and Pangestuti, 2023), and CEO characteristics (Maghfiroh and Isbanah, 2020; Putri and Kautsar, 2023). In addition, some researchers examine the influence of macroeconomic factors such as exchange rates and inflation (Tinoco and Wilson, 2013; Myllariza, 2021; Nilasari and Ismunawan, 2021).

One of financial distress determinant that is interesting to study is the company's financial ratios which include profitability, liquidity, and leverage ratios. Although it has been tested quite a lot, the results of effect testing of these variables on financial distress still show mixed results. Research of Masita & Purwohandoko (2020), Heniwati & Essen (2020), Cahyani & Iramani (2022), and Adielyani & Pangestuti (2023) prove that profitability negatively affect financial distress, contrary to research by Digdowiseiso & Ningrum (2022) which shows that profitability positively affect financial distress. Other research by Sariroh (2021) and Mafiroh & Triyono (2016) prove that there is no significant effect of profitability towards financial distress. The same thing happens to liquidity variable which shows positive relationship to financial distress in research conducted by Cahyani & Iramani (2022) and Mafiroh & Triyono (2016), but shows negative relationship in research by G. W. Putri & Aminah (2019) and Adielyani & Pangestuti (2023), meanwhile the research of Heniwati & Essen (2020), Sariroh (2021), and Ningsih & Asandimitra (2023) prove that there are no relationship between liquidity and financial distress. The next variable, leverage, shows a positive effect on financial distress evidenced by research of Antoniawati & Purwohandoko (2022), Masita & Purwohandoko (2020), Cahyani & Iramani (2022), and Ningsih & Asandimitra (2023). On the other hand, research by Gunawan et al. (2017) shows that leverage has a negative effect on financial distress. Moreover, research by Letiana & Hartono (2023), M. Putri & Kautsar (2023) and Dirman (2020) did not show any significant effect of leverage on financial distress instead.

In this study, we are interested to re-examine the effect of those three financial ratios above by adding several other variables that are thought to affect financial distress. This is based on the existence of phenomenon gaps and research gaps that have been described. In addition, there are still limitations in previous research that need to be continued (Antoniawati and Purwohandoko, 2022), so this study will carry out the recommendations of previous researchers to test other variables such as firm size (Heniwati and Essen, 2020; Adielyani and Pangestuti, 2023; Putri and Kautsar, 2023), operating capacity (Heniwati and Essen, 2020; Khasanah, Sukesti and Nurcahyono, 2021; Hikmawati, 2022), and *retained earning to total asset ratio* (Restianti and Agustina, 2018; Chabachib, Kusmaningrum and Hersugondo, 2019; Elbannan, 2021).

The relationship between firm size and financial distress still show 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 M. Putri & Kautsar (2023) there is no effect. The effect of operating capacity variables on financial distress also shows different results, such as positive effect (Khasanah, Sukesti and Nurcahyono, 2021), negative effect (Mafiroh and Triyono, 2016; Putri and Aminah, 2019; Cahyani and Iramani, 2022), and no significant effect (Restianti and Agustina, 2018; Heniwati and Essen, 2020; Digdowiseiso and Ningrum, 2022; Hikmawati, 2022). Likewise, the variable retained earning to total asset ratio shows the results of a negative effect on financial distress in research conducted by Elbannan (2021). However, it was not proven to affect financial distress in the study of Chabachib et al. (2019) and (Restianti and Agustina, 2018). Therefore, this study will fill the research gap explained by examining the effect of profitability, liquidity, leverage, firm size, operating capacity, and retained earnings to total assets toward financial distress in energy sector companies listed on the Indonesia Stock Exchange in 2018-2022.

Signaling Theory

Signaling theory is one of widely used theory 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 and Payamta, 2020). Signaling theory suggests how a company should deliver signals to financial report users. Signaling theory explains why a company has a motivation to provide financial report information towards external parties. The company's encouragement to provide information is due to the information asymmetry that exist between the company and outside parties, where the company has more knowledge about the company and its prospects in the future compared to the outside parties (Haras, Monoarfa and Dungga, 2022).

Profitability and Financial Distress

Profitability is defined as management's ability to earn net income. A high profitability value will provide a signal or information (signaling theory) to stakeholders that the company's health is in good condition and not experiencing distress (Restianti and Agustina, 2018). 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 and Iramani, 2022). 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.Thus the proposed hypothesis is:

H1: profitability has a negative effect on financial distress

Liquidity and Financial Distress

Companies that have a high liquidity ratio show the ability to meet their short-term obligations with their current assets (Athia Zainun Faqiha, 2023). 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). Thus, a high level of liquidity can reduce the level of possibility of corporate financial distress (Sutra and Mais, 2019). Research by Adielyani & Pangestuti (2023) proves that liquidity negatively affect financial distress. That result is in line with the result of G. W. Putri & Aminah (2019) research. Therefore, the hypothesis proposed in this study is :

H2: liquidity has a negative effect on financial distress

Leverage and Financial Distress

Leverage ratio shows how much debt the company has. If the company has a small debt, the possibility of financial distress in the company decreases (Antoniawati and Purwohandoko, 2022). The level of leverage is part of the company's policy and is a signal for investors in making decisions (Heniwati and Essen, 2020). A low level of leverage indicates the stability of the company and less likely for the company to experience financial distress (Ningsih and 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). The research of Masita & Purwohandoko (2020) proves that leverage has a 3 positive effect on financial distress. Thus the hypothesis proposed is :

H3 : leverage has a positive effect on financial distress:

Firm Size and 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 and Essen, 2020). Companies with large amount of total assets provide a positive signal to stakeholders because the 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). Companies must maintain financial performance so that asset management remains good, financing good company operations is from their assets and not from debt so that they have a strong capital structure to avoid financial distress (Putri and Kautsar, 2022). The result of research conducted by Adielyani (2023) 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 and Financial Distress

Operating capacity or known as activity ratio is used as an indicator of a company's asset management effectiveness and efficiency (Khasanah, Sukesti and Nurcahyono, 2021). 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 indicates that the company is in a healthy condition and less likely to experience any financial difficulties (Digdowiseiso and Ningrum, 2022). Companies that can utilize their assets effectively can reduce company expenses and increase company revenue (Cahyani and Iramani, 2022). In previous research, operating capacity was proved to have a negative effect on financial distress (Mafiroh and Triyono, 2016; Putri and Aminah, 2019; Cahyani and Iramani, 2022). Therefore the hypothesis proposed in this study is :

H5 : operating capacity has a negative effect on financial distress

Retained Earning to Total Asset Ratio and 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, Kusmaningrum and Hersugondo, 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 and 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 T and Agustina L, 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*

Based on the hypothesis that has been explained, the empirical research model is shown as follows :

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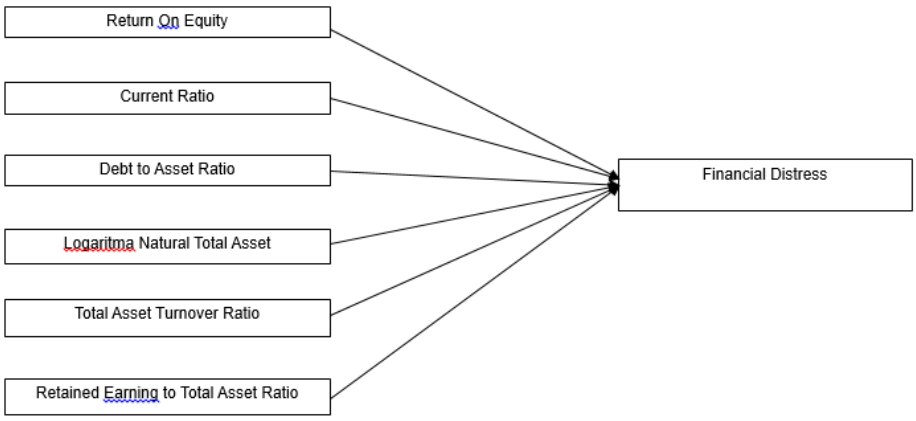

Figure 1. Empirical Research Model

RESEARCH METHODS

This research is causal associative research which examine the influence of the independent variables toward the dependent variable. 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. 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 data analysis technique used is logistic regression analysis with the help of Eviews 13 software.

The dependent variable in this research is financial distress. Financial distress is a resistant decline on a company's financial condition 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 and 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:

$Z'' = 6.56X1 + 3.26X2 + 6.72X3 + 1.05X4$

Notes :

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 and 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 interext / 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 and 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, Sukesti and Nurcahyono, 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, Kusmaningrum and Hersugondo, 2019). This variable is calculated using the following formula:

RETA = Retained earnings / Total Assets

RESULT

Descriptive Statistics

Descriptive statistics aims to provide an general overview of the research variable data. The dependent variable in this study is financial distress, which measured using a 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.

Table 1. Frequency of Dependent Variables

Dep. Value	Count	Percent	Cumulative Count	Cumulative Percent
0	191	65.86	191	65.86
1	99	34.14	290	100.00

Source : Output Eviews 13, data processed (2023)

Furthermore, the results of descriptive statistics analysis of the independent variables are shown in Table 2. This test 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.

Tabel 2. Descriptive Statistics of Independent Variables

Variable	Min	Max	Mean	Stdev
ROE (%)	(2.137,77)	4.854,49	22,36	344,48
CR (%)	1,26	14.693,14	275,35	1.112,86
DAR (%)	0,16	1.327,84	61,96	85,39
Total Asset (thousand USD)	1,66	10.782.307,00	917.493,13	1.780.293,94
TATO	0	7,38	0,65	0,66
RETA	(4,14)	18,98	(0,03)	1,37

Source : Output Eviews 13, data processed (2023)

Goodness of Fit

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.

Table 3. Hosmer-Lemeshow Test

H-L Statistic	2.0145	Prob. Chi-Sq(8)	0.9806

Source : Output Eviews 13, data processed (2023)

Coefficient of Determination and Simultaneous Test

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 0.784598 which means 78.46% variation of the financial distress (as dependent variable) can be explained by the the combination of independent variables in this research, while 21.54% is explained by other variables that are 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.

Logistic Regression Analysis

This analysis is used to explain the influence of each independent variable partially on the dependent variable. The results of the logistic regression analysis are shown in Table 4.

Table 4. Logistic Regression Result

Variable	Coefficient	Std. Error	z-Statistic	Prob.
C	-2.048867	1.522174	-1.346013	0.1783
ROE	-0.023953	0.019106	-1.253695	0.2100
CR	-0.001671	0.000525	-3.183853	0.0015
DAR	0.093921	0.019980	4.700840	0.0000
LNTA	-0.277880	0.125641	-2.211698	0.0270
TATO	-1.707702	1.082789	-1.577132	0.1148
RETA	-11.02702	2.078261	-5.305886	0.0000
McFadden R-squared	0.784598	Mean dependent var		0.341379
LR statistic	292.1283	Avg. log likelihood		-0.138277
Prob(LR statistic)	0.000000			

Sumber : Output Eviews 13, data diolah (2023)

Based on the statistical output in Table 4, the logistic regression equation is obtained in predicting the dependent variable financial distress :

$$Ln\ \frac{FD}{(1-FD)} = -2{,}048867 - 0{,}023953ROE - 0{,}001671CR + 0{,}093921DAR$$
$$0{,}277880LnTA - 0{,}707702TATO - 11{,}02702RETA$$

The interpretation of the logistic regression equation above is as follows.

1. If all independent variables have a value of zero, then the probability of financial distress occurring is a constant value, namely -2.048867.
2. If the profitability value as measured by return on equity (ROE) increases by one percent, it will reduce the probability of financial distress by 0.023953 percent.
3. If the liquidity value as measured by the current ratio (CR) increases by one percent, it will reduce the probability of financial distress by 0.001671 percent.
4. If the leverage value as measured by the debt to asset ratio DAR increases by one percent, it will increase the probability of financial distress by 0.093921 percent.
5. If the value of firm size as measured by the natural logarithm of total assets (LnTA) increases by one unit, it will reduce the probability of financial distress by 0.277880.
6. If the operating capacity value as measured by the total asset turnover ratio (TATO) increases once, it will reduce the probability of financial distress by 1.707702 times.
7. If the retained earnings to total asset ratio (RETA) value increases once, it will reduce the probability of financial distress by 11.02702 times.

DISCUSSION

The Effect of Profitability on Financial Distress

Based on Table 4, the probability value of ROE as a proxy for profitability is 0.2100 with a coefficient value of -0.023953. The probability value of 0.2100 is greater than 0.05 while 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.

Return on equity describes management's ability to obtain net profit compared to company equity. A high profitability value will provide a signal or information (signalling theory) to company stakeholders that the company's health is in good condition and is not experiencing distress (Restianti and 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 and Triyono, 2016). The results of this research support the research of Murni (2018), Haras, Monoarfa and Dungga (2022), and Dahruji and Muslich (2022) which evidenced that profitability (return on equity) has no effect on financial distress.

The Effect of Liquidity on Financial Distress

Based on Table 4, the probability value of CR as a proxy for liquidity is 0.0015 with a coefficient value of -0.001671. The probability value of 0.0015 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 has a negative effect on financial distress can be accepted. Thus, the higher the company's liquidity value, the smaller the possibility of financial distress the company will face.

Liquidity is used as a measure of a company's ability 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 and Aminah, 2019). On the other hand, companies with high liquidity values give a positive signal (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. The results of this research are in line with research by G. W. Putri & Aminah (2019) and Adielyani & Pangestuti (2023) which proves that liquidity (current ratio) has a negative effect on financial distress.

The Effect of Leverage on Financial Distress

Based on Table 4, the probality value of DAR as a proxy for leverage is 0.0000 with a coefficient value of 0.093921. 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 has a positive effect on financial distress can be accepted. Thus, the higher the company's leverage value will add possibility to face financial distress for a company.

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 and Essen, 2020). A low level of leverage indicates company stability and there is a small possibility for the company to experience financial distress (Ningsih and 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). The results of this research support the research of Antoniawati & Purwohandoko (2022), Masita & Purwohandoko (2020), and Ningsih & Asandimitra (2023) which proves that leverage (debt to asset ratio) has a positive effect on financial distress.

The Influence of Firm Size on Financial Distress

Based on Table 4, the the probability value of lnTA as a proxy for firm size is 0.0270 with a coefficient value of -0.277880. The probability of 0.0270 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.

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 and Essen, 2020). Companies which have large amount of total assets provide a positive signal to the stakeholders because the 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). The results of this research strengtenth the research by Dirman (2020) and Adielyani & Pangestuti (2023) which proved that firm size has a negative effect on financial distress.

The Influence of Operating Capacity on Financial Distress

Based on Table 4, the the probability value of TATO as a proxy for operating capacity is 0.1148 with a coefficient value of -1.707702. The probability of 0.1148 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 results of this research are 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.

Operating capacity or activity ratio is a measure effectiveness and efficiency of a company in managing the assets owned (Khasanah, Sukesti and Nurcahyono, 2021). In relation to signal 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 and Ningrum, 2022). However, the result analysis does not prove that operating capacity has any significant 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 and 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 and Essen, 2020). Thus, the level of operating capacity cannot necessarily predict the chance of financial distress occurring in a company.

The Effect of Retained Earning to Total Asset Ratio on Financial Distress

Based on Table 4, the the probability value of RETA is 0.0000 with a coefficient value of –11.02702. The probability figure 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.

Retained earnings or 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, Kusmaningrum and Hersugondo, 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 and Agustina, 2018). This gives a signal that the condition of the company is well and protected from the financial distress. The results of this research support research by Elbannan (2021) which proves that companies with a high retained earnings to total assets are at the maturity stage in the company life cycle and tend not to experience financial distress

CONCLUSION

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 contributes to the research literature on financial distress in energy companies and can be a source of enrichment for investors in making decisions. This research still has limitations in terms of the variables used and the research sample, so it is hoped that future research can test 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.

REFERENCE

Adielyani, D. and Pangestuti, I.R.D. (2023) 'Corporate Governance And Financial Ratios Of Manufacturing Companies On Financial Distress: The Main Board And Development Board Of IDX', *Media Ekonomi dan Manajemen*, 38(2), pp. 303–325.

Antoniawati, A. and Purwohandoko (2022) 'Analisis Pengaruh Profitabilitas, Likuiditas, Dan Leverage Terhadap Financial Distress Pada Perusahaan Transportasi Yang Terdaftar Di BEI TAHUN 2018-2020', *Jurnal Ilmu Manajemen*, 10(1), pp. 28–38.

Athia Zainun Faqiha, S.S. (2023) 'Pengaruh Rasio Likuiditas , Profitabilitas , Dan Leverage Terhadap Financial Distress Pada Perusahaan Tekstil Dan Garment Yang Terdaftar di BEI Periode 2017-2022', 8(2), pp. 216–228.

Badan Pusat Statistik (2021) 'Pertumbuhan Ekonomi Indonesia Triwulan IV-2020', *Www.Bps.Go.Id*, (13), p. 12. Available at: https://www.bps.go.id/pressrelease/2021/02/05/1811/ekonomi-indonesia-2020-turun-sebesar-2-07-persen--c-to-c-.html.

Cahyani, A.P.R. and Iramani, R. (2022) 'Studi financial distress pada perusahaan transportasi dan logistik di indonesia: pandemi covid-19 tidak berdampak', *Jurnal Ilmu Manajemen*, 10(4), pp. 1073–1086.

Caronge, E., Raznilawati, R. and Mursida, M. (2022) 'Pengaruh Return on Asset Dan Return on Equity Terhadap Financial Distress Pada Perusahaan Manufaktur Sub. Sektor Makanan Dan Minuman Yang Terdaftar Di Bursa Efek Indonesia Periode 2014-2017', *Humano: Jurnal Penelitian*, 13(1), pp. 15–26. doi:10.33387/humano.v13i1.4263.

Chabachib, M., Kusmaningrum, R.H. and Hersugondo, H. (2019) 'Financial Distress Prediction in Indonesia', *WSEAS Transactions on Business and Economics*, 16(2015), pp. 251–260.

Dahruji, D. and Muslich, A.A. (2022) 'Pengaruh Profitabilitas terhadap Financial Distress pada Bank Umum Syariah Periode 2018 – 2020', *Jurnal Ekonomi Syariah Teori dan Terapan*, 9(3), pp. 388–400. doi:10.20473/vol9iss20223pp388-400.

Digdowiseiso, K. and Ningrum, I.S. (2022) 'The Effects of Total Asset Turnover, Return on Assets, And Sales Growth on Financial Distress in Food and Beverage Companies over the Period 2016-2020', *Budapest International Research and Critics Institute-Journal (BIRCI-Journal)*, 5(2), pp. 12046–12058. Available at: https://doi.org/10.33258/birci.v5i2.5042.

Dirman, A. (2020) 'Financial distress: the impacts of profitability, liquidity, leverage, firm size, and free cash flow', *International Journal of Business, Economics and Law*, 22(1), pp. 17–25.

Elbannan, M.A. (2021) 'On the prediction of financial distress in emerging markets : What matters more ? Empirical evidence from Arab spring countries', *Emerging Markets Review*, 47(March), p. 100806. doi:10.1016/j.ememar.2021.100806.

Fathonah, A.N. (2016) 'Pengaruh Penerapan Good Corporate Governance Terhadap Financial Distress', *Jurnal Ilmiah Akuntansi*, 1(2), pp. 133–150.

Galih, M. and Indah, S. (2021) 'The Effect of Profitability and Leverage on Financial Distress with Inflation as Moderating (Study on Mining and Consumer Goods Industry Companies Listed on the Indonesia Stock Exchange 2016-2019)', *Jurnal Aset (Akuntansi Riset)*, 13(1), pp. 134–143.

Ghozali, I. (2016) *Aplikasi Analisis Multivariate Lanjutan dengan Program SPSS*. Semarang: Badan Penerbitan Universitas Diponegoro.

Gondokusumo, G.R. and Susanti, M. (2022) 'Analisis Faktor-Faktor yang Mempengaruhi Praktik Income Smoothing', *Jurnal Ekonomi*, pp. 264–282.
Gunawan, A.W. *et al.* (2017) 'Financial Distress Di BUMN Indonesia Dan Faktor-Faktor Yang Mempengaruhi', *Ekuitas: Jurnal Ekonomi dan Keuangan*, (32), pp. 226–243. doi:10.24034/j25485024.y2019.v3.i2.4135.
Haras, L., Monoarfa, M.A.S. and Dungga, M.F. (2022) 'Pengaruh Rasio Likuiditas, Rasio Solvabilitas dan Rasio Profitabilitas Terhadap Financial Distress Pada Perusahaan Manufaktur Sektor Industri Barang Konsumsi Yang Terdaftar di Bursa Efek Indonesia Tahun 2013-2016', *Jurnal Ilmiah Manajemen dan Bisnis*, 5(1), p. 10.
Harianti, R. and Paramita, R.A.S. (2019) 'Analisis faktor internal terhadap financial distress sektor perdagangan, jasa, dan investasi yang go public pada periode 2013 - 2017', *Jurnal Ilmu Manajemen*, 7(4), pp. 984–993.
Heniwati, E. and Essen, E. (2020) 'Which Retail Firm Characteristics Impact On Financial Distress ?', *Jurnal Akuntansi dan Keuangan*, 22(1), pp. 40–46. doi:10.9744/jak.22.1.40-46.
Hikmawati, V.B. (2022) 'Pengaruh corporate governance , operating capacity, leverage, likuiditas, dan ukuran perusahaan terhadap financial distress perusahaan sektor aneka industri', *Jurnal Ilmu Manajemen*, 10(2), pp. 459–474.
HR, I. *et al.* (2022) 'Prediksi Financial Distress Perusahaan Sektor Industri Consumer Cyclical', *Jurnal Akuntansi dan Manajemen*, 19(02), pp. 63–77.
IDX (2022) *13 Emiten Hengkang , Berikut Kilas Balik Delisting periode 2019-2021*. Available at: https://www.idxchannel.com/market-news/13-emiten-hengkang-berikut-kilas-balik-delisting-periode-2019-2021.
Kasmir (2019) *Analisis Laporan Keuangan*. Depok: Raja Grafindo Persada.
Khasanah, S.N.U., Sukesti, F. and Nurcahyono, N. (2021) 'Pengaruh Operating Capacity, Sales Growth, Arus Kas dan Leverage Terhadap Financial Distress', *Sustainable*, 1(2), p. 357. doi:10.30651/stb.v1i2.10907.
Kristiawan, N.B. (2020) 'Ceo Characteristics, Ownership Concentration and Corporate Social Responsibility Disclosure', *Jurnal Bisnis dan Akuntansi*, 22(2), pp. 147–166. doi:10.34208/jba.v22i2.701.
Letiana, I.T. and Hartono, U. (2023) 'Pengaruh profitabilitas, likuiditas, leverage dan sales growth terhadap financial distress pada perusahaan sektor properties and real estate yang terdaftar di Bursa Efek Indonesia 2019-2021', *Jurnal Ilmu Manajemen*, 11(1), pp. 187–199.
Li, Z. *et al.* (2020) 'Predicting the risk of financial distress using corporate governance measures', *Pacific-Basin Finance Journal*, (April), p. 101334. doi:10.1016/j.pacfin.2020.101334.
Limbong, N.D., Kristiana, D.R. and Hatta, A.J. (2022) 'Potensi Financial Distress Pada Bank Umum Berbasis RGEC', *JIMAT (Jurnal Ilmiah Mahasiswa Akuntansi) Universitas Pendidikan Ganesha*, 13(03), pp. 973–983.
Lin, B., Lee, Z.H. and Gibbs, L.G. (2008) 'Operational restructuring: Reviving an ailing business', *Management Decision*, 46(4), pp. 539–552. doi:10.1108/00251740810865049.
Mafiroh, A. and Triyono (2016) 'Pengaruh Kinerja Keuangan Dan Mekanisme Corporate Governance Terhadap Financial Distress (Studi Empiris pada Perusahaan Manufaktur yang Terdaftar di Bursa Efek Indonesia Periode Pendahuluan Kajian Pustaka Hipotesis dan Pengembangan', *Riset Akuntansi dan Keuangan Indonesia*, 1(1).
Maghfiroh, R.D. and Isbanah, Y. (2020) 'Pengaruh audit committee, ownership structure, dan chief executive officer terhadap financial distress pada perusahaan sektor perdagangan, jasa, dan investasi yang terdaftar di bursa efek indonesia pada tahun 2015-2018', *Jurnal Ilmiah Manajemen*, 8(3), pp. 1099–1115.
Masita, A. and Purwohandoko (2020) 'Analisis pengaruh rasio keuangan, kepemilikan manajerial, dan kepemilikan institusional terhadap financial distress pada perusahaan sektor perdagangan, jasa, dan investasi yang terdaftar di bei tahun 2015-2018', *Jurnal Ilmu Manajemen*, 8(3), pp. 894–908.
Murni, M. (2018) 'Analisis Faktor-Faktor Yang Mempengaruhi Tingkat Financial Distress Pada Perusahaan Manufaktur Yang Terdaftar Di Bei Tahun 2010-2014', *Jurnal Akuntansi dan Bisnis*, 4(1). doi:10.31289/jab.v4i1.1530.
Myllariza, V. (2021) 'Pengaruh rasio keuangan dan makroekonomi terhadap financial distress

pada perusahaan sektor industri barang konsumsi yang terdaftar di bei periode 2015-2019', *Jurnal Ilmu Manajemen*, 9(3), Pp. 1293–1307.
Nilasari, A. And Ismunawan (2021) 'Pengaruh Kinerja Keuangan, Risk Based Capital, Ukuran Perusahaan Dan Makroekonomi Terhadap Financial Distress', *Jurnal Ekonomi Bisnis dan Kewirausahaan (JEBIK)*, 10(1), pp. 55–72.
Ningsih, R.A. and Asandimitra, N. (2023) 'Pengaruh rasio-rasio keuangan terhadap financial distress pada perusahaan sektor infrastruktur, utilitas, dan transportasi dengan profitabilitas dan ukuran perusahaan sebagai variabel moderasi', *Jurnal Ilmu Manajemen*, 11(2), pp. 306–322.
Platt, H.D. and Platt, M.B. (2002) 'Predicting corporate financial distress: Reflections on choice-based sample bias', *Journal of Economics and Finance*, 26(2), pp. 184–199. doi:10.1007/bf02755985.
Pryangan, W. and Payamta (2020) 'Pengaruh Rasio CAMEL Terhadap Potensi Financial Distress', *Jurnal Aset (Akuntansi Riset)*, 12(2), Pp. 332–345.
Putri, G.W. And Aminah, W. (2019) 'Faktor-Faktor Yang Memitigasi Financial Distress Pada Perusahaan Pertambangan', *Jurnal Riset Akuntansi Kontemporer*, 11(1).
Putri, M. and Kautsar, A. (2022) 'Pengaruh Kepemilikan Institusional, Kepemilikan Manajerial, CEO Duality, Profitabilitas, Likuiditas, Leverage, Sales growth, dan Ukuran Perusahaan Terhadap Financial Distress Pada Perusahaan Sektor Agrikultur Yang Terdaftar di Bursa Efek Indonesia Periode', *Illmu Manajemen*, 11(1), pp. 170–186.
Putri, M. and Kautsar, A. (2023) 'Pengaruh kepemilikan institusional, kepemilikan manajerial, CEO duality, profitabilitas, likuiditas, leverage, sales growth, dan ukuran perusahaan terhadap financial distress pada perusahaan sektor agrikultur yang terdaftar di Bursa Efek Indonesia periode', *Jurnal Ilmu Manajemen*, 11(1), pp. 170–186.
Putri, S., Hardi, H. and Silfi, a. (2017) 'Pengaruh Rotasi Kap Mandatory dan Voluntary terhadap Kualitas Audit dengan Kepemilikan Institusional sebagai Variabel Pemoderasi pada Perusahaan Non Keuangan yang Listing di Bursa Efek Indonesia Tahun 2012-2014', *Jurnal Online Mahasiswa Fakultas Ekonomi Universitas Riau*, 4(1), pp. 926–939.
Restianti, T. and Agustina, L. (2018) 'The Effect of Financial Ratios on Financial Distress Conditions in Sub Industrial Sector Company', *Accounting Analysis Journal*, 7(1), pp. 25–33. doi:10.15294/aaj.v5i3.18996.
Restianti T and Agustina L (2018) 'Accounting Analysis Journal The Effect of Financial Ratios on Financial Distress Conditions in Sub Industrial Sector Company', *Accounting Analysis Journal*, 7(1), pp. 25–33. doi:10.15294/aaj.v5i3.18996.
Sari, A.N. and Hartono, U. (2020) 'Faktor-faktor internal yang memengaruhi financial distress pada perusahaan sektor industri barang konsumsi yang terdaftar di bei tahun 2015-2019', *Jurnal Ilmiah Mahasiswa Fakultas Ekonomi UM.Buton*, 8(3), pp. 1325–1337.
Sariroh, H. (2021) 'Pengaruh Likuiditas, Leverage, Profitabilitas, Dan Ukuran Perusahaan Terhadap Financial Distress Di Sektor Trade, Service, And Invesment', *Jurnal Ilmu Manajemen*, 9(3), pp. 1227–1240.
Sarwono, J. (2016) *Prosedur-Prosedur Analisis Populer Aplikasi Riset Skripsi dan Tesis dengan EViews*. Yogyakarta: Penerbit Gava Media.
Sutra, F.M. and Mais, R.G. (2019) 'Faktor-Faktor yang Mempengaruhi Financial Distress dengan Pendekatan Altman Z-Score pada Perusahaan Pertambangan yang Terdaftar di Bursa Efek Indonesia Tahun 2015-2017', *Jurnal Akuntansi dan Manajemen*, 16(01), pp. 34–72. doi:10.36406/jam.v16i01.267.
Tinoco, M.H. and Wilson, N. (2013) 'Financial distress and bankruptcy prediction among listed companies using accounting, market and macroeconomic variables', *International Review of Financial Analysis* [Preprint]. doi:10.1016/j.irfa.2013.02.013.
Udin, S., Khan, M.A. and Javid, A.Y. (2016) 'The Effects of Ownership Structure on likelihood of Financial Distress : An Empirical Evidence Article information : About Emerald www.emeraldinsight.com', *Corporate Governance: The International Journal of Business in Society* [Preprint].
Wahyuningsih, E.D. *et al.* (2022) 'Analisis Pengaruh Roe, Sales Growth, Dan Tato Terhadap Financial Distress', *Jurnal Ilmiah Manajemen, Eknomi Bisnis, Kewirausahaan*, 10(1), pp. 237–244. Available at: https://jurnaluniv45sby.ac.id/index.php/ekonomika/article/view/663.