The Effect of Profitability , *Leverage* , and Liquidity on Financial Distress with Company Size as a Moderating Variable in Fishery Industry Companies Listed on the Indonesia Stock Exchange

Nurlaily Astika [1] , Iskandar Muda [2] , Abdhy Aulia Adnan [3]
[123] Universitas Sumatera Utara, Medan, Indonesia
liliastika1991@gmail.com

ABSTRACT

This study aims to determine the effect of profitability, *leverage* , and liquidity on *financial distress* with company size as a moderating variable in fishing industry companies listed on the Indonesia Stock Exchange.The design of this study uses a quantitative approach with secondary data types. The samples are 3 fisheries sub-sector companies listed on the Indonesia Stock Exchange during the 2013-2022 period. The sampling technique is *purposive sampling* . The data analysis technique uses panel data regression analysis with the help of Stata 17 *software* .The results of this study indicate that the factors that significantly influence financial distress include: *Return on Assets* and *Current Ratio* . While the factors that do not have a significant effect on financial distress include: *Return On Equity, Debt To Assets, Debt To Equity, Quick Ratio,* and company size. Company size does not moderate profitability, *leverage* and liquidity on *Financial Distress*

Keywords: Profitability, *Leverage* , Liquidity, *Financial Distress* , *Company Size*

INTRODUCTION

Financial reports are needed by the company's internal parties to assess financial performance whether the condition is stable, increasing or decreasing. Apart from internal parties, external parties, especially investors, have an interest in assessing the company's sustainability. Business continuity is very important in the business management process (Nurhayati et al., 2022). Companies that can manage their business well, of course, are able to maintain the sustainability of their business. Conversely, companies that have not been able to manage their business efficiently must certainly be prepared for the possibility of business continuity problems (Warastuti and Sitinjak, 2014). According to Brahmana, 2007, states that financial difficulties occur because the company is unable to maintain the stability of its financial performance, causing losses for the period in question. Financial distress models, which are usually called bankruptcy prediction models, test the trends and behavior of a number of certain ratios. the characteristics of the ratios are used to identify the possibility of future financial distress conditions (Subramayam, 2017).

fishing industry is one of the industries that has an important influence on the survival of human resources. This industry receives protection and supervision from the government. The fishing business in Indonesia still faces various problems, including illegal fishing practices and the government's weak supervision of this industry. Indonesia's strategic position makes Indonesia an important country in creating political-economic stability. as well as regional and international security" (Sari, 2019) (Azhar et al., 2018). The government of the Ministry of Maritime Affairs and Fisheries has issued a new regulation, Regulation of the Minister of Maritime Affairs and Fisheries of the Republic of Indonesia number 10 of 2021 regarding standards for business activities and products in the implementation of risk-based business licensing for the marine and fisheries sector. however, in real practice there are still many fishing industry companies, both large and small companies, which are in conflict with the new government regulations because it is considered that the government provides restrictions on space for the fishing industry's operations and also limits the export and import of products from the management of fish, seafood and others.

Financial distress is a broad concept consisting of several situations where a company faces financial difficulties. According to Platt and Platt (2002) financial distress is a process of decreasing the company's financial position that was experienced before the company experienced bankruptcy or liquidation . In an effort to prevent financial distress (financial difficulties) it is necessary to detect financial performance data based on certain standards as indicators such as an alarm early warning system (early warning system) of potential financial difficulties / financial distress with a certain formula (Irfani, 2020: 248). Financial ratios are an important form of information in the process of evaluating company performance, so that these financial ratios can reveal the financial condition of a company and the performance achieved by the company for a certain period. several ratios used in research are usually profitability ratios, leverage ratios, liquidity ratios and activity ratios (Runis, 2020), (Hikmah, Sri Afridola, 2019),(Resi Mulya, Yulistina, 2019). In its development, financial ratios are one way to see the condition of the financial health of a business which is very important to pay attention to (Runis, 2020).

Company size is a picture of the size of a company's industry. The size of a business in terms of the field of business being run can be determined based on total sales, total assets and average level of sales. Companies with a large size have greater access and to obtain sources of funding from outside, so that obtaining loans will be easier because it is said that companies with large sizes have a greater chance of winning the competition or surviving in the industry (Fahmi et al., 2022). Based on this description of conditions, industrial companies must adopt short-term and long-term strategies in order to anticipate changes and global developments that occur, such as in unstable economic conditions. If the company is unable to improve its strategy and performance, the company will experience difficulties in the future, experiencing obstacles in maintaining its going concern and can cause financial distress and even face bankruptcy (Elisabeth et al., 2018 and Kamalah, 2021). In this study, the fishing industry was chosen because fishing industry companies have unstable conditions where industrial companies often experience a decline in profits. Meanwhile, the problem currently being faced by the government and the Indonesian fishing industry is overfishing or excessive fishing of resource capacity at the maximum sustainable yield (MSY) level. There are three fishing industry companies listed on the Indonesian Stock Exchange, namely PT Central Proteina Prima Tbk (CPRO), PT. Dharma Samudera Fishing Industries Tbk (DSFI), and PT. Inti Agri Resources Tbk (IIKP).

Table 1. Calculation results of the Springate Financial Distress Model

ISSUER	YEAR	X1	X2	X3	X4
CPRO	2013	0.090360779	-0.008313245	-0.132980458	0.771832888
	2014	0.109383424	0.023507504	-0.032657375	0.949437047
	2015	7.31848E-05	0.008630084	-0.120036266	0.740159836
	2016	-0.1569398	0.011416617	0.006035376	0.318098888
	2017	-0.848255699	-0.127368545	-0.25624985	0.683011985
	2018	-0.187612667	0.18784987	0.310586618	1.124480406
	2019	-0.583799633	0.223607014	0.061416207	1.195909043
	2020	-0.534739064	0.212684269	0.034775782	1.197147524
	2021	-0.036662141	0.231839602	0.637546988	1.245046614
	2022	0.031977672	0.187342621	0.109922453	0.916772075
DSFI	2013	0.042298885	0.095551227	0.04712733	0.666043096
	2014	0.184820769	0.096150291	0.036544066	0.839799505
	2015	0.163654083	0.076037933	0.137482962	1.843676386
	2016	0	0.043645878	0.042799126	1.837324869
	2017	0.170627828	0.049050221	0.044832616	1.771713624
	2018	0.155762144	0.187691194	0.0515075	1.611167879
	2019	0.190615226	0.149418871	0.056730905	1.217908451
	2020	0.164418026	0.10383741	0.038798826	0.978899962

Eur. Chem. Bull. 2023, 12(Special Issue 8),2921-2937

2922

	2021	0.209786825	0.217622448	0.101251632	1.35932684
	2022	0.603487767	0.215750087	0.161551098	1.157280383
IIKP	2013	0.028974454	-0.059529275	-1.297861675	0.067888221
	2014	0.023472946	-0.051371318	-0.951693317	0.06163762
	2015	0.000304762	-0.05507003	-1.540426135	0.060099757
	2016	-0.062185259	-0.078506394	-0.380263779	0.231150977
	2017	-0.013068049	-0.037824955	-0.683962449	0.068209876
	2018	-0.061939657	-0.026612311	-0.710668148	0.059721347
	2019	0.262615437	-0.015402384	3.286780494	0.052221947
	2020	0.293464513	-0.014846753	-0.417471412	0.045641702
	2021	0.270224501	-0.012713661	-0.367938839	0.061399011
	2022	0.292497283	-0.041279312	-0.606426306	0.01049452

Source: processed data for 2023.

Based on the data in Table 1.3 , it can be seen that a company's financial health is one way to assess financial ratios that provide an indication of the financial strength of a company and combine financial ratios into the form of a predictive model (Sawir, 2005 p.22) . based on the description of the subsequent phenomena from the impact of covid -19 that occurred in fishing companies and through the data shown in table 1.3 it can be seen that in XI using the Springate method it has decreased where in X1 which is an assessment of working capital which means working capital divided by total assets gain the minus value is caused by the moral value of the company's work which has decreased or is experiencing a loss, whereas in X2 it is profit before interest and tax (gross profit). will produce minus results. X3 is the valuation of profit before tax divided by total liabilities which also experiences a minus value from the results of calculations using the springate formula, and X4 is the valuation of sales, the value generated from sales divided by total assets each year has decreased. Table 1.3 can also be seen about the description of conditions before the pandemic occurred in 2018 and 2019, while the conditions during the pandemic occurred in 2020-2021, conditions after the pandemic occurred in 2022 where almost all companies are competing to improve their financial performance after being affected by the decline the global economy due to the occurrence of covid 19 in Indonesia which occurred from March 2020 to 2021.

Several studies explain that the different results are related to the characteristics of the financial distress prediction model used as a measuring tool related to the condition of financial distress that occurs in companies. The risks faced by the company can trigger failure or the emergence of unexpected results, one of the risks that may be faced is a condition of financial distress. the financial distress model needs to be applied early to be able to anticipate conditions or problems that will lead to the risk of bankruptcy. This is in line with research conducted by several previous researchers (Eka Yuni, Maslichah, 2021), (Carrisa, Jessica, 2022), (Kamalah, 2021), (Kristina, et.al, 2021), (Wiradana, et.al, 2021), (Irfani, 2020), (Novita, Rohmayanti, 2018) (Syafrida, 2015), (Yustika, 2015).

The results of the research by Dede, Linda, Galih, 2022. show that partially the ratio of profitability (ROA) and liquidity (CR) has a significant positive effect on financial distress which is proxied by the springate S-score theory while the leverage ratio (DAR) has no effect on financial distress which is proxied by springate S-score theory. Simultaneously, profitability ratios, profitability ratios, leverage and liquidity affect the financial distress of the Profession, Real Estate and Building Construction sectors listed on the Indonesia Stock Exchange in 2014-2018.

LITERATURE REVIEW

Agency Theory

Agency theory states that if there is a separation between the owner as the principal and the manager as the agent who runs the company, agency problems will arise because each party tries to

maximize its function (Astria, 2011). This agency theory arises due to the existence of a relationship between the principal and the agent. The agent grants certain powers or predetermined contracts to carry out and complete certain tasks from the principal. The principal is also obliged to provide compensation to the agent who has carried out the agreed contract. One of the main assumptions of this agency theory is that each individual is motivated by his own interests, causing conflict between principals and agents (Merawati and Ariska, 2018). This theory states that the company is a place or intersection point for contractual relations that occur between management, owners, creditors and the government. This theory tells of monitoring various costs and imposing relationships between groups. Audit, for example, is considered as a tool to convince oneself that financial reports must depend on inspection from the aspect of internal control.

Signaling Theory

Signaling theory is an act of explaining why companies have the urge to provide financial statement information to external parties. This theory provides an explanation of the reasons companies have the urge to convey or provide information related to the company's financial statements to external parties (Muda et al., 2010). The urge to submit and provide financial report information to external parties is based on the existence of information asymmetry between company management and external parties (Bergh et.al., 2014). One way to reduce information asymmetry is to provide a signal to outsiders. When the information is announced and all market participants have received the information, market participants first interpret and analyze the information as a good signal (good news) or bad signal (bad news). If the announcement of this information is a good signal for investors, then there will be a change in the volume of stock trading. Announcement of accounting information gives a signal that the company has good prospects in the future (Muda and Landau, 2019). So that investors are interested in trading shares. Thus the market will react which is reflected through changes in the volume of stock trading. Thus the relationship between the publication of information both financial reports, financial conditions or socio-politics to fluctuations in stock trading volume can be seen in market efficiency. An efficient capital market is defined as a market whose security prices reflect all relevant information (Godfrey et al, 2010).

Financial Distress

Financial Distress Is a financial difficulty which gives an overview of the condition of the company which is in difficulty to fulfill its obligations. The ability to predict financial difficulties is not only important for the company itself but also for potential investors and capital market regulators (Alifah, 2014). The condition of financial distress can be seen from the following: the company's performance has decreased, the inability of the company to pay off its obligations, there is no distribution of dividends to shareholders, there are problems with the company's cash flow, difficulties in terms of liquidity in the company, termination of workers by companies, bad corporate governance, increases in the composite stock price index, inflation and exchange rates (Hartianah, 2017).

Financial Ratios

The ratio is a tool to provide views on the underlying conditions. The ratio is one of the starting points of analysis not the end point. ratios when properly interpreted , identify areas that require further investigation. Ratio analysis can reveal important relationships and basic comparisons in revealing conditions and trends that are difficult to detect by examining each component in the form of a ratio. This means that there are adjustments to the factors that affect the ratio for possible future trends and magnitudes. (Subramayam, 2017). According to Agnes Sawir (2005) there are four limitations of financial ratio analysis, including:

1. Difficulties in identifying the industrial category of the company being analyzed if the company is engaged in several business fields.
2. The ratio is composed of several accounting data and the data is influenced by the way of interpretation and can even be the result of manipulation.
3. Differences in accounting methods will result in different calculations , for example differences in depreciation methods or company valuation methods .
4. Industry average information is general data and is an estimate only.

Profitability Ratios

According to Soemohadiwidjo (2017), the profitability ratio is a measure of overall management effectiveness as indicated by the size of the profit level obtained in relation to sales and investment. According to Harahap (2007: 304) profitability describes the company's ability to earn profits through all capabilities and existing resources such as sales activities, cash, capital, number of employees, number of branches and so on. with the effectiveness of using company assets, it will reduce the costs incurred by the company, then the company will get savings and will have sufficient funds to run its business. With sufficient funds, it is likely that the company will experience financial distress will be smaller. the profitability ratios used in this study are Return on Assets (ROA) and Return on Equity (ROE).

According to Kasmir (2016: 197) there are several goals for companies using profitability ratios , namely:

a. To measure or calculate the profit earned by the company in a certain period.
b. To assess the company's profit position in the previous year with the current year.
c. To assess the development of profits from time to time
d. To assess the amount of net profit after tax with own capital
e. To measure the overall productivity of all company funds used both loan capital and own capital
f. To measure the productivity of all company funds, both own capital is used
g. and other purposes.

Leverage Ratio

Weston in Kasmir (2016: 150), says that "The leverage ratio is another name for the solvency ratio. This ratio shows the extent to which the company's assets are financed with debt. A company is said to be "solvable" if the company has sufficient assets to pay all its debts. Conversely, if the total assets are insufficient or less than the amount of debt, it means that the company is "insolvable".

According to Kasmir (2016: 153) there are 7 company goals using leverage ratios, namely:

1. To find out the position of the company towards obligations to other parties (creditors).
2. To assess the company's ability to meet fixed obligations (such as loan installments including interest).
3. To assess the balance between the value of assets, especially fixed assets with capital.
4. To assess how much of the company's assets are financed by debt.
5. To assess how much influence the company's debt has on asset management .
6. To assess or measure how much of each rupiah own capital is used as collateral for long-term debt.
7. To assess how much loan funds will be billed immediately, there are so many times the own capital is owned.

Liquidity Ratios

According to Fred Weston in Kasmir (2016: 129) states that the liquidity ratio is a ratio that describes the company's ability to fulfill short-term (debt) obligations. This means that if the company is billed, the company will be able to fulfill the debt, especially debt that is due. The

liquidity ratio serves to measure a company's ability to meet its maturing obligations, both obligations to external parties and internal parties of the company. According to Syafrida Hani (2015: 121) The liquidity ratio is a ratio that escribes a company's ability to meet its short-term obligations that are due soon. Liquidity ratios are needed for credit analysis or financial risk analysis. Specifically, liquidity reflects the availability of funds owned by the company to meet all maturing debts.

Springate Model Analysis

The money data analysis model used is the Springate model in predicting potential bankruptcy. This model was developed in 1978 by Gordon LV Springate. springate found that there were 4 out of 19 financial ratios that contributed most to the prediction of corporate bankruptcy. the four financial ratios are combined in a formula called springate. Furthermore, Springate also determines a limit (standard) in the form of a value of 0.862 to predict a healthy company (not bankrupt). The springate model is formulated in a formula as follows:

S= 1.03X1 + 3.07X2 + 0.66X3 + 0.4X4
Information:
X1 = Working Capital / Total Assets
X2= Profit Before Interest and Tax/Total Assets
X3 = Profit before Tax / Total Current Liabilities
X4= Sales / Total Assets

a) Working capital is the reduction between current assets and current liabilities.
Working capital = current assets - current liabilities
b) Earnings before interest and taxes
Earnings before interest and taxes = gross profit – operating expenses
c) Profit before tax
Profit before tax = net sales - gross profit
d) Sale
Net sales= Sales- discount

The standard set by Springate is that if the S-score is > 0.862 then the company is predicted to be a potentially healthy company (not potentially bankrupt). Meanwhile, if the S-score is <0.862, the company is predicted to be a company that has the potential to experience bankruptcy.

Company Size

Company size is a scale where the size of the company can be classified according to various ways, including total asset value, total sales, market capitalization, number of employees and so on. The size of the company can show how much information is contained in it, as well as reflect management's awareness of the importance of information, both for external parties of the company and for internal parties of the company (Sanjaya and Ni Gusti, 2016). Law No. 20 of 2008 classifies company size into 4 categories, namely micro, small, medium and large businesses. The classification of the size of the company is based on the total assets owned and the total annual sales of the company.

Based on Law Number. 20 of 2008 defines micro, small, medium and large businesses as follows:

1) Micro-enterprises are productive businesses owned by individuals and/or individual business entities that meet the criteria for micro-enterprises as stipulated in this law.
2) Small business is a productive economic business that stands alone, which is carried out by individuals or business entities that are not subsidiaries or not branches of companies that are owned, controlled, or become part either directly or indirectly of medium or large businesses that meet the business criteria. small as referred to in this law.
3) Medium business is a productive economic business that stands alone, which is carried out by individuals or business entities that are not subsidiaries or branches of

companies that are owned, controlled, or become a part, either directly or indirectly, with small businesses or large businesses with total net worth or annual sales results as regulated in this law.

4) Large businesses are productive economic businesses carried out by business entities with a net worth or annual sales results greater than medium-sized businesses, which include state-owned or private national businesses, joint ventures, and foreign businesses that carry out economic activities in Indonesia .

size is proxied using the natural logarithm of total assets with the aim of reducing excessive data fluctuations. By using natural logarithms, the number of assets with a value of hundreds of billions and even trillions can be simplified without changing the proportion of the actual number of assets
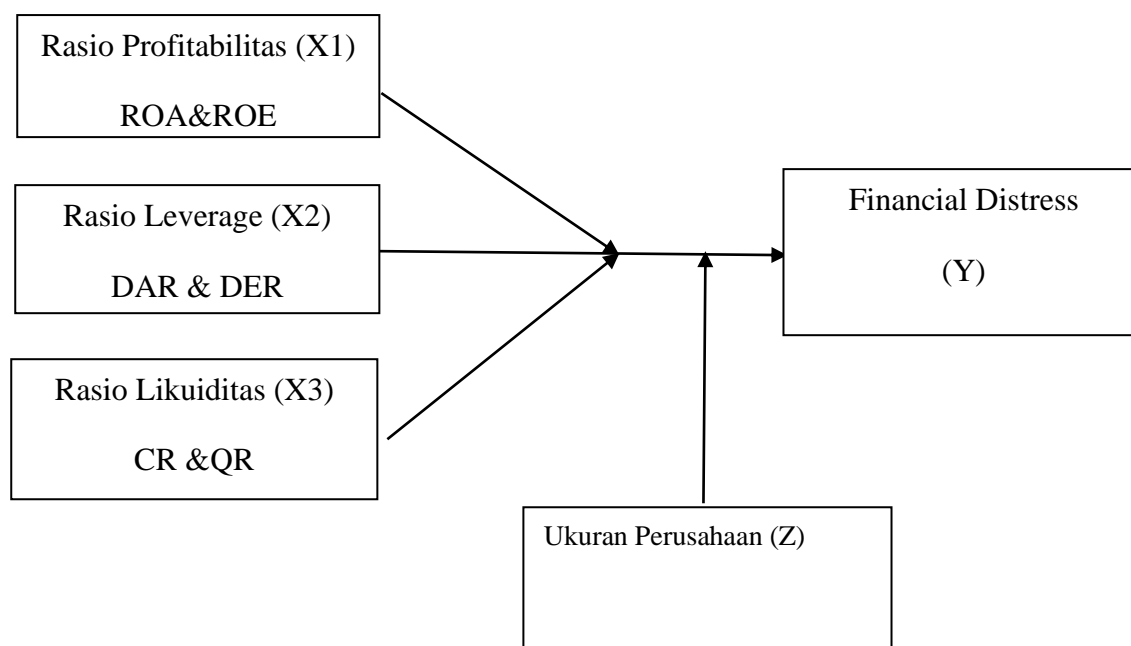
CONCEPTUAL FREMEWORK

Figure 1. Conceptual Framework

The independent variables in this study are financial ratios, namely profitability ratios (X1), leverage ratios (X2) and liquidity ratios (X3). While the dependent variable is Financial Distress (Y). The Moderating Variable is Company Size (Z).

H_{01} : Profitability Return on Assets (ROA) has a significant positive effect on Financial Distress.

H_{02} : Profitability Return On Equity (ROE) has a significant positive effect on Financial Distress.

H_{03} : Leverage Debt To Asset (DAR) has a Significant Positive Effect on Financial Distress.

H_{04} : Leverage Debt To Equity (DER) has a Significant Positive Effect on Financial Distress.

H_{05} : Liquidity Current Ratio (CR) Has a Significant Positive Effect on Financial Distress.

H_{06} : Liquidity Quick Ratio (QR) has a Significant Positive Effect on Financial Distress.

H_{07} : Company size has a significant positive effect on Financial Distress.

H_{08} : Company Size Moderates Profitability, Leverage, and Liquidity Against Financial Distress.

MATERIALS&METHODS

The money data analysis model used is the Springate model in predicting potential bankruptcy. This model was developed in 1978 by Gordon LV Springate. springate found that there were 4 out of 19 financial ratios that contributed most to the prediction of corporate bankruptcy. the four financial ratios are combined in a formula called springate. Furthermore, Springate also determines a limit (standard) in the form of a value of 0.862 to predict a healthy company (not bankrupt). The springate model is formulated in a formula as follows:

S= 1.03X1 + 3.07X2 + 0.66X3 + 0.4X4

Information:

X1 = Working Capital / Total Assets

X2= Profit Before Interest and Tax/Total Assets

X3 = Profit before Tax / Total Current Liabilities

X4= Sales / Total Assets

Calculating financial ratios in the form of:

a. Ratio of working capital to total assets (X1)
b. Ratio of earnings before interest and tax to total assets (X2)
c. Profit before tax ratio to total current liabilities (X3)
d. Ratio of sales to total assets (X4)

Perform calculations that combine the calculation results of the four ratios above into the Springate formula, namely with the formula:

S= 1.03X1 + 3.07X2 + 0.66X3 + 0.4X4

The interpretation is based on the results of Springate's calculations with the standards set by Springate. If the S-score is > 0.862, the company is predicted to be a potentially healthy company (not potentially bankrupt). Meanwhile, if the S-score is <0.862, the company is predicted to be a company that has the potential to experience bankruptcy .

Profitability Ratios Affect Financial Distress.

Financial performance is a reflection of the company's ability to optimize its resources (assets). From the management of these resources it can be seen how far the company's ability to maintain its financial position. This result is in line with previous research conducted by Dewi and Dana, (2017). A high ROA shows that the company is able to use its assets to generate profits from sales and investments made by the company. Return On Assets (ROA) can be used as an indicator to find out how capable a company is of obtaining optimal profit seen from its asset position (Andy Runis, 2020), (Hery, 2015) with a high level of profitability the company gives a signal to shareholders, that the company has been able to generate high profits and has succeeded in achieving its financial performance targets .

$$ROA = \frac{Laba\ Bersih}{Total\ Asset}$$

Return on Equity (ROE) shows the company's ability to generate profit after tax by using the company's own capital. This ratio is important for the shareholder, to determine the effectiveness and efficiency of own capital management carried out by the company's management. the higher this ratio means the more efficient use of own capital by company management (Sudana, 2015). Return On Equity is a ratio that shows the results (return) on the use of company equity in creating net income. In other words, this ratio is used to

measure how much net profit will be generated from each rupiah of funds embedded in total equity (Hery, 2016: 26).

$$ROE = \frac{Laba\ Setelah\ Pajak}{Ekuitas}$$

Leverage Ratio Affects Financial Distress

According to Hery (2016: 166) Debt to Assets Ratio (DAR) is used to measure how much the company's assets are financed by debt or how much the company's debt affects the financing of assets. Meanwhile, according to Kasmir (201 6:15 7) Debt to Assets Ratio (DAR) is a ratio that looks at the ratio of company debt by measuring the ratio between total debt and total assets . How much the company's assets are financed by debt or how much the company's debt affects asset management. Debt is divided into two, namely (1) short-term debt where all financing will be repaid within the current 12 months, and (2) long-term debt where the repayment time given is more than one year .

$$Dar = \frac{Total\ Debt}{Total\ Asset}$$

According to Kasmir (2016: 158) also explains that for creditors a high DER value will be increasingly unprofitable because there will be a greater risk of failure that may occur in the future. However, for companies with a high DER value, the better, because if the DER value is low, the company owner will have to provide more funds . Analysis of this ratio is needed to measure a company's ability to pay debts (short term and long term) if at one point the company is liquidated or dissolved. In Alexandros' research (2016) the financial distress variable is proxied by the DER ratio (Debt to Equity Ratio). The safe DER ratio level is 100%. A DER ratio above 100% is an indicator of deteriorating financial performance so that the company will experience financial difficulties or financial distress.

$$DER = \frac{Total\ Debt}{Total\ Equity}$$

Liquidity Ratio Influences Financial Distress

Kasmir (2016) stated that the liquidity ratio is the ratio used to measure how liquid a company is. The liquidity ratio that is usually used in several studies is the current ratio. The current ratio is a ratio that shows a company's ability to meet its short-term obligations by using its current assets. if the company has a low current ratio, it will increase the probability of the company experiencing financial distress. With a high current ratio, it can increase the company's liquidity level, which in turn affects the financial performance of the company's value . If the company is able to fund and pay off its short-term obligations properly, the potential for the company to experience financial distress will be smaller.

$$CR = \frac{Current\ Aset}{Current\ Liabilities}$$

Quick ratio or quick ratio is a type of financial ratio that is useful for assessing the liquidity position of a company, business, project, profit center or investment center. According to Kasmir (2016), a quick ratio with benefits shows the ability of a business or company to pay short-term obligations using current assets without taking into account the value of stock or inventories.

According to Mamduh & Abdul Halim (2017), the quick ratio is better used to measure a business's ability to fulfill all short-term obligations. the reason is because in calculating the quick ratio, all inventory elements are omitted or not used in calculating the company's ability to pay off its short-term debt.

$$QR = \frac{(\text{ aktiva lancar} - \text{persediaan})}{\text{Utang lancar}}$$

RESULT

1. Descriptive Statistic Analysis

This study conducted data analysis using a descriptive method which aims to provide a description of the data processed in the research. This study uses data from the financial statements of fishing industry companies from 2018-2022 , so that a total of 15 observations are made. Through descriptive statistics, information is obtained about the minimum value, maximum value, mean (mean) and standard deviation of each research variable. Descriptive statistical data from research variables can be seen in Table 1 below:

Table 1. Descriptive Statistics

Variable	Obs	Mean	Std. dev.	Min	Max
FINDES	30	.4738733	.9259933	-1.1613	2.4133
ROA	30	.10016	.1063242	-.154	.2461
ROE	30	-.3518133	2.45684	-13.0098	2.622
DAR	30	.75979	.5946569	.0387	1.8991
DER	30	3.212067	7.852118	-4.9353	39.4857
CR	30	1.269317	1.131215	.0273	5.4112
QR	30	4.736133	15.06191	.1583	75.3293
UP	30	18.33719	1.862861	15.6073	19.8193

Source: Processed Data (2023)

1. Descriptive statistics in Table 5.1 show that *financial distress* has a minimum value of -1.1613 and a maximum value of 2.4133 with an average value of 0.4738733 and a standard deviation of 0.9259933with observations totaling 30 data. The results of the descriptive statistical analysis for the ROA variable show a minimum value of -0. 154 and the maximum value is 0.2461 with an average value of 0.10016 and a standard deviation of 0.1063242 with a total of 30 observations . ROE has a minimum value of -13.0098 and a maximum value of 2.622 with an average value of -0.35 18133 and a standard deviation of 2.45684 with a total of 30 observations. DAR has a minimum value of 0.0387 and a maximum value of 1.8991 with an average of 0.75979and a standard deviation of 0.5946569 with a total of 30 data observations. DER has a minimum value of – 4.9353 and a maximum value of 38.4857 with an average of 3.212067 . and a standard deviation of 7.852118 with a total of 30 observations, CR data has a minimum value of 0.0273and the maximum value is 5.4112 . The average is 1.269317 and the standard deviation is 1.131215 with a total of 30 observations . QR has a minimum value of 0.1583and the maximum value is 7 5.3293 with an average value of 4.736133 and a standard deviation of 15.06191 with a total of 30 observations . UP has a minimum value of 15.6073 and a maximum of 19.8193 with an average of 18.33719 and a standard deviation of 1.862861 with a total of 30 observations.

2. S-Score Model

Eur. Chem. Bull. 2023, 12(Special Issue 8),2921-2937

2930

EMITEN	TAHUN	X1	X2	X3	X4	HASIL	KETERANGAN
CPRO	2013	0,090360779	-0,008313245	-0,132980458	0,771832888	0,288515994	TIDAK SEHAT
	2014	0,109383424	0,023507504	-0,032657375	0,949437047	0,543053914	TIDAK SEHAT
	2015	7,31848E-05	0,008630084	-0,120036266	0,740159836	0,243409737	TIDAK SEHAT
	2016	-0,1569398	0,011416617	0,006035376	0,318098888	0,004623923	TIDAK SEHAT
	2017	-0,848255699	-0,127368545	-0,25624985	0,683011985	-1,16064491	TIDAK SEHAT
	2018	-0,187612667	0,18784987	0,310586618	1,124480406	1,038237384	SEHAT
	2019	-0,583799633	0,223607014	0,061416207	1,195909043	0,604058226	TIDAK SEHAT
	2020	-0,534739064	0,212684269	0,034775782	1,197147524	0,603970494	TIDAK SEHAT
	2021	-0,036662141	0,231839602	0,637546988	1,245046614	1,592785231	SEHAT
	2022	0,031977672	0,187342621	0,109922453	0,916772075	1,047336496	SEHAT
DSFI	2013	0,042298885	0,095551227	0,04712733	0,666043096	0,634431394	TIDAK SEHAT
	2014	0,184820769	0,096150291	0,036544066	0,839799505	0,845585672	TIDAK SEHAT
	2015	0,163654083	0,076037933	0,137482962	1,843676386	1,230209468	SEHAT
	2016	0	0,043645878	0,042799126	1,837324869	1,064477283	SEHAT
	2017	0,170627828	0,049050221	0,044832616	1,771713624	1,064605817	SEHAT
	2018	0,155762144	0,187691194	0,0515075	1,611167879	1,415109076	SEHAT
	2019	0,190615226	0,149418871	0,056730905	1,217908451	1,179655395	SEHAT
	2020	0,164418026	0,10383741	0,038798826	0,978899962	0,905298626	SEHAT
	2021	0,209786825	0,217622448	0,101251632	1,35932684	1,494738157	SEHAT
	2022	0,603487767	0,215750087	0,161551098	1,157280383	1,853481044	SEHAT
IIKP	2013	0,028974454	-0,059529275	-1,297861675	0,067888221	-0,982344603	TIDAK SEHAT
	2014	0,023472946	-0,051371318	-0,951693317	0,06163762	-0,736995353	TIDAK SEHAT
	2015	0,000304762	-0,05507003	-1,540426135	0,060099757	-1,161392433	TIDAK SEHAT
	2016	-0,062185259	-0,078506394	-0,380263779	0,231150977	-0,463579149	TIDAK SEHAT
	2017	-0,013068049	-0,037824955	-0,683962449	0,068209876	-0,553713967	TIDAKSEHAT
	2018	-0,061939657	-0,026612311	-0,710668148	0,059721347	-0,59065008	TIDAK SEHAT
	2019	0,262615437	-0,015402384	3,286780494	0,052221947	2,413372487	SEHAT
	2020	0,293464513	-0,014846753	-0,417471412	0,045641702	-0,000585533	TIDAK SEHAT
	2021	0,270224501	-0,012713661	-0,367938839	0,061399011	0,021020268	TIDAK SEHAT
	2022	0,292497283	-0,041279312	-0,606426306	0,01049452	-0,22149884	TIDAK SEHAT

Based on the results of calculating financial distress predictions using the Springate formula, it can be seen that PT. Central Proteina Prima Tbk (CPRO) in 2013-2017 was in a gray area condition or a company with a decline in financial health. In 2018 the company's financial health condition began to improve but due to the global economic downturn caused by Covid-19 the company was in declining financial health conditions so that in 2019-2020 the company experienced another gray area or was in an unhealthy condition.

Based on the results of calculating financial distress predictions using the Springate formula, it can be seen that PT. Dharma Samudera Fishing Industries Tbk (DSFI) in 2013 and 2014 the company was in a gray area or in a condition of unfavorable financial health. but the DSFI company was able to rise from this condition so that of the three fishing industry companies listed on the Indonesian stock exchange, the DSFI company was in good financial health. the company's management always prepares a business strategy to maximize performance from year to year. One of the company's strategies is to expand its sales network and add new innovations from both existing and new markets.

Based on the results of calculating financial distress predictions using the Springate model formula, it can be seen that PT. Inti Agri Resources Tbk (IIKP) can be seen if in 2013-2018 the company experienced a deteriorating financial health condition due to a decrease in working capital where the company's total debt was greater than the total assets received so that the company was unable to generate profits for the company. In 2019, IIKP's company conditions had begun to pass through the gray area or unhealthy conditions in the company, but due to the Covid-19 pandemic which had an impact on the global economy, management failed again to maintain financial performance conditions which had started to improve in 2019. but in 2020-

2022 the company will again be in a gray area condition so that the company will again be in a state of financial distress.

DISCLUSION

Effect of Return on Assets (ROA) Profitability on Financial Distress.

The results of the study show that profitability proxied by ROA (*return on assets*) has a positive and significant effect on financial distress in fishing industry companies listed on the Indonesian stock exchange in the 2013-2022 period. this is in line with research (Siti, et al, 2020), (Linda, 2020). With a high return on assets, it can improve financial performance which has an impact on company value. Financial performance is a reflection of the company's ability to optimize its resources (assets). From the management of these resources, it can be seen to what extent the company's ability to generate profits or profits that have an impact on financial performance. In line with previous research conducted by Dewi & Dana, (2017) high ROA indicates that a company is able to use its assets to generate profits from sales and investments made by the company.

Effect of Profitability Return On Equity (ROE) on Financial Distress.

The results of the study show that profitability proxied by RO E (*return on equity*) has no positive and significant effect on *financial distress* in fishing industry companies listed on the Indonesian stock exchange in the 2013-2022 period .Liquidity proxied into *the current ratio* shows the company's ability to pay short-term financial obligations on time.Companies that have a high level of current ratio indicate that the company has a number of current assets that are ready to pay off its short-term debts so as to avoid financial distress. However, the results of this study showed different results. The current ratio is not proven to affect the financial distress of a company. This could have been caused by economic failure and *technical insolvency* .The existence of a company is also greatly influenced by several things that can result in *economic failure* , for example regional and regional economic growthinternational law, as well as various government policies regarding taxation of interest rates on loans, etc., all of which are conditions that can disrupt liquiditycompany, but that is only temporary.

Effect of Leverage Debt To Asset (DAR) on Financial Distress.

The results of the study show that leverage proxied by DAR (*debt to assets*) has no positive and significant effect on *financial distress* in fishing industry companies listed on the Indonesian stock exchange in the 2013-2022 period . This debt to asset ratio (DAR) measures how large assets the company is financed by debt. If this ratio is high, the greater the company's debt and the higher it isthe risk of the company not being able to fulfill its obligations and vice versa the smaller this ratiothe smaller the company is financed by debt.

Effect of Leverage Debt To Equity (DER) on Financial Distress.

The results of the study show that leverage proxied by DER (*debt to equity*) has no positive and significant effect on *financial distress* in fishing industry companies listed on the Indonesian stock exchange in the 2013-2022 period . The debt to equity ratio is the ratio between the total debt divided by the company's capital. The debt to equity ratio shows how much the company's capital is financedby debt. Companies in obtaining sources of funds will choose sources of funds that arethe risk is small and will improve the management of the company so as to earnhigh profits. No effect debt to equity ratio on financial distressin the company can be due to the tendency of the company when the debt is termthe company's long and short term have matured but at the same timethe company has not been able to pay, the company chooses to borrow funds from other partiesbanks or outside parties who are willing to lend funds to the company to pay offdebts and to continue to maintain and re-run the company's business in orderavoid financial distress/bankruptcy.

The Effect of Liquidity Current Ratio (CR) on Financial Distress

The results of the study show that liquidity proxied by CR (*current ratio*) has a positive and significant effect on *financial distress* in fishing industry companies listed on the Indonesian stock exchange in the 2013-2022 period .Current Ratio showscompany's ability to paycurrent liabilities using current assetsit has. Current Ratio is sometimes enough to satisfy somethingcompany, but the amount of working capital and the size of the ratio depend on several factorsfactor, where a standard or ratio isgeneral cannot be used for allcompany. If the company has a percentage CR is high then the company willaway from financial distress andvice versa if the company haslow CR percentage then the companyit can be said in conditionfinancial distress.The results of this study are in line with research conducted by Haq (2013) which said that the current ratio affects the possibility of financial distress in companies listed on the IDX.

The Effect of Liquidity Quick Ratio (QR) on Financial Distress

The results of the study show that liquidity proxied by QR (*quick ratio*) has no positive and significant effect on *financial distress* in fishing industry companies listed on the Indonesian stock exchange in the 2013-2022 period .The quick ratio is a measure of a company's ability to meet its short term needsby not counting inventory, because inventory is usually considered an illiquid asset. Quick ratio is also called acid test ratio, is an intermediate considerationthe amount of current assets minus inventories, with the amount of current liabilities. Inventory notincluded in the calculation of the quick ratio because inventory is the component of current assets that has the smallest level of liquidity.

The Effect of Company Size on Financial Distress.

The results of the study show that company size has no positive and significant effect on *financial distress* in fishing industry companies listed on the Indonesian stock exchange in the 2013-2022 period .Company size is a scale that can beclassify large and small companies according to various ways, namely total selling assets, market value of shares, and average sales level of the Companywith large sizes have greater and wider access to external sources of funding, so as toobtaining a loan will beeasier because it is said thatlarge size company. have a greater chance ofwin the competition or survivein the industry (Barnea & Rubin, 2010). The results of this study are not in line with research thatconducted (Putri, 2020), (Yola, 2019) (Rahayu & Sopian, 2017), (Kristanti et al., 2016), (Luqman et al., 2018), (Waqas &Md-Rus, 2018) which showsthat firm size matters significant negative effect on the condition financial distress.

Company Size Moderates Profitability, Leverage, and Liquidity Against Financial Distress.

The results of the study show that company size has no positive and significant effect in moderating profitability, leverage and liquidity on financial distress in fishing industry companies listed on the Indonesian stock exchange in the 2013-2022 period .Company size is an indicator that shows a condition or characteristic of a company or organization where there are parameters that can be used to determine the size of a company. Company size can be classified in various ways: it can be seen from the total assets, number of employees, log size and others. Companies that are able to generate and increase profits have the opportunity to expand so as to achieve company goals. The height of a company can affect the company to avoid financial distress. It is known that the value of profitability with the size of the company can strengthen the company's financial performance to avoid financial distress. Leverage value with the company size variable is known to be unable to moderate the occurrence of financial distress. the value of liquidity with the variable company size as a moderator can strengthen financial performance in paying short-term debt so that it can avoid or get out of financial distress.

CONCLUSION

From the results of research and discussion it can be concluded:

1. *Profitability Return on Assets* (ROA) has a significant effect on *Financial Distress* in fishing industry companies listed on the Indonesia Stock Exchange in the 2013-2022 period.
2. *Profitability Return On Equity* (ROE) has no significant effect on *Financial Distress* in fishing industry companies listed on the Indonesia Stock Exchange in the 2013-2022 period.
3. *Leverage Debt To Asset* (DAR) has no significant effect on *Financial Distress* in fishing industry companies listed on the Indonesia Stock Exchange in the 2013-2022 period.
4. *Leverage Debt To Equity* (DER) has no significant effect on *Financial Distress* in fishing industry companies listed on the Indonesia Stock Exchange in the 2013-2022 period.
5. Liquidity *Current Ratio* (CR) has a significant effect on *Financial Distress* in fishing industry companies listed on the Indonesia Stock Exchange in the 2013-2022 period.
6. Liquidity *Quick Ratio* (QR) has no significant effect on *Financial Distress* in fishing industry companies listed on the Indonesia Stock Exchange in the 2013-2022 period.
7. Company size has no significant effect on *Financial Distress* in fishing industry companies listed on the Indonesia Stock Exchange in the 2013-2022 period.
8. Company size can moderate the ratio of Profitability, Leverage and Liquidity to *Financial Distress* in fishing industry companies listed on the Indonesia Stock Exchange in the 2013-2022 period.

Research Limitations

This research still has research limitations that can be used as material for consideration for future researchers, that the limitations in this study include:

1. This study only uses 3 fishing industry companies listed on the Indonesia Stock Exchange for the 2013-2022 period as research samples. This is because only 3 companies consistently submit company financial information using the rupiah currency, so it needs to be added to other sub-sector companies that have not been registered. Indonesia stock exchange.
2. The factors that affect *financial distress* in this study only focus on 4 variables, namely Profitability, Leverage, Liquidity, and Company Size, while there are still many factors that affect financial distress.
3. In this study, financial distress is only determined based on 4 of 19 financial ratios. The next hope is that it can be further developed by assessing other financial ratios. Other financial ratios such as tobins' Q, EPS, and others.

REFERENCES

Agatha, SD, & Wijaya, H. (2022). Factors Affecting Financial Distress With Firm Size As Moderating Variables. *Journal of Paradigm Accounting* , *4* (1), 218-228.

Anggraeni, MDP (2020). *The effect of profitability, liquidity, and leverage on firm value with dividend policy as a moderating variable: Studies of manufacturing companies listed on the Indonesia Stock Exchange in 2016-2018* (Doctoral dissertation, Maulana Malik Ibrahim State Islamic University).

Apriyani, R. (2021). *The Effect of Profitability and Liquidity on Firm Value with Firm Size as a Moderating Variable (Empirical Study of Manufacturing Companies Listed on the Indonesia Stock Exchange for the 2017–2020 Period)* (Doctoral dissertation, Thesis, Muhammadiyah University of Magelang).

Bernardin, DEY, & Indriani, G. (2020). Financial distress: leverage, liquidity, activity and company size moderated by profitability. *Journal of Financia: Accounting and Finance* , *1* (1), 38-49.

Bukhari, C. (2022). The Effect of Liquidity, Leverage and Firm Age on Financial Distress with Firm Size as a Moderating Variable (Empirical Study of Telecommunication Companies Listed on the Indonesia Stock Exchange for the 2016–2021 Period). *Journal of Economics, Sharia Business Management and Technology* , *1* (1), 48-62.

Bukit, RCFB, Muda, I., & Abubakar, E. The Effect of Profitability and Liquidity on Firm Value with Leverage as Moderating Variable in Companies That are Joined in LQ45 and Listed on the Indonesia Stock Exchange for the Period 2007-2019

Cashmere. (2016). Financial Statement Analysis. Jakarta: Raja Grafindo Persada.

Chomario, D. (2022). *The Influence of Public Ownership, Foreign Ownership, Managerial Agency Costs, Working Capital, and Firm Size on Financial Distress Conditions in Cyclical Companies* (Doctoral dissertation, Hayam Wuruk University Perbanas Surabaya).

Elisabeth, D.; Simanjuntak, Aand Ginting, S. (2018). Corporate Social Responsibility, Auditor Opinion, Financial Distress Impact to Auditor Switching for Banking Companies in Indonesia Stock Exchange for Period of 2014 to 2017.In Proceedings of the 1st Unimed International Conference on Economics Education and Social Science - Volume 1: UNICEES, ISBN 978-989-758-432-9, pages 991-994. DOI: 10.5220/0009499909910994. https://www.scitepress.org/PublicationsDetail.aspx?ID=/ZQ4uUFFTPQ=&t=1

Eryanti, Rina. (2019). The Effect of Liquidity, Profitability and Leverage on Financial Distress Prediction Journal of Accounting & Tax Research (JRAP) 6.01.

Fahmi, M., Zulkarnain, I. M., & Kesuma, S. A. (2022). Implementation of Internal Control Procedures That Enable Cost Savings In Dealing With Threats Cycles: Reveneu Cycle: Tradional Vs Digital Accounting Information System Era In Pharmaceutical Sector. *Journal Of Pharmaceutical Negative Results*, 3566-3571. https://doi.org/10.47750/pnr.2022.13.S07.457 https://www.pnrjournal.com/index.php/home/article/view/5156

Handayani, HT, & Andyarini, KT (2020). The Effect of Liquidity and Leverage on Financial Distress with Profitability as a Moderating Variable (Empirical Study of Various Industrial Sector Companies Listed on the Indonesian Stock Exchange in 2015-2018).

Kristanti, FT, Rahayu, S., & Huda, AN (2016). The Determinant of Financial Distress on Indonesian Family Firm. Procedia - Social and Behavioral Sciences, 219, 440–447. https://doi.org/10.1016/j.sbspro.2016.05.018

Kuntari, SE, & Machmuddah, Z. (2021). The Effect of Liquidity Ratios and Leverage on Financial Distress with Profitability Ratios as a Moderator. *Dynamics of Financial Accounting and Banking* , *10* (2), 145-155

Luqman, R., Ul hassan, M., Tabasum, S., Khakwani, MS, & Irshad, S. (2018a). Probability of financial distress and proposed adoption of corporate governance structures: Evidence from Pakistan. Cogent Business and Management, 5(1), 1–14. https://doi.org/10.1080/23311975.2018.1492869

Lutfidya, L. (2022). *The Influence of Liquidity, Solvency, and Profitability on Financial Distress Is Moderated by Company Size* (Doctoral dissertation, Muhammadiyah University of Surakarta).

Makkulau, AR (2020). The effect of financial ratios on financial distress in companies in the basic and chemical industry sectors listed on the Indonesia Stock Exchange. *Tangible Journal* , *5* (1), 11-28.

Muda, I., & Landau, S. N. (2019). The implementation theory of conservative accrual accounting to the quality of accounting information systems. *Journal of Southwest Jiaotong University*, *54*(1). http://www.jsju.org/index.php/journal/article/view/266

Muda, I., Asrina Waty, H., Roesli, E., & Nuradi, T. E. (2020). The Impact of Accounting Information System on User Satisfaction: Empirical Studies on Local Government Bank. *Journal of Information Technology Management*, *12*(1), 94-111. dor 20.1001.1.20085893.2020.12.1.6.2

Mujiani, S., & Friday, W. (2020). Company size as a moderating factor affecting Financial Distress. *Accruals* , *2* (2), 149-165.

Muktisari, D. (2018). *The effect of operating capacity, leverage, and liquidity on financial distress with company size as a moderating variable in mining sector companies listed on the IDX 2014-2016* (Doctoral dissertation, STIE Perbanas Surabaya

Mulyadi, D. (2022). The Effect of Current Ratio, Cash Ratio, Debt To Equity Ratio and Sales Growth on Financial Distress in Manufacturing Companies Listed on the IDX for the 2015-2020 period. *Student Journal of Management and Accounting* , *2* (2), 325-345.

Ningsih, RA, & Asandimitra, N. (2023). The Effect of Financial Ratios on Financial Distress in Infrastructure, Utilities and Transportation Companies with Profitability and Company Size as Moderating Variables. *Journal of Management Science* , 306-322.

Nirvana, EN (2022). *The Effect of Profitability and Leverage on Financial Distress with Liquidity as a Moderating Variable in Hotel, Restaurant and Tourism Sub-Sector Companies Listed on the Industrial Stock Exchange in 2018-2021* (Doctoral dissertation, 021008 Tridinanti University Palembang).

Nurhayati, H. N., (2022). The General Ledger and Reporting Systems Cycle: Traditional Vs Digital Accounting Information Systems Era In Pharmacy Issuers And Implementation Of Internal Control Procedures That Enable Cost Savings In Dealing With Threats In The Cycle. *Journal of Pharmaceutical Negative Results*, 3558-3565. https://www.pnrjournal.com/index.php/home/article/view/5155

Oktariyani, Amanda. 2019. Analysis of the Effect of Current Ratio, DER, TATO and EBITDA on Financial Distress Conditions in Manufacturing Companies Listed on the Indonesian Stock Exchange. Journal of Accounting and Management Vol. 14, No. 1. ISSN 2657-1080 ISSN 1858-3687

Purwaningsih, E., & Safitri, I. (2022). Effect of profitability, liquidity, leverage, cash flow ratios and company size on financial distress. *JAE (JOURNAL OF ACCOUNTING AND ECONOMICS)* , *7* (2), 147-156.

Putri, SA, Bukit, RB, & Muda, I. Effect of Profitability, Liquidity and Leverage on Intrinsic Value of Shares with Probability of Financial Distress as Intervening in Property and Real Estate Sector Companies in 2010-2018.

Rahayu, WP, & Sopian, D. (2017). The Effect of Financial Ratios and Company Size on Financial Distress (Empirical Studies of Food and Beverage Companies on the Indonesian Stock Exchange). Competitive Journal of Accounting and Finance, 1 (2). Retrieved from http://jurnal.umt.ac.id/index.php/competitive/article/view/240

Rahmadianti, AD, & Fun, NF (2021). Firm Size as a Moderator for the Effectiveness of Financial Ratios in Predicting Financial Distress. *Journal of Accounting Science and Research (JIRA)* , *10* (8).

Ramdhania, DZ, & Kinasih, HW (2021). The Influence of Liquidity, Leverage, and Capital Intensity on Tax Aggressiveness With Company Size As Moderating Variable. *Dynamics of Financial Accounting and Banking* , *10* (2), 93-106.

Rozi, F., & Al Murni, S. (2020). The Effects of Profitability, Liquidity, and Leverage on Cash Dividend Policy with Company Size as a Moderating Variable (Empirical Study of Consumer Goods Companies Listed on the Indonesia Stock Exchange in 2016-2018) .

Runis, A., Arifin, DS, Masud, A., & Kalsum, U. (2021). The Influence of Liquidity, Leverage, Company Size and Profitability on Financial Distress. *International Journal of Business and Social Science Research* , *2* (6), 11-17.

Safitri, MA, & Yuliana, I. (2021). Effect of return on assets, current ratio and firm size on bankruptcy prediction with capital structure as a moderating variable. *Journal of Accounting and Business: Journal of Accounting Study Program* , *7* (1), 90-99

Sari, AP, & Sembiring, FM (2022). Effect of liquidity, *3* (, leverage and activity on financial distress which is moderated by profitability: Studies of mining companies listed on the IDX for the period 2015-2019. *Management and Organizational Studies* 1), 199-211.

Sariroh, H. (2021). The Influence of Liquidity, Leverage, Profitability, and Company Size on Financial Distress in the Trade, Service, and Investment Sector. *Journal of Management Science* , *9* (3), 1-14.

Stephanie, S., Lindawati, L., Suyanni, S., Christine, C., Oknesta, E., & Afiezan, A. (2020). Effect of liquidity, leverage and company size on financial distress in property and housing companies. *COSTING: Journal of Economic, Business and Accounting* , *3* (2), 300-310.

Suryani, S. (2021). Effect of Profitability, Leverage, Sales Growth and Company Size on Financial Distress. *Online Journal of Accountants* , *5* (2), 229-244.

Susilawati, D., Sofianty, D., & Sukarmanto, E. (2017). The Effect of Profitability, Company Size and Leverage on Financial Distress in Companies Listed on the Indonesia Stock Exchange (IDX). Accounting Proceedings, 3(2), 208–214

Syarli, ZA (2020). The Influence of Financial Distress, Leverage, and Profitability on Audit Delay with Firm Size as a Moderating Variable. In *PROCEDURE OF BASIC EDUCATION SEMINARS AND DISCUSSIONS*

Syuhada, P., Muda, I., & Rujiman, FNU (2020). The Effect of Financial Performance and Company Size on Financial Distress in Property and Real Estate Companies on the Indonesia Stock Exchange. *Journal of Accounting and Finance Research* , *8* (2), 319-336.

Theresia Natalia Sabu Suma Tukan. 2018. Analysis of Financial Distress Explanatory Factors in Manufacturing Companies on the Indonesian Stock Exchange.

Waqas, H., & Md-Rus, R. (2018a). Predicting financial distress: Applicability of the Oscore model for Pakistani firms. Business and Economic Horizons, 14(2), 389–401. https://doi.org/10.15208/beh.2018.28

Waqas, H., & Md-Rus, R. (2018b). Predicting financial distress: Importance of accounting and firm-specific market variables for Pakistan's listed firms. Cogent Economics and Finance, 6(1), 1–16. https://doi.org/10.1080/23322039.2018.1545739 Appendix