

## The Effect of Financial Ratios on Financial Distress Conditions: Moderating Role of Profitability Ratios

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### Abstract

This study aims to examine the effect of financial ratios moderated by profitability ratios on the financial distress of transportation and logistics sector companies listed on the IDX for 4 consecutive years in the 2018-2021 period. The independent variables are proxied by CR (liquidity), DAR (leverage), SG (growth), and the addition of TATO (activity). In addition, ROA is a proxy for the profitability variable which is the moderating variable. The Z-Score (Altman) is a proxy for financial distress as the dependent variable. This study selected companies in the transportation and logistics sector for the 2018-2021 period as a population with a sample size of 18 companies in the transportation and logistics sector that met the criteria. Logistic regression analysis was used as an analytical technique in this study. The results of his research inform that CR, DAR, and TATO have a significant influence on the occurrence of financial distress. Meanwhile, SG did not significantly affects the occurrence of financial distress. In addition, ROA can moderate the effect of SG and TATO on the occurrence of financial distress. However, ROA is unable to moderate the effect of CR and DAR on the occurrence of financial distress.

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## INTRODUCTION

Transportation and logistics are very important because they support all human activities, including the running of the business and the development of the Indonesian economy. Therefore, efforts are needed to improve transportation and logistics services. One of the efforts that can be carried out is to ensure the development of the business operations of transportation and logistics companies in order to achieve better conditions (Biro Komunikasi dan Informasi Publik, 2021).

Transportation and logistics sector companies are one of the largest supporters of Gross Domestic Product (GDP) as much as 7,05% in 2018. However, the growth of transportation and logistics sector companies has tended to decline in several years, namely in 2019 only by 6,38%, in 2020 by -15,05% and in 2021 only increased to 3,24% (Badan Pusat Statistik, 2023). Transportation and logistics sector companies are the company sectors most affected by the covid-19 pandemic due to large-scale social restrictions so that sales activities are hampered which makes revenue generation decrease dramatically (Sidik, 2020). So the financial performance of transportation and logistics sector companies needs more attention so that the company can continue to operate properly.

In running a business, competition can occur which causes several companies in the transportation and logistics sector suffer a decrease in sales volume and even experience losses, including SAFE losing Rp -20.514.021.923 in 2018, 2020 reaching Rp-17.589.816.911. SDMU lost Rp -30.795.779.177 in 2018, in 2019 it reached Rp -36.224.089.028, in 2020 it reached Rp -43.293.065.964, and in 2021 it reached Rp -9.741.992.566. TAXI lost Rp -836.820.231.000 in 2018, reached Rp -276.072.942.000 in 2019, and reached Rp -53.221.960.000 in 2020. MIRA lost IDR -3.222.370.200 in 2019, in 2020 it reached IDR -18.218.177.373, and in 2021 it reached IDR -13.195.658.734. WEHA lost IDR -33.601.480.667 in 2020, and IDR -9.622.676.055 in 2021. GIAA lost IDR -34.931.358.942.172 in 2020, and in 2021 it reached IDR -59.543.577.289.586. SMDR lost Rp -836.359.416.667 in 2019, and in 2020 it reached Rp -32.688.450.704. TRUK lost Rp -9.242.134.862 in 2020, and in 2021 it reached Rp -4.928.794.993.

The decline in sales volume and profitability can cause a decline in the stock performance of several companies in the transportation and logistics sector that are traded and even experience stock suspensions, namely WEHA, TMAS, BPTR, and TNCA due to a significant increase in cumulative stock prices (Bursa Efek Indonesia, 2021). If this phenomenon continues, the chances of financial distress will continue to increase and even lead to bankruptcy.

Financial distress is a situation when facing financial difficulties that cause the company to be unable to pay off its obligations so that bankruptcy can occur (Savitri & Rochdianingrum, 2022). Financial difficulties can be triggered by economic problems, insufficient additional capital, having too many liabilities, or experiencing continuous losses for several years. In addition, if a company does not have the capability as an anticipatory measure for opportunities for financial problems to take place, in the future it will result in a narrowing of business volume or financial distress and can even lead to corporate bankruptcy (Rachmawati et al., 2022). Company bankruptcy has a negative effect on all stakeholders, so companies must always be alert from the start regarding financial conditions to secure all company assets so they don't go bankrupt (Rahmadianti & Asyik, 2021).

Financial ratios are internal factors capable of influencing financial distress (Kuntari & Machmuddah, 2021). Financial ratios can provide an early warning or predict the financial distress of a company because financial ratios can illustrate whether the company's financial condition and performance are good or bad (Susilowati & Fadlillah, 2019). When estimating ongoing financial distress analysis is carried out using liquidity ratios, leverage, growth, and activity (Sopiyati et al., 2021). In addition, to improve the predictive results of financial distress, combination variables are used, namely the moderating variable in the form of profitability ratios (N. L. K. M. Sari & Putri, 2016).

The profitability ratio shows the company's net profit obtained through production activities that increase the number of assets (Hayati & Sholichah, 2022). The profitability ratio that will be used as a moderating variable in estimating financial distress is Return on Assets (ROA). Research Rodhiyah et al. (2023), A. P. Sari & Sembiring (2022), and Sugiharto et al. (2021) inform that profitability can moderate liquidity in financial distress. Meanwhile, research Savitri & Rochdianingrum (2022), Kristiana & Susilawati (2021), and Bernardin & Indriani (2020) informs that profitability is unable to moderate liquidity due to financial distress. Research Wilujeng & Yulianto (2020) and N. L. K. M. Sari & Putri (2016) informs that profitability can moderate leverage in financial distress. Meanwhile, research studies Rodhiyah et al.

(2023), Sugiharto et al. (2021) and Bernardin & Indriani (2020) inform that profitability is not able to moderate leverage in financial distress.

Research Rodhiyah et al. (2023) and Effendi & Hariyono (2022) informs that profitability can moderate growth in financial distress. Meanwhile, research Savitri & Rochdianingrum (2022), Hayati & Sholichah (2022), and Mulyatiningsih & Atiningsih (2021) informs that profitability is not able to moderate growth due to financial distress. Research Winata & Budiasih (2022), Kadarningsih et al. (2021), and Fretes (2021) informs that profitability can moderate activity in financial distress. Meanwhile, research Amah et al. (2023), A. P. Sari & Sembiring (2022), and Bernardin & Indriani (2020) informs that profitability is not able to moderate activity in a state of financial distress.

The liquidity ratio is useful for showing the amount of current assets owned to pay off a company's current debt (Pramitha & Wedasari, 2021). Current Ratio (CR) can represent the ratio of liquidity in predicting financial distress. Research Azizah & Yunita (2022), Sopiya et al. (2021), and Syuhada et al. (2020) informs that CR has an influence on financial distress. Meanwhile, research Baghaskara & Retnani (2023), Maysaroh et al. (2022), and Sudaryanti & Dinar (2019) informs that the CR ratio does not influence financial distress.

The leverage ratio is useful for showing total assets supported by the company's total liabilities and the company's expertise in managing its debts (Kristiana & Susilawati, 2021). Debt to Asset Ratio (DAR) can be used to represent the leverage ratio in estimating financial distress. Research Maysaroh et al. (2022), Pramitha & Wedasari (2021) and Sumani (2019) informs that DAR has an influence on financial distress. Research Oktaviani & Lisiantara (2022), Rahmadianti & Asyik (2021), and Iswari & Nurcahyo (2020) informs that DAR does not have an influence on financial distress.

The growth ratio is useful for showing an increase in company sales during the period compared to the previous period (Komala & Triyani, 2019). Sales Growth (SG) is able to represent the growth ratio in predicting financial distress. Research Rodhiyah et al. (2023), Effendi & Hariyono (2022) and Sugiharto et al. (2021) informs that SG can affect financial distress. Research Savitri & Rochdianingrum (2022), Pramitha & Wedasari (2021) and Rahman et al. (2021) informs that SG is not able to influence financial distress.

The activity ratio describes the level of use of company resources to support company activities so that the results received are maximized. Total asset turnover (TATO) can represent the activity ratio in predicting financial distress because it is better to use a balance between sales and various asset elements for measuring this ratio (Damajanti et al., 2021). Research Sopiya et al. (2021), Rahman et al. (2021), and Susilowati & Fadlillah (2019) informs that TATO can affect financial distress. Research Azizah & Yunita (2022), Syuhada et al. (2020) and Sumani (2019) informs that TATO is not able to affect financial distress.

The occurrence of the ongoing phenomenon of financial distress in companies in the transportation and logistics sector, as well as the discovery of research gaps from the results of previous research, makes the discussion in this area interesting to be tested again, by replicating research (Rodhiyah et al., 2023). This study adds activity variables, using different years of observation, as well as different corporate sectors, namely the transportation and logistics sector. Based on this explanation, the research questions are obtained, namely: (1) does the liquidity ratio have an influence on financial distress?, (2) does the leverage ratio have an influence on financial distress?, (3) does the growth ratio have an influence on financial distress?, (4) does the activity ratio have an influence on financial distress?, (5) are the profitability ratios able to moderate the effect of liquidity ratios, leverage ratios, growth ratios, and activity ratios on financial distress?

### **Theory Basis and Hypothesis Development**

The signal theory reveals an imbalance of information belonging to sellers and buyers (Akerlof, 1970). This theory assumes that company management is a motivated party to provide information about company performance by publishing financial reports as a signal to stakeholders. These signals can indicate good or bad information (Wahyuningsih et al., 2022). Submission of financial report information is useful for assessing financial performance, assessing company quality, and making future company policy decisions, as well as eliminating information asymmetry conditions (Hariono & Azizuddin, 2022). A good company financial report is a signal that the company is performing well (Spence, 1973).

Prediction of financial distress using financial ratios is needed as a signal for management to improve company performance before bankruptcy occurs and stakeholders will be able to consider the continuation of cooperation with the company (Hariono & Azizuddin, 2022). Analysis using liquidity ratios,

leverage, growth, activity, and profitability (moderation) with Z-Score (Altman) proxies is expected to get a good signal for management and other stakeholders so that they are mutually beneficial.

CR explains the amount of a company's current debt that can be paid off by its current assets (Azizah & Yunita, 2022). In other words, it can weigh the company's ability to fulfill its short-term debt when it matures through asset ownership. The possibility of ongoing financial distress will decrease if the CR value increases because a high CR value means that the company is able to pay off all of its short-term debt, so that it can increase the trust of other stakeholders to work together or invest in the company (Syuhada et al., 2020). Signal theory states that management submits information to external parties in the form of financial reports with financial ratios as a signal that the company's performance is profitable or is experiencing financial distress. Research Azizah & Yunita (2022), Sopiya et al. (2021), Syuhada et al. (2020) and Susilowati & Fadlillah (2019) supports CR having an effect on financial distress.

H1: Liquidity negatively affects on financial distress.

DAR explains the overall amount of assets financed by debt (Kristiana & Susilawati, 2021). In other words, DAR can weigh a company's ability to manage assets that have both short and long term debt burdens to increase its income. The chance of financial distress will increase if the DAR value increases because the return rate becomes higher which can result in default or can be declared in the extreme leverage category and experience liquidity (Wilujeng & Yulianto, 2020). This is in line with signal theory, namely leverage can signal that companies are facing or not facing financial distress for stakeholders in making decisions (Maysaroh et al., 2022). Research Baghaskara & Retnani (2023), Rahman et al. (2021), Syuhada et al. (2020) and Sumani (2019) support DAR has an effect on financial distress.

H2: Leverage positively affects financial distress.

SG explains the magnitude of the company's sales growth compared to the previous period (Damajanti et al., 2021). SG can assess the ability to manage the company's sales growth during the current period with the previous period. The increasing value of SG will still trigger financial distress if the company gets low final profit from its sales (Savitri & Rochdianingrum, 2022). In line with signal theory, SG is a signal that the company is facing or not facing financial distress for stakeholders (Oktaviani & Lisiantara, 2022). Research Rodhiyah et al. (2023), Kusuma et al. (2022), Sugiharto et al. (2021) and Damajanti et al. (2021) supports SG being able to influence financial distress.

H3: Growth positively affects financial distress.

TATO explains the efficiency of asset management in increasing company sales (Pramitha & Wedasari, 2021). In other words, TATO can assess a company's ability to obtain sales using its assets. Related to signal theory, TATO is able to act as a signal for stakeholders in making decisions by looking at the level of sales from asset management. The possibility of ongoing financial distress will decrease if the TATO value increases, because the higher the TATO value, the company's assets rotate faster, so as to obtain maximum results (Syuhada et al., 2020). Research Amah et al. (2023), Pitaloka & Budiwitjaksono (2022), Rahman et al. (2021) and Iswari & Nurcahyo (2020) supports that TATO can affect financial distress.

H4: Activities negatively affects financial distress.

ROA explains the net profit a company gets from all of its assets (Kristiana & Susilawati, 2021). In other words, ROA can assess a company's ability to manage its assets in order to obtain a net profit. The choice of ROA as a moderating variable is because all trading activities aim to generate profits. Obtaining maximum profits will help develop company operational activities such as increasing sales growth and managing assets so that they can pay off their debts before they are due, and avoid financial distress (Hayati & Sholichah, 2022). Related to signal theory, ROA can be a signal for stakeholders in decision making. The high value of ROA shows that stakeholders get a good signal that the company generates profits from its assets, so they will not experience financial distress (A. P. Sari & Sembiring, 2022).

Research Amah et al. (2023), Sari & Sembiring (2022), and Kuntari & Machmuddah (2021) supports profitability being able to moderate liquidity on conditions of financial distress. Research Wilujeng & Yulianto (2020) and N. L. K. M. Sari & Putri (2016) support profitability being able to moderate leverage on conditions of financial distress. Research Rodhiyah et al. (2023) and Effendi & Hariyono (2022) support profitability being able to moderate growth on conditions of financial distress. Research Winata & Budiasih (2022), Kadarningsih et al. (2021), and Fretes (2021) informs that profitability can moderate activity on financial distress.

H5: Profitability moderates liquidity on financial distress conditions.

H6: Profitability moderates leverage on financial distress conditions.

H7: Profitability moderates growth on financial distress conditions.  
 H8: Profitability moderates activity on conditions of financial distress.

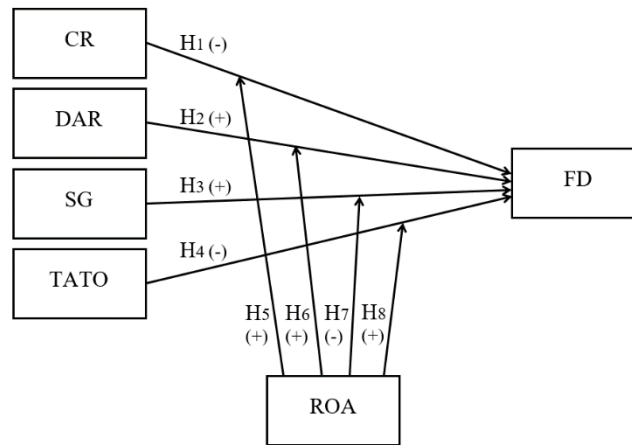


Figure 1. Theoretical Framework

**METHOD**

This research is quantitative research with secondary data obtained from the company's financial reports listed on the IDX website for the 2018-2021 period. The total sample determined in this study was 21 companies in the transportation and logistics sector in a row for 4 years of observation and the population in the form of companies in the transportation and logistics sector for the 2018-2021 period was listed on the IDX with a total of 84 data. Purposive sampling was determined as the sampling technique with the following qualifications: (1) transportation and logistics sector companies listed on the IDX for the 2018-2021 period, (2) companies that published financial reports for the 2018-2021 period sequentially, (3) companies that published data related to the variables studied during the 2018-2021 period. Financial distress is the dependent variable and the independent variables are CR, DAR, SG, and TATO with the ROA moderating variable. Data processing uses SPSS version 26 with logistic regression analysis techniques. The equation used is:

$$Y = \beta_0 + \beta_1 CR + \beta_2 DAR + \beta_3 SG + \beta_4 TATO + \beta_5 CR \cdot ROA + \beta_6 DAR \cdot ROA + \beta_7 SG \cdot ROA + \beta_8 TATO \cdot ROA + e$$

Where:

- Y : financial distress
- $\beta$  : regression coefficient
- CR : current ratio
- DAR : debt to asset ratio
- SG : sales growth
- TATO : total asset turnover
- ROA : return on asset
- e : residual error

Financial distress is processed using the Z-Score formula and the calculation uses a dummy variable with binary values 0 and 1. If the Z-Score result is > 2.6, then it is given a value of 0 which means the company is not facing financial distress. Meanwhile, if the result of the Z-Score < 2.6 then it is given a value of 1 which means the company is facing financial distress. Financial distress is a condition when the financial level of a company is low which has a risk of bankruptcy (Maysaroh et al., 2022). The formula for the Z-Score (Altman) method used for measurement is:  $Z - Score = 6,56 \cdot X_1 + 3,26 \cdot X_2 + 6,72 \cdot X_3 + 1,05 \cdot X_4$

Where:

$$X_1 = \frac{\text{current assets} - \text{current liabilities}}{\text{total assets}}$$

$$X_2 = \frac{\text{retained earning}}{\text{total assets}}$$

$$X_3 = \frac{\text{EBIT}}{\text{total assets}}$$

$$X_4 = \frac{\text{equity book value}}{\text{total debt}}$$

CR is a ratio that measures the availability of current assets to cover current liabilities. This ratio shows the company's capability to meet current debts for less than a year (Azizah & Yunita, 2022). The formula is:

$$\text{CR} = \frac{\text{current assets}}{\text{current liabilities}}$$

DAR is a ratio that calculates the amount of assets financed by debt. This ratio shows the level of company risk due to the large amount of debt used for financing (Oktaviani & Lisiantara, 2022). The formula is:

$$\text{DAR} = \frac{\text{total debt}}{\text{total assets}}$$

SG is a ratio that measures the amount of sales growth compared to the past period, so that it can be a reference in estimating the company's sales growth in the future (Hayati & Sholichah, 2022). The formula is:

$$\text{SG} = \frac{\text{sales } t - \text{sales } (t-1)}{\text{sales } (t-1)}$$

TATO is a ratio that measures the amount of sales obtained from the efficiency of the turnover of assets owned by the company, so that it can be a reference in seeing the level of company sales in a period (Rahman et al., 2021). The formula is:

$$\text{TATO} = \frac{\text{sales}}{\text{total assets}}$$

Profitability is a ratio that calculates the amount of profit obtained by utilizing company assets, so that you can find out the company's ability to generate profits (Savitri & Rochdianingrum, 2022). The formula is:

$$\text{ROA} = \frac{\text{net profit}}{\text{total assets}}$$

## RESULT AND DISCUSSION

The results of the Hosmer and Lemshow tests are useful in proving the appropriateness of the regression model with a Chi-square score of 1,345 and a sig score. a number of 0,995 (0,995 > 0,05). So it means that the model with research data is the same or the data can be explained by the regression model, so it is decided that the regression model is good and appropriate to use.

**Table 1.** Hosmer and Lemeshow Test

Hosmer and Lemeshow Test			
Step	Chi-square	df	Sig.
1	1,345	8	,995

Source: SPSS processing, 2023

**Table 2.** Initial -2 LL Value and -2 Final LL

Initial -2 LL Value dan -2 LL Final		
	Iteration	-2 Log Likelihood
Value -2 LL initial (Block Number = 0)	Step 0	112,562
Value -2 LL final (Block Number = 1)	Step 1	29,238

Source: SPSS processing, 2023

From the overall test, the fit model shows an initial -2LL score of 112,562 and a final -2LL score of 29,238. The decrease in the initial -2LL score with the final -2LL score has a difference of 83,324. So, the regression model is declared to be improving or the model is fitted with the research data.

**Table 3.** Model Summary

Model Summary			
Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	29,238 <sup>a</sup>	,629	,852

a. Estimation terminated at iteration number 9 because parameter estimates changed by less than,001.

Source: SPSS processing, 2023

Based on the Nagelkerke R Square test, the coefficient of determination is 0,852 which shows the variables liquidity, leverage, growth, activity and profitability can interpret the financial distress variable by 85,2% and the remaining 14,8% can be interpreted by other variables outside the research variables.

**Table 4.** Omnibus Test of Model Coefficients

Omnibus Tests of Model Coefficients				
Step		Chi-square	df	Sig.
1	Step	83,324	5	,000
	Block	83,324	5	,000
	Mode	83,324	5	,000

Source: SPSS processing, 2023

The omnibus test of the model, it shows a score of sig. totaling 0,000 (0,000 < 0,05) which means that the data studied, as a whole (simultaneously) the independent variables can significantly influence the dependent variable or this data is good and feasible to use.

**Table 5.** Logistic Regression Test Results

Variables in the Equation									
Step		B	S.E.	Wald	d f	Sig.	Exp(B)	95% C.I. for EXP(B)	
								Lower	Upper
1 <sup>a</sup>	CR	-3,895	2,346	2,756	1	,097	,020	,000	2,021
	DAR	25,698	10,921	5,537	1	,019	1447382 91675,18 7	73,277	285890563 797814940 000,000
	SG	1,302	2,428	,288	1	,592	3,677	,032	428,345
	TATO	-5,380	2,349	5,244	1	,022	,005	,000	,460
	ROA	-56,791	41,336	1,888	1	,169	,000	,000	332344335 91,708
	CR*R OA	2,576	4,789	,289	1	,591	13,138	,001	156715,10 4

DAR*ROA	35,022	39,465	,788	1	,375	1620849 4485120 67,200	,000	6,343E+48
SG*ROA	-68,570	34,214	4,017	1	,045	,000	,000	,220
TATO*ROA	47,089	28,001	2,828	1	,093	2820729 5499135 6580000, 000	,000	1,925E+44
Constant	-3,164	4,608	,472	1	,492	,042		

a. Variable(s) entered on step 1: CR, DAR, SG, TATO, ROA, CR\*ROA, DAR\*ROA, SG\*ROA, TATO\*ROA.

Source: SPSS processing, 2023

Based on the results of the logistic regression test, the regression model is obtained as follows:

$$FD = -3,164 - 3,895 CR + 25,698 DAR + 1,302 SG - 5,380 TATO - 56,791 ROA + 2,576 CR.ROA + 35,022 DAR.ROA - 68,570 SG.ROA + 47,089 TATO.ROA + e$$

CR as a proxy for liquidity shows a sig value. 0,097 or has a value higher than 0,05 (probability value), then H1 is rejected, meaning that CR has no influence on the company's financial distress. Financial distress is likely to occur even though the CR value owned by the company increases or decreases. The reason when CR increases is because the company cannot manage its current assets from the past period productively, such as idle company cash, piling up inventory and a large number of uncollectible receivables, so that the opportunity to earn profits for current debt payments at maturity is lost (Syuhada et al., 2020). However, when CR decreases, the company is considered unable to pay its current debt because the assets owned to pay off the company's debt at maturity are insufficient, so the company can face financial distress (Pitaloka & Budiwitjaksono, 2022).

Another factor is the transfer of current assets that focus on returning long-term liabilities by leaving short-term liabilities, and the company has few current liabilities and is more focused on long-term liabilities which causes the company's liquidity situation not to be affected by financial distress (Iswari & Nurcahyo, 2020). The results of research by Maysaroh et al. (2022), Pramitha & Wedasari (2021), Kuntari & Machmuddah (2021), and Sudaryanti & Dinar (2019) corroborate the results of this study which show that the CR ratio has no influence on financial distress. However, in contrast to the research results of Pitaloka & Budiwitjaksono (2022), Azizah & Yunita (2022), Sopiayati et al. (2021), Syuhada et al. (2020), and Susilowati & Fadlillah (2019) which show that CR holds an influence on financial distress.

DAR as a proxy for leverage shows the sig. 0,019 or less than the probability value (<0,05), then H2 is accepted which means that DAR has an influence on the company's financial distress. High leverage will increase the possibility of financial distress because the increased debt obtained exceeds the assets owned will make the rate of return higher which can result in default and experiencing liquidity (Wilujeng & Yulianto, 2020). The increasing number of debts that fail to pay at maturity can disrupt the company's operational activities, thereby reducing its income, and can change the decision of shareholders to invest their capital which causes the company to face financial distress (Fitria & Syahreenny, 2022). Reducing the value of leverage can be done by reducing or paying off the company's debt. If a company wants to add debt, it needs to add assets so that the company does not approach the financial distress zone (N. L. K. M. Sari & Putri, 2016). This explanation is in accordance with the signal theory (Akerlof, 1970).

Maximizing owned assets allows companies to earn more profits (Bernardin & Indriani, 2020). The link with signal theory is that management informs the leverage ratio as a signal to stakeholders to show that the company is in good or bad condition compared to other companies as a basis for decision making seen from the amount of assets financed by company debt (Sugiharto et al., 2021). The results of research Effendi & Hariyono (2022), Rahman et al. (2021), Syuhada et al. (2020) and Sumani (2019) strengthen the results of this study which shows that DAR has an influence on financial distress. However, there are differences in research results Rodhiyah et al. (2023), Kusuma et al. (2022), Rahmadianti & Asyik (2021) and Iswari & Nurcahyo (2020) which show that DAR does not have an influence on financial distress conditions.



SG as a proxy for growth shows a sig value. 0,592 or has a value higher than the probability value ( $<0,05$ ), then H3 is rejected or SG is declared not to have an influence on the company's financial distress because the decline in SG in recent years does not necessarily have a bad cash flow operation. A low level of sales does not necessarily mean that the net profit in the current year is also low if the company has the ability to manage the previous year's profits well (Pramitha & Wedasari, 2021). In addition, the amount of net profit can remain high if the company has consistently increased sales value in the past period and obtains safer loan guarantees when sales are faltering (Savitri & Rochdianingrum, 2022). The company's cash flow increases if the profit earned increases, so the company does not necessarily experience financial distress (Rahman et al., 2021).

The results of research Hayati & Sholichah (2022), Oktaviani & Lisiantara (2022), Pramitha & Wedasari (2021) and Sumani (2019) strengthen the results of this study which shows that SG does not have an influence on financial distress. However, there are differences in the results of studies Rodhiyah et al. (2023), Kusuma et al. (2022), Damajanti et al. (2021) and Sugiharto et al. (2021) which show that SG has an influence on financial distress conditions.

TATO as a proxy for activity shows a sig. 0,022 or has a value less than the probability value ( $<0,05$ ), so that H4 is accepted which means that TATO has an influence on the company's financial distress because an increase in TATO value indicates a more effective turnover in managing assets to build sales (Rahman et al., 2021). Healthier assets and sales make the company to obtain abundant profits, so that it can fulfill all of its obligations which can reduce the possibility of financial distress (Amah et al., 2023). The link with signal theory is that an increase in TATO value symbolizes a good signal for company stakeholders which shows that management is performing well and is increasingly effective in managing the company, especially in maximizing the use of assets for its operational activities (Assaji & Machmuddah, 2017).

Conversely, a decrease in the value of TATO shows that the company's performance is not good in generating its sales volume compared to its assets, so it can have an influence on the company's financial condition which causes financial distress. Management needs to evaluate its strategy, marketing, and capital expenditures to prevent this (Amah et al., 2023). The results of research Pitaloka & Budiwitjaksono (2022), Rahman et al. (2021), Iswari & Nurcahyo (2020) and Susilowati & Fadlillah (2019) strengthen the results of this study which shows that TATO has an influence on financial distress. However, it is different from the results of research Azizah & Yunita (2022), Syuhada et al. (2020), Sumani (2019) and Assaji & Machmuddah (2017) which show that TATO has no effect on financial distress.

ROA which moderates CR shows a score of sig. 0,591 or has a value higher than the probability value ( $<0,05$ ), then H5 is rejected which means that profitability is not able to moderate the effect of liquidity on financial distress. The transfer of current assets that focus on returning long-term liabilities by ignoring short-term liabilities, as well as companies that have few current liabilities and are more focused on long-term liabilities, causes idle cash, inventory and uncollectible receivables to accumulate. This can make liquidity not hold an influence on financial distress conditions (Iswari & Nurcahyo, 2020).

ROA cannot moderate CR on financial distress conditions if the company does not use its profits to immediately pay current debt or for better asset management activities (Bernardin & Indriani, 2020). The results of research Savitri & Rochdianingrum (2022), Kristiana & Susilawati (2021) and Bernardin & Indriani (2020) corroborate the results of this study which show that ROA is unable to moderate effect of CR on financial distress. However, there are differences in research results Amah et al. (2023), A. P. Sari & Sembiring (2022) and Kuntari & Machmuddah (2021) which show that ROA is able to moderate the effect of CR on financial distress.

ROA which moderates DAR shows a score of sig. 0,375 or has a value higher than the probability value ( $<0,05$ ), then H6 is rejected which means that profitability is unable to moderate the effect of leverage on financial distress. If the company's assets are managed properly in each period, the company can reduce the amount of assets owed. Debt paid in each maturity period will increasingly trigger better management of all debts and assets for the company in the next period. This will be able to assist the company in preventing financial distress.

The existence of ROA (either increasing or decreasing) as a measure of company profitability in the same period, does not cause a stronger or weaker influence of leverage on the occurrence of a decrease in company financial distress. Leverage will still affect the company's financial distress condition, so profitability does not contribute to influencing leverage on financial distress conditions (Kristiana & Susilawati, 2021). Management decisions play an important role in estimating the use of debt so that it is not excessive (Effendi & Hariyono, 2022). The results of research Rodhiyah et al. (2023), Effendi &

Hariyono (2022) and Sugiharto et al. (2021) corroborate the results of this study which show that ROA is not able to moderate the effect of DAR on financial distress. However, there are differences in research results Wilujeng & Yulianto (2020) and N. L. K. M. Sari & Putri (2016) which show that ROA is able to moderate the effect of DAR on financial distress.

ROA which moderates SG shows a score of sig. 0,045 or has a value less than the probability score ( $<0,05$ ), then H7 is accepted which means that profitability is able to moderate or strengthen the effect of SG on financial distress. If the company always makes a profit in each period when the sales level decreases, the company can use the profit to improve the company's sales performance in the next period. One form of improving sales performance is to finance operational activities by improving product quality and improving product marketing quality. A better sales performance system will increase company sales, so that companies can reduce the occurrence of financial distress (Effendi & Hariyono, 2022). So ROA is stated to be able to contribute in moderating SG on financial distress conditions.

The link with signal theory is that providing information on the prospects for future sales growth and high profits by management as a form of responsibility to stakeholders can be a good signal in decision making because the company has capital adequacy conditions and reduces the level of financial distress (Effendi & Hariyono, 2022). The results of research Rodhiyah et al. (2023), Effendi & Hariyono (2022) and Fretes (2021) corroborate the results of this research which show that ROA can moderate the effect of SG on financial distress. However, it is different from the results of research Savitri & Rochdianingrum (2022), Hayati & Sholichah (2022) and Mulyatiningsih & Atiningsih (2021) which show that ROA is unable to moderate the effect of SG on financial distress.

ROA which moderates TATO shows a sig value. 0.093 or has a value higher than the probability value ( $<0.05$ ), then H8 is rejected which means that profitability is unable to moderate the effect of activity on financial distress. If the company's asset turnover is well managed to increase the company's sales activity each period, the company's revenue from sales activities will increase and the company can fulfill all its obligations. This will help the company prevent financial distress (Amah et al., 2023). However, if the revenue from sales activities is not to immediately pay off its obligations before maturity, it will increase the occurrence of financial distress.

The existence of ROA (either increasing or decreasing) as a measure of the company's profitability in the same period, does not cause a stronger or weaker influence of TATO on the occurrence of a decrease in the company's financial distress. TATO will still affect the company's financial distress condition, so ROA does not contribute to influencing TATO on financial distress conditions (Idawati & Wardhana, 2021). The research results of Amah et al. (2023), A. P. Sari & Sembiring (2022), Idawati & Wardhana (2021) and Bernardin & Indriani (2020) corroborate the results of this study which show that ROA is unable to moderate the effect of TATO on financial distress. However, there are differences in the research results of Winata & Budiasih (2022), Kadarningsih et al. (2021) and Fretes (2021) which show that ROA is able to moderate the effect of TATO on financial distress.

## CONCLUSION AND RECOMMENDATION

Based on the results of data analysis, it is informed that CR, DAR, and TATO have a significant influence on financial distress. Meanwhile, SG does not have a significant influence on financial distress. In addition, ROA is able to moderate the effect of SG and TATO on financial distress. However, ROA is unable to moderate the effect of CR and DAR on financial distress. This study contains limitations, namely: (1) there are independent variables that partially have no effect on financial distress even though the Nagelkerke R Square determination coefficient is already high at 85.2% of the eight independent variables which indicates that the research results are not fully precise in explaining the situation transportation and logistics sector companies in detail, (2) This research object focuses one sector, namely the transportation and logistics sector so that it has problem with generalization of findings.

Based on the limitations that have been explained, there are variables that have no effect on the financial distress conditions of transportation and logistics sector companies, especially on variables that are moderated by profitability. So, suggestions for further research are obtained, namely (1) increasing the proxies of the independent variables studied, (2) modifying by adding other financial ratio variables outside of this study which are still rarely studied (for example: quick ratio, inventory turnover, return on investment, and others), (3) changing the moderation variable in order to obtain better and valid results,

(4) adding the number of companies with other sectors as research samples so that the results are maximized.

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