

The Effect of Solvency, Profitability, Liquidity, and Sales Growth Ratio on Financial Distress (Case Study of a Transportation Company Listed on the Indonesian Stock Exchange)

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<p>Article Information:</p> <hr/> <p>Keywords: Financial Ratios; Financial Distress; DAR; ROE; CR; Sales Growth;</p> <p>Article History: Received : October 01, 2024 Revised : October 31, 2024 Accepted : December 22, 2024</p> <p>Cite This Article: Aprilani, L. A., & Haningsih, L. (2025). The effect of solvency, profitability, liquidity, and sales growth ratio on financial distress (Case study of a transportation company listed on the Indonesian Stock Exchange). <i>Indikator: Jurnal Ilmiah Manajemen dan Bisnis</i>, 9(1), 97–116. doi:https://doi.org/10.22441/indikator.v9i1.30052</p>	<p>Abstract</p> <hr/> <p><i>This study aims to analyse the effect of financial ratios on Financial Distress, namely the effect of debt to asset ratio (DAR), return on equity (ROE), current ratio (CR), and sales growth. The population in this study are transportation companies listed on the Indonesia Stock Exchange in 2018-2022. The samples used were 15 companies with indications of Financial Distress from the calculation of negative earnings per share. The sampling method in this study used purposive sampling. The data collection method uses the library method, by taking financial reports on the IDX.co.id website or the official website of a transportation company listed on the Indonesia Stock Exchange. Methods of data analysis using descriptive and panel data regression. The results showed that the variable (1) debt to asset ratio (DAR) has negative and significant influence on financial distress of transportation companies, (2) current ratio (CR) and (3) sales growth has positive and significant significant influence on financial distress of transportation companies, and (4) return on equity (ROE) do not influence on financial distress of transportation companies listing on Indonesia Stock Exchange period 2018-2022.</i></p>
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INTRODUCTION

The financial manager in the company functions to manage the company's finances. Apart from that, the financial manager has the task of planning and developing the financial system in the company, and must be able to manage cash in and out according to the portion required by the company to ensure the smooth running of the business. When a financial manager mismanages the company's finances, it will have fatal consequences for the company. Inappropriate management decisions, bad policies, or inefficient financial management can cause a company to experience financial difficulties (Financial Distress) (Widarno and Irawan, 2021). A company's financial distress condition will cause a decline in business, the company will become smaller, even in more severe financial difficulties it will cause the company to be liquidated, liquidation is the dissolution or closing of the company by auctioning off all of the company's assets or property to pay the company's debts. (Musthafa, 2017). This condition can be said to be a company that has failed. Financial Distress is a condition when a company experiences a decline in financial health before bankruptcy occurs (Christine et al., 2019). According to Fatimah (2019), transportation is a means that plays a role in facilitating interaction between humans and making it easier to move people or goods. In people's lives, especially the economy, transportation plays a very important role, because it can encourage economic activity in a region or country. The

minister of Transportation, Budi Karya Sumadi stated that logistics transportation is the lifeblood of all human activities and serve as both the driving force and support for other economic sectors to function (Kompas, 2021).

Table 1.
Data on transportation companies listed on the Indonesian Stock Exchange that have negative EPS values for the 2018-2022 period

No	Kode	2018	2019	2020	2021	2022
1	LRNA	158,28	-19,63	-122,91	-74,64	-60,92
2	TRUK	3,41	2,18	-21,25	-11,33	-9,81
3	BLTA	3,35	-0,48	-0,44	3,24	5,4
4	DEAL	11,96	-0,15	-44,93	-24,63	-11
5	MIRA	0,58	-0,71	-4,55	-3,31	-7,98
6	TAMU	-14,77	-14,17	-3,49	-16,41	-20,38
7	BBRM	-28,73	-15,34	-29,36	1,78	1,28
8	RIGS	-334,72	-194,67	29	-115,46	58,78
9	LEAD	-162,92	-29,45	-9,42	-9,38	-23,26
10	CANI	-40,54	-18,07	-22,56	-24,25	-36,39
11	SDMU	-23,22	-31,97	-37,38	-8,31	2,51
12	GIAA	-36,23	0,98	-381,86	-651,05	642,55
13	SMDR	28,96	-166,81	-14,1	399,5	314,12
14	PORT	-0,26	4,69	-21,08	-20,74	7,27
15	IATA	-10,13	-6,95	-8,46	-4,28	24,28
16	CMPP	-84,91	-14,74	-257,81	-218,58	-154,41
17	WINS	-119,63	-53,64	-48,26	57,07	3,10
18	TAXI	-389,81	-60,11	8,64	18,4	-1,46
Rata-Rata		-57,74056	-34,39111	-55,01222	-39,02111	42,73

Source: IDX, processed data (2023)

Based on table 1, it shows that transportation companies listed on the Indonesia Stock Exchange have negative EPS values for several periods from 2018 to 2022. This shows that the companies are in financial distress. This EPS value is important for investors who will invest in a company. The EPS value is used by investors to assess the company's future prospects. A company will have good growth in the future if the company has a continuously positive EPS value in each period. On the other hand, if a company has a negative EPS value in several periods, this reflects poor earnings prospects, this condition will not attract investors to invest. Riyanti (2020) believes that companies that have indications of financial distress are characterized by negative earnings per share (EPS) for two years as seen in table 1, as many as 18 transportation companies listed on the Indonesia Stock Exchange had negative EPS values in the 2018- 2022.

Figure 1
Graph of Average Earning Per Share for Transportation Companies



Source: IDX, processed data (2023)

Based on graph 1.1, it shows that transportation companies on the Indonesian Stock Exchange are experiencing financial distress, as shown by the average value of negative earnings per share for 4 consecutive years for 18 transportation companies listed on the Indonesian Stock Exchange for the 2018-2022 period. According to Wahyuni (2019), one alternative method for assessing whether a company is experiencing bankruptcy or not is to thoroughly analyze the financial reports. Financial reports provide a basis for interpretation of the company's financial condition and performance, by comparing annual financial reports, viewing information about changes that have occurred, analyzing percentages and trends, and considering several individual ratios can simplify the process of interpreting the company's financial position.

Research on financial distress has been carried out by previous researchers which shows the results that financial conditions indicated by financial ratios can influence financial distress conditions. Based on the results of research conducted by previous researchers, according to Masita & Purwohandoko (2020) Debt to Asset Ratio (DAR) has a positive effect while Return on Assets (ROA) has a negative effect, then Current Ratio (CR), Total Asset Turnover (TATO), Managerial Ownership and Institutional Ownership have no effect on financial distress. The research results of Damajanti, Wulandari, and Rosyati (2021) say that Return on Assets (ROA), CR, and sales growth have a positive effect on financial distress, while the Debt to Equity Ratio (DER) has a negative effect, then TATO (Total Asset Turnover) does not influence on financial distress. Research results from Putri & Sari (2021) say that ROE has no effect on financial distress, while ROA and CAR (Capital Adequacy Ratio) have a negative effect. Then the results of Hanifah's (2020) research say that ROA has a negative effect on financial distress, while DAR and ROE have a positive effect. The research results of Simorangkir & Hidayat (2021) say that ROA and CR have a positive effect, while ROE has a negative effect, then TATO and DER have no effect on financial distress. The research results of Hadi, Abdul (2022) say that ROA and CR have a negative

effect, while DER, DAR, and TATO have no effect on financial distress. Research results from Oktariza & Isynuwardhana (2020) say that DAR and sales growth have a negative effect, while CR and ROA have no effect on financial distress. Suryani's (2020) research results show that DER has a negative effect, while ROA, sales growth and firm size have no effect on financial distress. There were different results from one researcher to another, so the researcher chose the Debt to Asset Ratio (DAR), Return on Equity (ROE), Current Ratio (CR), and Sales Growth variables for re-examination.

According to Mahfullah (2022), the solvency ratio or leverage is a ratio used to describe the extent to which a company's assets are financed by debt. This ratio is used as a tool to predict potential bankruptcy and also as an early indicator of the possibility of financial distress (Bachtiar & Handayani, 2022). The solvency ratio can be assessed with the debt to asset ratio (DAR). DAR compares the amount of debt with the amount of assets owned by the company. Profitability ratios are used to assess a company's ability to gain profits in a certain period (Bachtiar & Handayani, 2022). This ratio also provides a measure of the level of effectiveness of a company's management. Based on research results from Maysaroh, Suhendro, & Dewi (2022) which states that ROE has no effect on financial distress, this research is also in line with research results from Haras, Monoarfa, and Dunga (2022) that ROE has no effect on financial distress. However, research from Hariansyah & Soekotjo (2020) states that ROE has a positive effect on financial distress, then there is research from Caronge, Raznilawati, and Mursida (2022) which states that ROE has a negative effect on financial distress. The liquidity ratio describes the company's ability to fulfill its short-term obligations, meaning that when it is billed or due, the company is able to pay its debts (Kasmir, 2018). Damajanti, Wulandari, and Rosyati (2021) state that the current ratio has a positive effect on financial distress, but research results from Hadi, Abdul (2022) say that the current ratio has a negative effect on financial distress. The research results of Evrilianingsih & Amalia (2022) say that the current ratio has no effect on financial distress. This finding is the same as Masita & Purwohandoko (2020) that the current ratio has no effect on financial distress.

The growth ratio describes a company's ability to maintain its economic position amidst economic growth and its business sector (Kasmir, 2018). The research results of Damajanti, Wulandari, and Rosyati (2021) say that sales growth has a positive effect on financial distress. However, research by Oktariza & Isynuwardhana (2020) states that sales growth has a negative effect on financial distress. Then the research results of Suryani (2020) say that sales growth has no effect on financial distress.

LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

Signal Theory was first developed by researcher Spence (1973), explaining that this theory involves the use of signals as a mechanism to convey information to outside parties. This theory involves two parties, namely internal parties and external parties. The internal party consists of management who acts as the party who conveys the signal, while the external party is an outside party who acts as the signal recipient. Brigham & Houston (2019) state that signaling theory refers to actions taken by a company to provide clues to investors regarding management's views on the company's prospects.

Agency Theory was developed by Jensen and Meckling (1976) who stated that this theory explains the agency relationship or agreement between two parties, namely the company owner or investor as the principal who delegates authority to the agent. Company management as an agent has responsibility for carrying out company operations.

Financial Distress is one of the stages that describes a decline in financial conditions before bankruptcy occurs (Chrissentia & Syarief (2018). financial distress is a situation where the company's operational cash flow is insufficient to meet its obligations. This occurs because the company's financial condition is unhealthy or experiencing crisis due to a decrease in company income. In this situation, companies are more careful in taking action to protect the assets they own from the risk of bankruptcy (Bachtiar & Handayani, 2022).

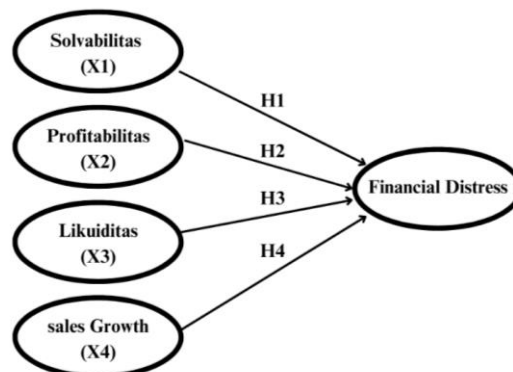
The solvency or leverage ratio is one of the ratios used for financial report analysis. The solvency ratio is a ratio to measure how much a company is financed by debt. This ratio provides a measure of the funds provided by creditors compared to the finances provided by the owner (Hidayat, 2018).

Profitability Ratios are ratios that show an overview of the level of effectiveness of company management in generating profits. This ratio is used as a measure of whether owners or shareholders can obtain an appropriate rate of return on their investment (Hidayat, 2018).

The liquidity ratio is the ability of a company to fulfill its short-term obligations appropriately. The liquidity ratio indicates the extent to which assets can be easily converted into cash without reducing their value, as well as the level of certainty regarding the amount of cash that can be obtained (Hidayat, 2018).

The Sales Growth Ratio is used as a tool to evaluate the size of a company and ensure that its economic conditions are in line with its continued business development. (Susilowati & Fadlillah, 2019).

Figure 2. The conceptual framework



Source: processed data (2023)

The Effect of solvency (DAR) on Financial Distress in transportation companies listed on the Indonesia Stock Exchange for the 2018-2022 period

The solvency ratio is a ratio to measure how much a company is financed by debt. This ratio provides a measure of the funds provided by the owner compared to the finances provided by creditors (Hidayat, 2018). The solvency ratio can be measured by the debt to asset ratio (DAR), namely the comparison of total debt to assets. If a financing company uses more debt, there is a risk of payment difficulties in the future due to debt being greater than the assets owned (Faldiansyah, Arrokhman, & Shobri, 2020). When a company experiences difficulty in paying its debts, the risk of the company experiencing financial distress will be greater. If the DAR value is high, it is feared that the company will not be able to pay off its debt because the composition of debt is greater than assets, as a result the possibility of the company facing financial distress will be higher. On the other hand, the smaller the DAR

value, the smaller the possibility of financial distress occurring, because the smaller the company's obligations, it reflects that the company is able to fulfill its obligations. Based on previous research, Ainun and Purwohandoko (2020) said that the debt to asset ratio has a positive effect on financial distress. Likewise with the research results from Antoniowati and Purwohandoko (2022) and Hanifah (2020). So the hypothesis that can be made is:

H1: Solvency Ratio (DAR) has a positive effect on financial distress

The Effect of profitability (ROE) on Financial Distress in transportation companies listed on the Indonesia Stock Exchange for the 2018-2022 period

The profitability ratio is something that is used to assess a company's ability to generate profits (Bachtiar & Handayani, 2022). In this research, ROE is used as the profitability ratio. This ratio compares net profit with the company's total equity. Return on Equity shows how much equity contributes to creating net profit. The higher the return on equity means the higher the net profit generated, and vice versa, the lower the return on equity, the lower the net profit generated (Hery, 2017). If the amount of profit generated by the company is low or even negative, then the possibility of financial distress will be higher. Based on previous research, Tarida et al (2021) in their research results stated that return on equity has a negative effect on financial distress. This is also the case with research results from Caronge et al (2022) and Moch et al (2019) which state that ROE has a negative effect on financial distress. so the hypothesis that can be made is:

H2: Profitability Ratio (ROE) has a negative effect on financial distress

The Effect of liquidity on Financial Distress in transportation companies listed on the Indonesia Stock Exchange for the 2018-2021 period

The liquidity ratio is a ratio that shows the company's ability to meet its short-term obligations. According to Kasmir (2018), the higher the Liquidity Ratio a company has, the better the company's financial condition, conversely if the company has a low Liquidity Ratio value, the worse the company's financial condition. The liquidity ratio can be calculated using the current ratio, the current ratio is used to estimate the company's efficiency in settling its short-term obligations (Rahma & Efendy, 2020). Companies with current assets that are greater than their current liabilities will minimize the occurrence of financial distress (Agustini & Wirawati, 2019). Bachtiar & Handayani (2022), Oktariza & Isyнуwardhana (2020), Winda et al (2021), and Maysaroh et al (2022) state that liquidity ratios have a negative effect on financial distress. So the hypothesis that can be made is:

H3: Liquidity ratio (CR) has a negative effect on financial distress

The Effect of sales growth on Financial Distress in transportation companies listed on the Indonesia Stock Exchange for the 2018-2021 period

Sales growth reflects higher sales levels compared to the previous period. If the company value increases, this shows that the market is responding positively to the products and services offered by the company. Sales play an important role in generating profits for the company (Suryani, 2021). Signal theory explains that management takes action to provide information to investors and creditors about the company's condition. Information about sales can help a company avoid financial difficulties if sales increase, whereas a decrease in sales indicates financial difficulties (Brigham & Houston, 2019). Based on previous researchers, Amanda & Tasman (2019) and Oktariza & Isyнуwardhana (2020) stated that sales growth has a negative effect on financial distress. So the hypothesis that can be made is:

H4: Sales Growth has a negative effect on financial distress

RESEARCH METHOD

This research was conducted from March 2023 to August 2024 at transportation companies listed on the Indonesia Stock Exchange. The data used is secondary data, namely, financial reports from 2018 to 2022 of transportation companies listed on the Indonesia Stock Exchange. This data was obtained through the official website of the Indonesian Stock Exchange, namely <http://www.idx.co.id> and the official website of each transportation company listed on the Indonesian Stock Exchange. In this research, the author uses quantitative data so that the research design uses a quantitative descriptive approach and the calculations use statistical calculations. In this research there are two types of variables, namely the dependent variable (*financial distress*) and the independent variable (*Debt to Asset Ratio, Return on Equity, Current Ratio, Sales Growth*). The population in this research is all transportation sub-sector companies listed on the Indonesia Stock Exchange (BEI), totaling 56 companies. Based on the sample criteria, the Transportation sub-sector companies listed on the Indonesia Stock Exchange for the 2018-2022 period that are the sample in this research are 15 companies. The data analysis test methods used are Descriptive Analysis, Inferential Analysis of Panel Data Causality, Selection of Panel Data Regression Models, Model Suitability Test, Influence Test.

RESULT AND DISCUSSION

This chapter will present the results of data analysis that has been carried out on research variables. It is hoped that the results of the analysis can be used to determine the influence of the research variables, namely Debt to Asset Ratio, Return on Equity, Current Ratio, and Sales Growth on financial distress conditions in transportation companies listed on the Indonesia Stock Exchange (BEI) for the 2018-2022 period. In this research, the samples used as research objects are all transportation companies listed on the BEI from the period 2018 to 2022. This research uses secondary data in the form of annual reports of transportation companies taken from the Indonesia Stock Exchange website www.idx.co.id and the official website of each company. Based on the purposive sampling method with predetermined criteria, the sample in this study was 15 companies from 56 transportation companies listed on the Indonesia Stock Exchange (BEI) for the 2018-2022 period, so that in the 5 year research period, 75 observational data were obtained which were used. in this research. The following is a list of companies that have met the sample criteria.

Table 2. Sample of Transportation Companies 2018-2022

No	Kode	Emiten
1	RIGS	PT. Rig Tenders Indonesia Tbk
2	CMPP	PT. AirAsia Indonesia Tbk
3	MIRA	PT. Mitra International Resources Tbk
4	SMDR	PT. Samudera Indonesia Tbk
5	IATA	PT. Mnc Energy Investments Tbk
6	WINS	PT. Wintermar Offshore Marine Tbk
7	GIAA	PT. Garuda Indonesia (Persero) Tbk

8	SDMU	PT. Sidomulyo Selaras Tbk
9	LEAD	PT. Logindo Samudramakmur Tbk
10	BBRM	PT. Pelayaran Nasional Bina Buana Raya Tbk
11	CANI	PT. Capitol Nusantara Indonesia Tbk
12	LRNA	PT. Eka Sari Lorena Transport Tbk
13	TAMU	PT. Pelayaran Tamarin Samudra Tbk
14	TRUK	PT. Guna Timur Raya Tbk
15	DEAL	PT. Dewata Freightinternational Tbk

Table 3. Descriptive Statistics Test Results

	Z-Score	DAR	ROE	CR	SG
Mean	-1.947594	0.792356	-0.043264	1.219623	1.734955
Median	-1.283501	0.543804	-0.026255	0.761352	0.017485
Maximum	26.50047	3.036192	5.083263	16.01900	124.5767
Minimum	-29.21502	0.027978	-5.618381	0.025076	-0.783373
Std. Dev.	8.339878	0.644776	1.008281	1.971478	14.39251
Observations	75	75	75	75	75

Source: data processed using Eviews 13 (2024)

It can be seen that N = 75, which indicates the number of data processed in this research is 75, consisting of 15 companies studied for 5 years. The dependent variable in this research is Financial Distress which is measured using z-score, while the independent variables are Debt to Asset Ratio, Return on Equity, Current Ratio, and Sales Growth.

Financial Distress is measured using a Z-score which has a maximum value of 26.50 at PT Pelayaran Tamarin Samudra TBK in 2019 and a minimum value of -29.21 at PT Capitol Nusantara Indonesia Tbk in 2022. With an average value of -1.94 which indicates that the average company is experiencing financial difficulties and has the potential to go bankrupt (Z-Score < 1.1). The standard deviation is 8.33 which is higher than the average value (mean) of -1.94, this shows that the data has an abnormal distribution. Companies experiencing financial distress were 73.3%, those in the gray area were 6.67%, while those not experiencing financial distress were 20%.

Solvency as measured by the Debt to Asset Ratio (DAR) has an average value of 0.79 which shows that on average the Company is solvable because for every Rp. 100 of Company assets there is a total debt of Rp. 790. The maximum value is 3.03 at PT Capitol Nusantara Indonesia Tbk in 2022, and a minimum value of 0.027 for PT Rig Tenders Indonesia Tbk in 2022, meaning that PT Rig Tenders Indonesia Tbk uses very little debt as a source of funding in 2022. With a standard deviation of 0.64 which is lower than the value The average (mean) is 0.79, this shows that the data has an abnormal distribution.

Return on Equity (ROE) has an average value of -0.04 which shows that for every IDR 100 of equity the company experiences a loss of IDR 4, meaning that on average the company is not profitable because it experiences losses or does not generate sufficient profits. The maximum value is 5.08 at PT Sidomulyo Selaras Tbk in 2021, and the minimum value is -

5.61 at PT Sidomulyo Selaras Tbk in 2020. With a standard deviation of 1.00 which is greater than the average value (mean) of -0.04, this indicates that the data has an abnormal distribution

Liquidity is measured by the Current Ratio (CR) which has a maximum average value of 1.21, indicating that the average company is in a liquid condition, so it can be explained that for every Rp. 100 in current debt, the company has 121 current assets to pay it off. The maximum CR value at PT Rig Tenders Indonesia in 2022 is 16.01, and the minimum value is 0.02 at PT Air Asia Indonesia Tbk in 2021. This minimum value indicates that CMPP is in an illiquid condition so that the company cannot pay off short-term debt. With a standard deviation of 1.97 which is higher than the average value (mean) of 1.21, this shows that the data has an abnormal distribution.

The growth ratio measured by Sales Growth (SG) has an average value of 1.73 which shows that on average the company experienced an increase in sales. High sales do not always produce profits, this is because the company has large expenses or a high level of receivables, where current assets are smaller than expenses which can cause the company to experience losses. The maximum value is 124.57 for PT Indonesia Transport & Infrastructure Tbk in 2022, and the minimum value is -0.78 for PT Indonesia Transport & Infrastructure Tbk in 2019. PT Indonesia Transport & Infrastructure Tbk has had a negative sales growth rate since 2019. With a standard deviation of 14.39 which is greater than the average value (mean) of 1.73, this shows that the data has an abnormal distribution.

Table 4. Common Effect Model Test Results

Dependent Variable: FINANCIAL_DISTRESS (Z-Score)

Method: Panel Least Squares

Date: 07/28/24 Time: 18:38

Sample: 2018 2022

Periods included: 5

Cross-sections included: 15

Total panel (balanced) observations: 75

<i>Variable</i>	<i>Coefficient</i>	<i>Std. Error</i>	<i>t-Statistic</i>	<i>Prob.</i>
<i>C</i>	1.522074	1.567752	0.970864	0.3350
<i>DAR</i>	-6.012467	1.367816	-4.395669	0.0000
<i>ROE</i>	0.015092	0.821897	0.018362	0.9854
<i>CR</i>	0.947730	0.437445	2.166511	0.0337
<i>SG</i>	0.080191	0.058107	1.380038	0.1720
<i>R-squared</i>	0.321374	<i>Mean dependent var</i>	-1.947594	
<i>Adjusted R-squared</i>	0.282595	<i>S.D. dependent var</i>	8.339878	
<i>S.E. of regression</i>	7.063855	<i>Akaike info criterion</i>	6.812200	
<i>Sum squared resid</i>	3492.864	<i>Schwarz criterion</i>	6.966699	
<i>Log likelihood</i>	-250.4575	<i>Hannan-Quinn criter.</i>	6.873889	
<i>F-statistic</i>	8.287395	<i>Durbin-Watson stat</i>	0.447364	
<i>Prob(F-statistic)</i>	0.000016			

Source: data processed using Eviews 13 (2024)

Based on the results from table 4, it can be seen that the results of the common effect model test have a constant coefficient value of 1.5220, which indicates that the solvency and liquidity variables have a significant effect on financial distress because the probability value is smaller than the significance level, namely, 5% or 0.05 . Meanwhile, the profitability and sales growth variables have no effect on financial distress because the probability value is greater than 5% or 0.05. Then the Adjusted R-Squared value is 0.2825 or 28.25%. This shows

that the variation in the dependent variable can be explained by all independent variables amounting to 28.25%, while the remaining 71.75% is explained by other variables outside the variables studied.

Table 5. Random Effect Model Test Results

Dependent Variable: FINANCIAL_DISTRESS
Method: Panel EGLS (Cross-section random effects)
Date: 07/28/24 Time: 18:41
Sample: 2018 2022
Periods included: 5
Cross-sections included: 15
Total panel (balanced) observations: 75
Swamy and Arora estimator of component variances

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	1.054516	2.075192	0.508153	0.6129
DAR	-5.639489	1.207045	-4.672143	0.0000
ROE	0.097490	0.502337	0.194072	0.8467
CR	1.085671	0.302900	3.584249	0.0006
SG	0.084430	0.038913	2.169701	0.0334

Effects Specification		S.D.	Rho
Cross-section random		6.665906	0.7092
Idiosyncratic random		4.268319	0.2908

Weighted Statistics			
R-squared	0.374663	Mean dependent var	-0.536163
Adjusted R-squared	0.338930	S.D. dependent var	5.109993
S.E. of regression	4.154742	Sum squared resid	1208.332
F-statistic	10.48493	Durbin-Watson stat	1.268312
Prob(F-statistic)	0.000001		

Unweighted Statistics			
R-squared	0.319766	Mean dependent var	-1.947594
Sum squared resid	3501.140	Durbin-Watson stat	0.437726

Source: data processed using Eviews 13 (2024)

Based on the results from table 5, it can be seen that the results of the random effect model test have a constant coefficient value of 1.0545 and show that the solvency, liquidity and sales growth variables have an effect on financial distress because the probability value is smaller than the significance level, namely 5% or 0.05, while the profitability variable has no effect on financial distress because the probability value is greater than the significance level of 5% or 0.05. Then the Adjusted R-Squared value is 0.3389 or 33.89%. This shows that the variation in the dependent variable can be explained by all independent variables amounting to 33.89%, while the remaining 66.11% is explained by other variables outside the variables studied.

Table 6. Chow Test Results

Redundant Fixed Effects Tests
Equation: Untitled
Test cross-section fixed effects

Effects Test	Statistic	d.f.	Prob.
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Cross-section F	9.694302	(14,56)	0.0000
Cross-section Chi-square	92.301408	14	0.0000

Source: data processed using Eviews 13 (2024)

Based on the test results, it can be seen that the probability value of cross section F is 0.000. This value is smaller than 0.05 or 5%, which indicates that the intercept is not constant between individuals and means that the most appropriate model to use is the fixed effect model.

Table 7. Hausman Test Results

Correlated Random Effects - Hausman Test
 Equation: Untitled
 Test cross-section random effects

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	0.324260	4	0.9882

Source: data processed using Eviews 13 (2024)

Based on the test results, it can be seen that the probability value of the random cross section is 0.9882. This value is greater than 5% or 0.05, which indicates that the model follows random effects.

Table 8. Lagrange Multiplier Test Results

Lagrange Multiplier Tests for Random Effects
 Null hypotheses: No effects
 Alternative hypotheses: Two-sided (Breusch-Pagan) and one-sided (all others) alternatives

	Test Hypothesis		
	Cross-section	Time	Both
Breusch-Pagan	59.93126 (0.0000)	1.198896 (0.2735)	61.13015 (0.0000)

Source: data processed using Eviews 13 (2024)

Based on the test results, it can be seen that the Breusch-Pagan (BP) probability value is 0.0000. This value is smaller than 5% or 0.05, which indicates that the model chosen is random effect, so the most appropriate model to use in this research is the random effect model.

Table 9. Random Effect Model Panel Data Regression Analysis Test Results

Dependent Variable: FINANCIAL_DISTRESS
 Method: Panel EGLS (Cross-section random effects)
 Date: 07/28/24 Time: 18:41
 Sample: 2018 2022
 Periods included: 5
 Cross-sections included: 15
 Total panel (balanced) observations: 75
 Swamy and Arora estimator of component variances

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	1.054516	2.075192	0.508153	0.6129
DAR	-5.639489	1.207045	-4.672143	0.0000
ROE	0.097490	0.502337	0.194072	0.8467
CR	1.085671	0.302900	3.584249	0.0006
SG	0.084430	0.038913	2.169701	0.0334

Effects Specification		S.D.	Rho
Cross-section random		6.665906	0.7092
Idiosyncratic random		4.268319	0.2908

Weighted Statistics			
R-squared	0.374663	Mean dependent var	-0.536163
Adjusted R-squared	0.338930	S.D. dependent var	5.109993
S.E. of regression	4.154742	Sum squared resid	1208.332
F-statistic	10.48493	Durbin-Watson stat	1.268312
Prob(F-statistic)	0.000001		

Unweighted Statistics			
R-squared	0.319766	Mean dependent var	-1.947594
Sum squared resid	3501.140	Durbin-Watson stat	0.437726

Source: data processed using Eviews 13 (2024)

From the panel data regression equation above, it can be explained as follows:

1. The constant value is 1.054516, meaning that if all independent variables are zero, the average value of Financial Distress as proxied by the z-score is 1.054516
2. The regression coefficient for the Debt to Asset Ratio (X1) variable has a negative value of -5.639489 with a probability of 0.0000. This means that if variable X1 increases by one unit, the z-score value will decrease by -5.639489, assuming that the other ratios are constant.
3. The regression coefficient for the variable Return on Equity (X2) has a positive value of 0.097490 with a probability of 0.8467. This means that if the variable X2 increases by one unit, the z-score value will increase by 0.097490, assuming that the other ratios are constant.
4. The regression coefficient for the Current Ratio (X3) variable has a positive value of 1.085671 with a probability of 0.0006. This means that if variable X3 increases by one, the z-score value will increase by 1.085671 assuming that the other ratios are constant.
5. The regression coefficient for the Sales Growth variable (X4) has a positive value of 0.084430 with a probability of 0.0334. This means that if the variable X4 increases by one unit, the z-score value will increase by 0.084430 assuming that the other ratios are constant.

Table 10. F Test Results

F-statistic	10.48493
Prob(F-statistic)	0.000001

Source: data processed using Eviews 13 (2024)

Based on table 10, it can be seen that the F-Statistics probability value of 0.000001 is smaller than the significance level, namely 0.05 or 5%. So it can be said that the variables used in the panel data regression equation are appropriate or feasible.

Table 11. Coefficient of Determination Results (R2)

<i>R-squared</i>	0.374663
<i>Adjusted R-squared</i>	0.338930

Source: data processed using Eviews 13 (2024)

Based on table 11, it can be seen that the Adjusted R-Squared value is 0.338939 or 33.89%. This shows that the variation in the dependent variable, namely financial distress, can be explained by all independent variables, namely solvency, profitability, liquidity and sales growth of 33.89%. Meanwhile, the remaining 66.11% is explained by other variables outside the variables studied.

Table 12. Statistical Test Results t

<i>Variable</i>	<i>Coefficient</i>	<i>Std. Error</i>	<i>t-Statistic</i>	<i>Prob.</i>
C	1.054516	2.075192	0.508153	0.6129
DAR	-5.639489	1.207045	-4.672143	0.0000
ROE	0.097490	0.502337	0.194072	0.8467
CR	1.085671	0.302900	3.584249	0.0006
SG	0.084430	0.038913	2.169701	0.0334

Source: data processed using Eviews 13 (2024)

Based on table 12 above, it can be seen that the t statistical results can be explained as follows:

The Effect of Debt to Asset Ratio on Financial Distress (Z-Score)

Based on table 12, it can be seen that the debt to asset ratio variable has a t-statistic value of -4.672143 with a probability value of 0.0000 which is smaller than the significance level of 0.05. Therefore, the results in this study show that H₀ is rejected and H_a is accepted, which indicates that the debt to asset ratio variable has a negative effect on Financial Distress.

The Effect of Return on Equity on Financial Distress (Z-Score)

Based on table 12, it can be seen that the return on equity variable has a t value of 0.194072 with a probability value of 0.8567 which is greater than the significance level of 0.05. Therefore, the results of this research analysis show that H₀ is accepted and H_a is rejected, which indicates that the return on equity variable does not have a positive effect on Financial Distress.

The Effect of Current Ratio on Financial Distress (Z-Score)

Based on table 12, it can be seen that the current ratio variable has a t-statistic value of 3.584249 with a probability value of 0.0006 which is smaller than the significance level of 0.05. This shows that H₀ is rejected and H_a is accepted, which indicates that the current ratio variable has a positive and significant effect on Financial Distress.

The Effect of Sales Growth on Financial Distress (Z-Score)

Based on table 12, it can be seen that the sales growth variable has a t-statistic value of 2.169701 with a probability value of 0.0334 which is smaller than the significance level of 0.05. This shows that H₀ is rejected and H_a is accepted, which indicates that the sales growth variable has a positive and significant effect on Financial Distress.

Discussion

The Effect of Solvency (DAR) on Financial Distress

Based on the results of hypothesis testing that has been carried out, it shows that solvency has a negative and significant effect on Financial Distress as measured by the Z-Score. The solvency ratio is used to measure the extent to which a company's assets are financed by debt, meaning how much debt the company bears compared to its assets. It can also be said that this ratio is used to measure the company's ability to pay all its obligations if the company is liquidated. The higher the solvency ratio value indicates that the debt used to finance the company's assets is higher so that greater liabilities will arise in the future. If the z-score value is small, the company's risk of experiencing financial distress will be greater. This is in line with research conducted by Jannah, Ayu Miftahul et al (2021) which shows that solvency has a negative effect on Financial Distress. The same thing was also shown in research by Maysaroh, Watim et al (2022), and Moch, Rusli et al (2019). By analyzing and calculating the debt to asset ratio, companies will be more careful in managing their debt so that it can be optimized as best as possible. This aims to ensure that the company can gain the trust of creditors and avoid financial problems. Apart from that, the company's assets must also be managed well so that it can pay off its long-term debt.

The Effect of Profitability (ROE) on Financial Distress

Based on the results of hypothesis testing that has been carried out, it shows that profitability has no effect on financial distress as measured by the Z-Score. The profitability ratio is a ratio that shows an overview of the level of effectiveness of company management in generating profits. This ratio is used as a measure of whether the owner or shareholder can obtain an appropriate rate of return on their investment. This ratio describes the company's ability to generate profits through all the capabilities and resources it has. A high return to equity value shows that the company has the ability to use equity to generate profits and further streamline the company's finances in funding or investment. So that the occurrence of financial distress becomes smaller. However, companies that record high profits do not always have a direct impact on reducing the risk of financial distress. This is because, if a company has large debts, high profits may only appear significant in nominal terms, but do not reflect the actual cash flow conditions. Net profit does not always indicate a company's ability to meet its short-term and long-term obligations because profit is not always in the form of cash and is often influenced by non-cash items such as depreciation and amortization. This is in line with research by Maysaroh, Watim et al (2022) which states that profitability ratios have no effect on financial distress. The same thing is also shown by research from Haras, Lutfhiyana et al (2022) and Murni, Mayang (2018) which states that profitability ratios have no effect on financial distress. Return on Equity shows the company's ability to return capital, but a good ROE does not always indicate that the company is not experiencing financial distress, and vice versa. There are other factors that can influence financial distress, such as cash flow turnover and company expenses which can influence financial distress. Companies that have high profits, followed by large debts, still allow the company to go bankrupt. This happens because the profit generated may not be enough to cover its debt obligations. In the context of financial distress theory, this situation is known as the problem of excessive leverage, where a high debt burden can drain a company's cash flow and hinder its ability to fulfill its obligations to pay interest and principal on loans.

The Effect of Liquidity (CR) on Financial Distress

Based on the results of hypothesis testing that has been carried out, it shows that liquidity has a positive and significant effect on financial distress as measured by the Z-Score. The

liquidity ratio is the ability of a company to fulfill its short-term obligations appropriately. If a company is able to pay off its short-term obligations on time, then the company is considered liquid. On the other hand, if a company is unable to pay off its short-term debt at maturity, then the company is considered illiquid. So the more liquid a company is, it indicates that the company is able to pay its maturing obligations, thus the possibility of financial distress will be smaller. This is in line with research conducted by Haras, Lutfhiyana et al (2022), Sarina, Silvia et al (2020), Simorangkir and Hidayat (2021), and Kisman & Krisandi (2019) which states that liquidity has a positive and significant effect on financial distress.

The Effect of Sales Growth on Financial Distress (Z-Score)

The growth ratio is a ratio that describes a company's ability to maintain its economic position amidst economic growth and its business sector. Based on the results of hypothesis testing that has been carried out, it shows that sales growth has a positive effect on financial distress. This shows that if the company's sales increase, the sales growth value increases, this will increase the z-score number, where if the z-score value is higher then the company is said to be not experiencing financial distress. Sales growth is used to measure the sales growth of a company. Sales growth reflects sales ability over time. The higher the level of sales growth, the more successful the company is in carrying out its strategy in terms of marketing and product sales. This means that the company will get greater profits. If the profits earned by the company increase, the company will avoid financial distress. The results of this research are in line with research by Damajanti, Wulandari, & Rosyati (2021) which states that sales growth has a positive influence on financial distress. This is because high sales growth does not necessarily mean low expenses, so the profits generated are only small and financial distress is likely to occur (Damajanti et al, 2021).

CONCLUSION AND RECOMMENDATION

Based on the analysis results obtained using panel data regression, the conclusion that can be drawn is that the Solvency Ratio (Debt to Asset Ratio) has a negative and significant effect on the Financial Distress (Z-Score) of transportation companies listed on the Indonesia Stock Exchange for the 2018 - 2022 period. Profitability (Return on Equity) has no effect on the Financial Distress of transportation companies listed on the Indonesia Stock Exchange 2018-2022, Liquidity Ratio (Current Ratio) has a positive and significant effect on the Financial Distress (Z-Score) of transportation companies listed on the Indonesia Stock Exchange for the 2018 period -2022, the Sales Growth Ratio has a positive and significant effect on the Financial Distress (Z-Score) of transportation companies listed on the Indonesia Stock Exchange for the 2018-2022 period.

For researchers who will conduct further research, they should use different sectors and a diverse sample of companies as comparison material. Apart from that, the author also recommends that in future research, researchers can consider the use of other independent variables other than return on equity which might influence financial distress. This is recommended because in this research, the profitability ratio variable represented by Return on Equity was proven to have no influence on financial distress. As an alternative, researchers can consider using other variables such as return on assets, net profit margin, gross profit margin, operating profit margin, and other variables that are relevant in future research.
For Investors and Prospective Investments

To be careful in making financial decisions, especially when investing in transportation companies. It is important for them to pay attention to company debt, both short-term and

long-term debt borne by the company. Because, the greater the debt the company bears, the greater the possibility of financial distress. In addition, before deciding to invest, investors should carry out an in-depth analysis of the company's financial reports, including observing various relevant financial ratios.

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