Using Financial Ratio for Financial Distress Detection: Evidence from Transportation Industry

Fauji Sanusi ⃝, Lintang Fidia, and Intan Purbasari(✉) ⃝

Management Department, Faculty of Economics and Business, Universitas Sultan Ageng Tirtayasa, Serang, Indonesia
intanpurbasari@untirta.ac.id

Abstract. This study examines how financial indicators including liquidity (X1), leverage (X2), profitability (X3), and growth (X4) affect the ability of enterprises in the transportation sector to predict financial distress (Y) and list their stocks on the Indonesia Stock Exchange (IDX). The sample for the study consisted of transportation-related companies that were listed on the Indonesia Stock Exchange between 2013 and 2018. The sample for the study consisted of 15 companies. The data analysis technique used in this study is multiple regression analysis. The results of the study show that (1) a measure of liquidity called the current ratio (CR) has a significant and favorable effect on anticipating financial distress situations, and (2) a measure of leverage called the debt-to-equity ratio (DER) is not relevant for doing the same. (3) The chance of financial difficulties is positively and strongly connected with the profitability ratio as indicated by Return on Assets (ROA). (4) Sales Growth (SG)-based growth ratios are not effective at forecasting the development of financial problems.

Keywords: Liquidity (CR) · Leverage (DER) · Profitability (ROA) · Growth (SG) · Financial Distress (Z-Score)

1 Introduction

In the era of globalization, which is full of uncertainty, global economic conditions, including the Indonesian economy, have become unstable. The financial state of a country certainly has an impact on the condition of the company. This economic instability certainly affects the company's performance because the changing economic needs will affect the company in carrying out its operational activities. In the era of globalization, which is full of uncertainty, global economic conditions, including the Indonesian economy, have become unstable. The financial state of a country certainly has an impact on the condition of the company. This economic instability certainly affects the company's performance because the changing economic needs will affect the company in carrying out its operational activities. Judging from all its roles for the economy and having become a basic need of the community, the company's business in the transportation sector is considered viable and can survive continuously. However, the facts on the ground

Table 1. Net Profit of Transportation Sector Companies from 2013–2018

Companies	Net Income					
	2013	2014	2015	2016	2017	2018
	In Millions of Rupiah					
PT. Indonesia Transport dan Infrastruktur Tbk	−29	−27	−162	−147	−91	−103
PT. Rig Tenders Indonesia Tbk	−23	−11	−61	−107	−176	−71
ICST Jasa Prima Tbk	−35	−37	−427	31	32	10

show that many transportation companies generate losses yearly. This indicates that the company's condition cannot be said to be good (Table 1).

The results of negative net income do not correspond to the annual growth in consumers of transportation service providers. The company's profit should increase; as a result, many transportation companies experience losses instead. Continuous losses or deterioration in a company's financial performance are a sign that it won't be able to fulfil its responsibilities. If this is allowed to continue to decline in the financial performance of the company, it is undoubtedly very worrying to cause the company to experience financial distress, which leads to bankruptcy. Financial distress is a company's financial condition at the decline stage before liquidity and bankruptcy. Financial distress occurs before the bankruptcy of a company. Bankruptcy is the worst financial distress condition (Putri and Merkusiwati, 2016). So, financial distress is a condition of declining financial performance that, if not overcome, will lead to bankruptcy.

Financial distress or a decline in the financial condition of a company can be assessed and measured through financial statements. We can find out the performance of a company from the published financial statements. The financial statements are used to calculate the company's health by looking at the current financial ratios. Then the financial ratios are used to analyze. This research will focus on testing several ratios, such as liquidity, leverage, profitability, and growth ratios.

The liquidity ratio is the ability of a company to meet its short-term obligations (Fahmi, 2014:121). The liquidity ratio was chosen to assess the company experiencing financial distress by looking at its ability to fulfil its obligations. Leverage is a ratio that measures the extent to which the company can meet its financial obligations in the short and long term or how much it is financed by debt. This leverage arises from using company funds from third parties, namely debt. Using this source of funds will create an obligation for the company to repay the loan with interest incurred on loan. If this situation is not balanced with good company income, likely, the company will easily experience financial distress. The profitability ratio is a ratio to assess the company's ability to seek profit and provides a measure of the effectiveness of a company's management—the better the profitability ratio, the better the company's ability to earn high profits. This means that the smaller the company is experiencing financial distress. The growth ratio is a ratio that measures how much the company's ability to maintain its position in the industry and general economic development (Fahmi, 2014: 137). Higher sales growth will be followed by increased profits so that the financial condition becomes

exceptionally stable and minimizes the possibility of the company experiencing financial distress.

2 Related Literature and Hypotheses Development

2.1 Agency Theory

Agency theory (Agency Theory) was put forward by Michael C. Jensen and Willian H. Meckling in 1976. Jensen and Meckling define an agency relationship as a cooperation contract in which one or more principals use agents to carry out company activities. The principal is a shareholder/owner/investor who provides facilities for the company's operational needs. At the same time, an agent is a manager or management who manages a company that aims to increase the prosperity of the owner or company profits. This separation system aims to create efficiency and effectiveness by employing professional agents to manage the company. The agent in charge of carrying out the company's activities will control the company, so the agent is required to always be transparent in carrying out the control of the company under the principal who acts as the owner of the company. One of the agent's responsibilities is to compile and report the company's financial statements at a particular time.

Through the information contained in the financial statements, the company's stakeholders can assess the condition of the company's performance. In the financial statements, we can find out how much the company's assets, debts and profits are. If the financial statements show a high-profit ratio, it will reflect that the company can generate high sales and the agent can manage assets well. But suppose the profit ratio shows a low or minus percentage. In that case, it will be judged that the company is experiencing a decline in financial condition (financial distress) or a loss due to decreased sales or income. However, this situation can also occur because of the agent's mistakes in managing the company. Even worse, the agent intentionally takes actions that are only selfish and ignore the interests of the principal.

2.2 Signaling Theory

Signaling theory originates from the writings of George Akerlof in his 1970 work "The Market for Lemons", which introduced the term asymmetric information. The idea discusses the existence of information inequality between internal and external parties of the company. Adverse selection is the condition in which one party (the seller) who carries out a business transaction has more information than the other party (the buyer). According to Ross (1977), Signaling Theory states that company executives will have better knowledge and tend to provide this information to investors. This theory is motivated by the assumption that the management or internal company has complete information about the company's condition compared to information held by outside parties. Based on these conditions, companies will try to use the information they have to give outsiders messages about their performance. The message will be responded to as a good or a wrong signal by outsiders so that the market can react to the sign in assessing the company's quality and help companies take policies to improve company performance.

2.3 Financial Distress

Financial distress is when the company experiences financial difficulties fulfilling all its obligations. This difficulty indicates that the company is in an insecure position from the threat of bankruptcy. Financial distress can be referred to as a condition before bankruptcy. According to Plat and Plat (2002), financial distress is defined as the decline stage in economic conditions before bankruptcy or liquidation occurs. Financial distress is a condition that occurs when a company is experiencing financial difficulties. Financial distress can be predicted by looking at the company's ability to fulfil obligations that have matured, whether the company has a willingness or unwillingness for these obligations. A company can be said to be in financial distress or financial difficulty if the company has had a negative net profit for several years. There is no common understanding of financial distress, as well as in previous research.

2.4 Current Ratio (CR)

This ratio demonstrates how current liabilities can be settled with cash using current assets. This ratio is calculated by contrasting current obligations with existing assets (Riyanto, 2010:28). The following is the current ratio formula:

$$\text{Current Ratio} = \frac{\text{Current Assets}}{\text{Current Debt}} \tag{1}$$

The ability of the company to cover its current obligations is inversely correlated with the current ratio. Typically, this ratio is considered favorable if the value hits 2:1, or 200%, as the minimum ratio that the organization must maintain (Martono 2002: 5556). Because current liabilities will no longer be covered by the quantity of current assets if they decline, say, by more than 50%. Any current debt of Rp. 1 must be backed by existing Rp. 2 because working capital is nothing more than an excess of current assets due to the 2:1 or 200% ratio.

The ability of the corporation to pay off its short-term debt using liquid corporate assets is shown by the current ratio (CR). The current ratio is a measure of how likely a company is to experience financial distress. The higher the current ratio, the less likely the company is to do so because it can quickly convert its liquid assets into cash to pay off debts and fund its operational needs, preventing financial difficulties.

2.5 Debt to Equity Ratio (DER)

The ratio known as the debt-to-equity ratio is used to evaluate the relationship between total debt, including current debt, and total equity. This ratio aids in understanding the amount of money provided by creditors relative to business owners. In other words, this ratio is used to determine how much of a company's own capital is used to guarantee loans (Kasmir, 2012:157). The following is the DER formula:

$$DER = \frac{\text{Total Liability}}{\text{Equity}} \tag{2}$$

This ratio evaluates the company's ability to use cash from total capital relative to the amount of debt to pay all or a portion of its long-term and short-term debts. As a result, the corporation is better able to meet all of its debts if its DER ratio is lower. Liabilities increase in proportion to the quantity of debt utilized in the capital structure.

The amount of debt used to finance a company's capital is indicated by the debt to equity ratio (DER). Let's say a corporation raises more money through debt. In that instance, it will surely be problematic for the business because there will be problems with future payments because the debt is more than the company's assets. The likelihood of financial trouble will increase if this problem cannot be addressed properly.

2.6 Return on Assets (ROA)

Return on Assets (ROA) measures the company's overall ability to generate profits with the total amount of assets available. ROA is the ratio of net income to total assets to measure the return on the entire set owned. (Hery, 2016:193). The ROA formula is as follows:

$$ROA = \frac{\text{Net Profit}}{\text{Total Asset}} \tag{3}$$

The more money that can be converted from the company's total assets into profit, the higher the ROA ratio. The entire net profit is displayed as the rate of return from using firm assets for every 0.1 or 1% ROA created. The return on assets (ROA) measures how much profit (or net income) a company makes using all of its available assets. The corporation is also thought to be better at using assets because the greater the ROA ratio, the more significant degree of profit is thought to exist for the organization.

2.7 Sales Growth (SG)

Sales growth rate illustrates how sales fluctuate from year to year, either increasing or decreasing. Sales growth demonstrates the business's capacity to boost product sales, whether by boosting sales volume or frequency (Fahmi, 2012: 69). The formula for the sales growth ratio is as follows:

$$\text{Sales Growth} = (\text{Sales}_t - \text{Sales}_{t-1})/(\text{Sales}_{t-1}) \tag{4}$$

The higher level of sales growth illustrates that the company is successful in its activities. It means that the profit generated is more significant, which impacts increasing the company's cash flow, which will affect its sound financial condition. Companies with good financial conditions are likely to experience minimal financial distress. With this, Sales Growth is considered capable of predicting financial distress conditions.

2.8 Altman Z-Score Method

Beaver pioneered the bankruptcy prediction method in 1966 and then developed by Edward I Altman in 1968, who researched financial distress. Research conducted by Altman used a sample of 66 companies, half of which were companies that went bankrupt.

This research produces a formula called ZScore, a ratio model that uses Multiple Discriminant Analysis (MDA), which requires more than one financial ratio related to corporate bankruptcy to form a comprehensive model (Rudianto, 2013:254). The following is a modified Altman model specifically for companies that have issued their shares to the public. The equation used is as follows:

$$Z'' = 0.71X1 + 0.874X2 + 3.107X3 + 0.420X4 + 0.99X5 \tag{5}$$

where:

X1 = *Working Capital/Total Assets*
X2 = *Retained Earning/Total Assets*
X3 = *Earning Before Interest and Taxes/Total Assets*
X4 = *Book Value of Equity/Total Liabilities*
X5 = *Sales/Total Assets.*

With the following category zones:

- If Z > 2.9, the company is in the "healthy" zone.
- If 1.23 < Z < 2.9, the company is in the "gray" zone.
- If Z < 1.23, the company is in the "bankruptcy" zone.

3 Research Method

The companies in the transportation sector that were listed on the Indonesia Stock Exchange (IDX) between 2013 and 2018 make up the study's population. A purposive sampling strategy, or sampling with specific goals, was employed to choose the sample for the study. 15 mining businesses that publish thorough and consistent annual reports and provide financial ratio data with the relevant variable measurements for the years 2013–2018 make up the sample of this study.

Descriptive statistics are used to gather, synthesize, display, and describe data to give useful information. With the exception of the dummy variable, descriptive statistics describe the magnitude of the average value, standard deviation, lowest value, and maximum for the variables (Mas'ud and Srengga, 2016).

After the model in this study satisfies the conditions, namely passing the classical assumption test, multiple linear regression testing can be performed. Normality tests, multicollinearity tests, autocorrelation tests, and heteroscedasticity tests are used to look for deviations from the classical assumptions (Ghozali, 2016). Multiple linear regression Analysis, the equation is:

$$Y = a + \beta 1\,X1 + \beta 2\,X2 + \beta 3\,X3 + \beta 4\,X4 + \varepsilon \tag{6}$$

where: Y = Financial Distress; a = constanta; β = coefficient; X_1 = liquidity (CR); X_2 = Leverage (DER); X_3 = Profitability (ROA); X_4 = Sales Growth. This test was conducted to test whether the independent variable separately was able to explain the dependent variable better—the test results on t-statistics with a standard significance of = 0.05.

Table 2. Normality Test

One-Sample Kolmogorov-Smirnov Test		Unstandardized Residual
N		90
Normal Parameters[a,b]	Mean	0.000
	Std. Deviation	0.444
	Absolute	0.177
Most Extreme Differences	Positive	0.177
	Negative	−0.077
Test Statistic		0.117
Asymp. Sig. (2-tailed)		0.200[c,d]

Note(s).

a. Test distribution is Normal; b. Calculated from data; c. Lilliefors Significance Correction; d. This is a lower bound of the true significance.

4   Empirical Results and Discussion

4.1   Normality Test

The purpose of the normality test, according to Ghozali (2018: 111), is to determine whether the independent and dependent variables in a regression model are regularly distributed or not. Using the Kolmogorov-Smirnov test in the SPSS application program with a probability level (sig) of 0.05, they are evaluating the data's normality.

The Kolmogorov-Smirnov value, assessed using Ln transformation data with N = 90 data, is 0.200, according to Table 2. Ghozali reported a significance value (asymp sig. 2 tailed) of 0.200. (2016), If a data set has a significance value (asymp sig. 2 tailed) greater than or equal to 0.05, it is said to have passed the Kolmogorov-Smirnov test. Because the significance value is 0.200 > 0.05, it may be inferred from these results that the data is regularly distributed.

4.2   Multicolinearity Test

The multicollinearity test, according to Ghozali (2018: 105), determines if the regression model detects a correlation between the independent variables. A good regression model is one in which the independent variables are uncorrelated. The following table shows the results of the multicollinearity test:

The results of the Multicollinearity Test calculation can be seen in Table 3, which demonstrates that the Tolerance and VIF values in the test results do not occur in Multicollinearity symptoms because the calculation results of all independent variables have a VIF value lower than 10; specifically, the largest VIF value is 1.007, and the smallest is 1.001. The Tolerance Value is also more than 0, with the highest and lowest values being 0.999 and 0.993 respectively. Having a Tolerance value of 0.1 or the same as a VIF value of 10 deems a regression model to be multicollinearity-free (Ghozali, 2016). It is

Table 3. Multicolinearity Test

Model		Collinearity Statistics		
		B	Tolerance	VIF
1	(Constant)	−1.396		
	LN_CR	0.256	0.999	1.001
	LN_DER	−0.004	0.996	1.004
	LN_ROA	0.260	0.993	1.007
	LN_SG	0.023	0.995	1.005

Table 4. Autocorrelation test

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	0.501[a]	0.251	0.214	0.29117	1.770

a. Predictors: (Constant), LN_SG, LN_CR, LN_DER, LN_ROA
b. Dependent Variable: LN_ZS

therefore possible to draw the conclusion that the regression model does not experience multicollinearity symptoms.

4.3   Autocorrelation Test

The autocorrelation test is used to determine whether there is a correlation between the residual error in period t and the residual error in the preceding period in the linear regression model. The Durbin-Watson (DW) test can be used to identify autocorrelation signs. The following Table 4 shows the results of the autocorrelation test:

Table 4's test results allow us to calculate the value of DW = 1.770. We must determine the values of dL and dU, which are visible in the distribution of the Durbin-Watson Table Values, in the autocorrelation test using the Durbin-Watson method in order to make the decision. The value of Dw is known for dL (α; k; n) = (0.05; 4; 90) = 1.5656 and the table value for dU (; k; n) = (0.05; 4; 90) = 1.7508, with a Dw value of 1.966, both at a significance level of 5%. Thus, it can be seen that dU < Dw < 4 dU, indicating that the regression model has neither positive nor negative autocorrelation, making it acceptable and practicable to employ.

4.4   Heteroskedasticity Test

The value of the Glejser correlation coefficient between each independent variable and the residual variable can be used to identify whether or not heteroskedasticity exists. If the probability value (sig) is greater than 0.05, heteroscedasticity is not present

Table 5. Heterokedasticity Test

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	B		
1	(Constant)	−0.297	0.569		−0.522	0.603
	LN_CR	0.003	0.049	0.007	0.063	0.950
	LN_DER	0.049	0.042	0.125	1.167	0.247
	LN_ROA	−0.027	0.048	−0.061	−0.563	0.575
	LN_SG	0.047	0.046	0.110	1.025	0.308

a. Dependent Variable: Abs_RES

Table 6. Regression Results

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	B		
1	(Constant)	−1.396	0.823		−1.696	0.094
	LN_CR	0.256	0.071	0.341	3.621	0.000
	LN_DER	−0.004	0.061	−0.006	−0.660	0.948
	LN_ROA	0.260	0.069	0.359	3.793	0.000
	LN_SG	0.023	0.066	0.033	0.347	0.729

a. Dependent Variabel: LN_ZS

(Ghozali, 2018, p. 139). The following Table 5 shows the outcomes of the Glesjer test's heteroscedasticity analysis:

The Glejser correlation coefficient between each independent variable and the residual variable provides information on the heteroskedasticity test, which is used to detect whether or not heteroskedasticity exists. There is no heteroscedasticity if the probability value (sig) is greater than 0.05. (Ghozali, 2018, p. 139). The following table shows the outcomes of the heteroscedasticity test using the Glesjer test:

4.5 Multiple Linear Regression Analysis

Multiple linear regression analysis was used to determine the effect of the independent variables (Liquidity, Leverage, Profitability, and Growth) on the dependent variable (Financial Distress). The following is a table of multiple linear regression analysis processed using the SPSS program application:

Based on the results of multiple linear regression analysis in Table 6, the following multiple regression equation models are obtained:

$$Financial\ Distress = -1.396 + 0.256CR - 0.004DER + 0.260\text{ROA} + 0.023\text{SG} \quad (7)$$

The regression equation above means; a = constant value of -1.396. The negative value explains that without the influence of the independent variables (liquidity, leverage, profitability, and sales growth), the probability of Z-Score will decrease by 1.396. B1 = Liquidity (CR) has a positive regression coefficient of 0.256, meaning that liquidity directly correlates with financial distress (Z-Score); this means that an increase of 1 unit of liquidity will increase the Z-Score value by 0.256.

β2 = Leverage (DER) has a regression coefficient in a negative direction of 0.004 which means that leverage has a relationship not in the same direction as financial distress (Z-Score); this means that an increase of 1 unit of leverage will reduce the ZScore value by 0.004.

β3 = Profitability (ROA) has a regression coefficient with a positive direction of 0.260, which means that profitability has a unidirectional relationship with financial distress (Z-Score), which means that the increase of 1 unit of profitability will increase the Z-Score value by 0.260.

β4 =Growth (Sales Growth) has a regression coefficient with a positive direction of 0.023, which means that growth has a unidirectional relationship with financial distress (Z-Score), which means that the increase of 1 unit of growth will increase the Z-Score value by 0.023.

Table 6 demonstrates that the LN CR and LN ROA variables have a probability value (p-value) of less than 1%, indicating that the liquidity CR of a company greatly reduces financial distress. The LN DER and LN SG variables, on the other hand, have probability values over the 10% significance level. These findings suggest that leverage and sales growth have no bearing on financial distress.

4.6   Discussion

a.   **The Effect of Liquidity on Financial Distress**

The results of this study indicate that the liquidity variable, as measured by the Current Ratio (CR), influences financial distress conditions. With a significance value of 0.000, less than 0.05, and a regression coefficient of 0.256. In this study, liquidity, as measured by the Current Ratio (CR), has a positive and significant effect on the Z-Score, which means that if the liquidity ratio (CR) increases, it will increase the probability value of the Z-Score, the increasing value of the z-score indicates that the company is in a healthy financial condition and vice versa. So it means that the increasing value of liquidity (CR) will reduce the possibility of the company experiencing financial distress. If there is a decrease in the value of liquidity (CR), the company may experience financial distress.

Referring to the grand theory used in this study, Agency Theory, based on this explanation, it can be said that the principal's interests in generating profits by utilizing agents in managing the company are vital. One form of company management that is carried out is liability management. This form of management will assess the company's ability to fulfill its obligations. The company's inability to pay its obligations will impact

the assets owned by the company, and even this can indicate that the company is going bankrupt. Moreover, the worst possibility is that the company will find it challenging to carry out its operational activities. However, if the company can make payments and settle short-term debt, the company is considered liquid and will certainly reduce the potential for financial distress.

b. **The Effect of Leverage on Financial Distress Conditions**

The findings of this study show that financial distress is unaffected by the leverage variable as evaluated by the Debt to Equity Ratio (DER) (Z-Score). It is possible to claim that an increase in DER of 1 will result in a reduction in the probability value of Z-Score of 0.004 with a coefficient of 0.004. Leverage (DER) does not affect financial distress according to a significance level of 0.948, which is higher than 0.05. (Z-Score). As a result, it is concluded from this study that the liquidity ratio (DER) has no effect on the possibility of financial distress. The Agency Theory, which is used in this study as a source of information, does not take into account these findings when explaining the connection between the principal and the agent in which the agent serves as the management of the business. Where does the agent in this scenario decide whether to accept funds from a third party or not? A higher liability will develop in the future, making the business more susceptible to financial troubles, if the agent employs an excessive amount of third-party funds as finance. Additionally, this study contradicts earlier studies by Septiana & Dana (2019), and Wulandari's research (2020), all of which found a strong negative correlation between leverage and financial distress.

The findings of this study suggest that the significance of the Z-Score value cannot be predicted based on the size of the DER value held by the company. Even though the company has a lot of debt to fuel its operations, other factors, such the assets it owns and the earnings it makes, can offset this and keep it from going bankrupt. The absence of this effect can also be attributed to the fact that when a company's long-term debt matures but the firm is unable to pay the obligation, the company relies on outsiders to make judgments about how to pay off its debts on a significant scale in order to keep the company operating.

c. **The Effect of Profitability on Financial Distress Conditions**

According to the study's findings, financial distress situations are influenced by the profitability variable as evaluated by Return on Assets (ROA). With a significance level of 0.000, which is less than 0.05, and a regression coefficient of 0.260 in the positive direction, an increase in ROA profitability of 1 unit will increase the probability value of the Z-Score by 0.260, which, if the increase in the probability value of the Z-Score indicates that the company is in a healthy company condition. In other words, the likelihood that the company would avoid financial distress will improve as the value of profitability (ROA) rises. These findings are relevant to the Agency theory, which was applied in this study, and which holds that an organization's management decisions regarding how much it may use its resources to make profits have a significant impact on that organization's overall health. In order to determine if a firm is in financial distress or not, one

can look at how well and how poorly its assets a The findings of this study are consistent with earlier studies by Lisnawati, Deviyanti, and Ginting (2017) and Wulandari (2020), which found that the profitability ratio significantly reduced the likelihood of financial distress.re used to generate profits. This is what ROA describes.

This research implies that ROA is proportional to the Z-Score value; when ROA increases, it also increases the Z-Score value. A high ROA can reflect that the company can manage its assets to obtain large profits, which can affect the condition of the Z-Score. With the increasing profitability of the company, the smaller the company will avoid financial distress.

d. **The Effect of Sales Growth on Financial Distress Conditions**

The study's findings suggest that financial distress is unaffected by the sales growth variable, as determined by Sales Growth (SG). According to the Signaling Theory, which holds that a corporation can be more successful the larger its sales, this outcome is irrelevant, thus it is good news for the judgments that investors will make. Investors will be motivated to move forward. This great news will later increase the company's value and enhance its reputation. Additionally, this study contradicts studies by Almilia & Krisjadi (2003), Widarjo & Setiawan (2009), and Handayani, Darminto & Atika (2012) that found a substantial correlation between sales growth and financial distress.

According to this study, the significance of the Z-Score value cannot be determined by the volume of a company's sales growth. This circumstance explains why sales growth hasn't been significantly able to forecast instances of financial hardship and why it can't be used as a sign for investors to determine whether the firm is in excellent or poor shape. Increased sales growth (Sales Growth) does not guarantee an increase in revenue because a negative net profit will result if the increase in sales is not offset by an increase in operating expenses or if the increase in operating expenses is greater than the increase in sales. This puts the business in financial distress. In a similarly, a drop in sales does not cause financial distress for a company directly; rather, it simply affects earnings.

5   Conclusion

Financial distress is positively and significantly impacted by the liquidity ratio as indicated by the current ratio (CR) (Z-Score). The regression coefficient is 0.256 with a positive direction and a significance value of 0.000, which is smaller than 0.05. In this study, the current ratio (CR), which measures liquidity, has a positive and significant influence in predicting financial distress. This means that as the current ratio rises, the Z-Score for financial distress will rise as well, allowing the liquidity variable to be used to forecast financial distress conditions. The debt-to-equity ratio (DER), which measures the leverage ratio, shows that it has no appreciable negative impact on financial hardship. With a 0.004 regression coefficient and a downward trend. It can be established from this study that leverage has a role in financial hardship because a rise in DER of 1 will result in a 0.004 reduction in the probability value of financial distress (Z-Score), and a significance level of 0.948, which is higher than 0.05. (DER). The leverage variable,

however, has a negative but not statistically significant impact on the Z-Score, which makes it impossible to anticipate financial distress circumstances.

The profitability ratio, as determined by Return on Assets (ROA), has a considerable favorable impact on financial distress. An increase in ROA of 1 unit will result in a 0.260 in the positive direction regression coefficient, a significance value of 0.000, which is less than 0.05, and a 0.260 increase in the Z-probability Score's value of financial hardship. Thus, it can be said that profitability, as determined by ROA, has a favorable and significant impact on the value of financial distress (Z-Score), indicating that the profitability ratio might predict the appearance of financial distress.

The growth ratio does not significantly improve financial distress conditions as determined by Sales Growth (SG). It may be stated that the growth variable assessed by sales growth has not been able to anticipate financial distress circumstances because it has not significantly affected the Z-Score value. It is expected that future study would broaden, particularly by not being restricted to businesses in the transportation sector and by allowing for longer time periods to give various situations. Further study may try to incorporate or use additional financial ratios for the variables already present, such as operating cash flow, which is related to revenues and costs in calculating net income and can be used to assess and predict financial distress conditions. Operating cash flow is one such ratio that can reflect the financial health of the company. The effect of financial ratios in forecasting financial distress circumstances can also be investigated utilizing additional research techniques, such as the logistic regression analysis approach.

The management of the company can use the knowledge from this research to manage the business and reduce financial distress. According to the study's findings, financial distress conditions can be predicted and signaled by factors like liquidity and profitability. The income statement must be carefully monitored by the firm's management because it is this report that should give investors confidence to entrust their assets to the company. The authors advise investors to consider financial factors including liquidity, leverage, profitability, and growth, particularly liquidity and profitability characteristics, when deciding which investment to make. Investors are able to determine whether a company is worthwhile to invest in by learning about its financial health and ability to withstand the hazards it will face.

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