

Research Article

The Effect of Leverage, Liquidity, and Managerial Ownership on Financial Distress with Profitability as a Moderating Variable (on Transportation Companies Listed on the Indonesia Stock Exchange for the Period 2018-2022)

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Abstract: Profitability acts as a moderating factor, this research seeks to learn how management ownership, leverage, and liquidity impact financial distress in transportation companies listed on the Indonesia Stock Exchange from 2018 to 2022. Quantitative research describes this kind of study. From 2018 through 2022, 37 transportation businesses were included in the study's population. These companies were listed on the Indonesia Stock Exchange (IDX). Eleven different businesses made up the sample. The kind of information used is secondary data. The method utilized to gather data is documentation studies. This study makes use of the Eviews 10 software program. The data analysis methods that are used include descriptive analysis, panel data regression analysis, R2 determination coefficient, significance test (t-test), and moderating test. According to the study's findings, financial distress is not significantly impacted by leverage, financial distress is negatively and significantly impacted by liquidity, financial distress is not significantly impacted by managerial ownership, and the relationship between the debt-to-equity ratio variable and financial distress cannot be moderated by profitability. However, profitability can moderate and strengthen the impact of liquidity on financial distress, and it can also moderate and strengthen the impact of managerial ownership on financial distress.

Keywords: Financial Distress, Leverage, Liquidity, Managerial Ownership, Profitability.

1. Introduction

The development of progress in the economic sector has created an increasing intensity of competition between companies which in the end is feared to lead to bankruptcy. Reported from the economic conditions of Indonesia where the Central Statistics Agency (BPS) from 2018 to 2022 had recorded economic growth with a negative value in 2020 with a GDP of -2.07%, down 2.95% from the previous year, where this value arose during the pre-covid 19 that occurred in that year. In addition, in recent years there have been fluctuations in fuel prices where the government has made several adjustments to fuel prices (Lavinda, 2023). One of the key elements affecting the business's operations is the fluctuation of gasoline costs. The rise and fall of world fuel prices have had significant implications for the company's operational costs and profitability. At that time the company must try to recover or the company must face the risk of being declared unable to pay debts if it cannot survive in that situation.

When a company struggles to fulfill its obligations, it is said to be in financial difficulty, when its revenue is insufficient to pay all of its expenses, and when it suffers losses (Fahmi, 2018). Financial distress can be measured using the Interest Coverage Ratio (ICR). The ICR is a ratio that shows the comparison of debt and profitability used in determining the company's ability to pay interest on loans. (Brigham & Houston, 2015). The following presents the Interest Coverage Ratio (ICR) data on Transportation companies listed on the IDX for the 2018-2022 period:

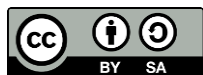
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Table 1. Interest Coverage Ratio (ICR) Data for Transportation Companies

No.	Company	Year				
		2018	2019	2020	2021	2022
1	PT Adi Sarana Armada Tbk.	2.00	1.43	1.23	1.95	1.01
2	PT Blue Bird Tbk	0.85	0.46	-2.17	-0.21	0.89
3	PT Berlian Laju Tanker Tbk.	0.43	1.03	0.35	0.79	0.64
4	PT Garuda Indonesia (Persero) Tbk	1.18	0.69	-3.98	-4.56	-6.11
5	PT Satria Antaran Prima Tbk.	2.37	3.22	2.05	1.29	-5.66
6	PT Jaya Trishindo Tbk.	-0.46	1.55	1.46	2.21	0.51

Source: Financial Report (www.idx.co.id) processed data by researchers (2024).

Through table 1, there's can see condition of Interest Coverage Ratio (ICR) transportation companies in Indonesia from 2018-2022. Through the data, it is known that several transportation companies, namely PT Blue Bird Tbk, PT Berlian Laju Tanker Tbk, PT Garuda Indonesia (Persero) Tbk since 2018-2022 experienced financial difficulties or financial distress where the Interest Coverage Ratio (ICR) value was below 1. Furthermore, there are several transportation companies, namely PT Adi Sarana Armada Tbk, PT Satria Antaran Prima Tbk, PT Jaya Trishindo Tbk are above the value of 1, but if observed over a period of time 2018-2022 The company's Interest Coverage Ratio value tends to decrease, some even have negative values..

A company's degree of financial distress may be influenced by a number of variables. The leverage ratio is the first one thought to have the potential to affect financial distress. How much of the owner's money may be used to settle debts owing to third parties is shown by the leverage ratio. The smaller this ratio, the better (Harahap, 2018:301). To measure debt, you can use the DER which compares all of the company's obligations, both debt and long-term and short-term debt to the company's capital. The higher the DER, the greater the total debt to total capital. (Sartono, 2016:121). Research conducted by (Hidayati & Yuneline, 2022) shows that leverage has a negative effect on financial distress. Research by (Siregar et al., 2023); (Sirait et al., 2023); (Utami & Taqwa, 2023) which discovered study findings suggesting leverage had no substantial influence on financial hardship.

The liquidity ratio, which evaluates a business's ability to meet its short-term obligations, is the second element seen to have the potential to impact financial crisis. The liquidity ratio seeks to ascertain if the company's cash are sufficient to cover urgently due commitments (Sugiono & Edi, 2016). Low liquidity may be produced by businesses using their limited current assets to settle their short-term obligations before they become due, and it will have a stronger impact on financial distress situations (Ghandi & Fardinal, 2019). Research conducted by (Astuti & Sjarif, 2022) shows a positive relationship with financial distress. Research by (Asmiraldha et al., 2024); (Anggun et al., 2023) who found that liquidity research results had a negative and significant effect on financial distress. However, the results of research by (Cahyani & Nugraeni, 2024) found that liquidity research results did not have a significant effect on financial distress.

Managerial ownership is the next element that might influence financial difficulty. The percentage of all outstanding shares that managers possess is known as managerial ownership. It is anticipated that the presence of management shares would foster a strong feeling of ownership in the business and lower the likelihood of financial trouble because of shared interests (Utami & Taqwa, 2023). Managerial ownership did not significantly impact financial hardship in the organization, according to research (Nugraha & Wirajaya, 2024); (Lubis et al., 2023). But studies by (Sirait et al., 2023) and (Rejeki et al., 2023) showed that management ownership had a beneficial and substantial influence on financial stress.

Along with the leverage ratio, liquidity, and managerial ownership, the profitability ratio the net profit from various management choices and policies is another measure that may have an impact on the level of financial hardship. Profitability serves as a moderating element in this investigation. The degree to which the business can pay its debts to third parties may be influenced by its profitability, this lessens the possibility that it may have financial issues. (Wilujeng & Yulianto, 2023).

With profitability acting as a moderating variable, researchers are interested in analyzing the impacts of managerial ownership, leverage, and liquidity on financial distress in transportation businesses listed on the Indonesia Stock Exchange (IDX) for the years 2018–

2022. This is in contrast to the findings of Sirait et al. (2023), who found that the effects of these factors on financial distress could not be moderated by profitability research results. (Natya, 2020) concluded that the impact of managerial ownership on financial hardship is moderated by profitability, whereas (Salsabila & Mudrikah, 2023) discovered that profitability may moderate the effect of liquidity on financial distress.

2. Literature Review

2.1 Signaling Theory

According to the signal hypothesis, businesses send signals to those who see their financial reports. According to this view, readers of financial reports should get indications (Prasetyo & Fachrurrozie, 2016). The significance of company-published information on investor choices as external parties is emphasized by signaling theory. According to the connection between signaling theory and financial distress, a management will deliver a positive signal if the firm's financial situation and prospects are favorable. This includes material released by the company to offer an overview or instructions meant for creditors or investors (Kudus & Meidiyustiani, 2022).

2.1.2 Financial Distress

A corporation is said to be in financial distress when it finds it difficult to pay its debts, when its revenue is insufficient to cover all of its expenses, and when it suffers losses (Hery, 2018). The interest coverage ratio is one metric used to gauge the degree of financial crisis. The ICR measures a company's ability to pay interest on its operating profits (EBIT). The formula for this ICR ratio is operating profit (EBIT) divided by interest expense or financial costs. Therefore, the higher the ICR ratio, the better the company's financial condition. The ICR ratio can be used to calculate if a company is experiencing financial difficulties (Sarpta et al., 2024).

2.1.3 Leverage

The leverage ratio is used to examine how money is utilized for capital composition and debt, as well as the company's capacity to cover fixed costs like interest (Brigham & Houston, 2015). One statistic used to gauge how much of a company's assets are funded by debt is the leverage ratio (Hery, 2018). The DER is used in this research to calculate leverage. When a company's debt and equity are compared, the DER demonstrates the company's capacity to pay its debts (Sujarweni, 2019).

2.1.4 Liquidity

The capacity of a business to promptly fulfill its short-term commitments is known as its liquidity ratio. Investor interest may decline or the company's value may decline if it is unable to meet its short-term commitments (Fahmi, 2018). The current ratio, which indicates how much the business can afford to pay its debts, is used to assess liquidity (Hani, 2015). One may determine the amount of the current ratio by comparing current assets and current liabilities (Syamsuddin, 2016).

2.1.5 Managerial ownership

According to Pasaribu and Topowiyono (2016), managerial ownership refers to the ownership or ownership of a company's managers who actively participate in decision-making. A greater level of management ownership reduces the likelihood that the business would face financial difficulties. This is because it is anticipated that the inclusion of firm management shares would foster a feeling of ownership over the business and lower the likelihood of financial difficulty because of shared interests (Fidyaningrum & Retnani, 2017). The percentage of shares that the firm owns at the end of the year is used to calculate managerial ownership. (Putu & Lestari, 2016).

2.1.6 Profitability

The profitability ratio is a metric that characterizes the capacity of the business to turn a profit using all of its resources and capabilities, namely those obtained from capital, assets, and sales activities (Hery, 2018). ROA is the profitability statistic used to assess the company's capacity to produce a profit. According to Fahmi (2018), the ROA ratio examines how well an investment can provide the anticipated return on profit.

3. Methods

The research design used in this study is quantitative. The purpose of statistical or quantitative research is to test the relevant hypothesis (Sugiyono, 2019). Transportation firms that were listed on the Indonesia Stock Exchange and accessible via the www.idx.co.id website were the subject of this study. The 37 transportation businesses that were listed on the Indonesia Stock Exchange (IDX) between 2018 and 2022 made up the study's population. Twenty-six businesses met the requirements to be included in the sampling. Secondary data was the sort of data that was utilized. Documentation analysis is the approach used to obtain data. Descriptive analysis, panel data regression analysis, determination coefficient R², significance test (t-test), and moderating test are the data analytic methods used in this research.

4. Research Result

4.1 Descriptive Statistical Analysis

Table 2. Descriptive Statistics

	DER	CR	KM	ROA	ICR
Mean	0.405569	1.636200	0.747308	-0.000108	-15.37373
Median	0.522500	0.992000	0.764500	0.012000	1.344500
Maximum	41.64800	11.72200	1,000,000	2.072000	44.78600
Minimum	-90.29800	0.025000	0.261000	-0.659000	-1344.775
Std. Dev.	9.357638	2.016194	0.179910	0.243999	131.2824
Observations	130	130	130	130	130

Source: EViews 10 Software Processing Results

According to Table 2, the range of possible values for leverage is from -90.29 to 41.64, with an average of 0.40 and a standard deviation of 9.357. With a standard deviation of 2.016 and an average of 1.636, liquidity values vary from 0.025 at the lowest end to 11.77 at the highest. The value of managerial ownership might be anything from 0.261 all the way up to 1.00. The standard deviation is 0.503, while the average is 0.747. The mean ROA is -0.000108 and the standard deviation is 43.56258. From lowest to greatest, the values range from -0.659 to 2.072. A Financial Distress (ICR) score of -15.373, with a standard deviation of 131.282, falls in between a low of -1344.775 and a high of 44.786.

4.2 Panel Data Regression Model Selection

4.2.1 Chow Test

Table 3. Chow Test Results

Effects Test	Statistics	df	Prob.
Cross-section Chi-square	129.991386	25	0.0000

Source: EViews 10 Software Processing Results

0.0000 is the probability value. The FEM is the recognized estimate model because the chi-square probability value is $0.0000 < 0.05$.

4.2.2 Hausman test

Table 4. Hausman Test Results

Test Summary	Chi-Sq. Statistic	Chi-Sq. df	Prob.
Random cross section	5.199789	4	0.2674

Source: Eviews 10 Software Processing Results

Probability value $0.267 > 0.05$, then the accepted estimation model is the REM.

4.2.3 Lagrange Multiplier Test

Table 5. Lagrange Multiplier Test Results

Breusch Pagan	68.94947	1.539095	70.48856
	(0.0000)	(0.2148)	(0.0000)

0.0000 is the probability value. The REM is the estimating model that is used since the probability value of $0.000 < 0.05$. The Random Effect Model (REM) regression model will be used in this investigation because the REM estimation model was chosen using the Lagrange Multiplier Breusch-Pagan test.

4.3 Panel Data Regression Analysis

Table 6. Linear Regression Test Results Panel Data REM model

Dependent Variables: Interest Coverage Ratio				
Method: Panel EGLS (Cross-section random effects)				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
Constantine	44.07274	36.31800	1.213523	0.2272
Debt To Equity Ratio	-0.127607	0.670619	-0.190283	0.8494
Current Ratio	-13.14249	4.623297	-2.842665	0.0052
Managerial Ownership	-26.16247	21.86718	-1.196426	0.2338

Source: EViews 10 Software Processing Results

The multiple linear regression equation derived from Table 6 looks like this:

$$Y = 44.07274 (a) - 0.127607 X_1 - 13.14249 X_2 - 26.16247 X_3 + e$$

When the independent variable is set to zero (0), the constant value (a) generated by the multiple linear regression equation formula, which is 44.07274, indicates that the financial distress value is 44,072. The leverage variable's (DER) regression coefficient was found to be -0.127, indicating a negative coefficient direction. Therefore, a -0.127 reduction in financial hardship will result from a 1 unit rise in leverage. A positive regression coefficient of -13.142 was found for the liquidity variable (CR). Financial hardship will decrease by -13.142 units for every unit rise in liquidity. A negative coefficient direction of -26, 162 was found for the Managerial Ownership (KM) variable in the regression analysis. This means that if Managerial Ownership increases by 1 unit, then Financial distress will decrease by -26,162.

4.3.1 Hypothesis Testing

a. Partial Significance Test (T-Test)

Table 7. Partial Significance Test (T-Test)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
Constantine	44.07274	36.31800	1.213523	0.2272
Debt To Equity Ratio	-0.127607	0.670619	-0.190283	0.8494
Current Ratio	-13.14249	4.623297	-2.842665	0.0052
Managerial Ownership	-26.16247	21.86718	-1.196426	0.2338

Source: EViews 10 Software Processing Results

Based on table 7, the partial test results can be known and interpreted as follows:

- 1) It is known that the Leverage variable's regression coefficient value is -0.127. Given that the p-value is 0.8494, or more than the significance threshold of 0.05, it is known that leverage has no discernible impact on financial distress.

- 2) It is known that the liquidity variable's regression coefficient value, with a negative coefficient direction, is -13,142. Since the p-value is 0.0052, or less than the significance limit of 0.05, liquidity is recognized to have a substantial impact on financial distress.
- 3) The Managerial Ownership variable's regression coefficient value is reported to be -26,162. Financial distress is not significantly impacted by managerial ownership, as shown by the p-value of 0.233, which is more than the significance threshold of 0.05.

b. Analysis of Determination Coefficient (R2)

Table 8. Results of Determination Coefficient Test

R-squared	0.598340	Mean dependent variable	-5.864231
Adjusted R-squared	0.585487	SD dependent var	108.6650

Source: EViews 10 Software Processing Results

The R-squared value for this study's coefficient of determination is 0.5983, as shown in table 8. Financial distress may be explained by the independent variables (Leverage, Liquidity, and Managerial Ownership) accounting for 59.83% of the variance, according to this value. However, extraneous variables account for the remaining 41.17 percent.

4.4 Moderating Test

4.4.1 Leverage On Financial Distress Moderated By Profitability

Table 9. Test Results Moderation

Variable	Coefficient	Std. Error	t-Statistic	Prob.
Return on Asset	-352.2689	27.76109	-12.68930	0.0000
DER X ROA	-7.300628	10.59966	-0.688761	0.4922
Constantine	-14.66890	10.96944	-1.337252	0.1835
R-squared	0.510584	Mean dependent variable	-8.955646	

Source: EViews 10 Software Processing Results

The interaction variable between the DER and ROA ($X1*Z$) has a probability value of 0.492, which exceeds the 0.05 threshold of significance, suggesting that the profitability variable cannot moderate the relationship between the DER variable and Financial Distress.

4.4.2 Liquidity On Financial Distress Moderated By Profitability

Table 10. Test Results Moderation

Variable	Coefficient	Std. Error	t-Statistic	Prob.
Return on Asset	98.46395	38.30957	2.570218	0.0113
CR X ROA	-92.90879	6.924422	-13.41755	0.0000
Constantine	9.686576	7.181044	1.348909	0.1798
R-squared	0.692644	Mean dependent variable	-15.37373	

Source: EViews 10 Software Processing Results

It has a significant impact since the interaction variable between the current ratio and return on asset has a probability value of 0.0000, which is < 0.05 threshold of significance. Additionally, the moderation findings' coefficient of determination (0.6926) is greater than the coefficient of determination (0.5983) before to the moderation test. Therefore, it may be said

that profitability can improve moderation by reducing the impact of liquidity on financial distress.

4.4.3 Managerial Ownership On Financial Distress Moderated by Profitability

Table 11. Test Results Moderation

Variable	Coefficient	Std. Error	t-Statistic	Prob.
Return on Asset	558.3876	128.8187	4.334678	0.0000
MO X ROA	-544.3270	75.31800	-7.227051	0.0000
Constantine	55.23898	32.37732	1.706101	0.0905
R-squared	0.703605	Mean dependent variable		-5.055504

It is recognized that the interaction variable between Managerial Ownership and Return On Asset ($X_3 \times Z$) has a substantial impact since its Prob. Value is 0.0000, which is less than the sig. value of 0.05. Additionally, the moderation findings' coefficient of determination (0.7036) is greater than the coefficient of determination (0.5983) before to the moderation test. Therefore, it may be said that profitability has the power to improve moderation by reducing the impact of managerial ownership on financial distress.

5. Discussion

5.1 The Effect of Leverage on Financial Distress

Leveraged does not significantly affect financial distress, according to the partial t-test. This is due to the fact that businesses often require loans from other parties to fund their operations. To put it another way, big businesses also have high ratio levels, but despite their size and high leverage ratio, it can be argued that they are better equipped to avoid financial difficulties by diversifying their operations, which enables them to use high debt levels to boost profitability (Siegar et al., 2023). The findings of this study are consistent with those of studies by Siegar et al. (2023), Sirat et al. (2023), and Umami & Taqwa (2023), which concluded that leverage had no discernible impact on financial hardship.

5.2 The Effect of Liquidity on Financial Distress

According to the partial t-test, liquidity significantly and negatively affects financial distress. Based on the study's findings, businesses that have a high liquidity value are better able to manage their cash flow and pay off their short-term debt before it matures. This means that they are less likely to go through financial hardship. The results of this investigation align with those of research conducted by Asmiraldha et al. (2024) and Angun et al. (2023), who discovered that the findings of liquidity research had a negative and substantial impact on financial hardship. The findings of this study, however, contradict those of a study by Cahyani and Nugraeni (2024), which concluded that financial hardship was not significantly impacted by the findings of liquidity research.

5.3 The Effect of Managerial Ownership on Financial Distress

The partial t-test indicates that there is no appreciable relationship between management ownership and financial difficulty. shows that the performance of a company's board of directors and management has a greater influence on its chance of suffering financial hardship than does the size of its managerial ownership level (Lubis et al., 2023). The results of this investigation align with those of research by (Nugraha and Wirajaya, 2024) and (Lubis et al., 2023), who discovered no discernible relationship between management ownership and the company's financial difficulty. This, however, contradicts the findings of studies by Rejeki et

al. (2023) and Sirait et al. (2023), which found that management ownership significantly and favorably impacted financial hardship.

5.4 Profitability In Moderating Effect of Leverage On Financial Distress

Profitability cannot mitigate the impact of the Debt To Equity Ratio variable on Financial Distress, according to the findings of the moderated regression test. Because strong profitability cannot ensure that a firm will pay off its debts and manage them well, and vice versa, profitability (ROA) cannot mitigate the impact of leverage on financial hardship. Profitability is not a factor that has to be taken into account when creating a firm strategy since its magnitude will not influence the effect that leverage will have on financial distress (Rejeki et al., 2023). This study's results are in line with previous research showing that profitability cannot lessen the effect of debt on financial stress (Asmiraldha et al., 2024; Siegar et al., 2023; Rejeki et al., 2023; Sirait et al., 2023). This contrasts with the findings of studies by Salma and Ichwanudin (2022) and Amah et al. (2023), who found that profitability might mitigate the impact of leverage on financial hardship.

5.5 Profitability In Moderating Effect of Liquidity On Financial Distress.

According to the moderation regression test findings, profitability may enhance the relationship between liquidity and financial distress. This might occur as a result of management's effective asset management, which offers advantages wherein all firm profits are used to settle debts. In the event that the business is not profitable, it will utilize its assets to pay its debts; but, if those assets are inadequate, obligations will be paid later, increasing the likelihood that the business would have financial difficulties (Rejeki et al., 2023). This study's findings are consistent with those of studies by Sugiharto et al. (2021), Rejeki et al. (2023), Asmiraldha et al. (2024), and Amah et al. (2023), which discovered that the profitability study's findings might mitigate the impact of liquidity on financial hardship. This, however, contradicts the findings of the research by Sirait et al. (2023), who discovered that the profitability study's findings could not mitigate the impact of liquidity on financial hardship.

5.6 Profitability In Moderating Effect of Managerial Ownership On Financial Distress

In light of the findings Profitability may both boost and reduce the impact of Managerial Ownership factors on Financial Distress, according to a moderation regression test. Profitability is a moderating factor that reinforces the association between managerial ownership and financial distress in the organization. Considering the results of the study, it can be said that high profitability and managerial ownership work in concert to prevent financial distress. The results of the research align with those of Natya (2020) and Arabela & Ajengningtias (2021), who discovered that profitability outcomes might act as a moderating factor for the relationship between management ownership and financial hardship. This, however, contradicts the findings of studies by Sirait et al. (2023) and Septiani (2020), who discovered that the impact of management ownership on financial hardship could not be mitigated by profitability study findings.

6. Conclusion

According to the study's findings, financial distress is not significantly impacted by leverage, financial distress is negatively and significantly impacted by liquidity, financial distress is not significantly impacted by managerial ownership, and the relationship between the debt-to-equity ratio variable and financial distress cannot be moderated by profitability. However,

profitability can moderate and strengthen the impact of liquidity on financial distress, and it can also moderate and strengthen the impact of managerial ownership on financial distress.

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