Determining Factors of Financial Distress in Property and Real Estate Companies Listed on the Indonesia Stock Exchange

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Keywords:	Abstract
Current Ratio; Debt to Equity Ratio; Return On Assets; Financial Distress	The purpose of this study is to examine how the Current Ratio, Debt to Equity Ratio, and Return On Assets influence the occurrence of Financial Distress in Property and Real Estate companies listed on the Indonesia Stock Exchange (IDX) from 2019 to 2021. The study aims to determine whether these factors have an impact, either individually or together. The sample for this study was selected using purposive sampling, resulting in the inclusion of 18 companies that met specific criteria. The analytical method employed in this study is multiple linear regression analysis, which was carried out using the Statistical Package for the Social Sciences (SPSS). The findings reveal that, when considered individually, both the Current Ratio and Return On Assets have a significant impact on financial distress, whereas the Debt to Equity Ratio shows significance specifically within property and real estate companies. Furthermore, when examining all three factors simultaneously, the research demonstrates that the combined influence of the Current Ratio, Debt to Equity Ratio, and Return On Assets significantly affects financial distress within the property and real estate sector of companies listed on the Indonesia Stock Exchange.

1. INTRODUCTION

The current unstable state of the Indonesian economy has significantly influenced business operations and productivity. This impact extends not only to small companies but also to large corporations, leading to widespread difficulties for many individuals (Sarina et al., 2020). The intensifying competition among companies is driving up operational costs, thereby affecting overall company performance (Revelation, 2009). In situations where companies cannot achieve growth, they are vulnerable to incurring losses that ultimately lead to financial distress. Financial distress is characterized by a company's financial status being neither favorable nor unfavorable, often tied to the risk of company bankruptcy. The resulting financial challenges have contributed to a notable increase in corporate failures.

Effective management plays a crucial role in enabling companies to flourish. Companies are established with the goal of generating profits to ensure their ongoing operations. In general, it's common for companies to

experience periods of growth and decline. These fluctuations are primarily due to the impact of unsteady financial conditions, which affect businesses of all sizes, including small, medium, and especially large enterprises. Failure to address unfavorable financial conditions can greatly elevate the likelihood of bankruptcy. A key indicator of a company facing financial distress is when its operating profits remain negative for two consecutive years (Luciana, 2003). Without corrective measures taken by the company's management, the risk of bankruptcy becomes significant.

As stated by Wulandari and Jaeni (2021), the property and real estate industry serves as a vital gauge for a country's economic growth. The property sector stands as the initial sector to reflect a nation's economic state, signaling economic ups and downs. Rapid economic growth triggers a boom in the real estate sector, often leading to oversupply. Conversely, economic slowdowns or stagnation result in a substantial decline in the real estate industry. The heightened competition within the real estate sector also contributes to the threat of bankruptcy for companies. This underscores

the need for investors to exercise caution when investing in companies experiencing growth in this sector. External entities typically analyze a company's financial difficulties to assist in guiding investment decisions, as highlighted by Kusumaningrum (2010) in Hildaningtyas and Gunarsih (2010).

The emergence of the Covid-19 pandemic in Indonesia towards the end of 2019 had a profound impact on the property and real estate sector. This led to a reduction in purchasing power among consumers, and since property and real estate are not essential needs, sales were adversely affected (Putra, 2020). The Chief Director of the Indonesia Stock Exchange (IDX) noted that the property and real estate sector experienced a substantial decline of 33.56% throughout 2020 (Artanti, 2020) .

Table 1. Demand for commercial property
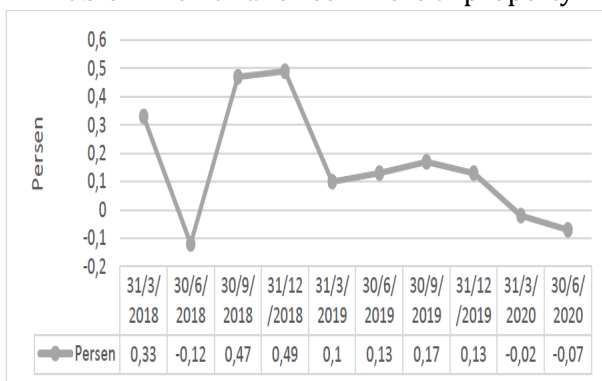
(Source: databoks, 2020)

The demand for commercial property experienced a notable decrease, falling to below 0% from 2018 to the first quarter of 2020. The most substantial decline occurred in the second quarter of 2020, attributed to the impact of the Covid-19 pandemic that led to a sluggish demand for commercial properties in Indonesia. This sharp reduction in property demand had a domino effect on various property and real estate issuers, causing a notable downturn in their performance during the third quarter of 2020. Consequently, these issuers faced a reduction in their net profits. The affected issuers are as follows:

Table 2. Income and Profit and Loss of Property and Real Estate Issuers

No	Emiten	Pendapatan (Rp)			Laba/Rugi Bersih (Rp)		
		2019	2020	Turun	2019	2020	Turun
1	PPRO	1,37 T	1,27 T	10%	216,4 M	76,7 M	65%
2	SMRA	4,41 T	3,26 T	26,05 %	314,61 M	-12,25 M	103, 89%
3	BSDE	5,23 T	4,28 T	18,67%	2,31 T	469,56 M	79,67 %
4	CTRA	4,66 T	4,24 T	9,01%	414,64 M	230,18 M	44,27 %
5	ASRI	1,96 T	1,1 T	43,88%	213,59 M	-977,65 M	557,72 %

Source: Data processed 2023

In 2019, the Indonesia Stock Exchange (IDX) listed several companies, namely PT. PP Property, Tbk (PPRO), Summarecon Agung, Tbk (SMRA), Bumi Serpong Damai, Tbk (BSDE), Ciputra Group (CTRA), and PT. Alam Sutera Realty, Tbk (ASRI). By September 2019, PPRO reported a net profit decline of IDR 216.4 billion, while as of December 2020, it achieved a net profit of IDR 76.7 billion. SMRA earned a net profit of IDR 314.61 billion in 2019 but incurred a net loss of IDR 12.25 billion in 2020.

BSDE's net profit in 2019 amounted to IDR 2.31 trillion, which reduced to IDR 469.56 billion in 2020, marking a decline of 79.67%. CTRA registered a net profit of IDR 414.64 billion in 2019, which decreased to IDR 230.18 billion in 2020. ASRI recorded a net profit of IDR 213.59 billion in 2019, but faced a net loss of IDR 977.65 billion in 2020. Additionally, an oversupply situation in 2019 led to considerably high property prices, prompting numerous developers to introduce their products to the market. The surplus supply coupled with reduced demand subsequently caused property prices to decrease, leading to a slowdown in the property business (Sari & Asana, 2020).

The consequence of financial distress often leads many companies to undergo liquidation. While financial difficulties are common for every company, they can be influenced by several critical factors. These factors encompass profitability, liquidity, and leverage. These three factors collectively

contribute to financial difficulties. The primary objective of this study was to ascertain the impact of liquidity, leverage, and profitability on financial distress.

2. LITERATURE REVIEW
2.1 Liquidity

It is projected that a company's liquidity level can impact its tax aggressiveness. Companies possessing high liquidity are regarded favorably due to their capability to fulfill tax obligations promptly. According to Bradley (1994) and Siahaan (2005), companies with lower liquidity tend to evade tax compliance, opting to retain more cash flow rather than meeting tax responsibilities. In cases where a company's earnings diminish, it becomes necessary to curtail expenditures such as wages and bank deposits, causing a decline in the company's current ratio. A diminished current ratio signifies reduced ability to settle bills, indicating financial distress, as the company's assets are insufficient to cover its obligations (Wijarnarto & Nurhidayati, 2016). The assessment of a company's liquidity is facilitated by analyzing its financial statement, particularly by comparing current assets against current liabilities, which yields the current ratio (Carolina et al., 2017).

Current Ratio

2.2 Leverage

Leverage is a term employed by companies to indicate the utilization of borrowed capital to amplify the value of their assets. When the calculation yields a high leverage ratio, it implies that the company's operational management heavily relies on debt. If the company's assets are insufficient to cover its necessities, a challenging scenario emerges, triggering financial strain. Consequently, the company's financial stability becomes compromised. Additionally, bankruptcy frequently results from a company's incapability to fulfill its obligations (Syuhada & Muda, 2020). In this study, the Debt to Equity Ratio (DER) was chosen as the variable to gauge leverage. The Debt to Equity Ratio measures the proportion of company ownership funded by debt in relation to total shareholder equity. This

ratio facilitates the presentation of cash distributions to shareholders.

A higher Debt to Equity Ratio (DER) signifies an elevated risk for the company, which can lead to investors pulling their investments from the company. This is primarily due to the fact that a higher debt ratio implies a greater responsibility for the company to service its debts. Additionally, when the debt-to-equity ratio is excessively high, potential investors might be reluctant to extend loans to the company.

Conversely, a low DER ratio encourages investor confidence in the company, as the company's debt obligations are relatively minor. Investors find reassurance in situations where the company generates profits and tend to be less concerned when the company faces financial losses. Addressing substantial debt requires companies to initiate a restructuring process, which may encompass areas ranging from product development to product distribution. Maintaining a healthy financial position entails maintaining a low debt to equity ratio. This ratio is one of the key financial indicators that signals a company's robust financial condition.

Debt to Equity Ratio

2.3 Profitability

As indicated by Wahyu (2009) in the study conducted by Fatmawati & Rihardjo (2017), the profitability ratio gauges a company's proficiency in generating profits relative to the utilization of its assets within a specified timeframe. Effective asset utilization can lead to a reduction in the company's incurred costs, subsequently resulting in cost savings and a sufficient pool of funds for its operational activities. Adequate capital availability also diminishes the likelihood of the company facing financial distress in the future (Andre & Taqwa, 2014). The generated profits are reinvested into the company's operations, ensuring its continuity and growth over time.

According to Tandelilin (2010), Return On Assets (ROA) is a ratio that depicts a company's

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competence in employing all its assets to generate net profits after accounting for taxes. Dewi et al. (2019) have noted that if the ROA ratio is low, the effectiveness of the company's assets in generating profits is limited, thereby potentially complicating the management of internal funding sources for investments. This scenario can contribute to financial distress within the company.

Return On Assets

2.4 Financial Distress

Financial distress refers to a situation where a company exhibits symptoms of short-term financial challenges prior to its potential bankruptcy, wherein the company struggles to meet its financial obligations. These symptoms can be identified through various means, including analyzing cash flow, assessing company strategies, and reviewing financial reports. The occurrence of financial distress can be attributed to a combination of internal and external factors affecting the company's operations.

Internal factors contributing to financial distress include:

1. Cash Flow Management: Difficulties in effectively managing cash flow for company activities can worsen the company's financial state.
2. Debt Burden: Accumulated debt arising from covering operational costs creates obligations for future debt repayment, adding to the company's financial pressures.
3. Operational Losses: Sustained operating losses over a period can stem from activities that need timely corrective policies. Such losses can lead to negative cash flows.

Despite addressing the aforementioned internal factors, companies may not be guaranteed immunity from financial distress due to the influence of external factors. One such factor is the increase in interest rates, leading to higher interest expenses. The formula employed to calculate financial distress is as follows: (Unfortunately, the formula you intended to provide appears to be missing from your message. Please provide the formula, and I'd be happy to assist you further:

$$Z = 6.56\,X_1 + 3.26\,X_2 + 6.72\,X_3 + 1.05\,X_4$$

Description :
Z'' = bankruptcy index
X_1 = current assets / current liabilities
X_2 = total liabilities / total equity
X_3 = earnings after interest and taxes / total assets
X_4 = book value of equity / book value of debt

2.5 Hypothesis:

The liquidity ratio serves as a metric to gauge a company's capability to settle its obligations and debts. A company is deemed to possess liquidity if it has the capacity to repay its debts as they come due. Conversely, a company is considered illiquid when it lacks the ability to meet its short-term debt obligations. Companies that heavily rely on debt financing face increased obligations in the future, thereby rendering them susceptible to financial distress. A lower liquidity ratio is more favorable and secure for the company's financial health (Dewi et al., 2019). Research by Sari & Asana (2020) has delved into the correlation between liquidity and financial distress. The outcomes of their study demonstrated that the current ratio significantly impacts financial distress. Building upon this understanding, the hypothesis posited in this study is: (Please provide the content of the hypothesis you would like to include, and I will be glad to assist you further:
H1: Current Ratio positive effect on financial distress.

The Debt to Equity Ratio serves as an indicator to assess a company's overall health. This ratio reveals whether the total debt surpasses the total equity owned or vice versa, reflecting the company's financial state. When current liabilities exceed long-term liabilities, this can be deemed a reasonable situation. Conversely, if the reverse occurs, it can signify an unhealthy company. When the value of long-

term liabilities surpasses that of current liabilities, the company becomes vulnerable to liquidity disturbances. If these circumstances remain unresolved, the company gradually encounters financial challenges leading to financial problems, often culminating in bankruptcy (Fadlillah, 2019). Research has been conducted on the leverage ratio, specifically the Debt to Equity Ratio, as an indicator of potential financial distress. Studies by Sari & Asana (2020) and Silalahi & Hendratno (2019) highlight that the Debt to Equity Ratio significantly impacts the occurrence of financial distress. Building upon this understanding, the hypothesis put forth in this study is: (Please provide the content of the hypothesis you would like to include, and I will be glad to assist you further:

H2: Debt to Equity Ratio has positive effect on financial distress.

The profitability ratio serves as a comparative measure employed to assess a company's capacity to generate profit or net income based on specific levels of sales, assets, and share capital. A company's profitability level is inversely related to the likelihood of experiencing financial distress; a lower profitability signals a higher potential for financial distress (Gobenvy, 2014). Conversely, a company's enhanced profitability indicates an improved financial performance, distancing the company from the risk of financial distress (Syuhada & Muda, 2020). Studies investigating profitability, particularly Return on Assets (ROA), have been undertaken by Sari & Asana (2020) and Sari (2014). Both studies assert that profitability (ROA) significantly impacts the occurrence of financial distress. Building upon this understanding, the hypothesis advanced in this study is: (Please provide the content of the hypothesis you would like to include, and I will be glad to assist you further:

H3: Return on Assets has positive effect on financial distress.

3. RESEARCH METHODS

The research methodology employed in this study is a quantitative approach. The data collection technique utilized is the documentation method, involving the gathering, recording, and examination of secondary data derived from audited financial reports and annual reports of property and real estate companies listed on the Indonesia Stock Exchange. These documents were accessed through the Indonesia Stock Exchange website. The analytical technique employed is multiple linear regression analysis. To facilitate data analysis, the study employed the SPSS (Statistical Package for Social Science) computer program. The target population for this research encompasses 81 companies listed on the Indonesia Stock Exchange during the financial years spanning from 2019 to 2021. The sampling method utilized in this research is Purpose Sampling, which involves selecting samples based on specific criteria. Out of the 300 data points initially collected, 18 companies meeting the predetermined criteria were chosen as the sample, resulting in a dataset of 240 data points used for the analysis.

4. RESULTS AND DISCUSSION
4.1 Classical assumption testing
a. Normality test

Below is the table presenting the outcomes of the normality test conducted using the Kolmogorov-Smirnov test, as illustrated in Table 3. Upon assessment, certain samples were identified as having abnormal distribution patterns. Subsequently, these data points were removed after reviewing the data distribution plots. As a result, the study proceeded with a reduced dataset of 32 samples that demonstrated a normal distribution.

Table 3: Normality test results

Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	Df	Sig.	Statistic	df	Sig.
CR	.080	34	.200*	.968	34	.400
DER	.126	34	.187	.914	34	.011
ROA	.182	34	.006	.929	34	.030
Y	.088	34	.200*	.965	34	.329

*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

b. Multicollinearity Test

The multicollinearity test is employed to ascertain whether there exists a strong (almost perfect) linear correlation among two or more independent variables. Multicollinearity is evaluated through the computation of VIF (Variance Inflation Factor) values. If the VIF value is below 5, it indicates the absence of multicollinearity; conversely, if it exceeds 5, multicollinearity is present.

Table 4: Multicollinearity test results between independent variables.

Coefficients[a]

Model		Unstandardized Coefficients B	Std. Error	Standardized Coefficients Beta	T	Sig.	Collinearity Statistics Tolerance	VIF
1	(Constant)	1.839	.618		2.976	.006		
	CR	6.911	.155	.999	44.565	.000	.986	1.014
	DER	1.466	.484	.070	3.032	.005	.923	1.084
	ROA	13.886	5.375	.060	2.583	.015	.928	1.077

a. Dependent Variable: Financial Distress

As evident from Table 4, the outcomes of the multicollinearity test reveal that none of the independent variables exhibit a tolerance value exceeding 0.5. The VIF values for Current Ratio (VIF = 1.014), Debt to Equity Ratio (VIF = 1.084), and Return On Assets (VIF = 1.077) are observed to be less than 5. Consequently, there is no independent variable presenting a VIF value exceeding 5. This leads to the conclusion that there exists no multicollinearity among the independent variables.

c. Autocorrelation Test

Autocorrelation is a situation in which a correlation (association) exists between the residuals of each series. The assessment of autocorrelation employs the Durbin-Watson method. When the value of 'd' approaches 2, it indicates that the assumption of no autocorrelation is satisfied.

Table 5: Autocorrelation test results between independent variables.

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.993[a]	.985	.984	.88363	1.598

a. Predictors: (Constant), X3, X1, X2

b. Dependent Variable: Y

ChatGPT Table 5 indicates that the p-value for the Durbin-Watson test is 1.598. This p-value is compared to the Durbin-Watson critical values obtained from the table (with k = 3 and n = 34), yielding pdl = 1.1010 and pdu = 1.6565. Consequently, the calculated Durbin-Watson p-value of 1.598 lies between pdl = 1.1010 and pdu = 1.6565, which can be expressed as (pdl < dw < pdu = 1.1010 < 1.598 < 1.6565). Moreover, it is also less than the difference between 4 and pdu (i.e., 4 - 1.6565 = 2.3435). As a result, the calculated dw value falls between the ddl value and the ddu value, implying that the test outcomes exhibit no presence of autocorrelation.

d. Linearity Test

Table 6: Linearity Test Results

ANOVA Table

			Sum of Squares	df	Mean Square	F	Sig.
Y * X2	Between Groups	(Combined)	1418.591	29	48.917	1.239	.469
		Linearity	1.967	1	1.967	.050	.834
		Deviation from Linearity	1416.624	28	50.594	1.281	.453
	Within Groups		157.928	4	39.482		
	Total		1576.520	33			
Y * X3	Between Groups	(Combined)	897.666	16	56.104	1.405	.247
		Linearity	.054	1	.054	.001	.971
		Deviation from Linearity	897.611	15	59.841	1.499	.210
	Within Groups		678.854	17	39.933		
	Total		1576.520	33			

In Table 6 above, shows the extent to which the predicted dependent variable lies exactly in a straight line. If the result is significant (p<0.05) then the linear model is suitable to be applied to the model relationship. F-DEVIATION FROM LINEARITY shows that the more significant the F value, the greater the deviant case. If we find p>0.05 in the deviation from linearity column then our data can be said to be linearly related.

e. Multiple Regression Analysis

The following are the results of the multiple regression test shown in table 7 below Table 7: Multiple regression test results

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	1.839	.618		2.976	.006
	CR	6.911	.155	.999	44.565	.000
	DER	1.466	.484	.070	3.032	.005
	ROA	13.886	5.375	.060	2.583	.015

a. Dependent Variable: Financial Distress

The multiple regression equation derived from the aforementioned table is as follows: Y = 1.839 + 6.911X1 + 1.466X2 + 13.886X3 Here's the interpretation for each part of the equation:

1. A constant value of 1.839 signifies that when the independent variables (CR, DER, ROA) remain unchanged, the value of Y (financial distress) is 1.839.
2. The coefficient of the Current Ratio variable (X1) is 6.911. This implies that if the Current Ratio variable increases by 1 unit while keeping the other variables constant, financial distress will rise by 6.911 units.
3. The coefficient of the Debt to Equity Ratio variable (X2) is 1.466. This suggests that when the Debt to Equity Ratio variable increases by 1 unit, while holding other variables constant, financial distress will increase by 1.466 units.
4. The coefficient of the Return On Assets variable (X3) is 13.886. This indicates that if the Return On Assets variable increases by 1 unit, while keeping other variables constant, financial distress will rise by 13.886 units.

These interpretations help understand the impact of each independent variable on the dependent variable (financial distress) within the context of this multiple regression equation.

f. Test the coefficient of determination

The interpretation of the coefficient of determination can be found in Table 8 below: Table 8: Test results for the coefficient of determination:

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.993[a]	.985	.984	.88363

a. Predictors: (Constant), X3, X1, X2

The test results for the coefficient of determination indicate that the adjusted R-squared value is 0.984. This signifies that 98.4% of the variables examined in this study, namely Current Ratio, Debt to Equity Ratio, and Return On Assets, have the capability to elucidate the association between fluctuations in the dependent variable, specifically financial distress. This substantial percentage of explanatory power provides essential insights for characterizing financial distress within property and real estate companies.

g. Simultaneous test results

The outcomes of the F-test yield an F value of 663.028 alongside a p-value of 0.000. The p-value, being 0.000, is less than the significance level of 0.05 (α = 0.05). This signifies that the utilized model is both viable and suitable (well-fitting). Table 9: Results of Simultaneous Test

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1553.095	3	517.698	663.028	.000[b]
	Residual	23.424	30	.781		
	Total	1576.520	33			

a. Dependent Variable: Financial Distress

b. Predictors: (Constant), CR, DER, ROA

4.2 Research result

a. Results of Testing the First Hypothesis (H1)

The findings from testing the hypothesis regarding the Current Ratio's impact on financial distress reveal a positive regression coefficient value of 6.911, accompanied by a significance level of 0.000. The significance level for testing this hypothesis is lower than 0.05 (p < 0.05), given the positive coefficient. This indicates that the Current Ratio (CR) variable holds a positive and statistically significant influence on financial distress. Hence, the initial hypothesis is accepted.

b. Second Hypothesis Testing Results (H2)

The outcomes of testing the hypothesis regarding the Debt to Equity Ratio's (DER) impact on financial distress reveal a positive regression coefficient value of 1.466, accompanied by a significance level of 0.05. The significance level for testing this hypothesis is greater than 0.05 ($p > 0.05$), and considering the positive coefficient, this indicates that the Debt to Equity Ratio (DER) variable holds a positive yet statistically insignificant influence on financial distress. Consequently, the second hypothesis is rejected**.**

c. Third Hypothesis Testing Results (H3)

The outcomes of testing the hypothesis regarding the Return On Assets' (ROA) impact on financial distress reveal a positive regression coefficient value of 13.886, accompanied by a significance level of 0.015. The significance level for testing this hypothesis is less than 0.05 ($p < 0.05$), and considering the positive coefficient, this indicates that the Return On Assets (ROA) variable has a positive effect on financial distress. Thus, the third hypothesis is accepted**.**

d. Fourth Hypothesis Testing Results (H4)

The outcomes of testing the hypotheses related to CR, DER, and ROA's impact on financial distress demonstrate a significance value of 0.000. The significance level for testing these hypotheses is less than 0.05 ($p < 0.05$), suggesting that the variables liquidity, leverage, profitability, and firm size indeed exert an influence on financial distress. Therefore, the fifth hypothesis is accepted**.**

5.   CLOSING
5.1 Conclusion

This study aims to ascertain the impact of liquidity, leverage, and profitability on financial distress within property and real estate companies listed on the Indonesia Stock Exchange for the period of 2019-2021. The results of data analysis for each variable can be summarized as follows:

a. Current Ratio exhibits a positive and significant influence on financial distress in property and real estate companies.
b. Debt to Equity Ratio does not demonstrate a significant effect on financial distress in property and real estate companies.
c. Return On Assets holds a positive and significant impact on financial distress in property and real estate companies.
d. Simultaneously, Current Ratio, Debt to Equity Ratio, and Return On Assets collectively exert a positive and significant influence on financial distress in property and real estate companies.

5.2 Suggestions

Based on the obtained research findings, the researchers propose the following recommendations:

a. Future researchers are encouraged to expand the scope of their study by incorporating additional variables to assess their impact on financial distress. Variables like return on equity, company size, and management ownership could provide valuable insights.
b. Subsequent research endeavors are advised to extend the sampling period beyond three (3) years, potentially allowing for a more comprehensive and accurate analysis. The current study's time limitations led to a restricted three-year timeframe.
c. For future investigations, it is suggested to explore alternative financial ratios or utilize different proxies for assessing financial ratios, which could potentially offer more nuanced insights into the relationship between variables and financial distress..

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